

CONNECT



WASHINGTON COUNTY BIKEWAY & TRAIL NETWORK PLAN

EXECUTIVE SUMMARY – June 12, 2019



Washington County Bikeway and Trail Network Plan Executive Summary

Adopted by Washington County Board of Supervisors
June 12, 2019

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Acknowledgements

The Bikeway and Trail Network Plan was the result of many individuals and groups. The Advisory Committee members, Washington County staff, and other staff listed below deserve special thanks and acknowledgement for their contributions. Funding for the project was provided by Washington County and a grant from the Wisconsin Department of Transportation.

Bike and Pedestrian Plan Advisory Committee

Chairperson, Daniel Zignego, Town of Erin
Vice Chairperson, Roger Kist, Washington County Board
Jessi Balcom, Village of Slinger
Richard Bertram, Town of Barton
Marcy Bishop, Town of Jackson
Chris Elbe, Town of Farmington
Corey Foerster, Alcore Bike Club
Rick Goeckner, Village of Newburg
Joseph Gonnering, Town of Trenton
Jennifer L. Guslick, Town of Germantown
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Willie Karidis, Rails-to-Trails Conservancy
Jennifer Keller, Village of Richfield
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Alternate Members

Mike Hermann - City of Hartford
Dennis Kay - Town of Trenton
Tammy Kennedy - Town of Erin
Mark Piotrowicz - City of West Bend
Jenny Strohmeyer - Village of Newburg

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Key Engagement Stakeholders

In addition to the individuals on the previous page, the key stakeholders listed below contributed (or were given opportunities to contribute) throughout the planning process.

Inter-Agency Coordination Discussions

The County met with the following agencies and organizations during the Preliminary Draft Plan Public Engagement Period:

Willie Karidis, Rails to Trails Conservancy (Route of the Badger)
Rob Wessberg, Wisconsin Department of Natural Resources
Thomas Stolp, Ozaukee Washington Land Trust
Steve Henkel, Ozaukee Washington Land Trust
Linda Mutschler, Cedar Lake Conservation Foundation
Mike Nast, Cedar Lake Conservation Foundation
Tim Malzhan, Ice Age Trail Alliance
Eric Gabriel, National Park Service
Pam Schuler, National Park Service
Mary Tano, National Park Service
Andrew Struck, Ozaukee County Planning & Parks
Ramsey Radakovich, Milwaukee County Parks
Michael Marlin, Milwaukee County Parks
Jason Wilke, Waukesha County Parks
Bridget Henk, City of Mequon
Tyler Zwagerman, Village of Menomonee Falls

Public Engagement Notification

The following organizations were notified via email of opportunities to provide input at public meetings and on interactive maps:

Wisconsin Department of Natural Resources - Northern Kettle Moraine Unit
Ice Age Trail Alliance
West Bend Area Chamber
Hartford Conservation and Gun Club
West Bend Barton Sportsman Club
Newburg Sportsman Club
Museum of Wisconsin Art
Ozaukee Washington Land Trust
Germantown Area Chamber
Hartford Area Chamber
Kewaskum Area Chamber
Downtown West Bend Association
Daniel Boone Conservation League
YMCA
Town of Kewaskum
Town of Addison
West Bend Daily News
Washington County Insider
Richfield School District
Washington County Boys and Girls Clubs
Village of Slinger Park and Rec.
Village of Germantown Park and Rec.
City of West Bend Park and Rec.
Village of Kewaskum DPW
Village of Richfield Public Works and Parks
Fond Du Lac County Parks
Town of Hartford
Town of Wayne
Village of Jackson
Ozaukee Bicycle Club
Belgium Bicycle Club

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The Plan as a Guide

The Washington County Bikeway and Trail Network Plan (the Plan) was developed as a guide to help the County as it makes investments in bikeways and trails across the County for a wide variety of people—from school children to casual bicyclists to avid road cyclists. The centerpiece of the Plan are seven high-priority, “all ages and abilities” bikeway and trail corridors that will connect all of the incorporated cities and villages in the County. The Plan will be used as a guide to implement bikeways and trails over the next 30 to 40 years.

The intent of this Plan is to give individual communities and the County a comprehensive map of future bikeways and trails, as well as proposed policy and program actions that will help the planned trails and bikeways come to fruition. An extensive stakeholder and public engagement process was employed to gain input from hundreds of people from across the County - including elected officials, agency staff, advocates, and the public - in shaping the future for biking and walking. A Five-Year Strategic Action Plan will be created following Plan adoption that will narrow the County focus for implementing the Plan and identify tasks necessary to determine the final location of bikeways and trails based on extensive discussions with willing landowners. This Strategic Action Plan will be reviewed annually. The current County Park and Open Space Plan (POSP) is under development and the recommendations of this Plan will be incorporated into the POSP.

The recommendations in the Plan are based on preliminary planning-level research and not engineering study to confirm feasibility. Existing conditions have not been field-verified. Further analysis, engineering, and outreach to property owners will occur prior to implementing the bikeway and trail recommendations. Plan implementation will be fulfilled over time in small, incremental steps. The implementation of bikeway and trail segments and corridors identified in the Plan will require the review and approval of appropriate County Board liaison committees and the County Board of Supervisors through the annual budget and capital improvement plan processes.

Vision, Goals, and Practices for this Plan

Plan Vision

“Quality of life for Washington County residents is enhanced by a comprehensive system of bicycling and walking routes connecting destinations throughout the County and neighboring communities. County bicycling and walking routes are safe, scenic, and serve people of all ages, abilities and circumstances.”

Plan Goals and Practices

As Committee members considered the Vision, it became clear that some aspects of the Committee’s hopes and goals for this planning effort should be further clarified into four goals and/or practices:

- **Fiscal Responsibility**

Seek all potential funding sources, partnerships, sponsorships, and investments from local municipalities, families, businesses, and foundations. Stage new infrastructure investments so that they are folded into other construction projects.

- **Safety**

Increase and emphasize safety for all road users through infrastructure projects utilizing best practices for design and promoting safety through education and outreach.

- **Quality of Life**

Increase the comfort, accessibility, usefulness, and appeal of trail and on-road bikeway networks to serve people of all ages, abilities, and circumstances for recreational and utilitarian use improving health, independence and quality of life.

- **Partnership**

Work in partnership with cities, villages, towns and the State to grow and expand the network through regular collaboration and communication.

Alignment with Washington County Vision, Mission, and Strategic Goals

The Vision and Goals and Practices for this Plan align with the Vision, Mission, and Strategic Goals for County government, notably in the emphasis on quality of life, safety, and good governance:

County Vision

Washington County strives to cultivate its rich heritage, vibrant economy and attractive communities through the distinct values that define us.

County Mission

We create an environment for residents and businesses to enjoy our authentic quality of life through a well - governed and administered county dedicated to safe and secure communities; economic growth and vitality; effective mobility and reliable infrastructure; and access to basic needs.

