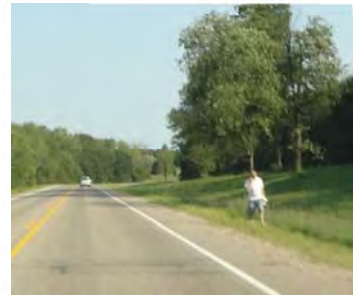
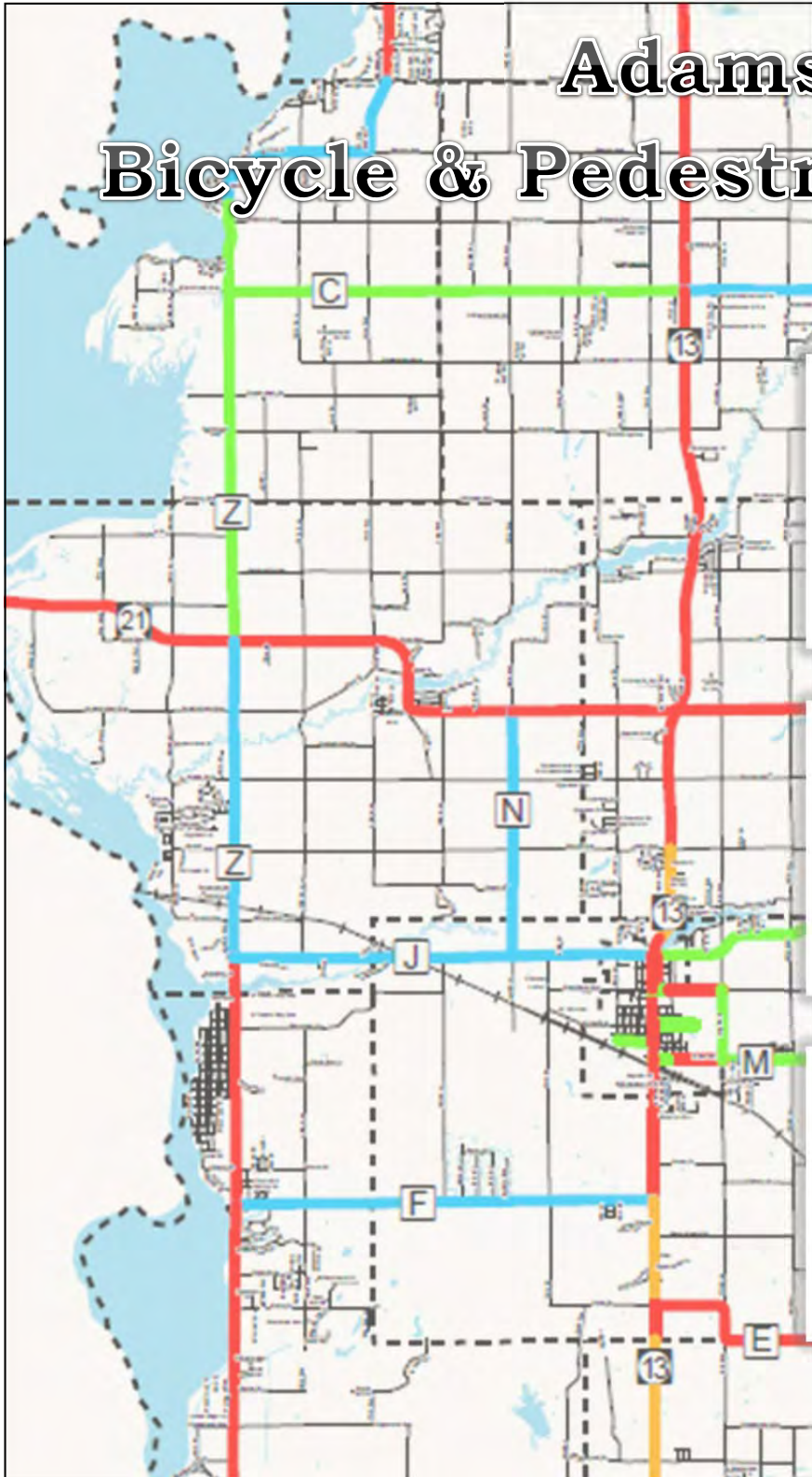


# Adams County Bicycle & Pedestrian Plan 2013



Prepared by:

North Central Wisconsin  
Regional Planning Commission



**Adams County  
Bicycle & Pedestrian Plan  
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Cover photo sources: NCWRPC

**May 2013**

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- A. WisDOT Road Evaluation Method
- B. Road or Highway Suitability For Bicycles, 2012
- C. Potential Ice Age Trail Area
- D. Adams County, Bicycle & Pedestrian Crashes, 2005-2011
- E. Bicycle Crash Analysis for Wisconsin
- F. Bicycle Tune-Up Bill Summary Sheet
- G. Advisory Group members
- H. A-F School District cross country routes and running club routes
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# Chapter 1

## INTRODUCTION

### A. PURPOSE

The primary emphasis of this plan is on developing a more bicycle friendly transportation system by establishing a facilities network and bringing all streets up to a minimum level of compatibility. Pedestrian accommodations are also reviewed and improvements are also suggested in this plan. Often the focus of a bicycle plan is solely on a network of improved roads and trails, but it is equally important to consider policies and practices. See Chapter 4 to read the vision statement and goals of this plan.

This is a countywide plan developed by NCWRPC with guidance provided by the Advisory Group (Attachment G) and oversight provided by the Adams County Highway Commission. Efforts were made to include local citizens and local governments to make all of Adams County bicycle and pedestrian friendly. Adoption of this plan does not commit Adams County or any municipalities within the county to funding projects listed in this plan, however, success in obtaining possible grant money may require that a project be listed in this plan.

### B. LEGISLATIVE BACKGROUND

Walking and bicycling are important modes of transportation, whether used separately or with other modes. Since 1991, the federal government has recognized the role of bicycling and its importance as part of a balanced transportation system by passing the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

1991 – Intermodal Surface Transportation Efficiency Act (ISTEA).

1998 – Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21).

2009 – Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

2012 – Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21).

Even before the passage of the original ISTEA bill, the Wisconsin Legislature prescribed a bicycling role for the Wisconsin Department of Transportation (WisDOT). According to Wisconsin State Statute 85.023, WisDOT is to provide assistance in the development of bicycle facilities.

*“The department [WisDOT] shall assist any regional or municipal agency or commission in the planning, promotion, and development of bikeways.”*

Adams County and community leaders alike have come to recognize that bicycle and pedestrian travel are viable forms of transportation in Adams County. In addition, they understand that there are other important benefits to be had when bicyclists and pedestrians can travel safely and conveniently within and between communities in the county.

## **C. BICYCLING AND WALKING AS TRANSPORTATION**

Bicycling and walking are two of the most efficient ways to get around. Walking is ubiquitous; nearly everyone depends on walking for at least part of every trip, if only from the parking lot to the nearest building. Although some lament that “people just can’t seem to walk anywhere anymore,” the reality is that, given the opportunity, many people choose to walk from one place to another, particularly if they can do so safely and conveniently. During the past fifty years, however, there is no question that we Americans have become increasingly auto-dependent. This is partially by choice, and partly as the result of a development pattern where individual land uses (e.g. retail, fast food, and schools) exist on the periphery of communities not only are a long walk from where people live, but they may be a half-mile or more from the nearest sidewalk. Conditions such as these not only discourage able-bodied pedestrians, they literally prevent access for pedestrians with special needs, a group that includes elderly, children, and people with disabilities.

## **D. DEFINING WHO RIDES BICYCLES**

Not everyone who walks or bikes has the same abilities. Age, experience, and bicycling ability dictate where and when individuals (or, in the case of children, parents) feel comfortable to safely bicycle on roads.

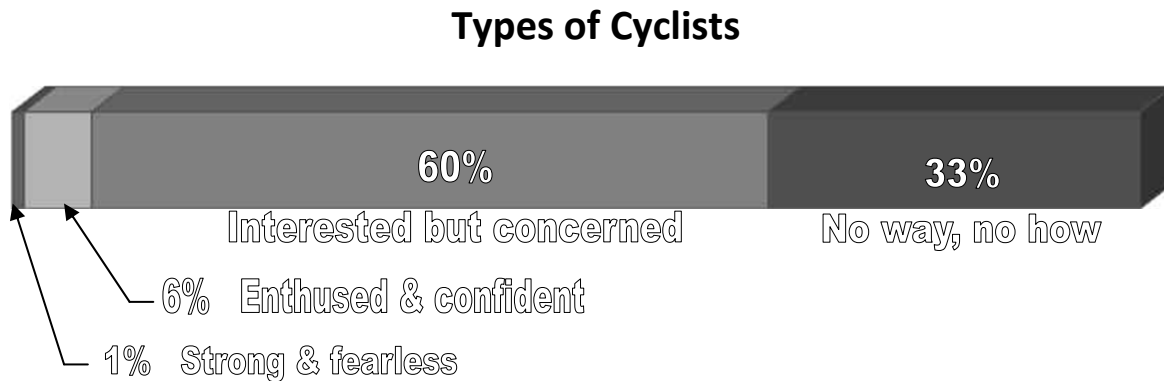
Age differences: In general, young bicyclists will not be found on a county’s more rural roads and county trunk highways unless there is a subdivision nearby and a school, park, or retail destination is within a mile away. However, in places where development is clustered, like in a city or rural hamlet, then children may be found bicycling at very young ages. Some kids learn the basics of balance and control with their first bicycle by the age of four. By the time they enter school many students are allowed to ride to school if the route is safe, or to the store, or to visit friends. By the time kids reach their junior high year, they often have good traffic safety skills. Bicycles are their primary means of independent mobility beyond walking.

Many high school students stop riding their bikes as infatuation with the car takes hold. But after high school, some people come back to bicycling, especially if they attend college. Beyond school, many people limit their bicycling to family outings, recreational trail riding, and within a few miles of their homes for low-impact exercise.

Some adults bicycle to work. This use is most often seen in cities, but was also found in Adams County per two NCWRPC interviews (Arkdale and STHs 21 & 13) on rural roads where an isolated business is located. Other adults may use bicycles for touring long distances. Bicycle clubs which tend to cater to people in the 25 to 50 age group often sponsor rides through rural areas (e.g. GRABAAWR).

By retirement age, many people who have not ridden for years take up bicycling again as a way to keep limber and fit. For some older adults, the bicycle or adult tricycle

**Figure 1**



Source: Roger Geller, Bicycle Coordinator, Portland Office of Transportation, Four Types of Cyclists  
<http://www.portlandonline.com/transportation/index.cfm?a=264746&c=44597>

may be their only means of independent travel. In many cases, these bicyclists will ride close to home or on local trails.

Types of cyclists: The American population can be divided into four classes of bicyclists (see Figure 1):

- 1 percent describe themselves as **“fearless.”**  
*These riders are confident in their abilities and will ride regardless of roadway condition, amount of traffic, or inclement weather.*
- 6 percent call themselves **“enthusiastic and confident.”**  
*Riders are comfortable sharing the road with motor vehicles, but they prefer to ride on separate facilities like bike lanes. May or may not ride in inclement weather.*
- 60 percent are **“interested but concerned”** about their vulnerability.  
*Very few of these people regularly ride a bicycle, but they like riding. They are concerned that their route is not safe to ride, so they don't ride very often, and definitely do not ride when the weather is bad.*
- 33 percent say **“no way, no-how”** to biking.  
*They are not interested in bicycling at all, not even for recreation.*

The challenge to increasing bicycling among the general population is making biking appeal to the big “interested but concerned” contingent.

## **Chapter 2**

### **EXISTING CONDITIONS**

Knowing what currently exists provides a baseline for monitoring changes in facility use. An inventory of roadway conditions, bicycling and walking facilities, and crash locations will build this baseline.

#### **A. ROADWAY CONDITIONS**

Low traffic volumes and paved surfaces often make town roads in Adams County ideal for bicycling, so most are considered as having the “best conditions” for bicycling. The only town road that was actually rated for bicycle suitability is River Road in the Town of Dell Prairie (“poor conditions”). Traffic counts that were available for other select town roads in Adams County showed less than 500 Annual Average Daily Traffic (AADT) counts, which usually makes them the “best conditions” for bicycling if a road is paved, otherwise a gravel road could be a hazard to a bicyclist if the surface is not graded and from a passing vehicle’s dust. Two other factors used to determine how suitable a road is for bicycling are: 1. the percentage of no-passing zones along a stretch of road, and 2. pavement width of the road (travel lanes & shoulder). Attachment A shows the WisDOT road evaluation method used for paved roads.

