

# GLACIAL EDGE TRAIL

## City of Fergus Falls

112 Washington Ave W, Fergus Falls, MN 56537

Multi-jurisdictional Trail

District: 3

Park/Trail ID#: 16-009D

April 01, 2022



Table Of Contents

**Regional Significance & Site Information** . . . . . 6

**Setting & Regional Context** . . . . . 10

**Vision, Trends & Engagement** . . . . . 21

**Development & Implementation** . . . . . 31

**Development Features** . . . . . 51

**Operations & Programming** . . . . . 80

**Attachments** . . . . . 86

## Location Description

Fergus Falls, MN

## Maps of Park/Trail

[Amended Trail Segment - Includes Otter Tail County Portion](#)

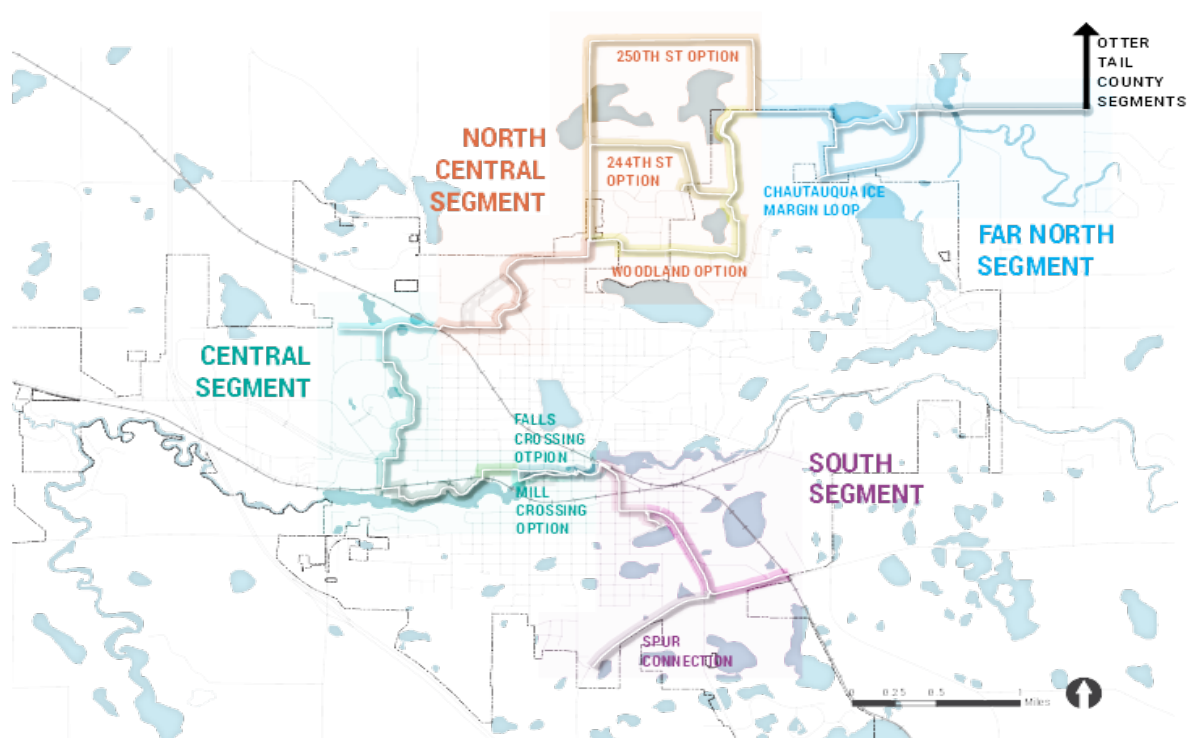


Figure 3-1. Glacial Edge Trail Route Map: Fergus Falls

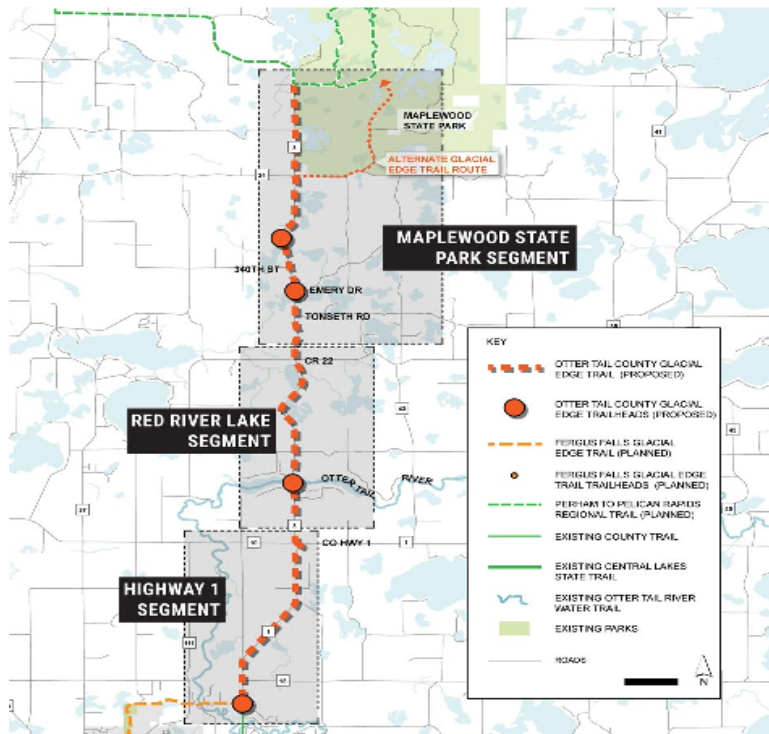


Figure 3-6. Glacial Edge Trail Route Map: Otter Tail County

**Facility Website:** <https://www.ci.fergus-falls.mn.us/government/city-projects/glacial-edge-trail>

**Lead Applicant Organization :** City of Fergus Falls

**Lead Contact Person:** Karin Flom

**Lead Contact Title:** City Planner

**Mailing Address:** 112 Washington Ave W

**City:** Fergus Falls

**Zip:** 56537

**Phone:** 218-332-5427

**Email:** [karin.flom@ci.fergus-falls.mn.us](mailto:karin.flom@ci.fergus-falls.mn.us)

**Joint Applicant #1:** Otter Tail County (Supporting Applicant)

**Upload Resolution:** [OtterTailCountyResolutions\\_e82e9c.pdf](#)

**Joint Applicant #2:** N/A

**Joint Applicant #3:** N/A



**Joint Applicant #4:** N/A

**Other project supporters :** Community Education, Visit Fergus Falls, Minnesota Department of Natural Resources, Fergus Falls Downtown Council, Fergus Falls Fish & Game Club, Kaddatz Galleries, Representative Bud Nornes, North Country Trail Association, PartnerSHIP 4 Health, Springboard for the Arts, Fergus Falls Sunrise Rotary, West Central Initiative

## Regional Significance & Site Information

**Regional Significance Statement:** The Glacial Edge Trail has regional significance as a planned 28-mile regional destination trail in west central Minnesota that will extend the existing Central Lakes State Trail (55-mile trail from Osakis to Fergus Falls) north to Maplewood State Park through the City of Fergus Falls and Otter Tail County. The Glacial Edge Trail will connect to the planned Pelican Rapids to Perham Regional Trail and ultimately to Maplewood State Park.