County Goals and Practices

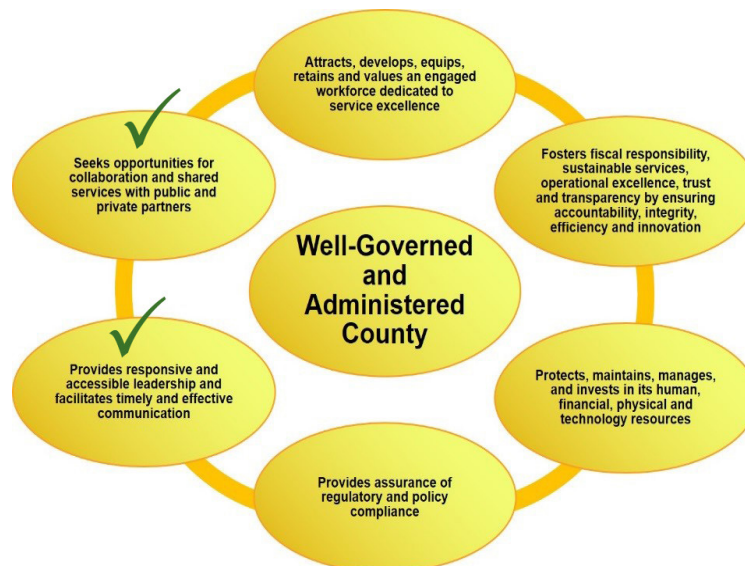
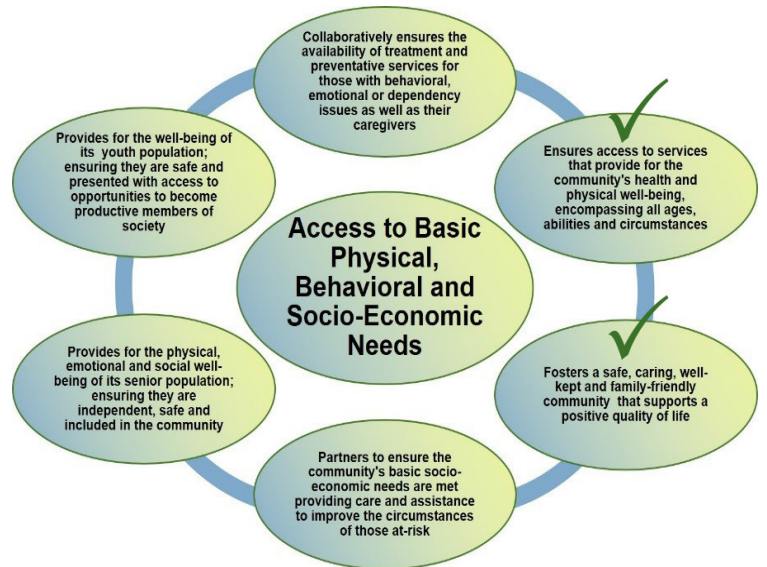
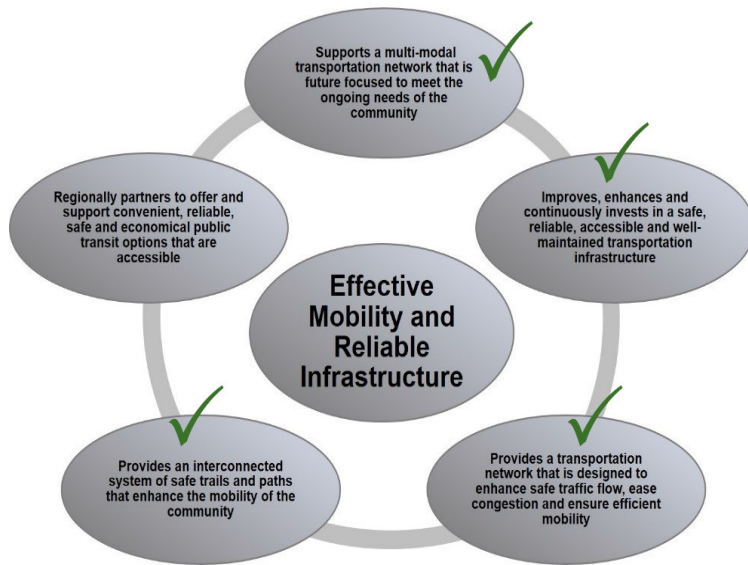
In 2015, the County Board established five strategic goals for County programs and services:

- Well-Governed and Administered County
- A Safe and Secure Community
- Economic Growth and Vitality
- Effective Mobility and Reliable Infrastructure
- Access to Basic Needs

Each goal is supported by a set of practices designed to achieve that goal. The goals and practices are shown in the following charts on page 3. Practices that align with this Plan are marked with green check marks.



Sidewalk along Jackson Drive in Jackson



Development of the Plan

The Washington County Planning and Parks Department received a \$90,000 grant issued by the Wisconsin Department of Transportation's 2016-2020 Transportation Alternative Program (TAP) for the development of a Bike & Pedestrian Plan. Washington County signed a contract with Toole Design Group and the Southeastern Wisconsin Regional Planning Commission to assist with the development of the Plan. In addition, the County assembled an Advisory Committee, coordinated internal workgroup meetings, held numerous public outreach events, and met with key stakeholders to assist in development of the Plan.

Advisory Committee

To help guide and oversee the development of this Plan, the Washington County Board authorized the creation of the Bike and Pedestrian Plan Advisory Committee, whose members are listed in the acknowledgements of this Plan. The Committee is comprised of representatives from most towns and municipalities in the County, as well as important stakeholders with an interest in bicycle and pedestrian issues. The Committee provided input throughout the development of the Plan, including reviewing and commenting on the memoranda that provided the basis of this Plan.



Advisory Committee meeting discussing the preliminary draft Plan

Public Engagement and Outreach

In addition to the Advisory Committee oversight, there were numerous opportunities for public engagement throughout the planning process including two online interactive mapping exercises, traditional public meetings, as well as in-person “meeting in a box” outreach. These opportunities were advertised by Washington County staff using traditional efforts, social media, and an email contact list developed for this project. The email contact list was created at the start of the planning process and included organizations (listed on page iii) that could have an interest in the Plan. During the planning process, additional citizens requested to be added to the list, which grew to about 90 addresses.

A full report of the Public Engagement and Outreach can be found in Chapter 3 of the Plan. A summary of the public engagement opportunities can be found on the following pages.

Online Interactive Maps

Community members provided input through two different interactive maps that allowed them to comment at different stages of the Plan development. Online interactive maps provide an excellent way to reach a broader spectrum of residents than those with the time or ability to attend public meetings.

Online Interactive Map #1

The purpose of the first interactive map was to identify desirable and challenging walking and biking routes. Between August 16, 2018 and September 11, 2018, a total of 37 users provided 161 comments on the interactive map. Respondents showed a desire to extend and connect the Eisenbahn State Trail to surrounding communities. In addition, most participants desired “family-friendly” bike routes, or routes for all ages and abilities over experienced bicycle routes. The results were translated into the development of the recommended bikeway and trail network.

Online Interactive Map #2

The purpose of the second interactive map was to identify which corridors of the network users considered to be important or a priority. Between November 13, 2018 and December 3, 2018, just over 100 users provided input on the map. The top three ranked corridors were identified to be the connection between Jackson and Germantown via extension of the Eisenbahn State Trail, the connection between West Bend and Slinger and the connection between West Bend and Jackson via extension of the Eisenbahn State Trail. Nearly all of the chosen corridors were “routes for all ages and abilities”. The results were translated into the development of priority corridors.

Public Meetings

Public Workshop

The County held a public workshop in August of 2018 to solicit input from the public regarding preferences, opportunities, challenges and needs. The public reported that a “Lack of Connected Multi-Use Trails/Sidewalks” was the largest factor discouraging bicycling and walking in the County. When asked what destinations were important, the two top-selected options were simply “Exercise/Dog Walking” and “Park/Recreation Center”.

Public Open House

A public open house was held in February of 2019. A total of 55 people attended the meeting. Maps of the Draft Recommended Bikeway and Trail Network and Priority Corridors were displayed in addition to summaries of the recommended changes to policies and programs. The planning team also gave a presentation summarizing the recommendations and explaining how the Plan was developed. Attendees voiced their concerns about the draft bikeway and trail network discussed in further detail in Chapter 3 of the Plan.



Members of the public attending the Public Open House on 2/13/19

Meetings in a Box

During November of 2018, County staff held six in-person “meetings in a box” (MIAB) at various community events throughout the County. The purpose of the MIAB was to solicit public feedback on corridor prioritization (where bikeways and trails should be built), as well as infrastructure preferences (what form those bikeways and trails should take). Over 130 participants provided input during the MIAB events.

The top three corridors ranked by MIAB participants were identified to be the connection between Jackson and Germantown via extension of the Eisenbahn State Trail, the connection between West Bend and Jackson via extension of the Eisenbahn State Trail and the connection between West Bend and Newburg. Respondents overwhelmingly preferred continuous networks, paths that can be used by “all ages and abilities,” and facilities located in scenic areas, even if they may be indirect. The results were used in the development of the priority corridors.

Inter-Agency Coordination

During the development of the Plan, County staff held many in-person meetings and review opportunities to solicit input and coordination both within County government and between other agencies that were not represented on the Advisory Committee. The meetings and reviews are documented in detail in Chapter 3 and Appendix D of the Plan. The following agencies were part of the preliminary Plan review:

- Multi-Jurisdictional Coordination (Milwaukee, Ozaukee and Waukesha Counties, the Village of Menomonee Falls and the City of Mequon)
- Ice Age Trail Alliance
- Wisconsin DNR
- National Park Service
- Rails to Trails Conservancy (Route of the Badger)
- Cedar Lake Conservation Foundation
- Ozaukee Washington County Land Trust
- County Staff Bike and Pedestrian Workgroup (Washington County Highway Department and Parks and Trails Division, and the Washington Ozaukee Health Department)
- WisDOT

Existing Bikeway and Trails

Shared Use Paths

Washington County has several popular off-street shared-use paths (also referred to as “trails”) which will form the foundation of the recommended bicycle and pedestrian network in the County.

- Eisenbahn State Trail
- West Bend Riverfront Parkway
- Rubicon River Bike Trail



Eisenbahn State Trail in the City of West Bend



Rubicon River Bike Trail in the City of Hartford

Sidepaths

Sidepaths are shared use paths adjacent to roadways. The City of Hartford, and the Villages of Germantown, Jackson, and Richfield have several miles of sidepaths within their jurisdictions. Some of these sidepaths were built along State Highways when they were reconstructed.