Several general road and traffic conditions exist in Adams County:

- All state highways have at least a 3-foot paved shoulder throughout Wisconsin.
- State Trunk Highways (STH) 21 and 82 have a large volume of truck traffic, which probably travels between I-39 and Juneau County over the only two Wisconsin River bridges in Adams County.
- Several state highways in Adams County are *Designated Long Truck Routes*, which means that the heaviest, longest, and oversized trucks that can legally operate in Wisconsin can use these roads. All of STHs 73, 21, & 82; and STH 13 north of STH 82 are all *Designated Long Truck Routes*.
- State Trunk Highway 13 from STH 82 south is the second highest truck route designation—*75’ Restricted Truck Route*.
- State Trunk Highway 23 is the third highest truck route designation—*65’ Restricted Truck Route*.
- Many seasonal residents and visitors who use CTH Z and visit other lakes throughout the county are pulling boat trailers that are sometimes slightly wider than a car. People know when their car drifts over the line, but should also watch to make sure that their trailer tires stay within the lane too.
- Farm implements (e.g. tractors, combines, etc.) use many of the county highways and town roads. These vehicles are not a large volume of the traffic on any road, but some of them are oversized vehicles that hang over the road shoulder, which makes it difficult for vehicle operators to overtake bicyclists when oncoming traffic exists.

Map 1, *Bikeability of Roads*, illustrates bicycling conditions on county and state highways throughout Adams County. These conditions were determined from four factors: 1. the most recent WisDOT or County Highway Department traffic counts, 2. the percentage of solid yellow centerline along a road segment, 3. the pavement width, including shoulders if paved, and 4. the percentage of vehicle traffic that is large trucks.



Generally, a narrow road up to 22 feet wide with an average daily traffic (ADT) count of less than 460 is “good” for bicycling. That is why most town roads are “good” for bicycling on if they are paved.

Generally, the wider the road, the more vehicle and bicycle traffic it can accommodate, because fewer *triple pass occurrences* (see description in box on page 23) would restrict traffic speed. It is the law in Wisconsin that a motor vehicle must have at least 3 feet between it and a bicycle when passing. Buses are wider than cars, and buses are about 8.5 feet wide; so a car (less than 8.5 feet wide) + 3 feet + a bike + an on-coming car can fit on a road that is 24 feet wide without any of the three vehicles leaving the pavement. The car passing the bike would probably cross the centerline slightly to make room for the bike, while still maintaining room for the on-coming vehicle.

Attachment A shows the WisDOT road evaluation method used for paved roads.

Four bicycle conditions result when analyzing the bikeability of roads (see Map 1):

• Best Conditions for Bicycling (green)	• Moderate Conditions for Bicycling (blue)
• Fair Conditions for Bicycling (orange)	• Poor Conditions for Bicycling (red)

“Road or Highway Suitability For Bicycles, 2012” tables exist for each municipality in Attachment B. Each table lists the traffic count, percent yellow line traffic count adjustment, and pavement width for each road segment. The resulting suitability for bicycles is also listed for each road segment in the tables. These tables provide the data that created Map 1, *Bikeability of Roads*.

Traffic counts came from WisDOT’s 2011 interactive map and WisDOT’s 2008 historical counts. If a segment did not have a 2011 count then the 2008 count was used. Also if a count did not exist, then a traffic count was presumed to be similar to surrounding highways. For determining how much solid yellow centerline a road segment had, NCWRPC used a combination of airphoto analysis and Google Street view to see if solid yellow center line existed for traffic traveling in either direction. For example, if only one direction had a solid yellow line indicating a no-passing zone for one mile, then that whole mile of road was considered to have 100% solid yellow line.

Map 2, *County Highway Year Paved & Paved Width*, makes it easy to see when each highway was paved and how wide the pavement is. An inventory of when each county highway was last paved was created to see how soon changes to pavement width could become part of repaving projects. It costs less to add paved shoulders to an existing highway project rather than just adding the paved shoulders by themselves. The paved width of a county highway includes shoulders and travel lanes. Some roads with high traffic volumes may need 5-6 foot paved shoulders for bicycles to use instead of bicyclists taking a travel lane.

## **B. BICYCLING AND WALKING FACILITIES**

Off-street bicycle and pedestrian facilities are uncommon in the rural areas of Adams County. Each community has their bicycling and pedestrian facilities described below. The Ice Age Trail is still a dream within the county, and is roughly planned to connect Adams & Friendship with Quincy Bluff and continue to Petenwell Lake. See map in Attachment C for the general area where the Ice Age Trail may meander in the future.

Map 3, *Walking & Biking Facilities*, shows where sidewalks and paths exist in both Adams and Friendship.

The WE CAN Committee in Adams County wants to improve resident's health through better nutrition and exercise. *Be Healthy Walking Map* was created by the WE CAN Committee to increase physical activity through walking. The map shows various lengths of sidewalk routes to walk within Adams and Friendship. See Attachment M for map.

**The City of Adams** has an extensive sidewalk network in very good condition with curb ramps throughout. No sidewalk exists to connect the neighborhood south of the railroad tracks with the rest of Adams. Two recent plans for the City address sidewalks, paths, and bike routes, in addition to the comprehensive plan that was created for each community in Adams County, which also states what facilities existed. The *Recreational Trail Plan, 2007*, proposes select sidewalks, multi-use paths, and school trail improvements. The *Adams Downtown Enhancement Strategy Report, 2012*, focuses on the STH 13 corridor within the City. On-street bicycle accommodations and bicycle parking in the sidewalk furniture zone (between sidewalk and curb) are recommended in the 2012 plan.



**The Village of Friendship** has sidewalks along the state and county highways, and on select side streets. Some curb ramps are needed and some sidewalk segments are missing in the Village. See Map 3 for existing paths and sidewalk locations.

**Arkdale** in the Town of Strong's Prairie has wide paved shoulders on STH 21 within part of the community. No paved shoulder is available to access the cemetery or to cross the Big Roche-a-Cri Creek just north of the community. See Figure 2 for existing pedestrian facilities since no sidewalks exist. See Figure 3

**Grand Marsh** in the Town of New Chester has some sidewalks in front of businesses along CTH E with curb ramps. No sidewalk connects the elementary school with adjacent neighborhoods.

Figure 2

Arkdale "Sidewalks"

-  = 8-foot wide paved shoulder  
 = 5-foot wide paved shoulder



Airphoto source: WROC 2010 Statewide 18" Imagery


A variety of additional recreational trails are open to the public throughout Adams County. Many of the signs at the parking areas or directing visitors to the trails are generally in disrepair.

Walking is allowed on all the following trails:

- Along Wisconsin River Power Company land that borders the Castle Rock and Petenwell Lakes;
- Quincy Bluff and Wetlands State Natural Area;
- Dells of the Wisconsin River State Natural Area;
- Leola Wildlife Area;
- Colburn Wildlife Area; and
- Lawrence Creek State Public Hunting Grounds.

Figure 3

## Grand Marsh Sidewalks

P.O. = Post Office  
 = Sidewalk



Airphoto source: WROC 2010 Statewide 18" Imagery

**Town of Rome** has sidewalks that were installed by WisDOT when the STH 13 & Alpine Dr. intersection was reconstructed and traffic lights added. Part of Apache Ave east of 10<sup>th</sup> Ave has a bike lane, but only on one side of the street. STH 13 has 8-foot wide paved shoulders from Apache Ave north to just beyond the Fourteen Mile Creek bridge. Only the standard 3-feet of paved shoulder connect the 8-foot wide shoulders on STH 13 (Figure 4) at Fourteen Mile Creek north to Alpine Drive.

**Town of Quincy** – The CTH Z bridge has a wooden pedestrian bridge (Figure 5) with overgrown path leading up to it on both sides.

**Town of Jackson** – CTH A, from Oak St to CTH EE, has wide shoulders that are intermittently paved.

**Town of Dell Prairie** – STH 13 has a pedestrian underpass (Figure 6) at Chula Vista Parkway. STH 13 has 8-foot wide shoulders from the county line north to just beyond Chula Vista Parkway.

Map 4, *Proposed Bicycle Facilities*, shows where there are intersections of special concern where walking and bicycling facility improvements are needed. The Recommendations chapter identifies what concerns exist and how to fix them.



Figure 4

8-Foot Wide Shoulders, Town of Rome



STH 13, looking north toward Fourteen Mile Creek bridge

Source: NCWRPC

Figure 5

CTH Z Pedestrian Bridge, Town of Quincy



Bridge is south of CTH F by 0.4 miles on CTH Z.

Source: NCWRPC

Figure 6

Pedestrian Underpass at Chula Vista



Source: NCWRPC

## C. CRASH DATA

Safety is often cited as the primary reason people do not bike or walk more. Creating a safer environment for these activities is an important focus that requires an understanding of safety issues and proven actions that can be taken to improve safety. Crashes involving motor vehicles that result in injuries or fatalities to bicyclists and pedestrians have been recorded at the state and federal levels for many years.

Over the past decades, traffic safety experts have been moving away from the term **accident** in favor of the term **crash** to describe a collision. An **accident** is defined as an unforeseen and unplanned event or circumstance. WisDOT made this change in 1990 because traffic crashes are not accidents, but avoidable events caused by a single variable or chain of variables.

Crash data are reported universally for Wisconsin on Form MV400. However, it is important to highlight some shortcomings.

1. Some studies indicate that as few as 10% of all bicycle crashes are reported;
2. Some roads with a higher frequency of bicycle crashes may have higher bicycle use;
3. Very likely that there will be no detectable pattern of bicycle crashes because of the small number reported in rural areas.

The third shortcoming in crash data is evident in Adams County, which is very good news that so few people have been hurt. There were 23 bicycle and pedestrian crashes were reported from January 2005-December 2011. Only two locations in the county had two or more crashes at it:

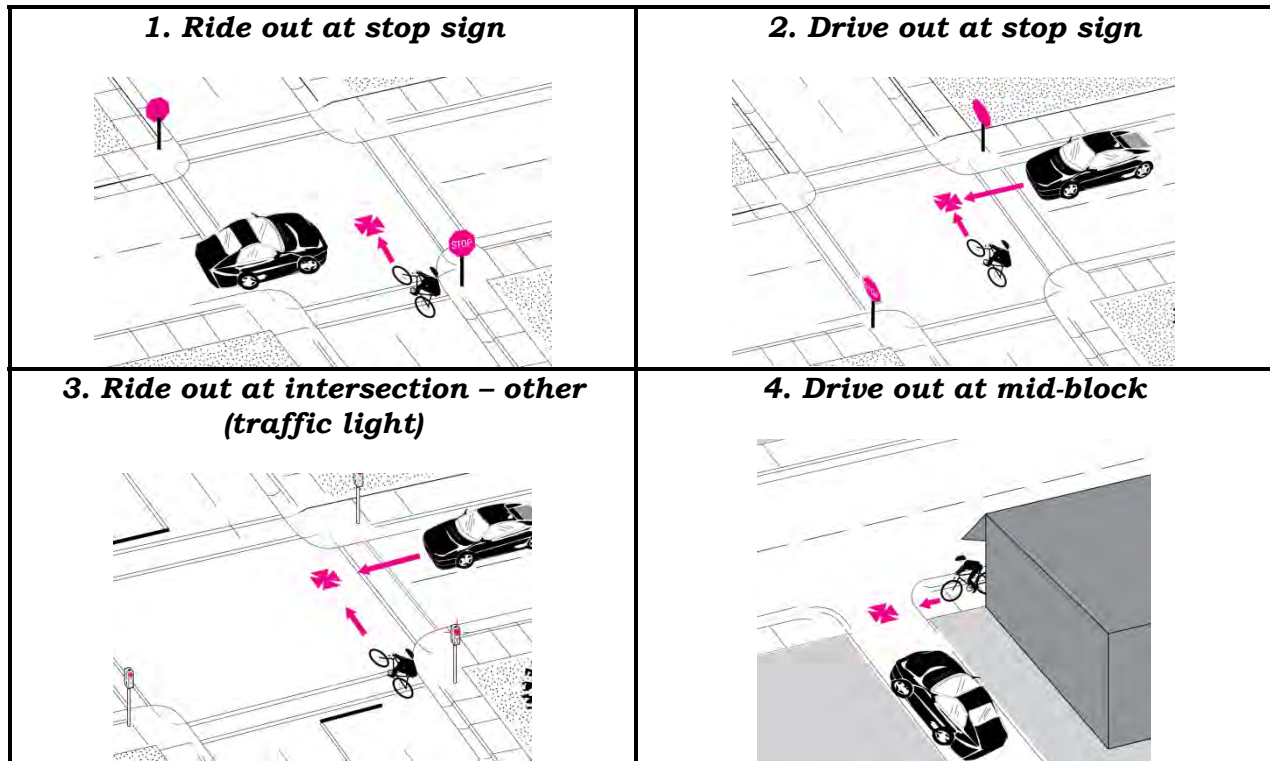
- Main St & North St 1 pedestrian & 1 bicycle crash
- Main St & 2<sup>nd</sup> St 2 pedestrian & 1 bicycle crash

A summary of Adams County crash data collected is in Attachment D.