## Site Map uploads

## Destinations in Fergus Falls

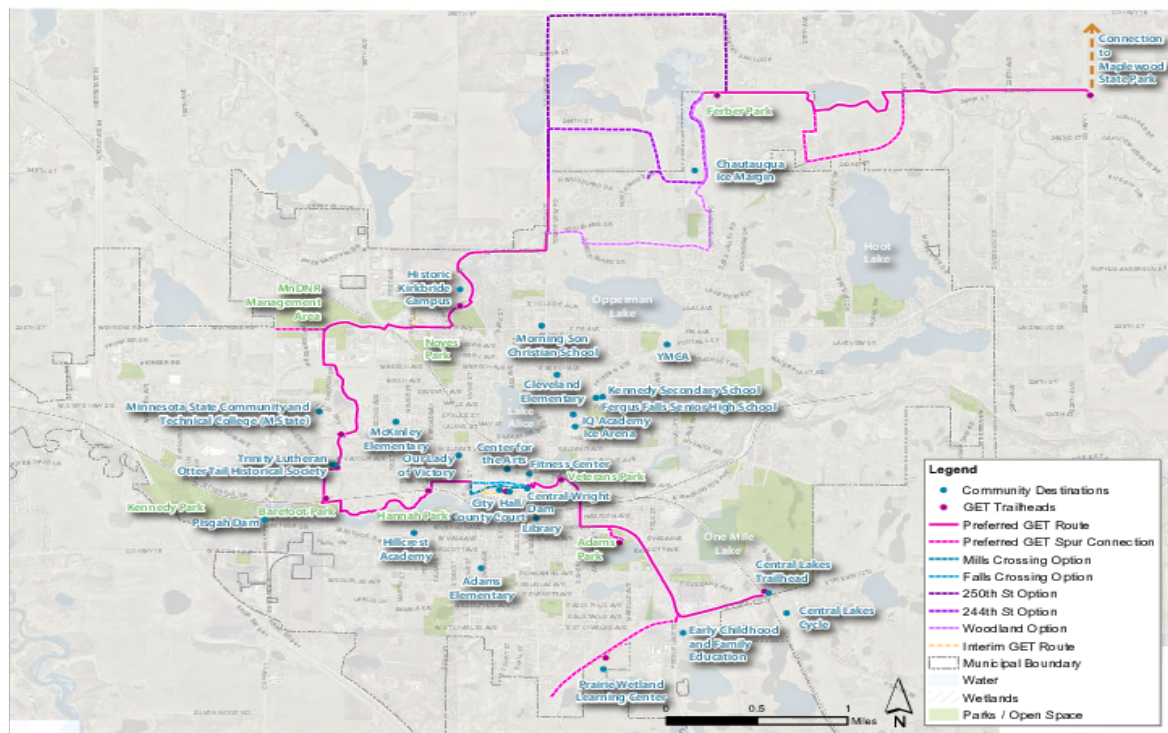


Figure 2-1. Destinations in Fergus Falls

**Classification:** Trails

**Overview/Description of Park or****Trail:**Vision Statement

The Glacial Edge Trail will be a regional destination trail traversing the unique scenic and cultural landscapes of the greater Fergus Falls area and western Otter Tail County, including the Otter Tail River and the scenic western banks and glacial hills of the ancient Lake Agassiz. The trail will provide a northern extension from the existing Central Lakes State Trail, travelling through Fergus Falls, linking to Maplewood State Park, the planned Perham to Pelican Rapids Regional Trail, and ultimately to the Heartland State Trail. This 28-mile paved multi-use trail will provide visitors and residents of Fergus Falls and Otter Tail County a non-motorized and fully accessible trail corridor that connects key natural and cultural destinations including: the Otter Tail River, Fergus Falls historic downtown and River Walk, Central Lakes State Trail, Prairie Wetlands Learning Center, Historic Kirkbride Campus, M State, Maplewood State Park, Ferber Park mountain biking trails, restored prairies, wetlands, lakes, forests, and the geologically significant Chautauqua Ice Margin.

**Guiding Principles**

1. As a future continuous regional trail travelling through the City of Fergus Falls and north to Maplewood State Park that will be approximately 28 miles in length, the trail will function as both a regional destination trail and a local connector trail. The trail will enhance accessibility and safety for both regional and local trail users to connect from

the Central Lakes State Trail to Maplewood State Park and to the Perham to Pelican Rapids Regional Trail. This trail will provide critical non-motorized continuous trail access in Otter Tail County, which has very limited off-road trails today.

2. The trail will provide a convenient and scenic connection for greater Fergus Falls and Otter Tail County residents and visitors to recreational, cultural, and tourist destinations within the region, such as the Otter Tail River, the Falls/Central Dam, historic downtown Fergus Falls, Prairie Wetlands Learning Center, Historic Kirkbride Campus, M State, Maplewood State Park, and restored natural landscapes.

3. The trail will offer a high-quality recreational and natural experience as a primarily off-road corridor through diverse natural landscapes, including prairie, rivers, lakes, and hardwood forests. This natural, off-road environment will enhance the recreational experience with scenic views, quiet surroundings, and access to adjacent recreational opportunities. The trail is designed to optimize the scenic and natural experience for trail users while also minimizing the trails physical impact on sensitive natural features.

4. Wherever feasible, the trail will be located in off-road trail corridor separated from vehicular traffic. The trail will be continuous with minimal road crossings with grade separations as provided where necessary.