Existing bike lanes and sidepath in the Village of Jackson

Wide Shoulders/Bike lanes

Wide shoulders and bike lanes provide space for people bicycling on the roadway. Most existing on-street bikeways in Washington County are wide paved shoulders, which are often on County, State, or Federal highways that have high speeds and traffic volumes. These can be useful to more-experienced bicyclists but do not serve “all ages and abilities.” Paved shoulders have considerable safety for motorists and significant maintenance benefits for the County.



Bike and pedestrian crossing sign in the Village of Jackson

Ice Age National Scenic Trail

The Ice Age National Scenic Trail is a continuous footpath that extends approximately 1,200 miles across the State of Wisconsin along the terminal moraine formed during the Wisconsin Glaciation. The Ice Age Trail provides a natural corridor for wildlife and habitat, is an educational resource for people to learn about the cultural and geological history of Wisconsin and provides quiet places for people to form a connection with the landscape. About 35 miles of completed footpath has been built in Washington County. The trail is designated for walking and hiking only. In areas where there is not yet a designated footpath, the Ice Age Trail uses roads as connectors.

Policy and Program Recommendations

Implementation of this Plan depends on changes in policies and programs at the County and municipal levels. Chapter 4 of the Plan provides recommendations and specific actions for policies and programs that will allow the creation of the recommended bikeway and trail network and improve walking and bicycling conditions in Washington County.

The figure below lists the policies and program recommendations found on the following pages and correlates each recommendation to the goals and practices of the Plan. Each of the recommendations include specific actions, a general timeline for implementation, and partners who may be involved with implementing each action.

Policy Recommendation	Fiscal Responsibility	Safety	Quality of Life	Partnership
1 Adopt design standards and implementation practices that will result in the creation of safe and well-designed walking and biking facilities.		✓	✓	✓
2 Update other plans and ordinances to include Plan recommendations.	✓			✓
3 Adopt a sustainable maintenance strategy and an evaluation program.	✓	✓		✓
4 Pursue all potential funding sources for bicycling and walking projects.	✓			✓
5 Increase coordination and communication between agencies.		✓		✓
6 Provide training and education opportunities for County staff.		✓		✓
7 Increase public outreach, awareness, and education.		✓	✓	✓



Rubicon River Bike Trail in the City of Hartford

Design and Implementation Policies

For a bikeway and trail network to be safe, paths, sidewalks, shoulders, and bike lanes must be built to the correct design standards. The County should assist willing communities with the adoption of consistent design standards and practices to ensure that facilities are designed and built correctly.

Recommendation 1: Adopt design standards and implementation practices that will result in the creation of safe and well-designed walking and biking facilities.

Action	Proposed Timeline	Partners
Add paved shoulders to County highways as part of Resurfacing, Restoration, and Rehabilitation (“3R”) projects when possible and appropriate. Add paved shoulders to County highways as part of Reconstruction projects. Adopt the recommended paved shoulder widths.	Ongoing	<ul style="list-style-type: none"> • Washington County Highway Department
If rumble strips are being considered during County highway Reconstruction projects, the County will use the WisDOT rumble strips policy and design criteria in the WisDOT Facilities Development Manual.	Ongoing	<ul style="list-style-type: none"> • Washington County Highway Department
Develop standard design guidelines for on-street bikeways and paths in the County: <ul style="list-style-type: none"> • Guidelines should be adopted by the County and shared with cities, villages, and towns • Include urban contexts, rural contexts, and urban/rural transitions • Include preferred standard widths for bike lanes, sidewalks, paved shoulders and sidepaths, and preferred crossing treatments where paths cross roadways 	1-3 years	<ul style="list-style-type: none"> • Washington County Highway Department • Washington County Planning and Parks Department • WisDOT • Local municipalities • Advocacy Groups
On state roadway projects, WisDOT requires municipalities to pass a Resolution of Support before they will build bicycle and pedestrian accommodations as part of a state roadway project. To assist municipalities, the County will write and share a model Resolution of Support if needed.	1-3 years	<ul style="list-style-type: none"> • Washington County Highway Department • Washington County Planning and Parks Department • WisDOT
Partner with appropriate organizations to establish a full-time trail coordinator to work toward implementing the bikeway and trail network in the County.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Ozaukee County
Provide appropriate staff and resources to implement the recommendations of the Plan.	Following Plan Adoption	<ul style="list-style-type: none"> • Washington County Planning and Parks Department

The recommendations in this Plan should be institutionalized in other plans and policies. Whenever possible, integrate policies that support walking, bicycling, and active living at the regional, county, and local level.

Recommendation 2: Update other plans and ordinances to include Plan recommendations.

Action	Proposed Timeline	Partners
Update the Washington County Park and Open Space Plan and Multi-Jurisdictional Comprehensive Plan for Washington County to include Plan recommendations.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
As preliminary plats and Certified Survey Maps are submitted, work with developers, County Highway Department and local municipalities to consider possible bicycle and pedestrian accommodation based on Plan recommendations. <ul style="list-style-type: none"> • Meet with developers and builders’ associations to increase awareness of this Plan, so they will know to include easements or connections for the recommended bikeway and trail network 	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington County Highway Department • Local municipalities
Review and update County highway and traffic ordinances to ensure new developments and infrastructure projects will help implement the recommended bikeway and trail network and accommodate bicycling and walking as appropriate.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington County Highway Department
Work with County Public Affairs Coordinator to determine barriers in State law that limit successful implementation of Plan recommendations.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • County Administration
Add “locations and widths of proposed bicycle and/or pedestrian accommodation” to 24.02(1) of Washington County Chapter 24 – Land Division.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Support the completion of the Ice Age National Scenic Trail in Washington County	3-20 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Consider Plan recommendations when developing County Park development plans and updating the County Parks Fiscal Sustainability Plan, County Highway Sustainability Plan, and County Capital Improvement Plan (CIP).	3-5 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington County Highway Department
Update health-based planning documents—such as Community Health Improvement Plans and strategic plans—to include appropriate Plan recommendations.	3-5 years	<ul style="list-style-type: none"> • Washington Ozaukee Health Department
Encourage local municipalities to update their ordinances and local plans to ensure that the bikeway and trail network is implemented in their community.	3-10 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Local municipalities
Update SEWRPC Regional land use and transportation plan to include regional bikeway connections recommended in this Plan.	3-10 years	<ul style="list-style-type: none"> • SEWRPC

Once a bicycle and pedestrian facility is built, it needs to be maintained so that it remains safe and useable. Maintenance is also a fiscally-sustainable strategy because oftentimes, a wise maintenance strategy can save money in the long-term by avoiding more costly repairs. The County should help coordinate a feasible and sustainable maintenance strategy for these investments. The County should also continue and expand non-motorized counts to validate the investments in this Plan. SEWRPC and WisDOT have helped the County count users on the Eisenbahn State Trail for several years. An expanded evaluation program would include pre- and post-evaluation measures to measure the use of new investments such as bike lanes, paved shoulders, or shared use paths. It would also identify intensely used trail segments and hazardous areas and road crossings.

Recommendation 3: Adopt a sustainable maintenance strategy and an evaluation program.

Action	Proposed Timeline	Partners
Create and maintain a countywide bicycle and pedestrian count program (in addition to the Eisenbahn State Trail counts). Consider: <ul style="list-style-type: none"> • Conducting counts before and after infrastructure is added • On-street and off-street counts 	1-3 years	<ul style="list-style-type: none"> • SEWRPC • WisDOT • Washington County Planning and Parks Department • Washington County Highway Department
Determine appropriate measures of success for Plan implementation as part of user counts and survey results.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Annually review crashes flagged as “bicycle” or “pedestrian” in the County and take a multi-disciplinary approach to addressing intersection concerns or problem areas as appropriate.	2-5 years	<ul style="list-style-type: none"> • Internal County staff workgroup • Sheriff’s Department • Local municipalities • WisDOT
Develop a sustainable strategy for annual maintenance needs and responsibilities: <ul style="list-style-type: none"> • Include guidelines for necessary agency commitments (such as how frequently to trim back vegetation from trails) • Consider longer-term maintenance and replacement of infrastructure 	3-5 years	<ul style="list-style-type: none"> • Washington County Highway Department • Washington County Planning and Parks Department • Local municipalities
Conduct a survey of countywide trail system users every five years to gain insight into preferences, concerns and use. <ul style="list-style-type: none"> • Include questions about the use of electric-assist bicycles (“e-bikes”) to determine whether high-speed e-bikes are negatively affecting other trail users 	5-10 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department

Funding Policies

Infrastructure and programs to support bicycling and walking in Washington County will require additional financial resources.

Recommendation 4: Pursue all potential funding sources for bicycling and walking projects.