Since crash data in Adams County is of limited use, due to few accidents, then gaining a better understanding of the specifics involving crashes between bicyclists and motorists is probably the most useful information in addressing safety concerns.

Studies have shown that it is possible to “type” crashes into distinct categories. A study undertaken by the FHWA of crashes involving bicycles and moving motor vehicles in six states has identified 38 different crash types (Appendix D). With a database of nearly 3,000 incidents, there are enough incidents in each crash type to provide a relatively good indicator of where, why, and how most crashes occur. The FHWA study found that the most common crash types were:

- 1.) ride out at stop sign (9.7%)
- 2.) drive out at stop sign (9.3%)
- 3.) ride out at intersection – other (7.1%)
- 4.) drive out at mid-block (6.9%)

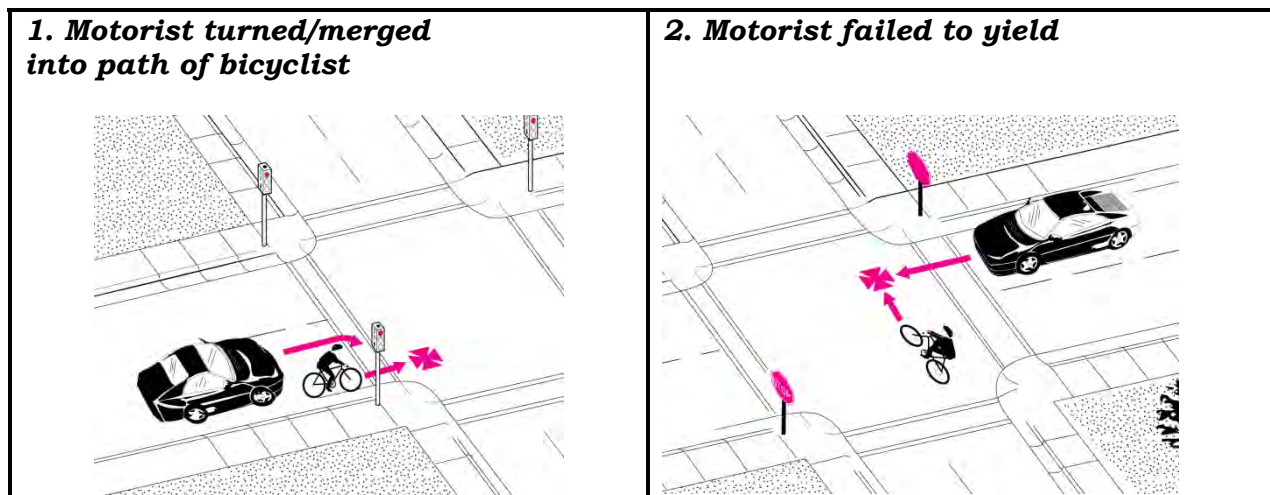


Source: FHWA, Crash-Type Manual for Bicyclists

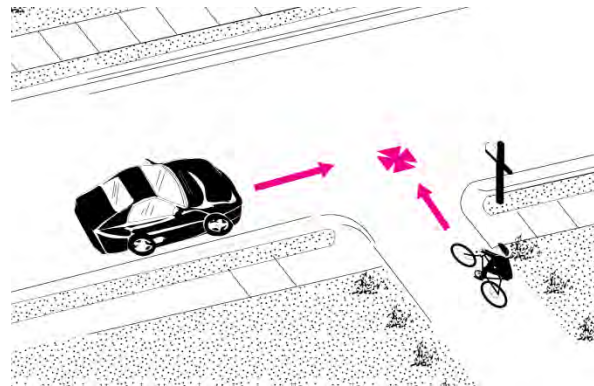
Other nationally conducted studies to “type” crashes involving bicycles include the Cross-Fisher study (1977) and the more recent Hunter/Pein/Stutts/Cox study (1996). The latter segregated the data into fourteen generalized crash types.

The top four bicycle crashes (which together comprised 63% of all bike crashes) were:

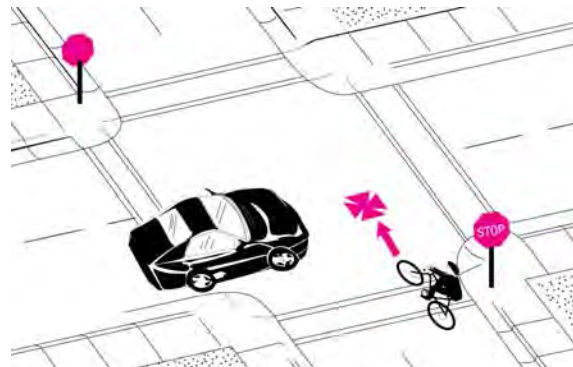
- 1.) motorist turned/merged into path of bicyclist
- 2.) motorist failed to yield
- 3.) bicyclist failed to yield at mid-block (mid-block ride-out)
- 4.) bicyclist failed to yield at intersection (intersection ride-out)



**3. Bicyclist failed to yield at mid-block (mid-block ride-out)**



**4. Bicyclist failed to yield at intersection (intersection ride-out)**

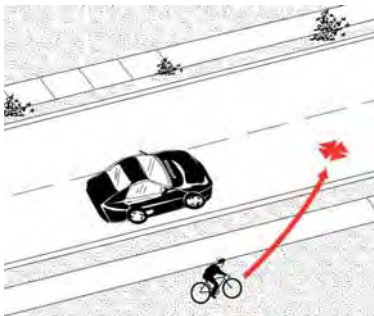


Source: FHWA, Crash-Type Manual for Bicyclists

The three most common crash types involving children:

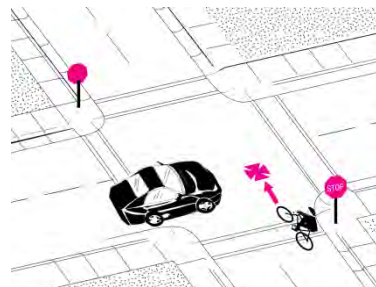
- 1.) bicyclist mid-block ride-out
- 2.) bicyclist ride-out at controlled intersection
- 3.) bicyclist makes unexpected turn or swerves into traffic

**Bicyclist mid-block ride-out**



1. Rides off the curb;
2. Rides out at a driveway;
3. Rides into the road from a gravel shoulder or parking lane.

**Bicyclist ride-out at controlled intersection**



Rides through a stop sign.

**Bicyclist makes unexpected turn or swerves into traffic**

Four common possibilities:

- Left turn: parallel paths, same direction
- Left turn: parallel paths, facing approach
- Swerve left: parallel paths, same direction
- Right turn: bicyclist riding wrong way

Source: FHWA, Crash-Type Manual for Bicyclists



A bicycle crash analysis that was performed for Wisconsin in 2006 (Attachment E) has some major findings that directly affect bicycle planning in Adams County:

- Almost 80% of rural bicycle-vehicle crashes occurred on roadways with posted speed limits of 55 miles per hour. Crashes occurring at such high rates of speed will increase the likelihood of a bicyclist injury or death. This is evident in the higher percentage of rural crashes resulting in fatalities than in urban crashes.
- Four out of the top five crash types indicate that the motorist made the critical error. This may indicate that motorists are not fully aware of bicyclists on the roadway and that increased education is necessary.
- For local rural roads, the greater the width, the lower the bicycle-vehicle crash rate. Twenty foot roadways had a crash rate that was double the crash rate of 22 foot roadways, but the 22 foot roadways had a rate that was over 40% higher than 24' roadways. Overtaking-type crashes were significantly lower for 24' roadways.

Since crash typing provides an indicator of critical errors or actions that likely led to the crash rather than on assigning fault, then potential options for reducing specific types of crashes can be identified. These options include better engineering and design, increased education, stronger enforcement, or a combination. As an example, the most frequent crash type involving children is mid-block ride out. Eliminating on-street parking would be one way (engineering/design) to reduce the incidence of this type of crash; however, educating parents and children to this danger may be more effective and less controversial. Similarly, while there are a number of engineering and design techniques that would be effective in reducing the number of bike crashes involving turning motor vehicles, using educational and enforcement techniques to alert both bicyclists and motorists of this concern should be a complementary strategy. These are but two of a litany of common causes for bike crashes and are cited because they demonstrate that there are multiple techniques that are available for improving safety for both bicyclists and pedestrians. At the same time, they show that having a clear understanding of how, where, and why crashes occur can be a crucial determinant in effectively targeting dollars for safety related improvements.

## **Chapter 3**

### **ROUTE PLANNING**

Motorists can expect to encounter bicyclists and pedestrians nearly anywhere on roadways in Adams County's outlying rural areas, and definitely in Adams and Friendship. These encounters are most frequent where nodes of significant rural development exist, such as the extensive residential and commercial development found along Castle Rock and Petenwell lakes, the lakes region in the Town of Rome, and other lakeshores and riverfronts throughout the county. Roadways in these areas receive particularly heavy use by pedestrians and bicyclists during the summer months and on weekends when Adams County's population swells with an influx of seasonal residents and vacationers. The concentration of cottages and other seasonal residences, resorts, and campgrounds, usually in lake areas, elevates the potential for conflict because, as a group, these visitors have high rates of participation in activities such as walking or bicycling. The safety issue is also magnified by peak traffic volumes at this time, with many of the motorists being infrequent visitors who are relatively unfamiliar with the local road system. For these motorists, the unexpected presence of other roadway users sharing the road surface can result in unanticipated "knee-jerk" over-corrective maneuvers, increasing the risk for themselves as well as pedestrians and bicyclists.

Another important observation of bicycle activity in Adams County is not seeing many bicycle carriers on vehicles at local parks or campgrounds (Adams County Parks Department interview). Therefore, the customers of better bicycling facilities within Adams County include:

- Residents for utilitarian and recreational use;
- Seasonal residents who own a property and want to get around recreationally;
- Adjacent county residents; and
- Occasional formal touring groups (e.g. GRABAAWR);

The bicycling public may increase once facilities near popular recreational destinations are improved.

#### **A. REFERENCE PLANS & LAWS**

Each plan and law listed below affects bicycling facilities in Adams County. See each of these proposed trails segments on Map 4, *Proposed Regional Trails*.

##### ***Complete Streets Law***

Wisconsin's Pedestrian and Bicycle Accommodations law addressing Complete Streets was codified in 2009. It was incorporated as State statute §84.01(35) and later into administrative rule as Transportation 75.

Complete Streets are roadways designed and operated to enable safe, convenient, and comfortable access and travel for all users. Pedestrians, bicyclists, motorists and public transport users of all ages and abilities are able to safely and comfortably move along and across a complete street.

All roads receiving state or federal funding through the Wisconsin Department of Transportation must also accommodate bicycles and pedestrians per this law.

Local governments may pass their own Complete Streets ordinances to cover their own road networks. Specific guidelines related to traffic counts, and if the road is urban or rural, are used in these ordinances to determine whether a sidewalk, path, or lane is needed to accommodate bicycles and pedestrians.

### ***State Trails Network Plan***

This 2001 document clarifies the Wisconsin Department of Natural Resources (WDNR) role and strategy in the provision of all types of trails. The plan identifies a series of potential trail corridors that would link existing trails, public lands, natural features, and communities. This statewide network of interconnected trails would be owned and maintained by municipalities, private entities, and partnerships of the two. Preserving transportation corridors, such as old rail lines, is specifically discussed as a very important strategy in the creation of recreational and alternative transportation corridors.

Three segments are either in or approach Adams County.

#### Segment 18 – Tomahawk to Wisconsin Dells

In Adams County this segment is all of CTH Z and part of STH 13 and River Road.

#### Segment 53 – Wyeville to Mauston to Adams County Hwy Z

This segment uses State Highway 82 to connect Mauston with CTH Z in Adams County.

#### Segment 60 – Ripon to Oxford

This segment uses State Highways 23 & 82 to connect Ripon with Oxford.

A rail corridor does not exist between Oxford and Mauston, so STH 82 would connect Oxford with Mauston. See Map 4.

### ***North Central Wisconsin Regional Bicycle Facilities Network Plan, 2004 Adams County Comprehensive Plan, 2010-2030***

Both of these plans identify the same potential trails. An improvement description was created for each county that trails exist in to facilitate implementation.