5. The trail will accommodate a variety of compatible non-motorized uses including

walking, running, hiking, bicycling, inline skating, and skate/longboarding. Additionally, winter uses including cross-country skiing, snowshoeing, and fat tire biking could be accommodated on portions of the trail.

6. The trail is designed as a paved multi-use trail, 10-foot wide wherever feasible, to meet the Trail Planning, Design, and Development Guidelines of the Minnesota Department of Natural Resources (MN DNR).

7. The trail is designed as a fully accessible ADA-compliant regional trail for people of all ages and with physical limitations.

8. Trailheads will be provided for vehicle parking and wayfinding for the convenience of both local users and visitors. The trail will be accessible to users where it crosses streets, parks, public facilities, and urban areas.

**Total Acreage or Mileage :** 28

**Acquisition and Development Status:**

New Park or Trail (no land acquired or developed)

**Development status:** No development

**General Site Characteristics:** The Glacial Edge Trail is a planned 28-mile regional destination trail in the greater Fergus Falls area and Otter Tail County, which have an abundance of scenic natural, cultural, and historic features. Located where the eastern edge of ancient Lake Agassiz once existed, the regions landscape of hilly moraines dotted with prairie potholes was created by

continental glaciation. Otter Tail County has more lakes than any other county in the nation, not just Minnesota, with more than 1,000 lakes! The 186-mile Otter Tail River, which flows through three of the states four ecosystems, travels through Otter Tail County and the heart of downtown Fergus Falls, home to cultural, historic, and commercial destinations. The head of the Central Lakes State Trail (completed in 2005), a 55-mile rails-to-trails corridor connecting to Osakis and the Wobegon Trail, is also located in Fergus Falls and serves as the southern terminus for the Glacial Edge Trail. Maplewood State Park, one of two beautiful State Parks nearby, serves as the northern terminus of the Regional Trail.

This section provides an overview of existing and proposed site facilities and general site characteristics

### **Existing Facilities**

### **Proposed Facilities**

- Picnicking and picnic shelters
- Walking Trails (paved)
- Biking Trails (paved)
- Cross-country Skiing Trails
- Restrooms/sanitation building

## Setting & Regional Context

**Regional Context:** The Glacial Edge Trail is a planned 28-mile regional destination trail in the greater Fergus Falls area and Otter Tail County, where there is an abundance of scenic natural, cultural, and historic features. Located where the eastern edge of ancient Lake Agassiz once existed, the region's landscape of hilly moraines dotted with prairie potholes was created by continental glaciation. Otter Tail County has more lakes than any other county in the nation, not just Minnesota, with more than 1,000 lakes! The 186-mile Otter Tail River, which flows through three of the state's four ecosystems, travels through Otter Tail County and the heart of downtown Fergus Falls, home to cultural, historic, and commercial destinations. The head of the Central Lakes State Trail (completed in 2005), a 55-mile rails-to-trails corridor connecting to Osakis and the Wobegon Trail, is located in Fergus Falls and serves as the southern terminus for the Glacial Edge Trail. Maplewood State Park, one of two beautiful State Parks nearby, serves as the northern terminus of the Regional Trail.

To enjoy the many scenic qualities of this region, the City of Fergus Falls has undertaken a number of initiatives to plan and develop an extensive trail network within the city and make connections to surrounding regional/state trails. The Glacial Edge Trail (GET) is planned as a regional non-motorized destination trail that will extend the existing Central Lakes State Trail north through the City of Fergus Falls

and north through the scenic prairie pothole landscape to connect to Maplewood State Park and to the Perham to Pelican Rapids Regional Trail. The GET is also intended to create connections with existing trails and destinations within Fergus Falls, including:

- The recently opened North Country National Scenic Trail through Fergus Falls,
- Planned trails identified in the recently adopted Otter Tail County-Wide Trail Master Plan,
- The Otter Tail River,
- Downtown Fergus Falls,
- The River Walk,
- Otto the Otter and Grotto Lake,
- A future aquatic facility,
- M State,
- The Historic Kirkbride Campus,
- Ferber Park, and the
- Chautauqua Ice Margin Interpretive Loop in northern Fergus Falls.

