BELoit - Janesville Bicycle Route Corridor Plan and Feasibility Study - Rock County, WI

ACKNOWLEDGEMENTS

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Afton Road existing on-street bicycle lanes and signage near Dawson Avenue in Beloit.

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The following memorandum summarizes the process, findings and recommendations of the Beloit to Janesville Bicycle Route Corridor Plan and Feasibility Study. The City of Beloit, on behalf of the Rock Trail Coalition, retained SAA Design Group, Inc. (SAA) to prepare a bicycle corridor master plan and feasibility study which (among other things) identifies the most logical and feasible route between the southern terminus of the Peace Trail in the City of Janesville and the northern terminus of the City of Beloit’s trail network on the west side of the Rock River at U.S. Pride Park. This planning study evaluates and explores options for a designated bicycle connection between the two cities and provides a phased approach to the implementation of this critical and long-awaited regional connection. It is important to note that the following recommendations are not intended as final plans but rather as guidelines that will require further investigation, more detailed planning and engineering, and public input prior to implementation.

PLEASE NOTE: Figures referenced in this report are attached at the end of this document.

PLANNING AREA

Figure 1 illustrates the planning area for the Beloit - Janesville Bicycle Route project in the context of Southern Wisconsin’s regional bicycle network, and Rock County in particular. While the planning area includes lands within both the City of Beloit and the City of Janesville, much of the planning area lies between the two cities, within Town of Rock and the Town of Beloit. The study considers optional route alignments within the planning area which traverse existing roadways and rights-of-way as well as unimproved lands in both public and private ownership. Of particular note, the planning area includes former right-of-way for the Chicago and Northwestern Railroad - most of which reverted to land owners in the 1970s - providing a unique “rails to trails” opportunity.

The study area is bordered to the south by Maple Avenue in the City of Beloit, to the west by South Afton Road/County Highway D, to the east by the Rock River, and to the north by Tripp Road in the City of Janesville. The north and south project limits are existing city-wide trail termini in the City of Janesville and the City of Beloit, respectively, with the Janesville system providing regional linkage to the Glacial River State Trail, and the Beloit system providing connections to Winnebago County, Illinois’ bicycle network. The linear distance between the north and south ends of the study area spans approximately nine miles and provides a cross section of southern Rock County’s landscapes: wetlands, shorelines, river bluffs, vibrant neighborhoods, agricultural fields, and healthy communities. Figure 2 illustrates the existing conditions of the planning area.

TRAIL TOURISM

One anticipated benefit of the development of a dedicated bicycling route between Beloit and Janesville is the enhancement of the economic viability of all of the communities the route touches. Businesses in Beloit, Janesville, and Afton all stand to benefit from the increased interest and traffic that the proposed route is sure to generate. National studies show that 43% of vacationers cite bicycling as an important factor in selecting a destination. In Wisconsin, there is substantial documented evidence that a recreational, multi-use trail provides communities with an economic shot in the arm. Some examples include:

- Chequamegon Area Mountain Bike Association (CAMBA) trail users add $1,174,100 to the local economy annually.
- Peak season hotel rooms along the Elroy-Sparta Trail are booked up to a year in advance. Visitors traveled an average of 228 miles to use the facility.
- Wisconsin boasts more bicycle trails per capita than any other state in the Union. Hundreds of thousands of Wisconsin residents of all ages take to the road on bicycles each year, generating an economic impact estimated as high as $834 million.

Obviously this phenomenon is not unique to Wisconsin, and communities across the nation that boast recreational trails realize an economic benefit. Multi-community trails - such as the proposed Beloit - Janesville trail - not only connect communities, they also provide opportunities for businesses to flourish with a nearly constant flow of visitors and patrons. One example, the Katy Trail in Missouri, connects 35 towns of varying sizes. Restaurants, bed and breakfasts, antique dealers, bicycle rental shops, and campgrounds serve hundreds of thousands of visitors each year and realize over 6 million dollars in local revenue.

While recognizing the economic potential of a multi-community trail is obviously not the same as actually capturing an economic impact, the three main communities (and the business owners who stand to be) most impacted by this plan - Beloit, Afton, and Janesville - are poised to work as partners to see that the Beloit-Janesville bicycle route provides communities and riders alike with the maximum recreational, cultural, and economic enjoyment possible.
PAST STUDIES
Several previous planning studies for this area were reviewed during the planning process including the Stateline Bicycle and Pedestrian System Plan for the Stateline Area Transportation Study (SLATS, the Metropolitan Planning Organization for the Beloit area) (Vandewalle & Associates, 2011), the Rock County Parks, Outdoor Recreation, and Open Space (POROS) Plan (Design Perspectives, 2009), the City of Janesville, the Town of Beloit Comprehensive Outdoor Recreation and Parks Plan (Batterman, 2009), and the Comprehensive Smart Growth Plans for each of the impacted communities.

PROJECT GOALS
The planning area is situated almost entirely in the gap between the City of Beloit and the City of Janesville in southern Rock County, Wisconsin. Similarly, this geographic gap coincides with a critical gap in the regional bicycle and recreation systems not only within Rock County but also beyond its borders into northern Illinois and south central/southeastern Wisconsin. Therefore, this Plan serves the crucial purpose of bringing local municipalities, the county, private landowners, and Rock County’s residents together to identify the preferred and most feasible option for addressing and filling in this “missing link” in the region’s bicycle network.

The following goals were identified for the master planning process:
• Connections to local/regional parks and open space.
• Improve regional connections.
• Environmentally sensitive route options.
• Development of off-street facilities (where possible) to allow access for riders of various abilities/comfort levels.
• Linking housing and employment centers via multimodal transportation.
• Accessibility for bicycle commuting to local business districts in Afton, Beloit, and Janesville.
• Provide a process for public input and comment.
• Fulfilling the mission of the Rock Trail Coalition

PUBLIC PROCESS
The Beloit-Janesville Bicycle Route Corridor Master Plan and Feasibility Study was prepared with input from staff and officials for each of the communities and the county, the Rock Trail Coalition, private landowners, and Rock County residents and businesses.

The following outline summarizes the public process for the Beloit-Janesville Bicycle Route Corridor Master Plan and Feasibility Study:

October 3, 2011
• Kick-off meeting
• Corridor tour with Rock Trail Coalition
• Discussion of past efforts
• Presentation of Opportunities and Constraints

November 10, 2011
• Public informational meeting
• Project overview/goal-setting
• Present process and preliminary findings
• Gather public input

November 29, 2011
• Opportunities Workshop
• Presentation of route alternatives to the Rock Trail Coalition
• Discussion of opportunities for Leadership Development Academy

December 2011 - January 2012
• Town of Beloit engagement (Town Board of Supervisors)
• Discuss route alternatives with Town of Beloit at public meetings
• Resolution of support approved January 23, 2012

January 26, 2012
• Discussion of plan recommendations with Rock Trail Coalition
• Update on local resolutions of support

February 6, 2012
• Town of Rock engagement (Town Board of Supervisors)
• Discuss route alternatives with Town of Rock at public board meeting
• Resolution of support approved February 6, 2012

February 14, 2012
• Rock County engagement (Parks Committee and County Board)

March 19, 2012
• City of Beloit parks committee engagement

March 26, 2012
• City of Beloit Common Council resolution of support
• City of Janesville resolution of support
2 - PLANNING RECOMMENDATIONS

The vision for the Beloit - Janesville Bicycle Route is to provide a regional bicycling and recreation connection focused on Rock County’s natural and cultural heritage, specifically celebrating the Rock River and associated environmental corridors as a unique ecosystem with local and regional significance. The establishment of this corridor will enhance the quality of life of current and future Rock County residents and diversify opportunities for recreation and tourism within the region.

Additionally, the development of this corridor will have a positive economic impact for the communities it connects and passes through, particularly the charming hamlet of Afton located roughly halfway between the Tripp Road trailhead and Big Hill Park. Finally, development of the Janesville-Beloit Bicycle Route demonstrates the continued commitment of Rock County, the City of Beloit, the City of Janesville, the Town of Rock, and the Town of Beloit to sustaining and enhancing the unique experience one enjoys as a resident, business, and/or visitor to the region.