Action	Proposed Timeline	Partners
Continue annual capital investment in bikeway and trail projects through County Planning and Parks Department.	Ongoing	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Pursue federal, state, and foundation grants, such as the Transportation Alternatives Program, Recreational Trail Program, or Brownfields Program.	Ongoing	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Continue to fund on-street bikeway accommodations on County highways as part of roadway projects. <ul style="list-style-type: none"> • Consider how paving shoulders may increase costs of scheduled projects, requiring more funds. 	Ongoing	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington County Highway Department
Establish annual capital investment for pedestrian, bikeway, and trail improvements on County highways that are NOT part of roadway projects, such as: <ul style="list-style-type: none"> • Spot treatments where trails cross roadways • Sidepath construction where it is not part of a roadway construction • Installation of signs and pavement markings 	1-2 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington County Highway Department
Implement a Washington County grant opportunity where funds are awarded for biking/walking projects in cities, villages, or towns.	3-5 years	<ul style="list-style-type: none"> • Washington County • Healthy Community Fund
Partner with area businesses and foundations for sponsorships and donations. <ul style="list-style-type: none"> • Explore opportunities for sponsored trails or named routes. • Coordinate physical and in-kind donations. 	3-5 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Local businesses • Community foundations
Encourage municipalities to establish annual capital investments for bicycle and pedestrian infrastructure improvements.	3-5 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Local municipalities

Coordination and Communication Policies

Implementation of this Plan will require cooperation and coordination between many different municipalities, agencies, and departments. This can be achieved by establishing committees responsible for implementation and oversight.

Recommendation 5: Increase coordination and communication between agencies.

Action	Proposed Timeline	Partners
Continue to meet quarterly with internal County Staff Bike and Pedestrian workgroup, to oversee the implementation of the Plan and provide interdepartmental feedback on upcoming infrastructure projects, grant opportunities, and policy projects.	Ongoing	<ul style="list-style-type: none"> • Washington County staff
Develop a Strategic Action Plan to identify specific tasks to implement the Plan recommendations over the next five years, along with responsible entities	Following Plan Adoption	<ul style="list-style-type: none"> • Washington County staff
Continue to meet with adjacent counties and local governments on an annual basis to discuss priority routes and coordinate implementation efforts.	Ongoing	<ul style="list-style-type: none"> • Washington County staff • Staff from Milwaukee, Ozaukee, and Waukesha Counties
Establish formal Intergovernmental Bike/Ped Council to address countywide bicycling and walking opportunities, share knowledge, and oversee implementation of the Plan.	1-3 years	<ul style="list-style-type: none"> • Washington County staff • Town and municipal staff • Advocacy organizations • WisDOT

Increasing the knowledge and capabilities of planners, engineers, and law enforcement officers is paramount to the effective implementation of this Plan and continued safety of the public.

Recommendation 6: Provide training and education opportunities for County staff.

Action	Proposed Timeline	Partners
Provide opportunities for appropriate county staff to attend webinars or conferences related to bicycle and pedestrian planning and implementation.	1-3 years	<ul style="list-style-type: none"> • Washington County staff
Provide "Pedestrian & Bicycle Safety for Law Enforcement" course for Sheriffs and local law enforcement officers.	1-3 years	<ul style="list-style-type: none"> • Washington County Sheriff • Local enforcement agencies

The County and partnering organizations should effectively and strategically communicate with the public throughout the implementation of Plan recommendations. Public engagement should cover topics related to planning and construction of the new bikeway and trail network, the value and benefits of biking and walking, and encouraging safe and friendly behavior by all modes (drivers, bicyclists, and pedestrians).

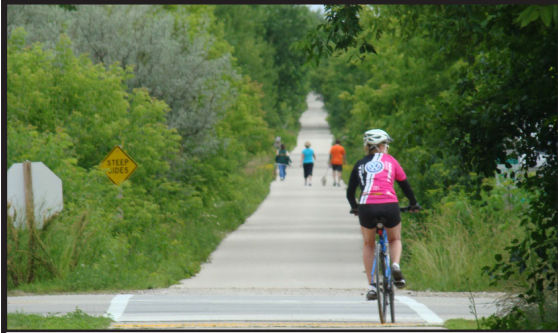
Recommendation 7: Increase public outreach, awareness, and education.

Action	Proposed Timeline	Partners
Develop an online mobile-friendly interactive map tool that shows the current and planned bikeway and trail network in the County, and major projects expected to be completed in the next 5 years.	As soon as Plan is complete	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Periodically update the Washington County Park and Trail Map to include new paths and all on-street bicycle routes.	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department
Develop and implement a public engagement strategy for all ages, abilities, and circumstances tied to Plan implementation recommendations, construction of new infrastructure, and the benefits of biking and walking. Consider: <ul style="list-style-type: none"> • Educating elected officials by coordinating events for them to walk and bicycle in their community with residents. • Continuing to support partnering organizations that organize bicycling and walking events. • Partnering with hospitals and health coalitions to promote walking and bicycling for health. • Engaging interested parties (including the Ice Age Trail Alliance, the Wisconsin DNR, or local land trusts) about implementation efforts on the seven priority corridors 	1-3 years	<ul style="list-style-type: none"> • Washington County Planning and Parks Department • Washington Ozaukee Health Department • Well Washington County • Advocacy groups • Hospital organizations
Develop a coordinated enforcement campaign that combines law enforcement with road user education to increase awareness of rules of the road, including messages targeted at reducing distracted and aggressive driving.	3-5 years	<ul style="list-style-type: none"> • Sheriff's Department • Local law enforcement • Advocacy groups
Support programs to educate children on how to walk and bike safely, such as "bike rodeos" or education programs in school.	3-5 years	<ul style="list-style-type: none"> • Sheriff's Department • Local law enforcement • Washington Ozaukee Health Department • School districts

Bikeway and Trail Facilities

The planning team recommended specific types of bikeway and trail facilities for each segment by reviewing traffic counts, road context, and physical constraints, and by considering whether the segment was part of the “all ages and abilities” network. The following table shows the different types of bikeway and trail facilities that make up the “menu” of facility types that were considered for the recommended bikeway and trail network. More information on the facility selection process can be found in Chapter 5 of the Plan.

Types of Bikeway and Trail Facilities



Shared-Use Paths

- Part of the “all ages and abilities” network
- Fully separated from a street or road
- Typically paved and 10-12 feet wide
- Often installed along rail or utility corridors or next to rivers
- Low-stress experience for many types of users (bicyclists, pedestrians, joggers)



Sidepaths (Shared Use Paths along a Roadway)

- Part of the “all ages and abilities” network
- Fully separated and located immediately next to and parallel to a roadway
- Provide a comfortable space for pedestrians
- Typically paved and 10-12 feet wide
- Paths next to urban and suburban roadways can increase hazards to bicyclists if there are numerous driveways and intersections
- Typically used on medium and high-volume streets with few intersections or driveways



Rail with Trail

- Part of the “all ages and abilities” network
- Run parallel to an active railroad
- Usually have barrier separation between the path and the railroad
- Open lines of communication with the railroad can make this a viable option



Bike Lanes

- Designate space for bicyclists on medium-to-high volume streets with markings and signs
- Located next to motor vehicle travel lanes; goes in the same direction as motor vehicle traffic
- Usually 5 feet wide; can be wider with a painted “buffer” marking
- Typically can be added by removing on-street parking, reducing the number of travel lanes, or through reconstruction

Types of Bikeway and Trail Facilities



Paved Shoulders (3'-6' wide)

- Benefit all road users and lengthen roadway life
- Serve more experienced bicyclists used to fast-moving traffic
- Can be used by pedestrians
- Recommended paved shoulder width depends mostly on the anticipated average daily traffic (ADT)



Minor Enhancements/Shared Lane Markings (Sharrows)

- Used to indicate a shared bicyclist/motorist lane
- Indicate where bicyclists should position themselves in the lane
- Typically used on low-volume local streets



Minor Enhancements/Signed Routes

- Help bicyclists navigate low traffic, low-stress streets
- Quickly and affordably expand the bicycle network using existing residential and town roads
- Alert drivers that bicyclists may be present
- May include destinations, distance, and direction



Traffic Calming

- Usually used on neighborhood streets to slow speeds
- Can include curb extensions, speed humps, neighborhood traffic circles, and pedestrian islands
- Can be hazardous to bicyclists if not properly designed
- Fire departments and school bus operators may object to traffic calming treatments; they should be a part of the planning process

Recommended Bikeway and Trail Network

The recommended bikeway and trail network went through several stages of development and iteration. The planning team developed an initial draft of a proposed network by referring to the existing conditions, challenges, and opportunities in Chapter 2 of the Plan, using that information to connect all communities of over 5,000 people in Washington County and neighboring counties.