Additionally, MN DOT's Statewide Bicycle System Plan identifies a High Priority Bikeway Corridor connecting Moorhead to St. Cloud, via Detroit Lakes, Fergus Falls and Alexandria. The GET will be a paved, multi-use trail accommodating walkers, bicyclists, runners, and inline skaters.



## Regional Map uploads:

### [Regional Context Map](#)

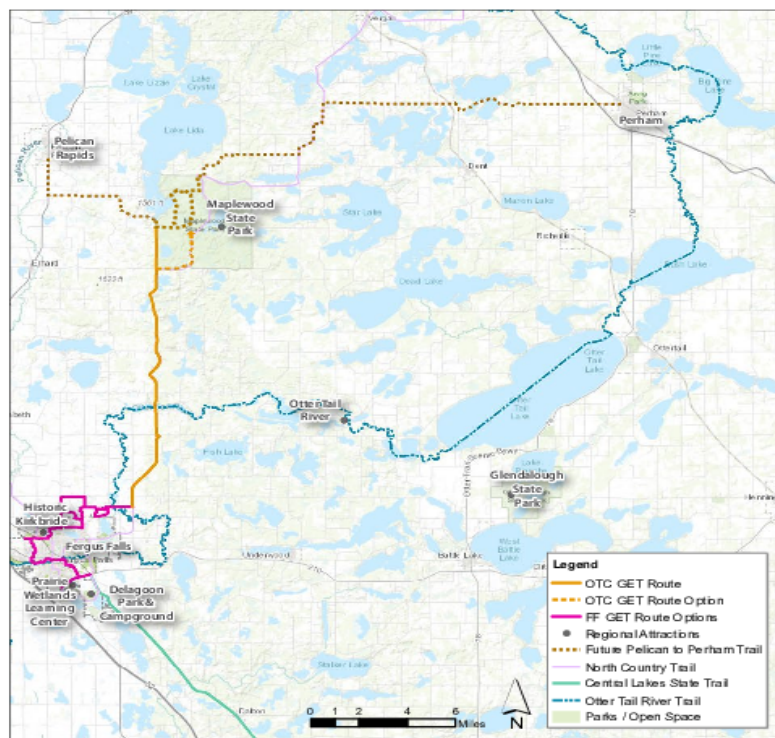


Figure 1-1. Regional Context Map  
8 Glacial Edge Trail Master Plan

### Regional Significance

The Glacial Edge Trail has regional significance as a planned 28-mile regional trail in west central Minnesota that will extend from the existing Central Lakes State Trail (55-mile trail from Osakis to Fergus Falls) north through the City of Fergus Falls and through Otter Tail County to connect to Maplewood State Park and the Perham to Pelican Rapids Regional Trail. The Glacial Edge Trail will offer convenient regional trail system access for recreation users from the region as well as the entire state due to its central geographic location to three states (Minnesota, North Dakota, and South Dakota). The trail route is located minutes away from I-94, and is in close proximity to the two major metro areas of Fargo/Moorhead (under 1 hour) and Minneapolis/St. Paul (approx. 2½ hours).

The Greater Minnesota Regional Parks & Trails Commission (GMRPTC) has established four evaluation criteria for trails designated as Regional Non-Motorized Trails:

#### Criteria #1: Provides a High-Quality "Destination" Trail Experience

The Glacial Edge Trail is located in the hilly moraine of the glacial action that created ancient Lake Agassiz. The trail route travels along the Otter Tail River, through prairie wetlands, and past twenty of the more than thousand lakes for which Otter Tail County has received national recognition. Fergus Falls and Otter Tail County are in the heart of one of the largest grassland areas in the world and is host to very important and threatened waterfowl habitats. The 186-mile Otter Tail River is the true headwaters