Big Hill to Krueger Link (Segment 1)

Segment 1 offers bicycle connection from Krueger Park on the City of Beloit’s West Side to Big Hill Park on the City’s north side via a combination of on-road and off-road routes. Segment 1 begins with a new on-street connection on South Shore Drive to the existing City of Beloit path network currently terminating at Caldwell Avenue/Reverend U.S. Pride Park. The on-road route continues north to Millar Road, where it turns west to connect to a proposed side-path (heading north) or existing on-street lanes (heading south) at Afton Road. Additionally, Segment 1 includes an on-road spur at West Dawson Avenue (from Shore Drive to Afton Road) to meet with an existing city trail at Burton Street which provides off-road connection to and through Krueger Park. The Dawson Avenue jog is proposed to replace an existing on-road “zig-zag” route using Caldwell Avenue and Poole Court between Shore Drive and 6th Street (Afton Road/CTH D in the City of Beloit). The Dawson route is preferred as it provides the rider with a straight line connection to the Burton Street side path and altogether avoids riding on 6th Street. Segment 1 effectively completes a connection from Big Hill Park at the City’s northern edge to the Wisconsin - Illinois State Line (at Shirland Avenue/Beloit Transit Center), and provides for access to a number of local landmarks along the way.

While Afton Road (County Highway D) is currently improved with on-street signage and pavement markings designating it as a bike route, an off-street side path on the east side of Afton Road is a preferred option from W. Big Hill Road to W. Millar Road. The lack of separation between motor vehicles and bicycle facilities on Afton Road likely presents an impediment to heavier use of this route by bicycles. Concerns from riders who have used the Afton Road bike lanes included speeds of motorists, broken glass and other debris, and in some cases roadkill being impediments to using the on-street lanes. This path would supplement the on-street lanes to provide an alternative option for less experienced bikers or those who prefer a dedicated route.

In addition to the Afton Road side path, several signage and crossing improvements are recommended within Segment 1. Wayfinding signage is recommended for Dawson Avenue, Shore Drive, and Millar Road as these proposed on-street systems provide new connections linking the off-road facilities discussed above. In addition, crossing improvements are proposed along Afton Road at intersections with County Highway Q (Newark Road) West Dawson Avenue, West Millar Road, and West Big Hill Road. Improvements may include pavement markings, improved signage, and lighting.

Existing on-road segment in the Town of Beloit.

Pedestrian over the Rock River in the City of Beloit. This is a segment of the 26th Street Trail running from the Wisconsin-Illinois State Line to Krueger Park.
Big Hill Route (Segment 2)

Segment 2 focuses on Big Hill Park, establishing much-improved bicycling access to the City of Beloit’s northside landmark. The recommendation for Segment 2 is to exit Afton Road at West Big Hill Road and use on-street facilities to the park entrance, where an off-street network utilizing a combination of existing park roads and additional path connections will be developed to continue through Big Hill Park to the north, meeting the existing, unimproved, (roughly) 35 foot wide right-of-way for South Duggan Road. From this point a short on-street connection continues north for some 700 feet to meet Town of Beloit owned property near the intersection of South Duggan Road and South Walters Road.

Existing on-street bike lanes on Afton Road will remain both north and south of West Big Hill Road, providing on-road bicyclists with a “bypass” option versus going through the park. Additionally, an off-street path in the east right-of-way of Afton Road is recommended as an additional bypass option for less experienced riders.

The proposed on-street route along West Big Hill Road and in Big Hill Park will require new signage and pavement marking.

Walters-Duggan Route (Segment 3)

Segment 3 picks up on Town of Beloit property on the south side of Walters Road near its intersection with South Duggan Road. The southern portion of the route is proposed to be an off-road path, continuing east and then north on Town property to avoid a rather dramatic curve on Walters Road before passing through town-owned right of way for Walters Road in front of the Rock River Prairie State Natural Area. After continuing north past the DNR property, the path turns west across Walters Road to Town of Beloit-owned property before meeting with former right-of-way for the Chicago and Northwestern Railroad, now in Town of Beloit ownership. Once on the former rail right-of-way, the path heads north/northwest until once again intersecting with South Duggan Road, where the route goes on-street. The on-street segment continues north on Duggan Road through the Town of Rock, before again meeting former right-of-way for the Chicago and Northwestern Railroad just east of Afton. In addition to the proposed Walters and Duggan route, it should be noted that existing on-street lanes on Afton Road will remain. Essentially, the Walters-Duggan route provides an alternative journey through the Towns of Beloit and Rock for bicyclists - one that is decidedly less-traveled by automobiles.

Pavement marking, signage, and crossing improvements will be an important component of the development of Segment 3. Wayfinding signage is recommended at the Duggan Road intersection with the proposed off-road path and at the Duggan Road/Townline Road intersection. Crossing improvements will be necessary on Walters Road (where the off-street path crosses north of the DNR property), and at the Duggan Road/Townline Road intersection. Pavement marking and signage along south Duggan Road in the Town of Rock is proposed to clearly designate that section as a bike route.

While the Wisconsin DNR prefers an alternate routing scheme - one that does not pass in front of the State Natural Area - for Segment 3, this plan recognizes it as one of three viable alternatives.
Peace Trail To Afton (Segment 4)

Segment 4 recommends utilizing the abandoned Chicago and Northwestern Railroad right-of-way to create a multi-use path connection from Duggan Road to West Third Street in Afton, where it goes on-street and connects to existing on-road facilities (striped and signed) on Afton Road through downtown Afton. At the northern edge of Afton (just south of 7th Street), the route uses an existing easement across from the Afton Pub (over land owned by the Pub owners), crossing an active rail line and ultimately meeting with the existing gravel off-road trail that follows abandoned rail right-of-way to the terminus of Janesville’s Peace Trail at Tripp Road.

This segment offers a crossing of Bass Creek at the site of a former railroad bridge shortly before entering downtown Afton via West Third Street. The railroad bridge, constructed in 1880, was removed in 1973. However, four stone and concrete abutments remain, providing the opportunity to accommodate the nearly 125’ span needed to cross Bass Creek with modular sections. Situated nearly half-way between the Tripp Road Terminus and Big Hill Park, the proposed bridge will be both a geographic and symbolic centerpiece for the proposed trail. A unique design which celebrates the historic connection between and beyond Beloit and Janesville is envisioned for the bridge, perhaps replicating a railroad bridge. However it is designed, the bridge crossing is a “showcase” element of this plan and the future trail, and will provide context and destination to tourists and all trail users. Given its significance and appeal, the proposed bridge may be a very viable candidate for substantial private fundraising and other creative funding options.

Segment 4 will require significant signage and wayfinding improvements, with a concentration on directing inbound travelers to Afton’s local shops, eateries, and attractions. In addition, crossing improvements are required at the intersection of the gravel trail with Eau Claire Road/River Road/West Third Street and South Afton Road. Finally, the intersection of the proposed off-road path and West Bass Creek Road will require crossing improvements.
DESIGN
The proposed corridor seeks to capitalize on the successes of the City of Beloit and the City of Janesville in developing comprehensive intra-city bicycle infrastructure and assumes that the most feasible way to do this is by linking Peace Trail with existing facilities on the west side of the Rock River. While linking the excellent systems on the east side of the Rock River in both communities remains a high priority, the west side option presents opportunities in the immediate future that are not apparent east of the river.

During the planning process, several design principles emerged for the development of the corridor based on input received from city, town, and county staff and officials, the Rock Trail Coalition, and the public. A bicycle connection between the cities of Beloit and Janesville has been a long-standing goal for both communities and Rock County. In addition to providing an invaluable recreational and commuter route for bicyclists, the completion of this corridor will serve to showcase the commitment to community, reverence for nature, and sense of regional identity that makes Rock County a unique and treasured place among its residents and visitors. With this in mind, elements of corridor design will look to celebrate the characteristics of the communities it passes through and connects: healthy neighborhoods, strong, friendly, and locally owned businesses, a rich agricultural heritage, and a transportation legacy centered on river, rail, and human locomotion as an alternative to automobiles.

FACILITIES
The best strategy for accommodating bicycle trips is to provide adequate on-street bicycle lanes and to educate the driving public on the need to share the road with bicyclists. Signs, off-road bicycle paths, proper bike parking facilities, and non-infrastructure initiatives also facilitate safe bicycle travel. Facility sheets describing the design and application of facilities are located at the end of this chapter.

Bike Lanes
Bike lanes can be incorporated into a roadway when it is desirable to delineate available road space for preferential use by bicyclists and motorists, and to provide for more predictable movements by each. Bike lane markings provide greater comfort for bicyclists who are not used to operating on a roadway with other traffic.