Jogger and bicyclist using the Eisenbahn State Trail

The culmination of this iterative process is the comprehensive proposed network of bikeways and trails. The full network includes approximately 72 miles of trails, 81 miles of sidepaths, and 195 miles of on-street treatments such as marked bike routes, bike lanes and paved shoulders. At full build out, there are 348 miles of proposed bikeway and trails. The recommended proposed bikeway and trail network can be found on the following page.

Throughout the planning process, it became clear that Washington County staff and residents desire a network of trails, sidepaths, and low-traffic, low-speed streets that could be used by “all ages and abilities”, enhancing the quality of life for County residents and families. At build out, this network will be 178 miles and will connect all the cities and villages in the County. The “All Ages and Abilities” map can be found in Chapter 5 of the Plan.

The recommended network is meant to be a conceptual guide. Further analysis and engineering design are necessary prior to implementation. Final bikeway and trail alignments will also depend on the willing participation of landowners.

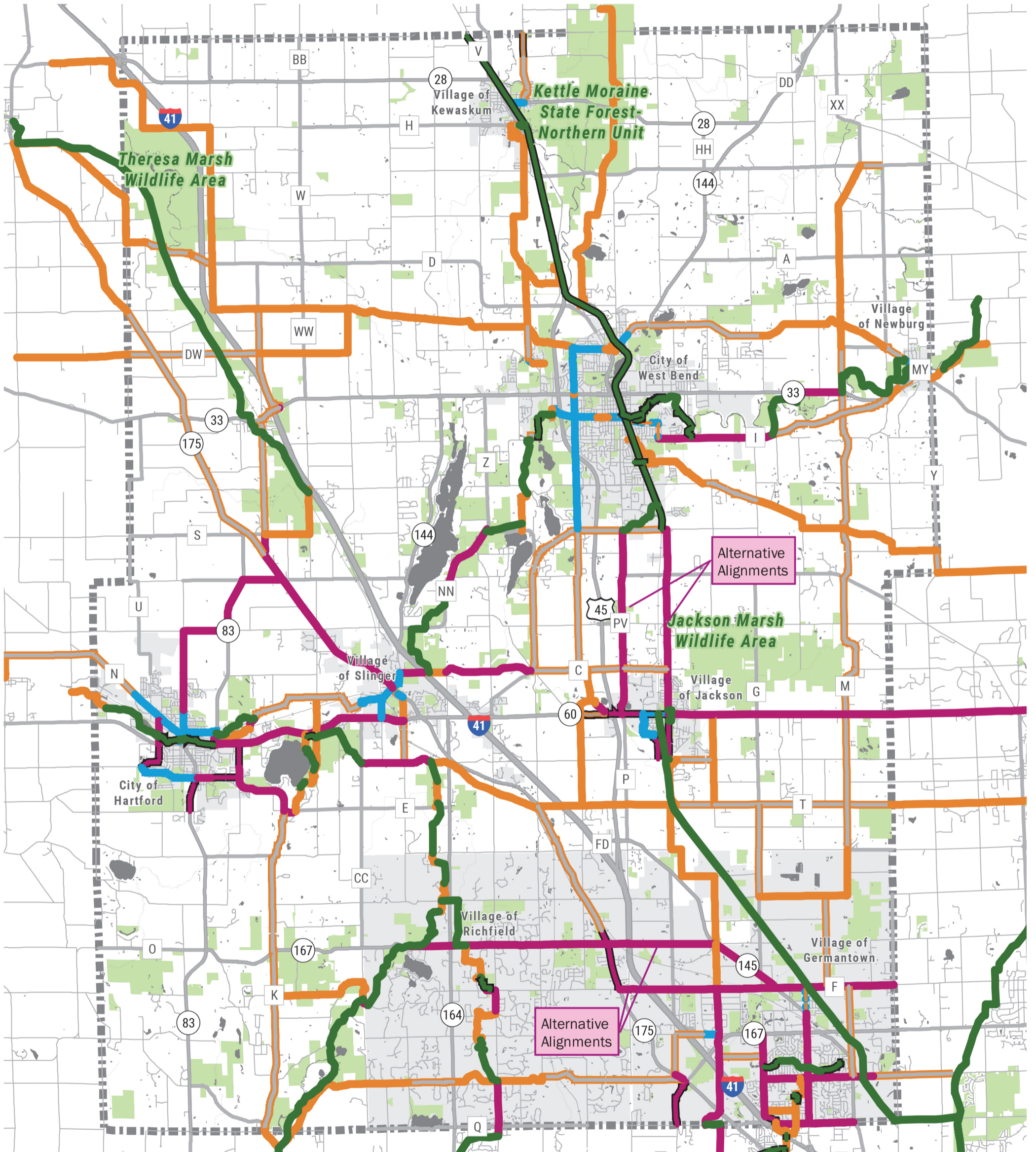
Priority Corridors

The planning team and County staff selected seven Priority Corridors out of the full recommended bikeway and trail network for further study and guidance on implementation. These corridors were determined by combining the scores from the “Meeting in a Box” corridor prioritization exercise and the second interactive map, and then ranking all the corridors by the total score. The planning team and County staff conducted a segment-by-segment analysis of the challenges and specific recommendations necessary to carry out each corridor. When built, these seven corridors will create a nearly continuous “all ages and abilities” network of bikeways and trails across the County. A map of the seven Priority Corridors can be seen on page 18 while an overview of each corridor can be found on pages 19 - 22. Further explanation of the priority corridors and a breakdown of estimated cost of construction can be found in Chapter 6 of the Bikeway and Trail Network Plan.

The Seven Priority Corridors

- 1) Jackson to Germantown via Eisenbahn State Trail Extension
- 2) West Bend to Jackson via Jackson Drive or CTH P
- 3) West Bend to Newburg via Decorah Road and Milwaukee River Path
- 4) West Bend to Slinger via Ridge Run Park and CTH NN
- 5) Holy Hill Road-Freistadt Road
- 6) Germantown to Bugline Trail via I-41 Pedestrian Overpass
- 7) Pike Lake Unit to Heritage Trails Park to Loew Lake Unit




Washington County Bikeway and Trail Network Plan Recommended Bikeway and Trail Network




Existing Planned

Existing Planned

-  Shared Use Path
-  Sidepath
-  Paved Shoulder (Width Varies)

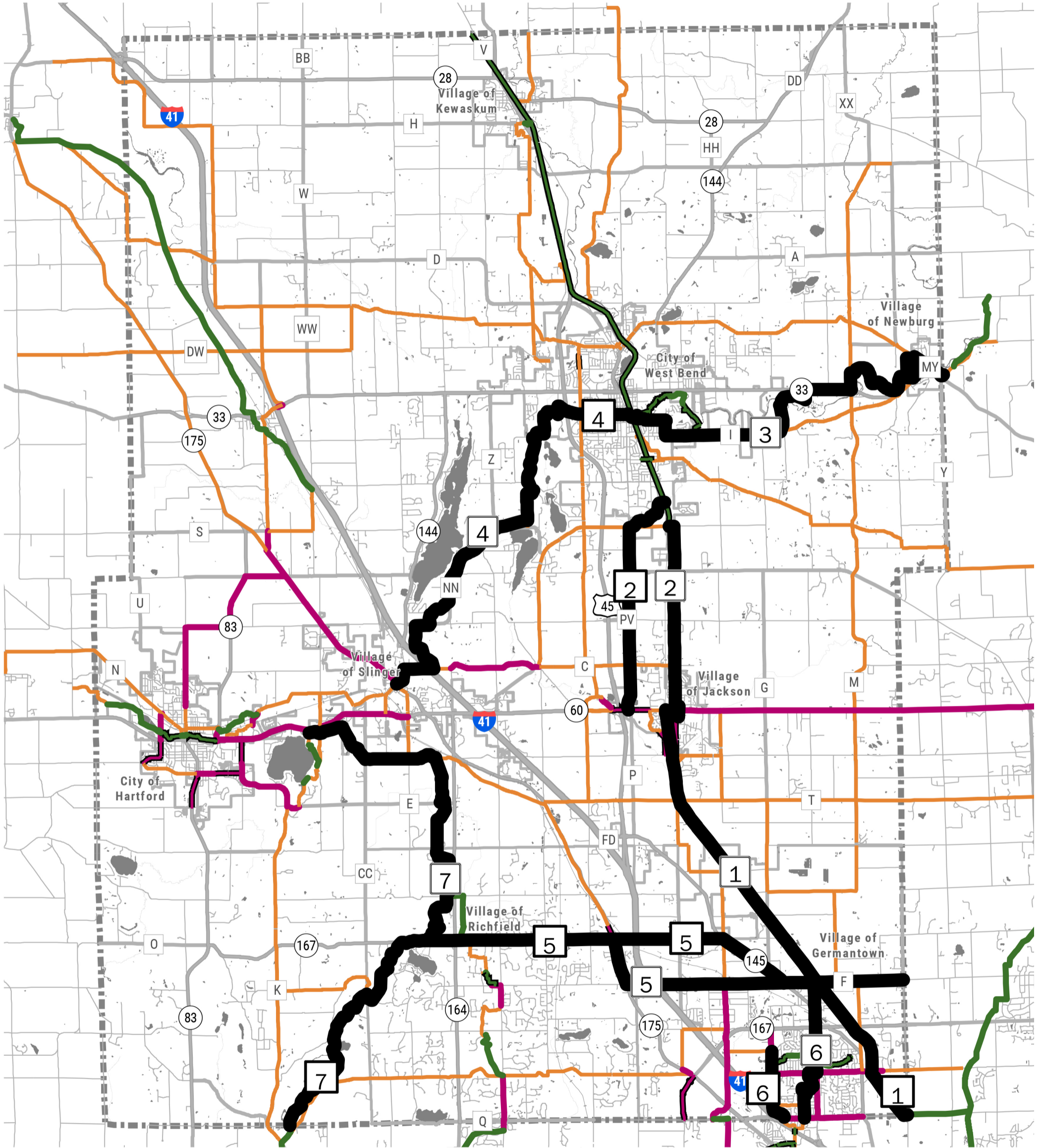
-  Bike Lanes
-  Minor Enhancements
-  Traffic Calming