### [Otter tail County-Wide Trail Master Plan](#)

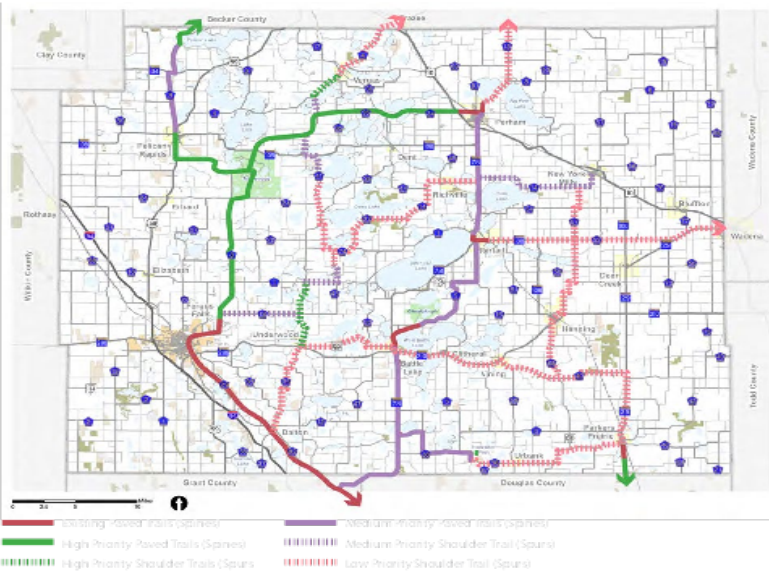


Figure 2-12. Implementation Priority Plan - Otter Tail County-Wide Trail Master Plan (2017)

**Otter Tail County-Wide Trail Master Plan**

The Otter Tail County-Wide Trail Master Plan provides a long-term vision for the establishment of various trail types within Otter Tail County. This plan serves as a high-level planning tool to inform and guide county staff, elected officials, and county residents to make logical and efficient use of county resources. The trail master plan identifies general, broad corridors that link County destinations.

The proposed bicycle and pedestrian trail system adopted in this plan identifies Fergus Falls as a 'High Bike Network Destination' within Otter Tail County; according to this assessment, Fergus Falls provides an important destination and link for the regional bicycle network.

A proposed paved trail connecting Alexandria to Fergus Falls, as well as connecting Fergus Falls to Maplewood State Park to the northeast will play an important future role in the development of the Glacial Edge Trail, as the Glacial Edge Trail route will complement the proposed regional trail by looping trail users around and through Fergus Falls, meeting the future regional trail route at two points.

**Figure 2-13 Statewide Bicycle System Plan**

**Minnesota Statewide Bicycle System Plan**

The Minnesota Statewide Bicycle System Plan was developed to identify Minnesota Department of Transportation's (MnDOT) goals and vision for bicycle transportation, implementation strategies and performance measures to evaluate progress for supporting the state trunk highway network and surrounding communities.

The goals of the plan include supporting regional and local bicycling needs and developing a connected network of state bicycle routes in partnership with national, state, regional and local partners.

Within District 4, which includes Fergus Falls and the surrounding area, the corridor connection between Alexandria and Fergus Falls, and then to Pelican Rapids and Detroit Lakes was identified as a State Priority Corridor. The Glacial Edge Trail, with connection to the Central Lakes Trail in south Fergus Falls, and connecting in north Fergus Falls to the future regional trail connection to Maplewood State Park and Pelican Rapids aligns with the priorities set forth in the Minnesota Statewide Bicycle System Plan.

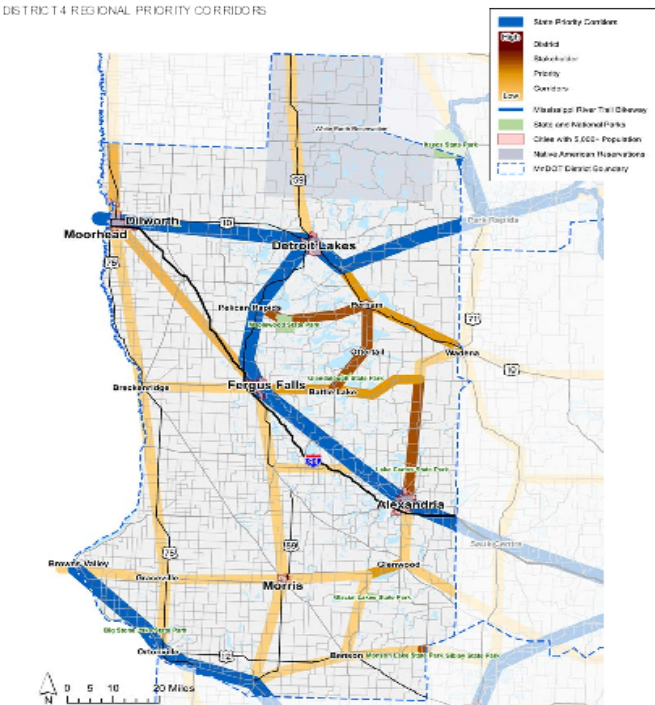


Figure 2-13. Statewide Bicycle System Plan- District 4 Regional Priority Corridors (2016)