Bike lanes should be one-way facilities and carry bike traffic in the same direction as adjacent motor vehicle traffic. On one-way streets, bike lanes should generally be placed on the right side of the street. However, bike lanes on the left side of the street may be appropriate when it will substantially decrease the number of conflicts, such as those caused by heavy bus traffic or unusually heavy turning movements to the right, or if there are a significant number of left-turning bicyclists.

Curbside bike lanes and bike lanes adjacent to parking are common treatments. It is important that a curbside bike lane include at least 5 feet of space outside of the gutter pan to allow for snow storage and to discourage bicyclists from riding in the gutter pan. In corridors with limited space an innovative 5 foot gutter pan bike lane with saw cut joints can be installed to accommodate bicycles. See Facility Sheet 3.1.

Shared-Use Roadway
A shared-use roadway is typically a neighborhood street where traffic volumes and traffic speeds are low and bicyclists and motorists can comfortably share the road. Width is the most critical variable affecting the ability of a roadway to accommodate bicycle traffic. In order for bicycles and motor vehicles to share the
There are several reasons for designating signed bike routes:

- Routes useful for getting to know the area by bicycle.
- They are not intended to link all possible locations, and bicyclists are not required to use a given corridor and to remind motorists that they may encounter a bicycle.
- The routes should be identified with directional and informational signs, with or without a specific bicycle route number. These routes should also provide bicycle access to areas that are otherwise served only by limited access highways closed to bicycles. See Facility Sheet 3.3.

Paths should be thought of as a complementary system of off-road transportation routes for bicyclists and others that serve as a necessary extension to the roadway network. Paths should not be used to preclude on-road bicycle facilities, but rather to supplement a system of on-road bike lanes, wide outside lanes, paved shoulders and bike routes. In Appleton, the off-road network includes a number of paths that lead over highways and are vital multimodal connections.

**Multi-Use Path**

This facility is located within its own right of way, is usually 10-14 feet wide and is commonly designed for two-way traffic. Multi-use paths can serve a variety of purposes. They can provide users with a shortcut through a residential neighborhood, provide access to school sites, and can provide an enjoyable recreational opportunity. Shared use paths can be located along rivers, lakefronts, canals, abandoned or active railroad and utility rights-of-way, limited access freeways, within college campuses or within and between parks. Paths can also provide bicycle access to areas that are otherwise served only by limited access highways closed to bicycles. See Facility Sheet 3.3.

**Bicycle Routes and Other Signs**

Suitably designed bikeways can be identified formally as "Bike Routes." As defined by the American Association of State Highway and Transportation Officials (AASHTO, which is a standards setting body which publishes specifications, test protocols and guidelines which are used in highway design and construction throughout the United States), bike routes are segments of a system of roads that are designated by a jurisdiction having authority with appropriate directional and informational markers, with or without a specific bicycle route number. These routes should indicate a major route that most bicyclists will feel comfortable using. The routes are not intended to link all possible locations, and bicyclists are not required to use these routes. New bicyclists, and bicyclists new to Rock County, will find these routes useful for getting to know the area by bicycle.

There are several reasons for designating signed bike routes:

a. The route provides continuity to other bicycle facilities such as bike lanes and multifuse paths.

b. The road is a common route for bicyclists through a high demand corridor.

c. The route extends along local neighborhood streets and collectors that lead to an internal neighborhood destination such as a park, school or commercial district.

Bike route signs may be used on shared streets, streets with bike lanes, and on multifuse paths. Regardless of the type of facility or roadway where they are used, it is recommended that bike route signs include destination information, as shown in Facility Sheet 3.4.

"Bike Route" or "Share the Road" signage can be used to encourage bicyclists to use a given corridor and to remind motorists that they may encounter a bicycle. Bike Route signage should be placed at key decision points along a corridor and Share the Road signage should be spaced at regular intervals.

**Bicycle Parking Facilities**

Bicycle racks are necessary for cyclists to secure their bicycles once they reach their destination. Choosing the appropriate style of bicycle rack is based on how much security is required at a location. Available space is also a factor in determining what style of rack should be installed. Some bicycle rack styles take up more space than others and position parked bicycles differently. Choosing the right bike rack involves looking at utility locations, fire escapes, sidewalk dimensions, and visibility. Design is a critical component in bicycle rack selection. In general, a bicycle rack should include two points of contact with the bicycle to keep it from falling and damaging the bicycle. The "inverted-u" is considered one of the most functional and cost effective designs. See Facility Sheet 3.5. The hitch post rack, or hoop and bollard design currently used on College Avenue is also considered an attractive and space efficient bike rack that is designed for sidewalks and other narrow space applications.

**Additional Design Considerations and Facilities**

Catch Basins: A properly designed catch basin should be entirely located within the gutter pan and catch basin covers should be placed to avoid catching the tires of a bike. Drainage grates (catch basin covers) should be placed perpendicular to the direction of travel.

Transitions (On- and Off-Street): The transition of paths to roadways is particularly important for creating a functional bicycle network. Special design treatments should be applied depending on the relative volume of motor vehicle and bicycle traffic.

- a. Bicycle-Pedestrian Signals: for mid-block crossing of higher volume roadways, where the crossing is located a sufficient distance from adjacent signalized intersections.

- b. Roundabout: standard roundabout design on the motor vehicle approaches, with modified design for the bike path approaches.

- c. Raised Crossing: maintains the grade of the path across the roadway.

- d. Multi-way Stop Control: requires all approaches to stop, which can be desirable in locations with limited sight distance.

Bike Station: A Bicycle Station is a full service indoor bicycle storage facility that is typically staffed or has membership access. Bicycle Stations generally include a secure place to store a bike and may provide services such as bike repair, bike rentals, concessions, bicycle sales, and merchandising. Some bicycle stations include restrooms, drinking fountains, lockers, and shower facilities. Bicycle Stations are excellent locations to distribute maps and to provide the public with basic information about local paths, safety, and rules of the road.
Dismount Zone: Dismount zones are often needed when bicycles and pedestrians cannot safely share the same space. Signage and pavement markings are often helpful in informing bicyclists, however in some areas it is not practical or necessary to sign or mark the dismount zone because of a known statute or ordinance. Dismount signage and pavement markings should be minimized and should only be used when one or more of the following criteria are met:

a. The location presents a clear safety problem such as a narrow sidewalk or a steep slope. Clear zones, sight distances, and crash history should be evaluated.

b. The location has a substantial number of pedestrians such as a college campus or a sidewalk in front of numerous businesses. Both pedestrian and bicycle volumes and level-of-service should be considered and compared.

c. The location is in an area with a high number of children or elderly pedestrians.

d. The location has a suitable alternative route for bicycles within a reasonable distance.

Crosswalk Enhancements: Crosswalks are typically intended for pedestrians, however some bicyclists choose to ride on sidewalks and often use pedestrian crosswalks. Unless a path approaches an intersection, crosswalk design and crosswalk enhancements should be based on pedestrian needs and not designed specifically for bicycle use.

Striped crosswalks are often found at signalized intersections and typically consist of two solid parallel white lines. In some cases when the crossing distance is long or there are very high volumes, a zebra crosswalk may be used. Crosswalk enhancements may include zebra/continental crosswalks, crosswalk bollards, flashing warning signs, enhanced pavement markings, and lighted crosswalks.

Refuge Islands: Pedestrian refuge islands are defined as the areas within an intersection or between lanes of traffic where pedestrians or bicyclists may safely wait until vehicular traffic clears, allowing them to cross a street. Refuge islands are commonly found along wide, multilane streets where adequate pedestrian crossing time could not be provided without adversely affecting the traffic flow.

In areas of heavy traffic, a Z-crossing can be used to increase safety. A Z-crossing utilizes a median island and crosswalks laid out in a staggered configuration at uncontrolled intersections. The configuration requires pedestrians or bicyclists to walk or ride toward traffic to reach the second half of the crosswalk.

Bicyclists may benefit from pedestrian refuge islands if they choose not to utilize a travel lane to execute a turning movement. For this reason, refuge islands should be wide enough to accommodate a bicycle (preferably one with a trailer).