 All Parks and Open Spaces (Private and Public)

0 1 2 Miles



Washington County Bikeway and Trail Network Plan Priority Corridors

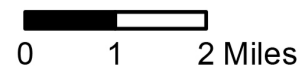


Highest Priority Corridors in Plan Network

-  Top 7 Corridors
-  Corridor Number

Other Routes in Plan Network

-  Shared Use Path
-  Sidepath
-  On-Street Segment of Planned Network

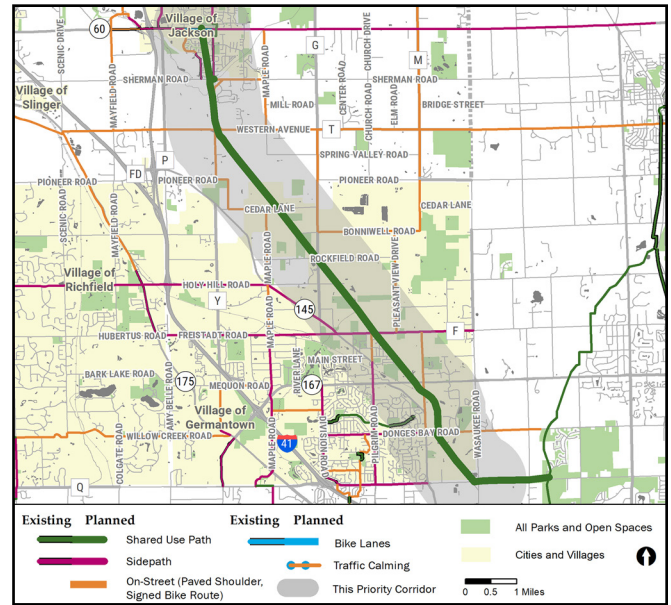


Corridor 1: Jackson to Germantown via Eisenbahn State Trail Extension

Public input on priority routes revealed that this connection between Jackson and Germantown via a future extension of the Eisenbahn State Trail was—by far—the most important trail connection for Washington County to complete. Rail-trails have the advantage of being flat, removed from traffic, and, in this case, travel through rural farmlands to connect two important communities. However, this railroad is currently in use by Canadian National railroad. The alignment is based on the trail being built next to the existing rail line in the railroad right-of-way (ROW). In the interim, there are two on-road options for experienced bicyclists, which only require wayfinding signs and minimal investment in paving shoulders as roads are resurfaced or reconstructed.

Construction cost opinion: \$15,299,000

Land acquisition cost opinion: The Canadian National railroad ROW is exempt from property assessments; moreover, operating railroad corridor properties are typically not sold in the open market. Therefore, this report cannot estimate the cost of land acquisition for Corridor 1.



Corridor 2: West Bend to Jackson via Jackson Drive or CTH P

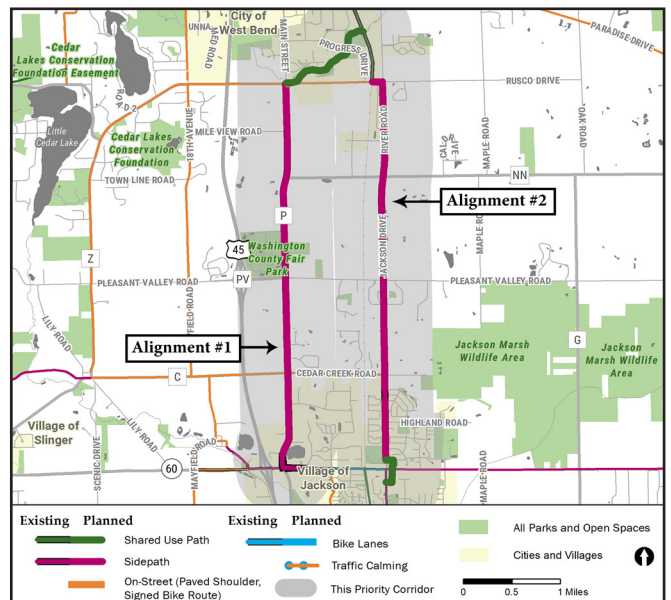
Public input placed a high priority on continuing a bicycle or trail to connection from the Eisenbahn State Trail south from West Bend to Jackson. Initially, the planning team and County staff considered a “rail with trail” option next to the railroad. However, the initial analysis determined that it was unlikely that Canadian National would abandon the railroad and the steep slopes on either side of the railroad would pose many challenges to building a trail next to the existing rail line. Therefore, the two potential alignments presented here propose sidepaths built in the road right-of-way. The County will need to perform an engineering study to decide which of the alignments is more feasible and cost-effective.

Construction cost opinion:

Alignment #1 - \$3,452,000

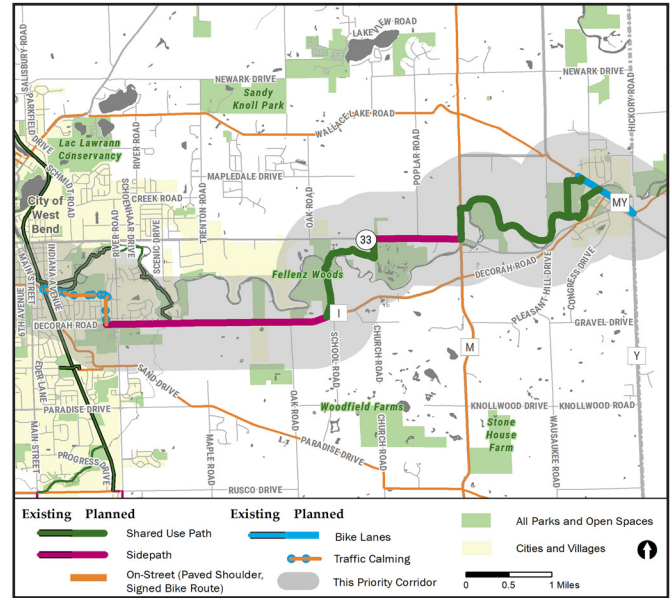
Alignment #2 - \$2,859,000

Land acquisition cost opinion: between \$60,000 and \$240,000



Corridor 3: West Bend to Newburg via Decorah Road & Milwaukee River Path

This route from West Bend to Newburg would be a part of an eventual “all ages and abilities” bikeway and trail connection from the Eisenbahn State Trail in West Bend to the Interurban Trail in Ozaukee County. During the planning process, County staff determined that the previously planned alignment along the West Bend Municipal Airport was unfeasible due to Federal airport runway open space requirements. The proposed alignment connects West High School in West Bend to a variety of parks and residential areas. At Fellenz Woods, the route continues as a shared-use path across the Milwaukee River to STH 33, then as a sidepath along STH 33 and CTH M before following the river again, ending in the Village of Newburg.