These routes are listed as: “2004 Proposed Bike Trails” on Map 4.

### ***Proposed Wisconsin River Scenic Byway***

This is a joint venture by Adams and Juneau Counties via their respective highway departments. When this road designation around the Wisconsin River is complete, then it will be advertised along with all other Wisconsin Scenic Byways.

## **B. PUBLIC PARTICIPATION**

To create bicycle and pedestrian facilities that local residents want, several methods of public participation were used.

May 2012 – All towns in Adams County were notified about this bicycle and pedestrian plan starting. The Bicycle Tune-Up Bill (AB 265, adopted: Nov. 16, 2011) summary sheet that describes what bicycling laws have changed in Wisconsin, and two pocket

reference cards with bicycling and pedestrian laws on them were also enclosed for their use. See Attachment F for Bicycle Tune-Up Bill summary sheet.

August 2012 – NCWRPC staff took a two day tour of Adams County where they:

1. Performed Walk Audits of Arkdale, Brooks, Dellwood, Grand Marsh, and Rome;
2. Interviewed local businesses (e.g. gas stations and bars with a view of the road) about bicycle and pedestrian activity outside their establishment;
3. Conducted interviews with Director Fred Nickel, Adams County Parks Department; City Administrator Robert Ellisor, City of Adams; Village President Tony Sleeman, Village of Friendship; and Theresa Wimann who is UW-Extension staff for the WE CAN Committee; and
4. Took pictures for the plan.

A local Advisory Group of interested residents was established. This group consisted of a variety of engaged residents, who are listed in Attachment G. One of the mapping exercises for this group was to plot their “sphere of knowledge” to find out if most residents in Adams County would be represented by the group (also shown in Attachment G). To cover the rest of the county, NCWRPC staff made presentations at the October 12<sup>th</sup> and 17<sup>th</sup> meetings described below.

September 12, 2012 – Advisory Group Meeting #1 – At this meeting the group was asked what areas the bicycle and pedestrian plan should focus on. Here were their focus areas:

- Adams-Friendship School District cross country routes and running club routes need to be safe (maps in Attachment H).
- All of CTH Z needs to become excellent for bicycling.
- The area near Chula Vista needs to become safe for bicycling.
- Consider both recreational users and utilitarian users when making recommendations.
- CTH J is the preferred east-west bicycle road connecting CTH Z to Adams-Friendship verses CTH F, due to the hospital, fairgrounds, and close proximity on both ends to population concentrations.
- Motorized wheelchairs, lawn tractors, and golf carts are sharing the road with vehicles and bikes, but they are not as visible.

Pictures of each Advisory Group map are located in Attachment G.

October 12, 2012 – Adams County Towns Association – 8 towns were present to hear NCWRPC present the plan’s progress, and NCWRPC mapping exercise (Attachment I) for them to show: pinch points, truck traffic, and existing bicycling and walking. I mailed the mapping exercise to the remaining 9 towns. Several responded.

October 17, 2012 – Adams County Municipalities – 4 communities attended, and I presented the plan’s progress. Most communities were the same as had attended the Oct 12<sup>th</sup> meeting.

October 23, 2012 – Advisory Group Walk Audit of Adams & Friendship – Sidewalk locations and conditions, and pinch points were identified. Auditors walked all roads, observed how children left the grade school, middle school, and high school; and

Advisory Group members interviewed school officials to identify difficult pedestrian and bicycling areas. See cross country and running club maps in Attachment H.

December 17, 2012 – Advisory Group Meeting #2 – An initial plan draft, a series of maps, and a set of goals were reviewed. Feedback received related to tweaking the plan to make it easier to understand, and therefore easier to implement, and the vision and goals were revised. Pictures of each Advisory Group map are located in Attachment G.



Source: NCWRPC

### February 25, 2013 – Lighted Schoolhouse Open House

The Adams-Friendship School District provides a free dinner at their elementary school in the City of Adams every Monday night. NCWRPC staff had plan poster maps on the cafeteria walls and answered questions as people walked through to get their dinner. 79 people received a free dinner and several people reviewed the maps and asked questions. Plan Summaries and public hearing notices were given to everyone who showed interest.

### February 26, 2013 – Local Government Mailing for Public Hearing

Each local government was mailed

- a letter announcing the public hearing;
- a green public hearing announcement in 11x17 poster format for them to post;
- CD-ROM with the full draft plan on it; and
- Plan Summary document.

### March 14, 2013 – Public Hearing

The Public Hearing was called to order at 4:30 p.m. by Highway Committee Chairperson Larry Babcock.

- Fred Heider representing North Central Wisconsin Regional Planning Commission gave a presentation of the proposed Adams County Bicycle and Pedestrian Plan.
- Jack Allen: I fully support this plan, how is this going to happen and how long will it take to get done and reference to County Road Z the paved bicycle accommodations? It would be great to have at least one north-south and one east-west bicycle route established in less than 5 years. Fred Heider referred to long and short term implementations and reference CTH Z when the roads are reconstructed.
- Janet Boddy: Bicyclists and runners/walkers are accommodated in this great plan. I like to think of this plan as adopting a vision to make it more inviting for residents to recreate and become active. We could slow down traffic in some areas, or at least make people aware that others may be bicycling on the same road. There are 100+ members in the runners club. This is a great plan that came from local residents not some bureaucrats that imposed ideas on us. We residents are not made of money, so this plan does not go wild with recommendations, but it will make us stretch to reach every justifiable improvement.
- Everett Johnson: There are many bicyclists that pass my place on County Road J, east of State Road 13 and a 3' wide shoulder would be needed in this area. What kinds of improvements are scheduled for that area? State Road 21 is also heavily traveled with bicycles and pedestrians.
- Barb Morgan: Will you be coming around to towns to show this plan as this is the first she has heard of it and what improvements is planned for gravel roads that are marked as routes? Fred Heider responded that the plan was mailed to towns and there have been two presentations at the Towns Association Meetings.

- Bill Euclide: Was at a town meeting where it was handed out and speed limits were discussed, because just posting a slower speed limit will not change people's behaviors the sheriff's department will have to enforce them.
- Fred Heider: Discussed how towns would be impacted and how the plan may be implemented and coordinated through county so all signs are properly placed at the same time.
- Fran Dehmlow: Who will pay for all of the costs? Fred Heider responded that the local jurisdictions pay for implementation of the bike / pedestrian plan. Addressed safety issues when GRABARR comes to county as the bicycle does legally have full access to the roadway as a vehicle.
- Dan Wysocky: Is there any grant money for funding? Fred Heider responded that there was not any funding in the last [state] budget, possible in future that [federal funding] could be available again for grants.
- Jack Allen: How do we keep this plan moving forward? Fred Heider responded to possibly meet annually to review the plan.
- Florence Johnson: Are there signing requirements? Fred Heider responded yes, must follow the MUTCD standards, there may be areas that can be properly signed as routes now.
- Jack Allen: Volunteer to head up Committee
- Janet Boddy: Should get the plan implemented
- Bill Euclide: Should contact Chamber of Commerce to get involved.
- Fran Dehmlow: Shared that there was at one time a bicycle and pedestrian count done on County Road Z.
- Everett Johnson: Is this County or State wide? Fred Heider responded that is County and discussed trails in other counties.
- Tyler Grosshuesch: Spoke in favor of plan and that he supports it.

Attached to minutes are letters/emails from people that were not able to attend the Public Hearing and wanted their opinion included in the Public Hearing minutes.

No further testimony being offered either for or against the Adams County Bicycle and Pedestrian Plan.

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## C. ROUTE PLANNING CRITERIA & TRAVEL DEMAND

Route designation and roadway bicycle & pedestrian improvements are accomplished with two general sets of planning criteria.

**1** The first set of planning criteria addresses bicycle & pedestrian user demand (**1a**), and reasons behind corridor locations (**1b**) of proposed routes (Map 5). Average trip lengths, and trip origins & destinations are identified below to determine where to place bicycle routes and pedestrian accommodations (e.g. sidewalks, paved shoulders, multi-use trails, & marked low traffic volume streets).

The national average bicycle trip length is 2.31 miles.<sup>1</sup> The national average pedestrian trip length is less than 2 miles.<sup>2</sup> WisDOT through the Safe Routes To School program considers a 2-mile radius around each school as the focus area where walking and bicycling facilities need scrutiny. Adult bicyclists in Adams County are comfortable riding distances longer than 2 miles. Recreational bicycling routes developed locally range from about 3-17 miles round trip (see Attachment J) and NCWRPC interviews identified people riding 8 miles round trip to work (see Attachment K). The Adams-Friendship High School and Middle School each have cross country, walking, and bicycling teams or groups that travel within 3.5 miles of the Middle School for up to a total of 6 mile round trips (see maps in Attachment H).

Based upon the above bicycle and pedestrian trip lengths common in Adams County, then some trip routes are definable. These trip routes show where the heaviest concentrations of pedestrians or bicyclists exist or could exist in Adams County if it is safe to walk or bike in these areas. The intent of the trip route warrants is to increase the number of “interested but

concerned” people choosing to bike or walk in Adams County. Bicycle and pedestrian routes are also chosen based upon a specific road or highway that exists between two large trip generating land uses (see “**Trip Generators**” under **1b**). Recommendations in Chapter 5 identify specific engineering changes necessary within these trip routes to implement this plan’s vision, mission, goals, & objectives (see Chapter 4).

### Trip Route Warrants

1. A heavy concentration of bicyclists or pedestrians that would warrant a trip route to be designated is defined for this plan as about 25 trips or more in one direction on the same road segment.
2. Most direct route, or safest alternative route, between two trip generators for:
  - A. Bicycle trips less than 4 miles one way;
  - B. Cross county bicycle travel generally longer than 5 miles one way; or
  - C. Walking trips less than 2 miles one way.

<sup>1</sup> 2002 National Household Transportation Survey, bicycle trips for social/recreational purposes were taken by Wisconsin residents in 2001, with an average trip length of 2.31 miles (USDOT 2001).

<sup>2</sup> Approximately 40 percent of all trips in Wisconsin urban areas are less than 2 miles according to the 2001–2002 National Household Travel Survey.



### **Trip Route Areas:**

**1a**

1. A two mile radius around each school is where children could potentially walk or bike to school even if the school is in a rural location.
2. All of the City of Adams and the Village of Friendship are locations where people walk and bike.
3. All of the developed rural hamlets of Arkdale, Brooks, and Grand Marsh are where people walk and bike.
4. Active residents in Adams-Friendship run on a variety of local roads up to 3 miles north of Friendship.
5. A-F Middle School and A-F High School Cross Country teams practice on roads within a 3.5 mile radius of the Middle School.
6. Where seasonal or permanent housing exists around lakes and rivers, and where a network of streets surrounds the water body, then these are locations where people walk and bike. A list of such water body residential areas includes:
  - a. “the lakes” area in the Town of Rome;
  - b. all of the coastline along Petenwell and Castle Rock lakes;
  - c. Trout Valley subdivision, with Big Roche A Cri Creek running through it in the Town of Big Flats (T19N, R6E, Sec. 22);
  - d. Big Roche A Cri Lake, Cottonville;
  - e. Peppermill Lake, Goose Lake, Hill Lake, and Parker Lake region of the Town of Jackson;
  - f. Jordan Lake, Town of Jackson;
  - g. Mason Lake, Town of New Haven;
  - h. Fawn Lake, Town of Dell Prairie; and
  - i. The Wisconsin River shoreline, Towns of Springville and Dell Prairie.

**1b**

The Advisory Group in Meeting #2 agreed upon several general reasons for why a route was designated:

1. Need north-south and east-west routes to cross the entire county. State and county highways cover the whole county very well, but routes were picked not just if they were highways. If a highway went directly to a community in an adjacent county, then it was designated as a bike route from the nearest perpendicular county highway in Adams County.
2. Use town roads or county highways that are close and parallel to state highways. All the state highways in Adams County have uncomfortably high levels of truck and vehicle traffic for most bicyclists to ride on a 5 foot wide or less paved shoulder. Therefore, where parallel town roads are too far away, then bicycle and pedestrian accommodations (e.g. bike lanes, off street paths, etc.) are proposed within the state highway right-of-way.
3. Designate a highway or road that connects major trip generating land uses (see **Trip Generators** below) with other trip generators nearby. For example Grand Marsh and Patrick Lake County Park are both considered trip generators. Residents of Grand Marsh would bike to Patrick Lake. A third trip generator includes the Federal Correctional Institution due to employee commutes and institutional deliveries. Since each of these trip generators are less than 4 miles apart along the same road, then CTH E from Grand Marsh to CTH G is designated a bicycle route, and specifically needs bike lanes due to high traffic counts and a large amount of no-passing zones.