Lead Pedestrian Intervals: At some locations, bicyclists may encounter signal controlled intersections, especially when a multiuse path carries through or terminates at an intersection. In most cases, bicyclists will use the pedestrian signal to cross the intersection. When pedestrian signals are timed with a green phase at an intersection both pedestrians and motor vehicles (particularly right-turning vehicles) start at the same time and conflicts can result. A lead pedestrian interval is a change in signal phasing that allows a pedestrian phase to begin a short time (generally 4 seconds) before the green phase for motor vehicle traffic. This allows pedestrians and bicyclists a “head start” utilizing crosswalks in the intersection. This facility requires the intersection to be signed for “no turn on red”. This signal phase enhances visibility of pedestrians and bicyclists at crossings and alerts motorists to the existence of vulnerable users in the right-of-way.
Facility Sheet 3.1

Bike Lane

Description/Purpose
Marked space along length of roadway for exclusive use of cyclists. Bike lanes create separation between cyclists and automobiles.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides bicycle access on major through street</td>
<td>• Space requirements may preclude other possible uses like parking or excess travel lane width</td>
</tr>
<tr>
<td>• Clarifies lane use for motorists and cyclists</td>
<td></td>
</tr>
<tr>
<td>• Increases cyclist's comfort through visual separation</td>
<td></td>
</tr>
</tbody>
</table>

Design

- On roadways with 3,000 motor vehicles per day or higher
- Any street with excessive curb-to-curb space where bike lanes could help reduce vehicle lane widths

Design/Maintenance Considerations

- Bike lane width
- Frequency of bike lane symbol
- Keep bike lane symbols out of the path of turning vehicles
- Typically placed on right side of roadway (unless one-way street)
- Automobile "door zone" clearance when bike lanes are adjacent to parked cars
- One-way facility carrying traffic in same direction as adjacent traffic

Design Guidance

- Minimum 4 feet width for roadways with no curb and gutter
- If parking is permitted, the bike lane should be placed between the parking area and the travel lane and have a minimum width of 5 feet
- Where parking is permitted but a parking stripe or stalls are not utilized, the shared area should be a minimum of 11 feet without a curb face and 12 feet adjacent to a curb face
Facility Sheet 3.2
Shared Lane

Description/Purpose
Shared roadway pavement markings, or “sharrows”, are marking used to indicate a shared lane environment for bicycles and automobiles. Sharrows identify to all road users where bicycles should operate on a street where a separated facility is not feasible.

Advantages
• Helps cyclists position themselves in lanes too narrow for a motor vehicle and a bicycle to travel side-by-side
• Provides pavement markings where bike lanes are not possible

Disadvantages
• Maintenance requirements
• Not as effective as a separated bicycle facility

Design

Application
• On roadways with 3,000 motor vehicles per day or higher
• Any street with excessive curb-to-curb space where bike lanes could help reduce vehicle lane widths

Design/Maintenance Considerations
• Bike lane width
• Frequency of bike lane symbol
• Keep bike lane symbols out of the path of turning vehicles
• Typically placed on right side of roadway (unless one-way street)
• Automobile “door zone” clearance when bike lanes are adjacent to parked cars
• One-way facility carrying traffic in some direction as adjacent traffic

Design Guidance
• Minimum 4 feet width for roadways with no curb and gutter
• If parking is permitted, the bike lane should be placed between the parking area and the travel lane and have a minimum width of 5 feet
• Where parking is permitted but a parking stripe or stalls are not utilized, the shared area should be a minimum of 11 feet without a curb face and 12 feet adjacent to a curb face
Facility Sheet 3.3
Multiuse Path

Description/Purpose
Multiuse paths effectively maximize available right-of-way by combining uses. They accommodate several types of non-motorized users including bicyclists, pedestrians, joggers, and roller bladers.

Advantages
• Can enhance access to destinations
• Wide range of user comfort

Disadvantages
• Right-of-way acquisition
• Cost

Design

Application
• Connections between cul-de-sacs
• Linear trail network
• Rails-to-trails conversions
• Along waterways

Design/Maintenance Considerations
• Speed of cyclists
• Slope, grade
• Pedestrian use volumes
• Lighting
• Signage
• Markings

Design Guidance
• Some multiuse paths are striped with a centerline to delineate direction
• Must be at least 10 feet wide; wider paths are preferred on busier paths
• Ideally, bicyclists and pedestrians should be separated
• Vegetation can be used adjacent to catch run-off
Facility Sheet 3.4
Bicycle Wayfinding

Description/Purpose
Informational signage tells a cyclist where they are located or which facility they are using. Signs for bike routes or lanes also communicate to motorists that bicycles may be present. Wayfinding signage provides destination information at decision points and enhances the usability of the bicycle network. The Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration, establishes standards for signage that will be referenced in implementing this plan.

Design

Advantages
- Tells users where a route or path goes
- Can identify distance to destination
- Can name certain segments or paths

Disadvantages
- If there’s a lot of information it may require frequent updating
- Names listed may be unfamiliar to users

Application
- Bike Route and Destination signs only on designated routes
- Destinations mentioned must accommodate bikes

Design/Maintenance Considerations
- All signs retroreflectORIZED
- Detour signs when under repair
- Limit number of signs per location

Design Guidance
- “No Motor Vehicles” sign at path entrance
- Warning signs at crossings
- Trail signs located 3’ to 6’ from trail edge
- Overhead signs on trails require 8’ clearance
### Facility Sheet 3.5
#### Bicycle Parking

**Description/Purpose**
Bicycle parking allows bicyclists secure parking upon reaching their destination. Racks should be ideally located near a building entrance to encourage bicycle use and increase security.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a dedicated space for bicyclists</td>
<td>Requires maintenance</td>
</tr>
<tr>
<td>Can encourage bicycle trips if well placed</td>
<td>Substandard designs can be a disincentive</td>
</tr>
<tr>
<td>Formalizes access corridors for site planning</td>
<td>Security can be a concern</td>
</tr>
</tbody>
</table>

**Design**

**Application**
- Use to identify where bikes should be secured

**Design/Maintenance Considerations**
- Must be cleared of snow in winter
- Place in well lit area

**Design Guidance**
- Place on paved surface
- Surface should not exceed 2% slope
- Utilize 4’ (preferred) x 6’ stall with 5’ access aisle (36” minimum spacing between racks)
- Locate within 50’ of a building entrance

![Diagram of Bicycle Parking Rack](image-url)
PRIORITY PROJECTS AND PHASING

Given the geographic scope and nature of the recommendations of this plan, improvements should be considered in manageable phases to complete the project, as outlined below. Phases may span multiple years depending on funding.

Phase One - Project partners should focus on relatively "low-hanging fruit" in Phase One to gather momentum for the project as a whole by earning some early successes. Phase One tasks are critical in establishing the vitality of the corridor and should be relatively easy to complete at reasonable costs. Tasks are listed below:

- Secure easements - The proposed route will likely require easements from property owners in the Town of Rock (especially in/near Afton) and the Town of Beloit. During the course of this project, discussions have been ongoing with property owners along the corridor for which easement agreements will be needed. Securing easements is a necessary and high priority for implementation of this project.
- Afton wayfinding - Developing a wayfinding/signage system for the corridor as it enters Afton from both the north and south is recommended as an early step in the implementation process.
- Re-route City of Beloit segment - The on-street connection between Shore Drive and Afton Road currently follows a "zig-zag" on-road route on Coldwell Avenue and Poole Court. Reassigning this route to Dawson Avenue via transferring or transferring signage, where it directly connects to the Burton Street off-road path across Afton Road, will be an easily implementable task.

Phase Two - Phase Two projects focus on work in Segments 3 & 4, from the terminus of Peace Trail through Afton and on through the Town of Rock and Town of Beloit to just north of Big Hill Park.

- Design and engineering - Detailed design and engineering plans for the off-road components on the south end of Afton must be completed for this new portion of the route. Similarly, off-road segments across Town of Beloit property between Duggan Road and Walters Road, and along Walters Road, will require design and engineering.
- Utility coordination - The proposed off-road path along Walters Road will ideally utilize space within current Right-of-Way, and may impact/be impacted by existing utilities within the right-of-way. As a component of the design of this segment, coordination with local telephone, energy and sewer utilities will likely be necessary.
- Afton wayfinding & crossing improvements - As this segment essentially provides the wayfinding & crossing improvements at the interior and exterior of the park is recommended to guide travelers. Additionally, the Afton Road crossing with West Big Hill Road should receive signage alerting motorists and bicyclists of the intersection.