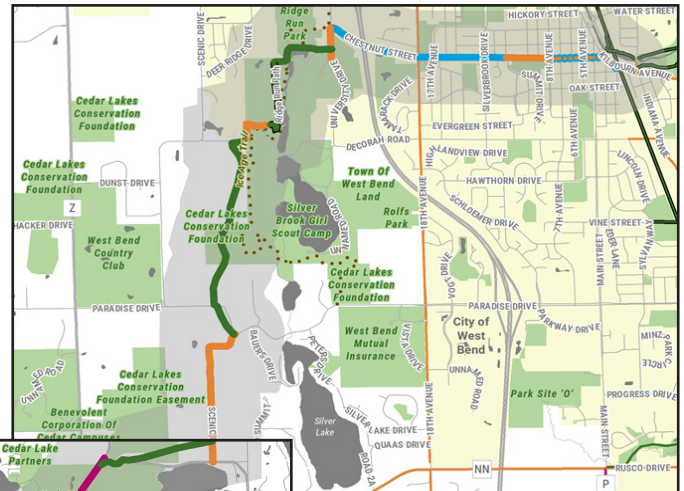


Construction cost opinion: \$6,813,000

Land acquisition cost opinion: between \$190,000 and \$470,000

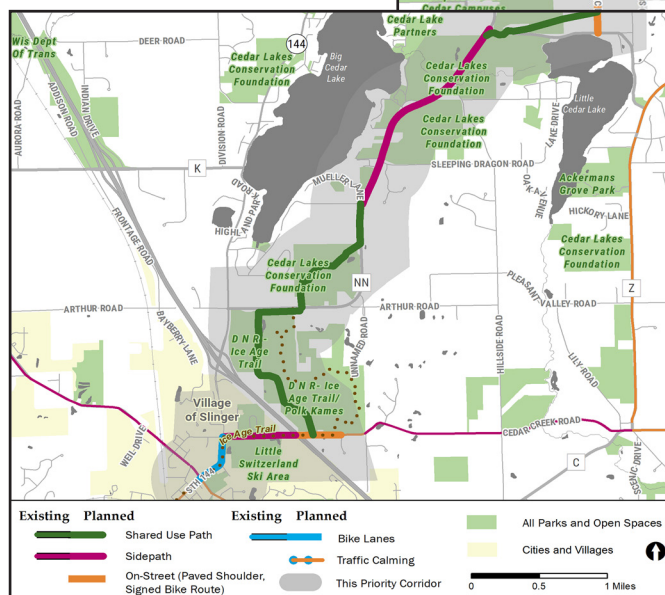
Corridor 4: West Bend to Slinger via Ridge Run Park and CTH NN

This proposed route runs through some of the most scenic areas in Washington County and connects West Bend to Slinger via an “all ages and abilities” route. At the northern and southern ends of the route, the alignment runs parallel to existing hiking segments of the Ice Age National Scenic Trail, but has been adjusted in places to provide as much distance as possible between the hiking trail and the proposed path. Along CTH NN, the road ROW is wide enough in most places to allow a sidepath without the need to acquire many additional property easements. Due to the length in this route, the corridor is split into northern and southern sections.



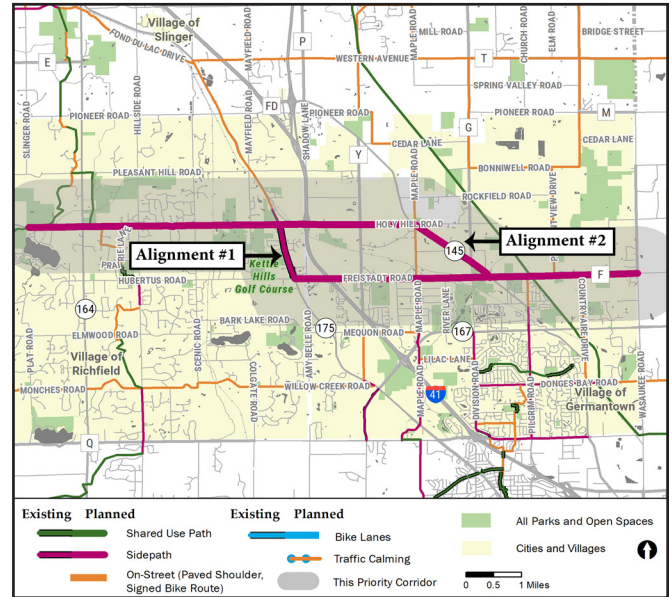
Construction cost opinion: \$5,003,000

Land acquisition cost opinion: between \$212,000 and \$310,000



Corridor 5: Holy Hill Road-Freistadt Road

This east-west route will serve as a gateway for Germantown and Richfield residents to access the scenic Holy Hill area. It also provides a connection to several important County parks and schools. Eventually, the route could extend into Ozaukee County and connect to the Interurban Trail. Some of the sidepath segments on Freistadt Road in Germantown are good candidates for grant funding due to their proximity to schools, residential areas, and parks. Initially, the planning team and County staff proposed a sidepath on Hubertus Road in Richfield. Further analysis revealed that the narrow right-of-way and tight curves near Friess Lake made a Hubertus Road sidepath unfeasible. This section presents two alternatives: the first uses Appleton Avenue (STH 175) to go from Holy Hill Road to Freistadt Road; while the second uses Fond du Lac Avenue (STH 145). The County will need to perform an engineering study to decide which alignment is more feasible and cost-effective.



Construction cost opinion:

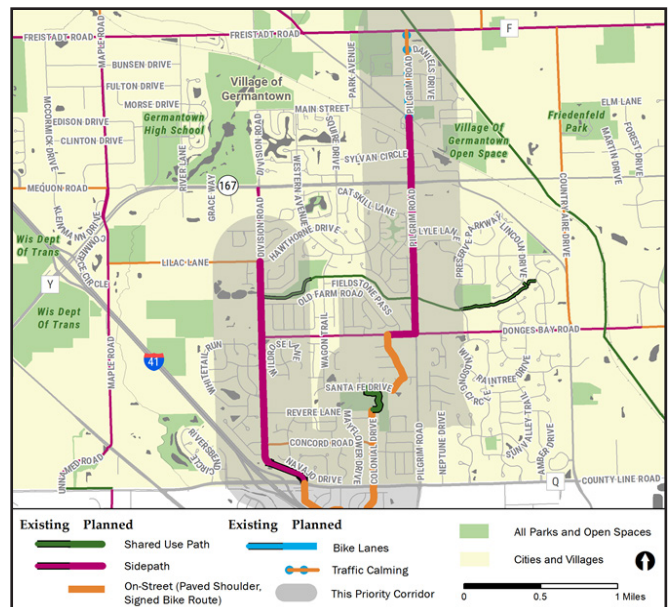
Alignment #1 - \$7,715,000

Alignment #2 - \$9,089,000

Land acquisition cost opinion: between \$166,000 and \$690,000

Corridor 6: Germantown to Bugline Trail via I-41 Pedestrian Overpass

This corridor provides Germantown residents with a safe, all-ages-and-abilities route to access the Bugline Trail and Menomonee River Parkway in Menomonee Falls. The existing sidepaths on Division Road and Donges Bay Road need to be rebuilt to state design standards to safely accommodate bicyclists and pedestrians, which is why they appear as “Planned” sidepaths. Some of the planned sidepaths recommended on Pilgrim Road are within the road ROW and could be built as part of new development.