**Trip Generators** referenced in #3 above comprise of the following (see Map 6):

- a. County parks, campgrounds, & buttes;
- b. Residential subdivisions;
- c. Urban developments (e.g. Adams, Friendship, Arkdale, etc.);
- d. Neighboring communities (e.g. Oxford, Wisconsin Dells, etc.); and
- e. Major employers (e.g. large resorts, agricultural processing facilities, and schools).

### **Bicyclists Within Adams County**

<b>Who is riding? &amp; -Trip Purpose</b>	<b>Where is their destination?</b>	<b>Does the route need improvements?</b>
Fearless – long distance travel (more than 18 miles)	Desires to cross the whole county.  Uses a bicycle instead of a motor vehicle as often as possible for recreation and utility (to get to work or do shopping) on state and county highways.	State highways already have 3 foot or wider paved shoulders.  <i>No improvements needed if only a couple exist along a road segment at a time. Groups of fearless riders would pose a passing challenge for motor vehicles, and a roadway improvement would be suggested if a road is projected to attract more fearless riders.</i>
Enthusiastic and confident – long distance travel (more than 18 miles)	Desires to cross the whole county.  Uses a bicycle for recreation and utility (to get to work or do shopping) on state and county highways.	State highways in Adams County have too much traffic to ride so close to passing trucks.  1. Wider paved shoulders needed <b>OR</b> 2. Alternative roads that parallel state highways may work.
Interested but concerned – long distance travel (more than 18 miles)	Desires to cross the whole county.  Would use a bicycle for recreation and utility (to get to work or do shopping) on state and county highways if they were safe to ride on.	State highways in Adams County have too much traffic to ride so close to passing trucks.  1. Alternative roads that parallel state highways may work. <b>OR</b> 2. Very wide paved shoulders <b>OR</b> 3. Grade separated paths in highway right-of-ways are needed.

## Children Walking To School

Who is riding? & -Trip Purpose	Where is their destination?	Does the route need improvements?
Interested but concerned (children & parents) - attend school	2 miles from school	<p>Since young children are developing their balance while bicycling, and cannot judge traffic speed very well, then a variety of improvements may be necessary.</p> <p>Perform a Safe Routes To School analysis (separate from this document) at each school to determine what engineering, encouragement, education, enforcement, and evaluation tasks need to be completed.</p>

## Bicycle Commuting

Who is riding? & -Trip Purpose	Where is their destination?	Does the route need improvements?
Fearless - commute to work	Any rural or urban employer throughout Adams County or in neighboring counties.	<p>Cyclists take the lane when a county highway or local road is too narrow for a motor vehicle and bike to share the pavement.</p> <p><i>No improvement needed.</i></p>
Enthusiastic and confident - commute to work	<ul style="list-style-type: none"> <li>Any rural or urban employer that is not directly on a state highway. There are many agricultural processing warehouses that have a lot of truck traffic and employees.</li> <li>Bars generate a lot of vehicular traffic.</li> <li>County parks generate a lot of motorized and bicycle traffic.</li> <li>Schools could generate a lot of bicycle traffic if housing subdivisions are within 2 miles of school.</li> </ul>	<ol style="list-style-type: none"> <li>If a new employer is established that would generate additional traffic, then re-run the numbers for that road segment in the Attachment B table to determine if additional accommodations like 5 foot or wider paved shoulders are now needed.</li> <li>All unpaved parking lots that are adjacent to and directly access paved roads need to be paved a minimum of 15 feet from the edge of the road to reduce the amount of gravel scattered along the road. Or access to the paved road needs to be restricted by guard rails or other permanent barrier and pave driveway per #3 below.</li> <li>All unpaved driveways (except farm field access points) that access paved roads need to be paved a minimum of 8 feet from the edge of the pavement to reduce the amount of gravel scattered along the road, and to prevent bicycling employees and visitors from wiping out while using a driveway.</li> </ol>
Interested but concerned - commute to work		

## Motorized wheelchairs in Village of Friendship

Advisory Group members noticed that motorized wheelchairs were using the roads, and group members want to make sure that all road users are safe. This is less of a concern in the City of Adams because of the extensive sidewalk network in the city.

Who is traveling? & -Trip Purpose	Where is their destination?	Does the route need improvements?
Motorized wheelchair users – library; hospital; grocery, big box stores, convenience stores; and neighbors.	1 mile radius from county courthouse	<b>Friendship's</b> improvements include both engineering and policy changes (see Recommendation chapter).

## Walking Trips

Who is walking? & -Trip Purpose	Where is their destination?	Does the route need improvements?
Residents – utilitarian	<ul style="list-style-type: none"> <li>• All three post offices (Arkdale, Grand Marsh, &amp; Friendship).</li> <li>• Going to school.</li> <li>• Retail &amp; commercial district along Main Street in Adams &amp; Friendship.</li> <li>• Walking about 1 mile to every bar, restaurant, and convenience store.</li> </ul>	<p><b>Arkdale</b> needs bicycle and pedestrian accommodations along STH 21. See Recommendations chapter.</p> <p><b>Grand Marsh</b> needs bicycle and pedestrian accommodations along CTH E. See Recommendations chapter.</p> <p><b>Friendship's</b> improvements include both engineering and policy changes. See Recommendation chapter.</p> <p>Variety of other improvements. See Recommendation chapter.</p>
Residents, tourists, and seasonal residents – pleasure walking	Local businesses and outdoor recreation within 1 mile radius of origin.	Specific pedestrian accommodations are described in the Recommendations chapter.

**2** The second set of bicycle and pedestrian facility planning criteria is used to determine what engineering changes are needed within chosen bicycle corridors to make them safe for bicyclists and pedestrians, and to also provide less conflicts for motorists to encounter. These criteria are helpful when resurfacing a road or deciding when a road may need to be retrofitted to accommodate bicycles, pedestrians, and motor vehicles.

Reducing incidences of *triple pass occurrences* on state, county, and local roads is the reason why Adams County will use a modified version of the Road Evaluation Method that is found in Appendix A of WisDOT's Wisconsin Rural Bicycle Planning Guide.

#### **TRIPLE PASS OCCURRENCE**

A *triple pass occurrence* is when a bicycle, and oncoming motor vehicle, and an overtaking motor vehicle arrive at the same lateral section at the same time.

The basis for using the Road Evaluation Method is the concept that every rural road is capable of accommodating one bicycle and one motor vehicle occupying the same lateral road section at the same time. The *triple pass occurrence* conflict comes when a combination of the following occurs:

1. the frequency of triple pass occurrences is too high
  - a. due to high motorized vehicle traffic volume; or
  - b. due to high bicycle traffic volume
2. the frequency of no passing zones is too high

The state law was changed on November 16, 2011 to allow vehicle operators to pass slow moving vehicles (bicyclists included) across a solid yellow line when it is safe to do so (see Attachment F).

NCWRPC did not create a modification to the Road Evaluation Method, because paved shoulders are part of the total pavement width used in the evaluation. It can be presumed that a 36-foot wide paved road only has enough room for 2 lanes of traffic and paved shoulders that may or may not be separated with a solid white fog line; so no modification was deemed necessary to create the tables in Attachment B that created Map 1, *Bikeability of Roads*.

The **Road Evaluation Method** used is located in Attachment A of this plan.

## **Chapter 4**

### **MISSION, GOALS, & OBJECTIVES**

The following mission, goals, and objectives were created by the Advisory Group and NCWRPC based upon the Advisory Group identified focus areas on page 19 (1a & 1b).

#### **MISSION:**

*Develop a transportation system that is safe and easily accessible by bicyclists, walkers, runners, and motorized wheelchairs, in addition to motorized vehicles, by establishing a county route network, appropriate policies, and best practices to bring all streets up to a comfortable level of compatibility.*

**GOAL 1. Make All Roads Safe To Walk Or Bike.** All roads in Adams County are available for people to walk and bicycle on. Some roads are dangerous or very uncomfortable to walk or bicycle on, and therefore need alternative routes or the road right-of-way needs some other accommodation to make it safe for all users.

Objective 1.1 – Identify high priority county highway segments for bike lanes.

Objective 1.2 – Identify very hazardous road segments for prioritization so that basic improvements can be scheduled to make those segments much safer to use.

Objective 1.3 – Identify pinch points where bicycling could be very dangerous due to predictable and observable hazards.

Objective 1.4 – Add bicycle accommodations (usually bike lanes) on all state and county highways within a 2-mile radius of the A-F Middle School. Runners will use these paved shoulders to stay out of traffic. Routes may change over time, so it is important that all collector and arterial roads are safe to use.

Objective 1.5 – Sign bike routes so drivers become aware to share the road with bicyclists.

Objective 1.6 – Create better outdoor recreation wayfinding and trailhead signage.

**GOAL 2. Provide Bicycle Parking.** Everyone who owns a bicycle has a place to securely park it at home, but many destinations do not provide secure bicycle parking.

Objective 2.1 – Provide bicycle parking guidance through fact sheets to all employers.

**GOAL 3. Provide Safe Routes To School.** This is an opportunity to make walking and bicycling to school safer for children in grades K-8, and to increase the number of families who encourage their children to walk and bike.

Objective 3.1 – Apply for Safe Routes To School assistance for each school.

## **Chapter 5**

### **RECOMMENDATIONS**

Plan support and endorsement both by public officials and residents alike will greatly enhance the potential that key policy based recommendations related to bicycle and pedestrian issues will be implemented. These recommendations are seen as an important first step in promoting uniform bicycle and pedestrian facility decisions throughout the county.

In addition to policy-based recommendations, NCWRPC created engineering and education recommendations too. Where possible, the recommendations have been developed to establish priorities for undertaking specific actions. This will help decision-makers understand the value of their actions within the broader context of Adams County's overall pedestrian and bicycle network.

The cost-effectiveness of physical improvements often can be influenced by when, where, and how specific projects are undertaken. For example, adding paved shoulders to a larger road project is less costly than paving the shoulders as a "stand-alone" project. Similarly, since rural roadways with traffic volumes under 400 vehicles per day are generally considered acceptably safe for bicycling, expenditures for paved shoulders or an off-road trail on a parallel highway to such a low volume road would be difficult to justify.

#### **A. IMPLEMENTATION**

The recommendations on the following pages will identify an implementation schedule for each one. County trunk highway routes should be addressed for improvement when they are scheduled for repaving, or reconstruction. The following guidance for how soon a recommendation could occur is listed by each specific recommendation:

- Short-range (less than 5 years)
- Intermediate (5 to 10 years)
- Long-range (more than 10 years)

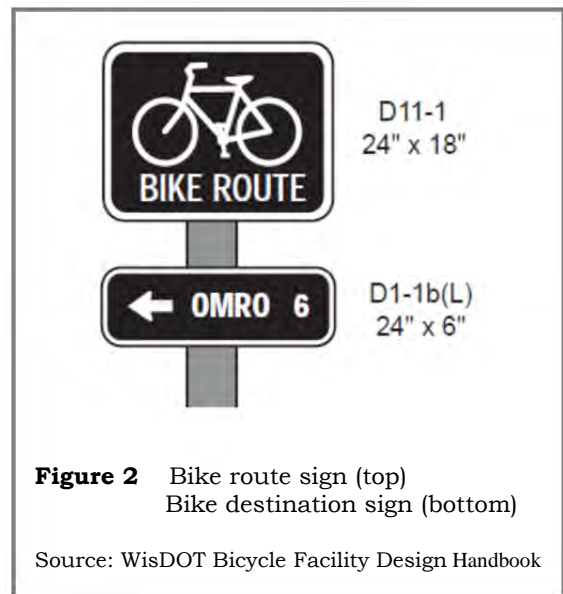
It is important to note that implementation is heavily reliant on the availability of sufficient funding and the attainment of right-of-way. Specific infrastructure recommendations need to be further developed at the time a project is undertaken. Routing will also be dependent on the physical characteristics of the location to be developed.

## B. COUNTYWIDE RECOMMENDATIONS

### 1. Route Wayfinding Signs

Review if a designated bicycle route (Recommendation #4) needs upgrades, or has “favorable conditions.” Once the upgrades are done, or favorable conditions exist, then install signs. “Favorable conditions” is defined for Adams County as having “good” or “moderate” conditions on Map 1 (Attachment B tables); so a bike route with favorable conditions may be signed. If a road is not rated on Map 1 for bicycling conditions, then use Attachment A to determine the rating.

Bike route signs should always be accompanied with supplemental plaques that indicate the route's end point and/or the route's name. Showing mileage to a particular destination is also recommended (Figure 2).