Phase Three - Phase Three projects focus on work in Segment 2, which primarily deals with areas in and adjacent to Big Hill Park in the City of Beloit.

- Design and engineering - Detailed design and engineering plans will be needed for this new portion of the route.
- Wayfinding & crossing improvements - Wayfinding signage at the interior and exterior of the park is recommended to guide travelers. Additionally, the Afton Road crossing with West Big Hill Road should receive signage alerting motorists and bicyclists of the intersection.

Phase Four - Phase Four projects focus on work in Segment 1, from the intersection of Afton Road with Big Hill Road to the southern limits of the project at Pride Park on Shore Drive in the City of Beloit.

- Design and engineering - Detailed design and engineering plans will be needed for the proposed off-road side path along the eastern side of Afton Road. Stormwater management will be a specific area of importance for this segment, as the
- Utility coordination - The proposed side path along Afton Road will ideally utilize space within current Right-of-Way, and may impact/be impacted by existing utilities within the right-of-way. As a component of the design of this segment, coordination with local telephone, energy and sewer utilities will likely be necessary.
- Secure easements - Should the Afton Road side path not be accommodated in existing right-of-way, easements may be required over property in the Town of Beloit.
- Wayfinding & crossing improvements - As this segment essentially provides the link between Big Hill Park and both Krueger and Pride Parks and is mostly on-street, wayfinding signage will be essential. There are also several crossing improvements to be considered, the most significant of these being the Afton Road intersection with Newark Road (CTH Q)

KEY IMPLEMENTATION STEPS

The following key implementation steps have been identified for the development of the Beloit-Janesville Bicycle Route Corridor. This initial list should be expanded and developed with more detail to establish a Critical Path Schedule that will direct the implementation of master plan recommendations. The Critical Path Schedule should include a breakdown of all implementation activities, a timeframe for completing each activity, and the entity responsible for each implementation activity.

- Adopt Beloit - Janesville Bicycle Route Corridor Plan and Feasibility Study
- Approval of an official name for the trail
- Prepare grant applications
- Prepare detailed design and engineering plans for phased improvements
- Permitting
- Phased development of corridor segments
- Prepare marketing and promotional materials for this new regional connection
- Special events programming
CONCEPTUAL BUDGETS

The SAA design team prepared conceptual budgets for the Beloit - Janesville Bicycle Route Corridor Plan broken down by corridor segments. A breakdown of these segmental cost estimates is attached with this document in Appendix 2. These budgets are based on conceptual level planning, and more detailed analysis and design will be necessary to verify these budgets. It will be critical for Rock County to develop a comprehensive funding strategy to support the phased implementation of master plan recommendations.

Note: The total budget does not include property acquisition, private development (buildings, parking, and site improvements), additional studies, detailed design, or engineering.

POTENTIAL FUNDING SOURCES

The financial realities of our time necessitate the acquisition of outside funding to enable the development of large projects. Grant funding also provides needed money and crucial capital for leveraging additional community dollars and support. While many projects identified in this master plan would benefit from the acquisition of outside funding sources, some projects will require grant funding if they are to be realized.

This section provides general information and details for many of the grant programs that may be used to acquire and develop bicycle and pedestrian facilities. It is important to note that funding availability and deadlines can change from year to year, so maintaining contact with the agencies, or even simply monitoring their websites, is advisable in order to stay current with funding opportunities. Primary categories of funding opportunities, by authorization agency, include:

- Wisconsin Department of Natural Resources
- Wisconsin Department of Transportation

Wisconsin Department of Natural Resources (DNR)

Knowles-Nelson Stewardship Program: Named for two of Wisconsin’s most revered conservation leaders, Governor Warren Knowles and Senator Gaylord Nelson, the Wisconsin Legislature created this innovative program in 1989 to preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation.

All grant program awards cover up to 50% of eligible project costs. Projects eligible for Stewardship grant programs require that all land acquisition and development projects provide public access for “nature-based outdoor recreation” purposes. DNR decisions as to whether a particular project activity is “nature-based outdoor recreation” are made on a case-by-case basis. Please note that purchase and installation of playground equipment, and the purchase of land for recreation areas not related to nature-based outdoor recreation (dedicated sports fields, swimming pools, etc.) are not eligible. The Stewardship Program includes the four funds described below (A – D):

Eligible Project Examples:

- Land acquisition projects that will provide opportunities for nature-based outdoor recreation.
- Property with frontage on rivers, streams, lakes, estuaries and reservoirs that will provide water-based outdoor recreation.
- Property that provides special recreation opportunities, such as floodplains, wetlands and areas adjacent to scenic highways.
- Natural areas and outstanding scenic areas where the objective is to preserve the scenic or natural values, including areas of physical or biological importance and wildlife areas. These areas shall be open to the general public for outdoor recreation use to the extent that the natural attributes of the area will not be seriously impaired or lost.
- Land within urban areas for day-use picnic areas.
- Land for nature-based outdoor recreation trails.

Ineligible Project Examples:

- Projects that are not supported by a local comprehensive outdoor recreational plan.
- Land to be used for non-nature-based outdoor recreation.
- Acquisition and development of golf courses.

B. Urban Rivers (UR)

Description: Stewardship allocates 20% of funds annually to restore or preserve the character of urban riverways through the acquisition of land or easements adjacent to rivers. Funding will be provided for projects that are part of a plan to enhance the quality of a river corridor. Applicants compete against other applicants statewide. The purposes of the program are:

- To provide for economic revitalization through the restoration or preservation of urban rivers or riverfronts.

Email: mary.rothenmaier@wisconsin.gov
Telephone: (608)275-3322

Mary Rothenmaier
Wisconsin Department of Natural Resources
Email: mary.rothenmaier@wisconsin.gov
Telephone: (608)275-3322

Wisconsin Department of Transportation
Email: mary.rothenmaier@wisconsin.gov
Telephone: (608)275-3322

Wisconsin Department of Natural Resources (DNR)

Note:

1. For more information and to submit applications contact the South Central Region representatives (listed below). All applications are due May 1.
• To improve outdoor recreational opportunities by increasing access to urban rivers for a variety of public uses, including but not limited to, fishing, wildlife observation, enjoyment of scenic beauty, canoeing, boating, hiking and bicycling;

• To preserve or restore significant historical, cultural, or natural areas along urban rivers.

Funding Priorities: Priority is given to projects that have one or more of the following characteristics:

• Acquires land or land rights that preserve or restore natural values, including aesthetic values, and enhance environmental quality along urban waterways.

• Provides new or expanded diverse recreational opportunities to all segments of urban populations.

• Provides new or expanded access to urban waterways.

• Acquires blighted lands that will be restored to complement riverfront redevelopment activities.

• Encourages comprehensive riverway planning within and between municipalities and other agencies.

• Provides opportunities for increasing tourism.

• Acquires lands that through proper management will improve or protect water quality.

C. Urban Green Space (UGS)

Description: The intent of the Urban Green Space Program (UGS) is to provide open natural space within or in proximity to urban areas; to protect from urban development areas that have scenic, ecological or other natural value and are within or in proximity to urban areas; and to provide land for noncommercial gardening for the residents of an urbanized area.

Funding Priorities: Priority is given to projects that have one or more of the following characteristics:

a. Planning Considerations, including:

• Specifically implementing a priority of the Statewide Comprehensive Outdoor Recreation Plan

• Implementing the approved master plans of 2 or more units of government or regional planning agencies

• Preserving land that is listed on the natural heritage inventory database

• Implementing elements of water quality plans or initiatives

b. Project Considerations, including:

• Serving the greatest population centers

• Serving areas of rapidly increasing populations

D. Acquisition of Development Rights

Description: The purpose of the Acquisition of Development Rights Program is to protect natural, agricultural, or forest lands that enhance nature-based outdoor recreation. "Development Rights" are the rights of a landowner to develop their property to the greatest extent allowed under state and local laws. The goals of the program are achieved through the purchase of those development rights and compensating landowners for limited future development on their land.