Construction cost opinion: \$885,000

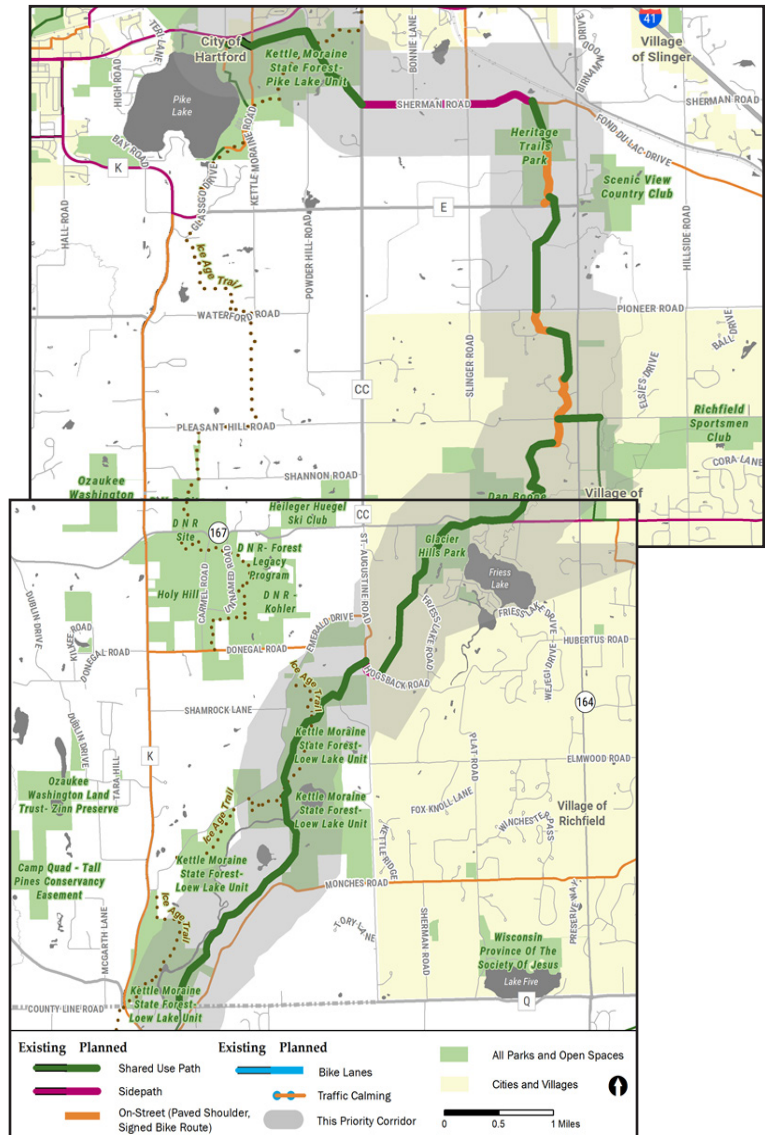
Land acquisition cost opinion: \$6,000

Corridor 7: Pike Lake Unit to Heritage Trails Park to Loew Lake Unit

This proposed route connects some of the most beautiful and scenic areas of the County, taking advantage of open space in Kettle Moraine State Forest units and several County parks. Between CTH E and Holy Hill Road (STH 167), the proposed alignment traverses land that is currently active farmland. The proposed alignment depends on the Village of Richfield and the Town of Polk providing on-street connections or easements for the future path if or when the agricultural parcels are subdivided. The corridor may traverse several of the same parcels as the Ice Age National Scenic Trail; the alignment has been adjusted to minimize the number of times the proposed path would cross the hiking trail, and to emphasize that trail crossings shall be perpendicular and clearly marked.

Construction cost opinion: \$9,209,200

Land acquisition cost opinion: between \$456,000 and \$670,000



Shared Use Path Riverside Park Trail along the Milwaukee River in the City of West Bend

Implementation

Washington County elected officials and staff are eager to begin building the recommended bikeway and trail network. The County has pledged to contribute \$250,000 annually to the Parks and Planning Department Capital Improvement Plan in 2019 through 2023 (subject to an annual vote of the County Board) for implementing the recommendations in the Plan. One of the principal outcomes of the Plan was to decide which bikeway and trail projects the County should build first. Chapter 6 identifies immediate short term opportunities, medium term opportunities, and long term opportunities. Immediate short term opportunities will be considered and refined as part of the Five-Year Strategic Action Plan that the County staff will undertake after adoption of this Plan.

It is important to recognize that the Plan is not an “end result” but rather a guide for future action. Plan implementation will be fulfilled over time in small, incremental steps. The implementation of bikeway and trail segments and corridors identified in the Plan will require the review and approval of appropriate County Board liaison committees and the County Board of Supervisors through the annual budget and capital improvement plan processes.

Opinion of Probable Costs for Bikeways and Trails

Construction Costs

Using per-mile cost estimates, the total cost of constructing the entire bikeway and trail network in the Plan is estimated at \$90 million.

The planning-level cost opinions used for the Priority Corridors are based on typical per-mile cost estimates. Opinions of probable cost were developed by identifying major pay items and establishing rough quantities, to determine a rough order of magnitude cost. Additional pay items have been assigned approximate lump sum prices based on a percentage of the anticipated construction cost. Planning-level cost opinions include a 15 percent contingency to cover items that are undefined or are typically unknown early in the planning phase of a project. Unit costs are based on 2018 dollars and were assigned based on historical cost data from WisDOT, other state departments of transportation and other sources. Cost opinions do not include costs for culverts or bridges; easement and right-of-way acquisition; permitting, inspection, or construction management; engineering, surveying, geotechnical investigation, environmental documentation, special site remediation, or the cost for ongoing maintenance. The overall cost opinions are intended to be general and used only for planning purposes. Construction costs will vary based on the ultimate project scope, actual site conditions and constraints, schedule, and economic conditions at the time of construction.

That cost would not be borne entirely by the County; for example, WisDOT, local municipalities, the Wisconsin DNR, and other jurisdictions would all be significant contributors to the cost of building the network. In addition, the County will also pursue grant funding, partnerships and sponsorships to offset costs of the Plan.

Maintenance Cost Estimates

Before a community builds a trail or a sidepath, there should be a public discussion on the cost of day to day maintenance, snow removal and long term maintenance as well as who would be responsible for such maintenance. Further breakdown of construction and maintenance cost estimates can be found in Chapter 6 of the Bikeway and Trail Network Plan.

Design and Environmental Review Costs

Design costs for trails or sidepaths are typically 20 to 25 percent of the construction costs. Most of the projects in the Priority Corridors can go into the design stage after this Plan is approved. WisDOT does not award federal Transportation Alternatives Program (TAP) grants to multi-modal projects that propose stand-alone preliminary engineering work such as developing project-specific design or environmental documents. In addition, WisDOT does not fund multi-modal projects that require property acquisition that has not been completed. The County should plan on locally funding all preliminary engineering work, environmental review, and property acquisition for projects they hope to complete with WisDOT grant funds.

The first step of the design process is alternative development, which considers different potential trail alignments within a corridor, prepares feasibility and costs reports, and typically designates a preferred alternative. After the alternatives development, the County can review the costs for each alternative, including easement and right-of-way acquisition costs.

An additional cost for projects constructed using federal funds is the more detailed environmental documentation needed. At the low end, added documentation for federal funding can cost between \$15,000 to \$30,000 for a simple categorical exclusion. At the higher end, the added documentation can cost hundreds of thousands of dollars for a full Environmental Impact Statement (EIS).

Funding

County Level Funding

The infrastructure recommendations in the Plan cannot be implemented in a timely manner solely through grant funding. Rather, most of the recommendations in the Plan will need to be funded from County and local sources. The program and policy recommendations in Chapter 4 of the Plan include recommendations for County and local funding sources.

Federal and State Level Funding

Washington County, municipalities, and advocates should continue to seek funding from alternative sources, making a concerted effort to attain significant portion of the funding of stand-alone projects from such sources. Grant programs are one of the primary sources of funding bicycle and pedestrian infrastructure. However, state and federal funding sources are limited and highly competitive. The figure below summarizes some of these funding opportunities, which are described in more detail in Chapter 6 of the Bikeway and Trail Network Plan.

Federal and State Grant Programs			
Types of Funding	Eligible Bikeway Projects	Match Required	Availability/Timeline for Application
Federal Transportation Alternatives Program (TAP)	On or off-road facilities	20%	Late 2019 or early 2020
Federal Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Transportation projects that reduce the number of vehicle trips and/or vehicle miles traveled.	20%	2019
Knowles-Nelson Stewardship Local Assistance Programs	Off-road facilities such as trails and trailhead facilities	50%	May of 2019
Recreational Trails Program (RTP)	Development and maintenance of recreational trails and trail-related facilities	50%	May of 2020

Strategic Action Plan

Once the Washington County Bikeway and Trail Network Plan is adopted, County staff can develop a Five-Year Strategic Action Plan to outline clear and achievable implementation tasks. Such a plan would pull from the recommendations in Chapter 4 and 6 of this Plan, and identify priorities, responsibilities, and timelines for each individual action.

The Five-Year Strategic Action Plan will:

- Define the roles & responsibilities of the implementation team
- Outline external stakeholders and partnerships
- Prioritize tasks outlined in the Bikeway and Trail Network Plan and decide on which engineering studies to undertake to determine alternative alignments
- Focus on specific actions each year during the 5-year period
- Set performance measures of success
- Plan for communication and marketing efforts, especially with key stakeholders
- Craft a consistent message

The Strategic Action Plan will be reviewed on an annual basis. It could include the following six sections. Within each section, there would be a list of tasks, organized in one-year increments, listing the necessary actions and the entity or entities responsible.

1. Policy Implementation Tasks
2. Priority Corridor Network Implementation Tasks
 - a. Short-term projects on priority corridors
 - b. Engineering studies on priority corridors
3. Connector Network Implementation Tasks
4. Communication & Marketing Tasks
5. Public & Stakeholder Engagement Tasks
6. Funding Tasks

Coordination and Oversight

Successful implementation of the bikeway and trail network will require internal coordination, public oversight, and proactive communication with external agencies. The Internal County Staff Bike and Pedestrian Workgroup should take the lead on developing the Five-Year Strategic Action Plan and coordinating to implement specific tasks. This group will define the annual priority tasks, assign responsibilities, and revise the Strategic Action Plan as tasks are completed or updated. The County should also establish a formal Intergovernmental Bike/Ped Council to oversee implementation of the Plan, support implementation within their capabilities, and provide guidance on difficult decisions.