Always follow MUTCD standards (Section 9B.01 – Application and Placement of Signs), including mounting height and lateral placement from edge of path or roadway. Additional standards and guidance are found in Section 9B.20 – Bicycle Guide Signs. In some cases, WisDOT has chosen how to use MUTCD standards, and so WisDOT’s guidance supersedes the MUTCD.

Consider reconvening the Advisory Group or ask the WE CAN Committee to work with the Highway Department on choosing wayfinding sign types, colors, and what the routes should be called, or what end community should be listed. Once the route signs are made, then other groups could coordinate sign installation and making tourism style bicycle maps for public use.

Use the WisDOT regional bike and pedestrian coordinator as a resource for planning and designing bike and pedestrian facilities on state and federally funded projects.

### 2. Bicycle Parking

Installing bike racks by each business (both rural and urban), or conveniently located in a commercial district, would provide secure parking for residents and visitors.

A set of bicycle parking recommendations from the Association of Pedestrian and Bicycle Professionals (APBP) is included in Attachment L. The amount of space needed for a bike rack, and how to determine good bike rack designs are included in those guidelines.

Warehouses, and other employers, may choose to use a closet or create a fenced in bicycle parking area within their building for employees to store their bikes.



Some considerations:

- Will the bicycle be secure in the storage area?
- Will anyone with a bicycle in the storage area be able to get their bike out without tipping over the remaining bicycles in the area?
- Is there a shower facility available for bicyclists to clean up in? A shower is not required, but some riders may need it to maintain their professional appearance to customers.

### **3. Safe Routes To School**

School district to work with WisDOT and NCWRPC to perform a Safe Routes To School analysis (separate from this document) at each school to determine what engineering, encouragement, education, enforcement, and evaluation tasks need to be completed.

### **4. Designate Bike Routes**

All of the proposed bike routes on Map 5 and recommended improvements on Map 6 will need County Highway Department coordination.

Each proposed bike route becomes a bike route when the County Highway Committee:

1. Officially designates by ordinance one of the segments or part of a segment named below (e.g. Segment 1) per WI State Statute 349.23; and
2. Installs bike route signs (see recommendation: “Route Wayfinding Signs”).

A bike route may be officially designated when there are “favorable conditions” for bicycling. If a route is inherently dangerous, then it should not be officially designated until it becomes acceptable to bicycle on. “Favorable conditions” is defined for Adams County as having “good” or “moderate” conditions on Map 1 (Attachment B tables); so a bike route with favorable conditions may be signed. If a road is not rated on Map 1 for bicycling conditions, then use Attachment A to determine the rating.

When scheduling a repaving project, check to see if it is a designated segment on the list below (Map 5), then check Map 6 for the recommended improvement. If no improvements are noted on Map 6, then follow Recommendations 5 through 10 as applicable.

#### *Segment 1 – CTH Z to Plainfield*

A combination of bike lanes and bike route designations will make this route safe to use and connect residents in the Town of Rome’s lakes area with local commercial establishments along with Owen Rock and Plainfield. Segment 1 uses all of Alpine Drive and all of CTH D.

#### *Segment 2 – Rome*

All of the residential streets empty their traffic onto these collector streets. For that reason, seasonal traffic is high and 6-foot wide paved bike lanes are recommended. Since these roads are slower, then paving a 5-foot shoulder on an 11-foot wide travel lane with a solid white strip separating the travel lane from the paved shoulder is also acceptable. All of Apache Ave and 8<sup>th</sup> Ave between CTH D and Apache Ave make up Segment 2.

### *Segment 3 – Wisconsin River*

This route includes all of CTH Z, part of STH 82, part of STH 13, and finishes on River Road. Creating bike lanes on CTH Z connects a variety of residential and recreational areas together. State Highway 82, from CTH Z to STH 13, should have an off-street path on the north side so bicyclists using Segment 3 will not need to cross at the uncontrolled CTH Z & STH 82 intersection at the Wisconsin River Bridge. If an off-street path is provided on State Highway 13, between STH 82 & River Road, then place the path on the east side to connect all the rural residential areas and the various roads that make loop bicycle routes. South of Chula Vista resort, River Road meanders through sandstone buttes that are close to the road. The park road up Rib Mountain in Wausau was reconstructed recently to include a bicycle and pedestrian trail parallel to the road. Maybe an off street path would work along all of River Road.

### *Segment 4 – State Highway 13*

If STH 13 is not going to be repaved within 10 years, then designate the town roads marked on Map 6 as alternatives to using STH 13. Some segments of STH 13 already have 5 foot paved shoulders, which accommodate bicyclists well. Because of the 55 mph speed on STH 13, then consider permanently using the town roads and paving bike lanes on STH 13 where recommended on Map 6. Several of the parallel town roads are too far out of the way for residents to bike to work, so that is why bike lanes on STH 13 are recommended (Town of Big Flats residents to STH 13 & 21 intersection for employment).

### *Segment 5 – County Highway G*

Not much is needed for upgrades along CTH G. On the scenic stretch of CTH G between CTH J and CTH M, the recommendation is to pave at least 5-foot shoulders, because a bicyclist may drift while they take in the scenic buttes.

### *Segment 6 – Necedah to Hancock*

Instead of taking CTH C the whole way, this route starts on CTH C from Hancock, then south on CTH G to either Chicago Ave & 4<sup>th</sup> Ave to Cottonville Avenue, or a little farther south on CTH G to Cottonville Ave to 3rd Dr to Chicago Ln to Cottonville Avenue. When this segment on Cottonville Ave meets CTH Z, then it uses CTH Z to Cottonville Dr to STH 21 into Necedah. This segment is proposed to exist on a grade separated path next to STH 21. Points of interest include the rustic road and Big Roche-A-Cri Lake.

### *Segment 7 – Necedah to Coloma*

While STH 21 is the straightest path between these two communities, if STH 21 was used then off-street 10-foot wide path would be needed. To save WisDOT money and provide a more scenic and less stressful trip, the recommendation is to mark a variety of town roads as alternatives to STH 21. Those town roads include Cypress Ave, 20<sup>th</sup> Ave, Cumberland Ave, and 22<sup>nd</sup> Avenue. Connecting these town roads with small parts of STH 21 that will have 10-foot off-street paths on them will complete the route. Adding 6-foot wide bike lanes on STH 21 from Arkdale to STH 13 provides a direct route for employment access.

### *Segment 8 – Arkdale*

A variety of Town of Strongs Prairie roads connect Arkdale to the north and south alternatives to STH 21 (Segments 6 and 7). The Town of Strongs Prairie roads that

make up this segment include: 16<sup>th</sup> Ave, 16<sup>th</sup> Ct, 17<sup>th</sup> Ave, Cree Dr, and STH 21 from Arkdale to STH 13.

*Segment 9 – Dellwood to Adams-Friendship to Coloma*

All of CTH J, part of CTH G, all of CTH CC, and part of CTH CH (in Waushara County) north into Coloma are the roads that make this segment.

“Long range” project: On CTH J from STH 13 to CTH Z, construct a 10-foot wide off-street path within the CTH J right-of-way. The Advisory Group and Highway Committee both expect either CTH J or CTH F to have extensive bicycle traffic once a preferred route was chosen between Adams-Friendship and CTH Z. CTH J is the chosen route, because it is a shorter distance between population centers. Other improvements to this route are within the Village of Friendship and shown on the inset map on Map 6.

“Intermediate” project: As a faster way to provide bicycle and pedestrian accommodations on CTH J, between STH 13 and CTH Z, it is recommended to provide bike lanes on this stretch of CTH J.

*Segment 10 – Adams-Friendship to Castle Rock*

This combination of STH 13 out of A-F and all of CTH F provides a direct link to Quincy Bluff and Wetlands State Natural Area, a residential subdivision, Castle Rock County Park, and the southern end of Dellwood.

*Segment 11 – Quincy Bluff to Grand Marsh to Westfield*

County Highway E from STH 13 to Westfield is one option; or CTH E from Westfield through Grand Marsh to CTH B, then south to Edgewood Ave, then west to 11<sup>th</sup> Ave, south to Edgewood Dr, and west to 14<sup>th</sup> Court where Quincy Bluff and Wetlands State Natural Area is available. 11<sup>th</sup> Avenue is also the STH 13 alternative route to riding on STH 13.

*Segment 12 – Castle Rock to Oxford (North STH 82 Alternative)*

Two reasons for this route are 1. to connect the various points of interest on this route, and 2. to avoid riding on STH 82 to get to Oxford. Points of interest include: Quincy Bluff, Easton Mound, Easton Park, Rustic Road 14, the community of Brooks (CTH G & CTH A) and the lakes in the Town of Jackson, along with arriving in Oxford. State Highways 82 and 21 in Adams County carry very high volumes of truck traffic because they are traveling over the two Wisconsin River bridges in the whole county. Chapter 1 of this plan describes the 4 types of cyclists. Only "fearless" cyclists may not have a problem riding on a paved shoulder next to extensive truck traffic. Most people ("interested but concerned") would prefer this route as the North STH 82 Alternative, with Segment 15 being the South STH 82 Alternative. A combination of county and state highways eventually connects to Oxford from this part of Adams County. This route starts on CTH H at CTH Z. All of CTH H and most of CTH A make up this route, with connections on STH 13, Rustic Road 14, CTH B, and all of CTH EE, including a spur of CTH EE to connect with CTH G per Map 5.

#### *Segment 13 – Mauston to Oxford*

Two DNR State Trails use STH 82 up to the east and west county borders (See Map 4). Connecting these two trails via bike lanes on STH 82 just makes sense. The alternative routes would either be allowing a 5-foot paved shoulder, or directing through bicyclists to Segment 12 to the north of STH 82 or to Segment 15.

#### *Segment 14 – Wisconsin Dells to Briggsville*

A few local roads leading out of Wisconsin Dells connect with STH 23 to access Mason Lake for a direct lower volume route. The route uses River Road out of downtown to Waubeek Rd to Gulch Ave, which then connects to either 5 foot paved shoulders or an off-street path on the west side of STH 23, north to CTH B. Now either 5 foot paved shoulders, or a continued off-street path are recommended for STH 23 from CTH B, east to Briggsville.

#### *Segment 15 – CTH Z to Oxford (South STH 82 Alternative)*

State Highway 82 in Adams County carries very high volumes of truck traffic because it has a Wisconsin River bridge. Most people ("interested but concerned") would prefer this route as the South STH 82 Alternative. A combination of town roads and CTH I make a direct route to Oxford from this part of Adams County. This route starts at two points on CTH Z at Fur Ln and 13<sup>th</sup> Ave, and both roads join at Fur Ln to use Fur Avenue, which connects to CTH I into Oxford.

### **5. Any County Highway**

When scheduling a repaving project, check to see if it is a designated segment on Map 5 and review the Segment text (page 28-32) for that highway, then check Map 6 for the recommended improvement. If no improvements are noted on Map 6, then follow Recommendations 6 through 12 as applicable.