Funding Priorities: Priority is given to projects that have one or more of the following characteristics:

• Property with frontage on rivers, streams, lakes or estuaries

• Property that creates a buffer between land that has been permanently protected for natural resource and conservation purposes and potential or existing residential, commercial or industrial development

• Property that is within the boundaries of an acquisition project established by the DNR, a government unit or a NCO where the uses of the property will complement the goals of the project and the stewardship program

• Property that is within an environmental corridor that connects 2 or more established resource protection areas

In addition to the Stewardship Programs listed above, a couple of other Wisconsin DNR-administered programs could be sought for funding assistance. These programs are listed below:

E. Recreational Trails Act (RTA)

Description: These funds are used to develop and maintain recreational trails and...
4 – IMPLEMENTATION

The off-road segments of the planned route offer all-season recreation opportunities for hiking, cross-country skiing, and snowshoeing as well as bicycling, walking, and running.

I. Bicycle and Pedestrian Facilities Program (BPFP)

Description: Bicycle and pedestrian facility projects costing $200,000 or more and planning projects costing $50,000 or more are eligible for BPFP funds. To be eligible, the project must be usable when it is completed and not staled so that additional money is needed to make it a useful project. A project sponsor must pay for the project and then seek reimbursement for the project from the state. Federal funds will provide up to 80% of project costs, while the sponsor must provide at least the other 20%. Because of the similarities between the BPFP and the Transportation Enhancements (TE) program objectives and eligibility criteria, applications and funding for both programs are undertaken together.

Contact: Renee Callaway, State Coordinator at 608-266-3973 or renee.callaway@dot.state.wi.us

Deadline: spring of even-numbered years in conjunction with BPFP, dates vary (no funding cycle in 2012)

J. Safe Routes to School (SRTS)

Description: Safe Routes to School (SRTS) programs encourage children ages K-8 to walk and bike to school by creating safer walking and biking routes. These programs are funded through the revised federal transportation act - SAFETEA-LU - signed into law on August 10, 2005. This legislation provides funding to state
The planned route connects the natural, cultural, and civic resources of neighboring communities.

Public Funding

The following table outlines several public funding sources available to increase bicycle and pedestrian programming and facilities development.

<table>
<thead>
<tr>
<th>Grant Source/Name</th>
<th>Brief Description</th>
<th>Local Match*</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowles-Nelson Stewardship Program</td>
<td>Funding for “nature based” recreational facilities including hiking and biking trails.</td>
<td>50%</td>
<td><a href="mailto:mary.rothenmaier@wisconsin.gov">mary.rothenmaier@wisconsin.gov</a></td>
</tr>
<tr>
<td>Recreational Trails Grant (RTA)</td>
<td>Funding to build trails for motorized and non-motorized traffic.</td>
<td>50%</td>
<td><a href="mailto:mary.rothenmaier@wisconsin.gov">mary.rothenmaier@wisconsin.gov</a></td>
</tr>
<tr>
<td>Land and Water Conservation Fund (LWCF)</td>
<td>Funding for creation and enhancement of recreational opportunities, including bike and pedestrian trails.</td>
<td>50%</td>
<td><a href="mailto:mary.rothenmaier@wisconsin.gov">mary.rothenmaier@wisconsin.gov</a></td>
</tr>
<tr>
<td>Surface Transportation Program (STP-U, STP-R)</td>
<td>Funding for collector and arterial roadway improvements; must include bike accommodations.</td>
<td>0%</td>
<td><a href="mailto:michael.erickson@dot.wi.gov">michael.erickson@dot.wi.gov</a></td>
</tr>
<tr>
<td>Local Transportation Enhancement Program (TE)</td>
<td>Funds bicycle and pedestrian facility improvements that address commuting and transportation needs.</td>
<td>20%</td>
<td><a href="mailto:renee.callaway@dot.wi.gov">renee.callaway@dot.wi.gov</a></td>
</tr>
<tr>
<td>Bicycle and Pedestrian Facilities Program (BPFP)</td>
<td>Funds projects that construct or plan for bicycle or bicycle/pedestrian facilities.</td>
<td>20%</td>
<td><a href="mailto:renee.callaway@dot.wi.gov">renee.callaway@dot.wi.gov</a></td>
</tr>
<tr>
<td>Safe Routes to School Program (SRTS)</td>
<td>Will fund improvements to public infrastructure within 2 miles of an elementary or middle school that will improve conditions for biking or walking to school. Also provides funds for “non-infrastructure” activities and planning for safe routes.</td>
<td>0%</td>
<td><a href="mailto:Renee.callaway@dot.wi.gov">Renee.callaway@dot.wi.gov</a></td>
</tr>
</tbody>
</table>
FIGURE 1 – PROJECT CONTEXT

Beloit-Janesville Bike Plan
Existing Linking Facilities, Key Destinations and Potential Trail Locations

Legend
- Paved Shoulder/Bike Lanes
- Off Road Path - Gravel
- Off Road Path - Paved
- Sidewalks along primary roads
- Overhead Utility
- Potential Trail Location

Key Destinations
- Peace Trail Connection
- Big Hill Park

Other:
- Bridge Crossing
- Beloit College
- Beloit Downtown

Source: Rock County, WI

Project #2456 | September 2011

Beloit - Janesville Bicycle Route Corridor Plan and Feasibility Study - Rock County, WI
FIGURE 2 – EXISTING CONDITIONS
Beloit - Janesville Bicycle Route Corridor Plan and Feasibility Study - Rock County, WI

**FIGURE 3** — SEGMENTS 1 & 2

Segment 1

- Existing off-street bike path along Afton Road.
- Existing off-street path north along South Shore Drive to West Millar Road (with a secondary spur along West Dawson Avenue connecting to the existing Burton Street Path).

Segment 2

- Existing off-street path along Afton Road (CTH D) - Existing City of Beloit path network.
- Extension from existing City of Beloit path network north to West Big Hill Road. Explore the feasibility of creating an off-street bike path along South Shore Drive, Dawson Avenue, and West Millar Road.

Crossing Improvements and Wayfinding Signage required.

E South Av

Legend

Federal Land

Proposed route through Big Hill

County Owned Parcel

DNR Land

Exit Afton Road and enter proposed route on proposed off-street facilities. Big Island Park may be by-passed by on-street bike lanes.

Potential Trail Location

Proposed Trail Location (Alt. 1)

Proposed Trail Location (Alt. 2)

Off Road Path - Gravel

Off Road Path

On-street bike lanes.

Sidewalks along primary roads

Abandoned Railroad Right-of-Way

Abandoned off-street Right-of-Way

Sidewalks along primary roads

Wayfinding Signage required.
**FIGURE 4 – SEGMENTS 3 & 4**

**Segment 3A**

- **Alternate 3A.1**: Utilize the abandoned Railroad Right-of-Way corridor and easements along Duggan Road to create an off-street multi-use path connection through Town of Beloit.

- **Alternate 3A.2**: Create on-street facilities along Duggan Road to create a connection between Big Hill Park and Town of Rock.

- **Alternate 3A.3**: Utilize the abandoned Railroad Right-of-Way corridor and easements along Duggan Road to south edge of proposed Rock River Business Park, and utilize Town ROW/easements along Walters Road to make multi-use path connection through Town of Beloit.

**Segment 3B**

- **Alternate 3B.1**: Create on-street facilities along Bass Creek Road to create a connection between Big Hill Park and Town of Rock.

- **Alternate 3B.2**: Procure easements along Duggan Road to create an off-street multi-use path connection through Town of Beloit.

**Segment 4**

- **Alternate 4A**: Utilize the abandoned Railroad Right-of-Way corridor and bridge to create an off-street multi-use path connection from Bass Creek to W. 3rd Street and Afton Road on-street to the terminus of the Janesville bike path network.

- **Alternate 4B**: Create on-street facilities along Bass Creek Road to create a connection between Big Hill Park and the on-street facilities on Afton Road.

**Beloit - Janesville Bicycle Route Corridor Plan and Feasibility Study - Rock County, WI**

**SAA Design Group, Inc.**

717 John Nolen Drive, Madison, WI 53713 | 608.255.0800 | www.saa-madison.com | #2456
Alternate Route 1: Utilize the abandoned Railroad Right-of-Way corridor to create an off-street multi-use path connection from Bass Creek to W. 3rd Street and Afton Road on-street to the terminus of the Janesville bike path network. Crossing Improvements and Wayfinding Signage required.

Alternate Route 2: Create on-street facilities along Bass Creek Road to create a connection between Big Hill Park to the on-street facilities on Afton Road. Crossing Improvements and Wayfinding Signage required.