## 6. Blind Highway Curve Recommendation



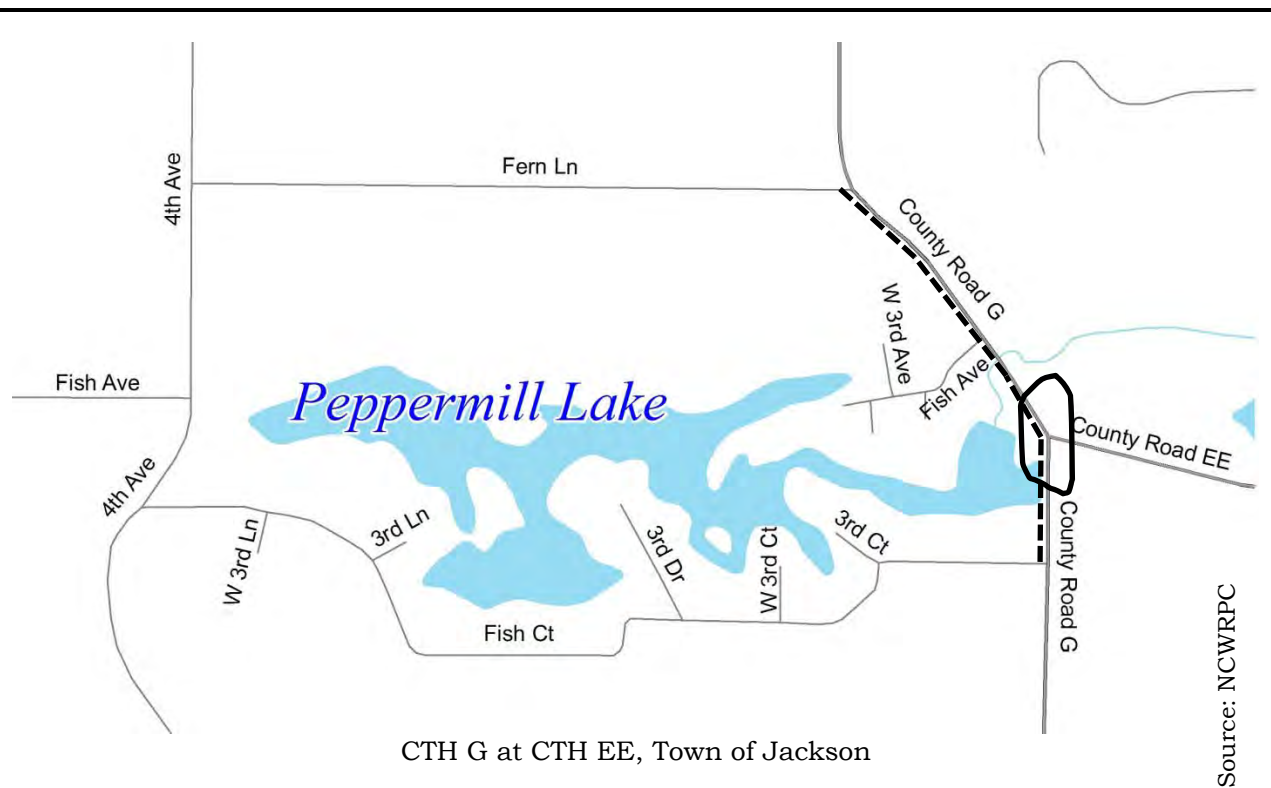
Source: NCWRPC

Heading north in blind curve  
CTH G at CTH EE

The whole length of lane that is marked with a solid yellow line will not need a paved shoulder on road segments that are rated: “fair” or “poor”. Each yellow line segment will need an engineering judgment to determine when it would not usually be safe to pass a bicyclist traveling at 20 mph or less. Then in that non-safe zone pave:

1. at least a 3 foot shoulder if the lane curves to the left; or
2. at least a 5 foot shoulder if the lane curves to the right; or
3. at least a 6 foot shoulder if it is an uphill segment, with at least 5 foot shoulder on the downslope until the road levels out.

## 7. Sidewalk Alternative Recommendation



--- See options below for creating a walking surface.

○ Blind zone. Pave both sides.

Options for a paved shoulder to also act as sidewalk:

Note: A paved shoulder on one side of the highway can only allow pedestrians to walk against traffic [Wis. Stats. 346.28(1)]. Either paving both shoulders, or creating a sidewalk or grade separated path will allow pedestrians to get to and from their destination.

1. Pave 5 foot shoulders on both sides of highway.
2. Pave a 5 foot grade separated path, or concrete sidewalk, at least 5 feet from the edge of the road.

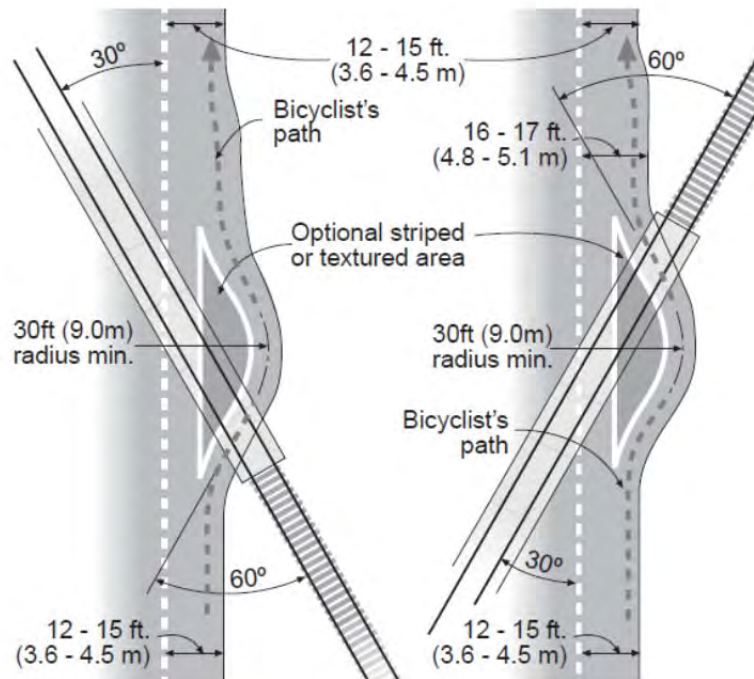


## 8. Railroad Bike Crossing Recommendation



Source: NCWRPC

Recommendation: When the railroad tracks are not perpendicular, then add the appropriate amount of shoulders per the graphics below during repavings of road segments rated “fair” or “poor”:



Source: WisDOT, Wisconsin Bicycle Facility Design Handbook

## 9. Bridge Recommendation



STH 13 bridge over Big Roche-A-Cri Lake, Cottonville

All new bridge structures should be constructed to provide adequate width for simultaneous use by motor vehicles, bicycles, and pedestrians. Provide enough deck width to add sidewalks and bike lanes on both sides. Paving the whole bridge deck and painting a solid white line to delineate the wide shoulders outside of the travel lanes instead of adding sidewalks is acceptable.



## 10. Bicycle Recommendation For Highway Adjacent To New Employer



Source: NCWRPC

If a new employer is established that would generate additional traffic, then re-run the numbers for that road segment in the Attachment B table to determine if additional accommodations like 5 foot or wider paved shoulders are now needed.

If a road segment with a new traffic count will change a road to a “fairly” or “poorly” suitable road for bicycles, and if this road is not already designated for any improvement on Map 6, *Proposed Bicycle Facilities*, then pave at least 5-feet of both shoulders. If that same road segment is designated as a route then pave a bike lane.

## 11. Gravel Parking Lots & Driveways Recommendation



Source: NCWRPC

Gravel parking lot is directly accessible at each parking spot from highway.

All unpaved parking lots that are adjacent to and directly access paved roads need to be paved a minimum of 8 feet from the edge of the road to reduce the amount of gravel scattered along the road. Or access to the paved road needs to be restricted by guard rails or other permanent barrier and pave driveway per below:

All unpaved driveways (except farm field access points) that access paved roads need to be paved a minimum of 8 feet from the edge of the pavement to reduce the amount of gravel scattered along the road, and to prevent bicycling employees and visitors from wiping out while using a driveway.

## 12. Physical Fitness Road Improvements

Both the Adams-Friendship High School and Middle School have cross-country teams. Attachment H shows the routes that were used in the 2012-2013 school year.

Goal 1 (page 24) is *Make All Roads Safe To Walk or Bike*. Objective 1.4 requests that all highways within a 2-mile radius of the middle school have bike lanes on them to make roads safer for high school and middle school teams to use. Routes change, so this radius will cover most roads used for these teams.

**Overall Recommendation:** On roads that rate as “fair” or “poor” for bicycling (see Map 1), make improvements to accommodate bicyclists and pedestrians.

**County Recommendation:** Add bike lanes\* to CTH M from 11<sup>th</sup> Ave to Walker St.

**City Recommendation:** Add bike lanes\* to Deerborne Avenue from 11<sup>th</sup> Ave to Pierce St.

**State Recommendation:**

1. Mark bicycle accommodations on STH 13 between Family Affair restaurant and CTH J;
2. Make the crosswalks more pedestrian friendly on STH 13 at CTH J and at Mound View Dr;
3. Revise speed limit to 35 mph on STH 13 from Mound View Dr north to Dakota Blvd.

Time frame: Long term, because each improvement may be done with a road resurfacing.

\*Use the Wisconsin Bicycle Facility Design Handbook (WisDOT) and the WisDOT Facilities Development Manual when designing the bike lane.

### 13. STH 21 & STH 82 Wisconsin River Bridges Recommendation



State Highway 82 bridge over the Wisconsin River.

Both state highway bridges over the Wisconsin River are inadequate to walk or bicycle across. No shoulder wide enough and no sidewalk exist on either the STH 21 or STH 82 bridges.

Long term recommendation: When bridge deck is replaced, add enough space on new deck to accommodate a two-way bicycle and pedestrian multi-use path separated from the traffic lanes with a Jersey barrier. In winter this multi-use path could be used as a snowmobile path. Also have enough bridge deck to create 5-foot wide shoulders for winter bicyclists to use when the multi-use path is a potential snowmobile path. Additional bridge deck may be needed for on-bridge snow storage while plowing, so that 5-feet of the shoulder is clear to use by bicyclists.

## 14. Maintenance Sign Recommendation



Source: Google Street View



Move road work sign partially off of paved shoulder.



## 15. Road Maintenance Recommendation



Alligator cracking road  
Soon potholes will develop (as seen)



Prompt removal of road kill



Edge patching may cost effectively extend the road life to accommodate bicycles and motor vehicles.



Maintain gravel edge to reduce bicycles tipping as they use the shoulder for safety

Maintain travel lanes, but especially maintain the shoulder on all roads marked on Map 5 as bicycle routes.

All pictures source: NCWRPC

## **16. Communitywide Bicycling Education**

Every road in Adams County is available for bicyclists to ride on. The bicycle is defined as a vehicle [340.01(5)]. The bicyclist is granted the same rights and is subject to the same duties as the driver of any other vehicle [346.02(4)(a)]. Figure 1 on page 3 shows that 60% of bicyclists are “interested but concerned” about their vulnerability riding with traffic. Teaching motorists to share the road and teaching bicyclists to ride safely will go a long way to helping everyone share the road.

Time frame: Short term.

### **1. Establish recreational rides**

One way to inform is through doing. Setting up bike rides creates excitement about bicycling, and improves a person’s confidence when riding with traffic. Group rides are more visible to a motorist than a single bicyclist, which makes riding safer. This could be a regular weekly or monthly occurrence, or a few large events with “waysides” every few miles.

### **2. Wear helmets**

Over half the bicyclists observed in Adams County were not wearing a helmet. Encouraging more people to bicycle AND wear their helmet will save lives and injuries.

Possible encouragement activities:

1. Requiring everyone on organized recreational rides to wear a helmet will start the habit.
2. Organizing bicycling events at each elementary school and requiring everyone to wear their own or provided helmets will re-enforce their importance.
3. Create annual Bike To School days or other bicycle instruction days with the option for kids to receive free or at-cost helmets.

### **3. Mass education**

Official bicycle routes are new in Adams County, so a refresher course on motorists sharing the road with bicyclists, and bicyclists understanding how to ride on the road are needed.

Possible educational opportunities:

1. Tax bill stuffers for residents who live in an area where a route is signed;
2. Town hall posters for annual meetings;
3. Information created for Castle Rock County Park and Petenwell County Park visitors;
4. Road sign reminders to share the road where appropriate.

## 17. Traffic Calming To Reduce Speed



SOURCE: FHWA

Experimental transverse markings

Speed management is a significant challenge for most communities in the United States. This is particularly true for small, rural communities where the main roadway through the town serves a dual role. Outside the town, the roadway provides high-speed travel over long distances; within the built-up area, however, the same roadway accommodates local access, pedestrians of all ages, on-street parking, bicycles, and the many other features unique to the character of a community. This convergence of roadway purposes presents both an enforcement challenge for the community and a potential safety problem for the public.

Addressing the issue through law enforcement alone often leads to temporary compliance at a significant cost. A more permanent way to reinforce the need to reduce speed is to change the look and feel of the road by installing traffic calming treatments that communicate to drivers that the function of the roadway is changing. Traffic calming has been evaluated and used extensively within low-speed urban areas in the United States but less so in rural areas where driver expectations and traffic characteristics are different.

Traffic calming measures such as colored pavement, physical lane narrowing, signing, and landscaping are often combined. A gateway treatment to the road entering a community is intended to evoke lower speed, and is usually followed by a series of other measures repeated throughout the community to encourage drivers to maintain appropriate speeds. Traffic calming has reduced the total number of accidents by 50 percent and injury accidents by 25 percent or more in many communities.

**Recommendation:** County Highway Department, Sheriff's Department, and Town Board to work together to solve speeding issues on local roads and county highways.

**Time frame:** Short to long term depending on what type of traffic calming is needed. Paint & signs is short term, while modifying a road's design will take much longer.

## **18. Intersection Specific Bike & Pedestrian Recommendations**

Refer to “” on Map 6

1. Town of Rome – At STH 13 & Apache Ave, it is difficult for pedestrians and bicyclists to cross STH 13.
  - Recommendation: WisDOT to create an underpass on the north side of Apache Ave under STH 13.
  - Timeline: “Intermediate.”
2. Town of Monroe – It is difficult to walk along Bighorn Drive from Petenwell County Park to CTH Z.
  - Recommendation: Determine if enough right-of-way exists to create two 10-foot travel lanes and a 5 foot wide sidewalk that is separated from the road with a curb. Adding at least a 5 foot buffer between the road and the sidewalk would be better than just a curb though.
  - Timeline: “Long term” — determining how to design and build the path/sidewalk.
3. Town of Richfield – Intersection of STH 21 & 4<sup>th</sup> Ave. – Off-street bike path is on south side of STH 21, east of 4<sup>th</sup> Ave, and north of STH 21 from 4<sup>th</sup> Ave to Ship Rock wayside. This intersection will need WisDOT review to design a safe bicycle and pedestrian crossing.
  - Timeline: “Long term” until STH 21 is resurfaced.
4. Village of Friendship – Three intersections need review. Recommendations are listed for each intersection under “Village of Friendship.”
  - Timeline: “Short term” – paint is inexpensive, but median crossings may be “intermediate” term because they could occur when STH 13 is revised with the City of Adams modifications.
5. Town of Quincy – A series of pedestrian and bicycle accommodations are described in the recommendations listing for “Town of Quincy.”
  - Timeline: “Long term” – design and engineering will be necessary to create the network.
  - Timeline: “Short term” for the pedestrian bridge, because some path reconstruction and fencing are needed to make the bridge usable.
6. Town of Easton – On CTH E, the piece of road that is also named 11<sup>th</sup> Avenue.
  - Recommendation: Pave 5-foot shoulders on both sides of CTH E/11<sup>th</sup> Ave. as a stand along project when ready to establish Section 4.
  - Timeline: “Intermediate” — budgeting and coordination will take time.
7. Town of Jackson – On CTH B between CTH I and Fur Avenue.
  - Recommendation: Pave 5-foot shoulders on both sides of CTH B as a stand along project when ready to establish Section 15.
  - Timeline: “Intermediate” — budgeting and coordination will take time.
8. Town of Jackson – At CTH G & CTH EE.
  - This is a blind intersection and a popular walking stretch for seasonal residents in this area.
  - Timeline: “Short term” if the right-of-way just needs paved shoulders to make it safer, but “intermediate-long term” if shoulder reconstruction is needed to support a sidewalk.



## C. RECOMMENDATIONS BY MUNICIPALITY

Arkdale (Town of Strong's Prairie) Recommendations			
Recommendation	Responsible Agencies (Lead entity in bold)	Funding Source	Time Frame
Pedestrian crossing over Big Roche A Cri Creek. Possibly use snowmobile bridge in summer until road bridge is re-surfaced and shoulders are widened to accommodate pedestrians.	<b>Town</b> , Adams County Parks	WisDOT Trans. Alt. Grant, Town	Short term for snowmobile bridge & long term for road bridge
6 foot or wider paved shoulders on STH 21 from 1,056 feet north of Cree Dr, south & east to 16th Ave.	<b>WisDOT</b> , Town	WisDOT repaving project	Long term, road was paved in 2010

Grand Marsh (Town of New Chester) Recommendations			
Recommendation	Responsible Agencies (Lead entity in bold)	Funding Source	Time Frame
Install crosswalks across CTH E at Ash St.; Miller St.; and Charles St.	<b>County Hwy</b> , Town	Hwy budget	Short Term
6 foot or wider paved shoulders on CTH E from Ash St to 400 feet west of Oak Street. Also add a railroad bike crossing (Fig. 8).	<b>County Hwy</b> , Town	SRTS, or Hwy budget	Long Term, hwy last paved in 2005
A sidewalk connecting Grand Marsh Elementary with the existing sidewalk along CTH E to the west.	<b>Grand Marsh School</b> , Town	SRTS, School Dist, or Town	Medium Term

### Village of Friendship:

Sidewalks with ramps exist on all state and county highways.

Village: Review all sidewalks to determine which ramps are not usable, and create a repair schedule.

A WisDOT review is needed of STH 13 at CTH J north to STH 13 at Mound View Dr.

1. Add bike lanes to STH 13 between Family Affair restaurant and CTH J.

2. Add pedestrian median at crossing on STH 13 at CTH J and at Mound View Dr.

Revise speed limit to 35 mph on STH 13 from Mound View Dr north to Dakota Boulevard (crest of hill).

### Non-Traditional Motorized Vehicles

Community concern exists for the safety of those who ride motorized vehicles that are not street legal (e.g. lawn tractors, golf carts, motorized wheelchairs, etc.) on local roads. To make the roads safer for everyone, consider passing a low-speed vehicle

(LSV) ordinance and pass a neighborhood electric vehicle (NEV) ordinance so that vehicles that meet the LSV or NEV requirements can use Village streets.

Requirements to make these non-traditional vehicles more visible would be a part of LSV and NEV ordinances. Registration of vehicles would not be necessary, but the requirements to make such vehicles more visible would be required of the vehicle owner if they want to use the vehicle on Village streets.

Encourage stores that sell non-traditional vehicles to create point-of-purchase kits that would make non-traditional vehicles street legal when the LSV and NEV ordinances are passed.

Bicycles are considered street legal vehicles that have the same rights as motor vehicles, and are allowed on all roads except on interstate highways. Bicycles are required to have a rear red reflector and a front facing white reflector; or if operated during dawn, dusk, or night hours then lights with the same colors as the reflectors must be used (a rear red reflector or red light are required). Side tire white reflectors are also required. Amber pedal reflectors are often added to bicycles to increase visibility.

#### Segment 9 Improvements

Coordinate the following improvements with the County Highway Department's creation of the off-street path on CTH J. The improvements below could also happen before other CTH J improvements occur.

On CTH J from Park St to Quincy St, mark bike lanes on the wide road. On CTH J from Quincy to STH 13, mark an on-street bike route by painting "sharrows" in the travel lane (guidance exists in the MUTCD). On Quincy St., paint a solid white line to make two 10-foot travel lanes, and install bike route signs (review the "Route Wayfinding Signs" recommendation earlier in this chapter to coordinate sign creation efforts).

#### Airport Drive & North Street Intersection Recommendation



Review how to provide a pedestrian crossing at this intersection to cross from Adams to the south, and Friendship to the north of North Street.

Coordinate Village efforts with the City and A-F School District since this is a school crossing.

Time Frame: Short Term for planning and for paint. Intermediate if infrastructure changes are necessary.

### West St & STH 13 Intersection Recommendation



Review how to provide a pedestrian crossing at this intersection to cross from West St across State Highway 13.

Coordinate Village efforts with WisDOT.

Time Frame: Short Term for planning and for paint. Intermediate if infrastructure changes are necessary.

### STH 13 & North Ave Intersection Recommendation



Review intersection signal and pedestrian signal timing, pedestrian actuator locations to verify their working condition and if they meet the current MUTCD standards.

Coordinate Village efforts with the City and WisDOT.

Time Frame: Short Term for planning and for paint. Intermediate if infrastructure changes are necessary.

### Bicycle Parking Recommendation

New guidance is provided on the types of bike racks that will secure and hold a bicycle upright. All bike racks should allow a U-lock to secure the front tire and frame to the rack, and the rack should contact the bike at two points so it does not fall over. Summarized guidelines from the Association of Pedestrian and Bicycle Professionals are in Attachment L. A revision to the Village zoning ordinance may be required to have these new bike racks throughout the Village. Time Frame: Short Term for a zoning ordinance change. Long Term for all bike racks to be replaced.

## City of Adams

See “Non-Traditional Motorized Vehicles” section under the Village of Friendship, and consider also passing LSV and NEV ordinances to allow these vehicles on the streets. Since Adams does not have sidewalks on all streets, then this set of ordinances is still necessary for many trips.

### Street Lighting At Crosswalks & Intersections Recommendation



New design for midblock crosswalk lighting layout.  
Picture: FHWA

When providing new lighting on STH 13 to match the downtown plan recommendations, review “Chapter 3—Crosswalk Lighting Design Considerations” from FHWA-HRT-08-053.

New guidance is provided on light height from the surface, type of light, and location of the post to provide the best illumination for safety.

Coordinate City efforts with WisDOT.

Time Frame: Intermediate for light fixtures that match downtown plan.

### Bicycle Parking Recommendation



“wheel bender” bike rack


New guidance is provided on the types of bike racks that will secure and hold a bicycle upright. All bike racks should allow a U-lock to secure the front tire and frame to the rack, and the rack should contact the bike at two points so it does not fall over.

Summarized guidelines from the Association of Pedestrian and Bicycle Professionals are in Attachment L.

A revision to the City zoning ordinance may be required to have these new bike racks throughout the City.

Time Frame: Short Term for a zoning ordinance change. Long Term for all bike racks to be replaced.



Sidewalk Over Railroad Tracks Recommendation	
 <p>No sidewalk exists. The solid line shows where a sidewalk is recommended.</p>	<p>No sidewalk exists from the residential neighborhood south of the railroad tracks north into the rest of Adams.</p> <p>The Downtown Enhancement Report recommends creating a gateway entrance with sidewalks on both sides of STH 13 south of the railroad tracks.</p> <p>If reconstruction of STH 13 is more than 5 years away, then consider creating a 5-foot asphalt sidewalk. Place the sidewalk on the east side of STH 13 from Railroad St to Capella Street, and place it back from the road at the edge of the right-of-way. Curb and gutter is not needed, but raising it a few inches from the grass level and providing basic drainage pipes (not culverts) under the sidewalk to allow drainage will connect these residents to the rest of the city.</p> <p>Time Frame: Short to Intermediate Term.</p>





Library Sidewalk Recommendation	
 <p>No sidewalk exists from library, west to housing. Solid line is proposed sidewalk.</p>	<p>Housing exists directly west of the Library and Community Center, but no sidewalk allows for a direct walking route.</p> <p>Recommendation: Install a sidewalk about 100 feet to connect the sidewalk on North Elm Street with the Community Center sidewalk.</p> <p>Time Frame: Short Term.</p>



Castle Rock County Park Area (Town of Quincy)  
Proposed Bicycle & Pedestrian Improvements



Source: WROC 2010 Statewide 18” Imagery

-  Pedestrian/Bike road crossing
-  8 foot wide paved path
-  Bike Route sign
-  Wooden pedestrian bridge is 5-feet wide, which may need to be widened if the 8-foot wide path is to use this bridge vs. splitting into a pedestrian only bridge and bikes would need to use the paved shoulders over the CTH Z bridge.

Many people walk along the stretch of CHT Z from Castle Rock County Park area north across the bridge to a convenience store and a bar/restaurant next to it and up to the corner of STH Z and CTH F where another bar/restaurant exists. Residents and seasonal residents north of CTH F can use side streets to access the recommended CTH F path.

This series of recommended paths, bridge, and bike route signs will need coordination among the Adams County Highway Department, Adams County Parks Department, and the Town of Quincy.

Time Length: Short term for bike route signs. Intermediate to Long Term for the paths.

ADD: Map 1 – Bikeability of Roads



ADD: Map2 – County Highway Year Paved & Paved Width

ADD: Map 3 – Walking & Biking Facilities

ADD: Map 4 – Proposed Regional Trails

ADD: Map 5 – Proposed Bike Routes and Pedestrian Areas

ADD: Map 6 – Proposed Bicycle Facilities

## **ATTACHMENT A**

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### **WisDOT Road Evaluation Method**

## **ATTACHMENT B**

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### **Road or Highway Suitability for Bicycles Tables, 2012**



## **ATTACHMENT C**

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### **Potential Ice Age Trail Area**

## **ATTACHMENT D**

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### **Adams County Bicycle & Pedestrian Crashes 2005-2011**

## **ATTACHMENT E**

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### **Bicycle Crash Analysis for Wisconsin**

## **ATTACHMENT F**

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### **Bicycle Tune-Up Bill Summary Sheet**

## **ATTACHMENT G**

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### **Advisory Group Members**

## **ATTACHMENT H**

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### **A-F School District Maps of Cross Country Routes & Running Club Routes**

## **ATTACHMENT I**

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### **Towns' Mapping Exercise**

A map of the results is also included



## **ATTACHMENT J**

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### **Bike Rides in Adams County**

These rides were created by Advisory Group members to showcase areas of Adams County for the enjoyment of all residents and visitors.

## **ATTACHMENT K**

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### **NCWRPC Interview Notes**

## **ATTACHMENT L**

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### **Bicycle Parking Guidelines**

From: Association of Pedestrian and Bicycle Professionals (APBP)  
*Two page summary sheet created by City of Madison.*

## **ATTACHMENT M**

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### **Be Healthy Walking Map**