Proposed Route - Afton Detail

LEGEND
- Federal Land
- Town Owned Parcel
- County Owned Parcel
- DNR Land
- Public Land
- Potential Trail Location
  - Recommended Route (Alt. 1/Comp Plan)
  - Proposed Trail Location (Alt. 2)
  - Proposed Trail Location (Alt. 3)
- Paved Shoulder/Bike Lanes
- Off Road Path
- Off Road Path - Gravel
- Stormwater Management
- Proposed Off Road Route
- SLATS Plan Proposed Route
- Sidewalks along primary roads
- Abandoned Railroad Right-of-Way
- Crossing Improvements

FIGURE 5 – AFTON VILLAGE DETAIL
FIGURE 6A – EXISTING ROADWAY SECTIONS

Beloit - Janesville Bicycle Route Corridor Plan and Feasibility Study - Rock County, WI
FIGURE 6C – EXISTING ROADWAY SECTIONS
Discussion:

- Dean Paynter, President of the Rock Trail Coalition, provided an overview of the group’s history and interest in creating a trail connection from Beloit to Janesville.
  - Dave Gibbs and Lloyd Goding were among the first to realize the potential for the rail corridor abandoned in 1975.
  - Over the years both Janesville and Beloit have significantly expanded their trail facilities and recent developments have moved the Beloit to Janesville segment closer to becoming a reality.
  - In 2005, the Hendricks family donated to the trail effort and provided easement donations down to Afton.
  - In 2011 Janesville purchased the remaining parcel needed to complete the Afton connection.
  - Dean extended a special thanks to Walter Loos, Therese Oldenburg and Rick Barder for their knowledge and leadership.
  - In spring 2011, a group of interested parties met at Paddle and Trail (Beloit) and proceeded to form the loose Beloit-Janesville Peace Trail discussion group. Members include representatives from:
    - Bass Creek Espresso
    - City of Beloit Parks
    - Beloit and Beyond Bike Tour
    - City of Janesville Parks
    - Janesville Convention and Visitors Bureau
    - Janesville Velo Club
    - Paddle and Trail
    - Rock County Parks
    - Rock Trail Coalition
    - Stateline Area Transportation Study
    - Stateline Spinners
    - Trail neighbors, donors and advocates.

- Blake Theisen with SAA Design Group provided an introduction to SAA’s expertise, capabilities, history in the area and role in the project.

- Patrick Hamann with SAA Design Group provided an update on the project status, including goals, objectives and next steps after describing the study area and outlining the significance of making this connection between Beloit and Janesville.
  - The purpose is to craft a feasible corridor master plan and report that can be used as a tool to gather support and pursue funding opportunities.
  - The corridor master plan will provide a conceptual layout for the proposed route. Detailed engineering and exact configuration will occur at a later date once the plan has been adopted and funding has been secured for detailed design and construction.
  - Blake Theisen provided an overview on how SAA has done in terms of inventory and analysis within the corridor and along the proposed route.
  - Review of past planning studies, tour corridor and assess feasibility of route options, property information and right-of-way research, stakeholder interviews.
- Patrick Hannon described potential route alternatives for both the northern and southern segments of the trail connection. Pros and cons to on and off street facilities were discussed along with challenges and potential solutions along the routes.

- Meeting attendees were asked to voice opinions and express hopes and concerns for the project. The following comments were discussed.

Comments:

- Why is the study area limited to the land west of Rock River?
  - Decision made by task force in an effort to achieve results more quickly. Future opportunities may be considered east of the river as the network expands. SAA reviewed DOT projected projects and no immediate opportunities were identified for the east side.

- There is concern over snowmobiles and other motorized vehicles.
  - Motorized vehicles will not be permitted on the trail. Bollards, gates, etc. may be used to limit access.

- Who will be responsible for trail maintenance?
  - The cities of Beloit and Janesville will maintain sections within their jurisdiction and Rock County/Rock Trail Coalition will likely maintain the rest.

- There is concern with an off-street trail as it may by-pass businesses in Afton.
  - If an off-street path is not feasible along Afton Road, it may very well be separated from the business district to a degree. This is often the case with multi-use paths and small towns. Connecting paths and appropriate wayfinding signage may help cyclists reach businesses and, often, cyclists will seek out businesses regardless of trail proximity.

- There is concern over bicyclists potentially entering private property.
  - Screening, berming and fencing can be implemented in areas where this issue may surface.

- The proposed change to the bike route near Beloit (utilizing Millar Road) seems to be an improvement.
  - The realignment of Caldwell/Poole route to the proposed Dawson route is an improvement that the design team also prefers.

- Trail amenities, including drinking fountains, would be desired in key locations.
  - We will look into incorporating amenities along the trail where appropriate.

- Broken glass and other debris along the path is a concern.
  - Our hope is that the trail users will do their part to keep the trail clean and safe. Rock Trail Coalition or other user groups could possibly organize cleanup events as needed.

- Traffic speed and volume on Walters Road is a concern.
  - This will be taken into consideration when looking at the entry/exit to Big Hill Park.

- Duggan Road is a relatively low traffic route and is a desirable option for a portion of the route.
  - Duggan Road is not a bad option, but it may be more difficult to create facilities that would appeal to riders of all levels. This route is still being considered.

- Some property owners between Bass Creek Road and the abandoned railroad right-of-way have concerns over the location of the proposed route. They do not want it to be in their back yard.
  - The design team and steering committee are willing to work with all property owners in the area to design an alignment that is functional and respects involved property lines.

SAA Design Group Tasks:

- Verify property information and exact abandoned rail corridor location.
- Fine tune maps based on comments received
- Continue to explore the feasibility of both the on-street and off-street alternatives for the northern half of the study area.
- Study the “curve” on Walters Road where the potential entrance to Big Hill Park is shown.
  - There is concern over traffic speed, volume and visibility.
- Explore possibilities for trail routes and crossing Bass Creek at Bass Creek Road near former railroad bridges. Continue conversations with property owners in that area to reach a solution.
- Explore opportunities for creating a path segment from the southeast corner of Big Hill Park to the neighborhood along S. Nature’s Ridge.
### APPENDIX 2 – COST ESTIMATES

#### Segment 1: City of Beloit to Big Hill Park (On-Street Route Relocation and Off-Street Side Path)  
Approximately 0.45 miles of on-street route, 1.6 miles of off-street path.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General clearing and mobilization</td>
<td>1</td>
<td></td>
<td>$6,000.00</td>
<td>Clearing of structures, vegetation, erosion control, etc.</td>
</tr>
<tr>
<td>2.</td>
<td>Paved (asphalt) multi-use path</td>
<td>3000</td>
<td>ft</td>
<td>$20.00</td>
<td>$60,000.00</td>
</tr>
<tr>
<td>3.</td>
<td>Utility relocation</td>
<td>1</td>
<td></td>
<td>$50,000.00</td>
<td>Possible relocation of overhead electric lines</td>
</tr>
<tr>
<td>4.</td>
<td>Signage</td>
<td>1</td>
<td></td>
<td>$5,000.00</td>
<td>Wayfinding and directional signage</td>
</tr>
<tr>
<td>5.</td>
<td>Retaining walls</td>
<td>1</td>
<td></td>
<td>$50,000.00</td>
<td>May be required along Afton Road multi-use path</td>
</tr>
<tr>
<td>6.</td>
<td>Trenching</td>
<td>1</td>
<td></td>
<td>$50,000.00</td>
<td>May be required along Afton Road multi-use path</td>
</tr>
<tr>
<td>7.</td>
<td>Intersection improvements</td>
<td>3</td>
<td></td>
<td>$30,000.00</td>
<td>Crosswalks, flashing beacons, signage, etc.</td>
</tr>
<tr>
<td>8.</td>
<td>Signage</td>
<td>1</td>
<td></td>
<td>$5,000.00</td>
<td>Wayfinding and directional</td>
</tr>
<tr>
<td>9.</td>
<td>Landscape improvements</td>
<td>1</td>
<td></td>
<td>$50,000.00</td>
<td>Restoration, tree replacement, etc.</td>
</tr>
<tr>
<td>10.</td>
<td>Pavement markings</td>
<td>1</td>
<td></td>
<td>$50,000.00</td>
<td>Bicycle markings for on-street section</td>
</tr>
</tbody>
</table>

**Subtotal** | **$510,500.00** |  
*Subtotal with crushed stone path* | **$577,500.00** |  
**Total** | **$584,175.00** |  
*Subtotal with crushed stone path* | **$591,700.00** |

#### Segment 2: Big Hill Park to Walters Road (Existing Park Roads and New Off-Street Path Connections)  
Approximately 1.7 miles of off-street route, 0.95 miles of on-street route.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General clearing and mobilization</td>
<td>1</td>
<td></td>
<td>$15,000.00</td>
<td>Clearing of structures, vegetation, erosion control, etc.</td>
</tr>
<tr>
<td>2.</td>
<td>Off-Street multi-use path</td>
<td>8300</td>
<td>ft</td>
<td>$50.00</td>
<td>$415,000.00</td>
</tr>
<tr>
<td>3.</td>
<td>Landscape improvements</td>
<td>1</td>
<td></td>
<td>$20,000.00</td>
<td>Restoration, tree replacement, etc.</td>
</tr>
<tr>
<td>4.</td>
<td>Signage</td>
<td>1</td>
<td></td>
<td>$5,000.00</td>
<td>Wayfinding and directional</td>
</tr>
<tr>
<td>5.</td>
<td>Miscellaneous improvements</td>
<td>1</td>
<td></td>
<td>$20,000.00</td>
<td>Restoration, tree replacement, etc.</td>
</tr>
</tbody>
</table>

**Subtotal** | **$352,836.00** |  
*Subtotal with crushed stone path* | **$446,000.00** |  
**Total** | **$707,062.50** |  
*Subtotal with crushed stone path* | **$731,450.00** |

#### Segment 3: Walters Road to Bass Creek (See alternate route options and associated costs.)  
Alternate Route 3.A.1 (New Off-Street Path Following abandoned Railroad Right-of-Way corridor).  
Comprehensive Plan recommended route.  
Approximately 1.5 miles of off-street path.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General clearing and mobilization</td>
<td>1</td>
<td></td>
<td>$10,000.00</td>
<td>Clearing of structures, vegetation, erosion control, etc.</td>
</tr>
<tr>
<td>2.</td>
<td>Off-Street multi-use path</td>
<td>7775</td>
<td>ft</td>
<td>$40.00</td>
<td>$311,000.00</td>
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<td>3.</td>
<td>Landscape improvements</td>
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<td></td>
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<td>Restoration, tree replacement, etc.</td>
</tr>
<tr>
<td>4.</td>
<td>Signage</td>
<td>1</td>
<td></td>
<td>$5,000.00</td>
<td>Wayfinding and directional</td>
</tr>
<tr>
<td>5.</td>
<td>Miscellaneous improvements</td>
<td>1</td>
<td></td>
<td>$20,000.00</td>
<td>Restoration, tree replacement, etc.</td>
</tr>
</tbody>
</table>

**Subtotal** | **$352,836.00** |  
*Subtotal with crushed stone path* | **$446,000.00** |  
**Total** | **$707,062.50** |  
*Subtotal with crushed stone path* | **$731,450.00** |

### Summary

**Total Cost Estimate:** $1,094,175.00  
20% Contingency = $218,700.00  
15% Design Fee = $162,000.00  
Subtotal = $810,500.00  

---

*Subtotal with crushed stone path* **$907,400.00**  
15% Design Fee = $136,110.00  
Subtotal = **$771,290.00**  

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*Subtotal with crushed stone path* **$785,700.00**  
15% Design Fee = **$117,855.00**  
Subtotal = **$667,845.00**

---

*Subtotal with crushed stone path* **$736,300.00**  
15% Design Fee = **$110,445.00**  
Subtotal = **$625,855.00**
### COST ESTIMATE

**Project:** Beloit - Janesville Bicycle Route Corridor Plan
**Date:** February 28, 2012

#### Alternate Route 3.3 (New Off-Street Path along Willard Road and through Town of Beloit property): Approximately 1.25 miles of on-street path.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General clearing and mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>2. Off-street multi-use path</td>
<td>6000</td>
<td>ft</td>
<td>$50.00</td>
<td>$300,000.00</td>
<td>Paved (asphalt) multi-use path</td>
</tr>
<tr>
<td>3. Railing structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$10,000.00</td>
</tr>
<tr>
<td>4. Intersection improvements</td>
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<td>$15,000.00</td>
</tr>
<tr>
<td>5. Signage</td>
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<td>$2,000.00</td>
</tr>
<tr>
<td>6. Landscape improvements</td>
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<tr>
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<tr>
<td>7. Railing structures</td>
<td></td>
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<tr>
<td>8. Intersection improvements</td>
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<td>9. Signage</td>
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<tr>
<td>10. Landscape improvements</td>
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<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
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<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$97,500.00</strong></td>
</tr>
</tbody>
</table>

#### Alternate Route 3.3.1 (New Off-Street Path from Townline Road to Former Railroad Bridge at Bass Creek): Approximately 1.4 miles of on-street route.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General clearing and mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>2. Off-street facilities (paved shoulders)</td>
<td>350</td>
<td>ft</td>
<td>$138,700.00</td>
<td>$48,000.00</td>
<td>If paved shoulders (asphalt pavement, grading, etc.)</td>
</tr>
<tr>
<td>3. Railing structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$10,000.00</td>
</tr>
<tr>
<td>4. Intersection improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$15,000.00</td>
</tr>
<tr>
<td>5. Signage</td>
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<td></td>
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<td></td>
<td>$2,000.00</td>
</tr>
<tr>
<td>6. Landscape improvements</td>
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<td>$5,000.00</td>
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<tr>
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<td>7. Railing structures</td>
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</tr>
<tr>
<td>8. Intersection improvements</td>
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<tr>
<td>9. Signage</td>
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<tr>
<td>10. Landscape improvements</td>
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<tr>
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<td><strong>Total</strong></td>
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<td></td>
<td><strong>$127,000.00</strong></td>
</tr>
</tbody>
</table>

#### Alternate Route 3.3.2 (New Off-Street Path from Townline Road to Former Railroad Bridge at Bass Creek via Duggan Road ROW/Easements): Approximately 1.4 miles of on-street path.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General clearing and mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>2. Off-street multi-use path</td>
<td>6000</td>
<td>ft</td>
<td>$50.00</td>
<td>$300,000.00</td>
<td>Paved (asphalt) multi-use path</td>
</tr>
<tr>
<td>3. Railing structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$10,000.00</td>
</tr>
<tr>
<td>4. Intersection improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$15,000.00</td>
</tr>
<tr>
<td>5. Signage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$2,000.00</td>
</tr>
<tr>
<td>6. Landscape improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$5,000.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$57,500.00</strong></td>
</tr>
<tr>
<td>7. Railing structures</td>
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<tr>
<td>8. Intersection improvements</td>
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<tr>
<td>9. Signage</td>
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<tr>
<td>10. Landscape improvements</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$97,500.00</strong></td>
</tr>
</tbody>
</table>

#### Alternate Route 3.4 (New Off-Street Path from Townline Road to Former Railroad Bridge at Bass Creek via Afton Road and Duggan Road ROW/Easements): Approximately 1.25 miles of on-street path.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Item Total</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General clearing and mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>2. Off-street multi-use path</td>
<td>6000</td>
<td>ft</td>
<td>$50.00</td>
<td>$300,000.00</td>
<td>Paved (asphalt) multi-use path</td>
</tr>
<tr>
<td>3. Railing structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$10,000.00</td>
</tr>
<tr>
<td>4. Intersection improvements</td>
<td></td>
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<td></td>
<td>$15,000.00</td>
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<tr>
<td>5. Signage</td>
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<td></td>
<td></td>
<td></td>
<td>$2,000.00</td>
</tr>
<tr>
<td>6. Landscape improvements</td>
<td></td>
<td></td>
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<td></td>
<td>$5,000.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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<td></td>
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<td><strong>$57,500.00</strong></td>
</tr>
<tr>
<td>7. Railing structures</td>
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<td>8. Intersection improvements</td>
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<tr>
<td>10. Landscape improvements</td>
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<td></td>
<td></td>
<td><strong>$97,500.00</strong></td>
</tr>
</tbody>
</table>

### Notes:
- *No right-of-way, easement, or property acquisition is included in these cost estimates.
- *Subtotal with crushed stone path: $436,500.00
- *Subtotal with gravel path: $368,000.00
- *Subtotal with crushed stone path: $415,000.00
- *Subtotal with gravel path: $332,000.00
- *Subtotal with crushed stone path: $610,000.00
- *Subtotal with gravel path: $520,000.00