**Classification:** Trails**Criteria 1: Provides a High-Quality Outdoor Recreation Experience:**

The Glacial Edge Trail is located in the hilly moraine of the glacial action that created ancient Lake Agassiz. The trail route travels along the Otter Tail River, through prairie wetlands, and past four of the more than thousand lakes for which Otter Tail County has received national recognition. Fergus Falls and Otter Tail County are in the heart of one of the largest grassland areas in the world and is host to very important and threatened waterfowl habitats. The 186-mile Otter Tail River is the true headwaters of the Red River, part of the 20% of Minnesota waters flowing north to Hudson Bay, and is distinguished by its fast, clean water and an amazing 272-ft drop in the river within the greater Fergus Falls area. Two Class 3 white-water sections exist in Fergus Falls, which take advantage of a 100-ft drop over the 5-mile stretch within the city limits.

Scenic vistas throughout the trail area reveal the stunning fall colors of maple, oak, birch, aspen and ash trees. Year-round recreation options include abundant fishing, viewing of native wildflowers, birding, and water-oriented sports like kayaking and canoeing.

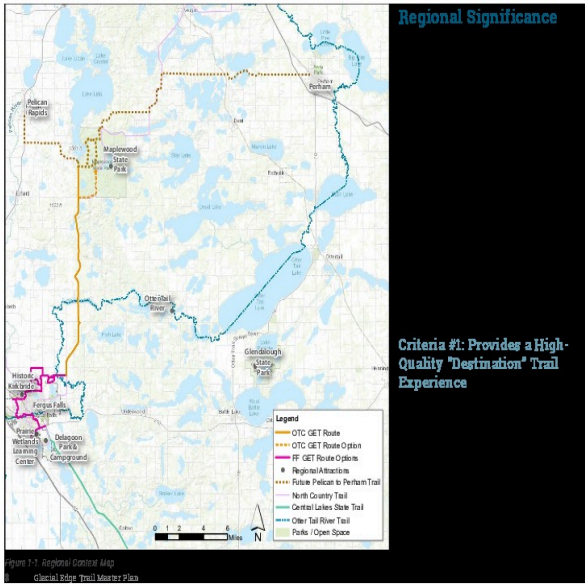
The trail route passes by the old Red River Mill, River Inn, Fergus Falls City Hall, and through the Historic Kirkbride Campus. Here, trail users will view the architectural style of the former Fergus Falls State Hospital built in the 1870s, which is a National Register Historic Site.

The trail route is connected to secure parking and urban amenities in the downtown section of Fergus Falls, while also connecting the green spaces of seven city parks and recreation areas.

As a high-quality destination trail, the Glacial Edge Trail is located independently from roadway alignments as much as possible. This provides a relaxing atmosphere for trail users, as well as an added layer of safety from vehicular conflicts while exposing trail users to the scenic beauty of the surrounding landscape. 86% of the Glacial Edge Trail is designated as an off-road trail (independent from roadway alignment) or separated from the roadway as a multi-use trail. The unique geography, landscape, and built environment of downtown Fergus Falls offer an off-road trail experience at the heart of Fergus Falls.

**Criteria #1 Images**[Criteria 1](#)





Criteria 1

[View full image](#)

of the Red River, part of the 20% of Minnesota waters flowing north to Hudson Bay, and is cherished valued by its best, clean water and an amazing 272-ft drop in the river within the greater Fergus Falls area. Two Class 3 white-water sections exist in Fergus Falls, which take advantage of a 100-ft drop over the 6-mile stretch within the city limits.

Scenic vistas throughout the trail area reveal the stunning fall colors of maple, oak, birch, aspen and ash trees, as well as through a rolling oak savanna and agricultural landscape. Year-round recreation options include abundant fishing, viewing of native wildflowers, birding, fall tree coloring, and water-oriented sports like kayaking and canoeing.

The trail route passes by the old Red River Mill, River Inn, Fergus Falls City Hall, and through the Historic Kitchielemie Campus. Here, trail users will view the architectural style of the former Fergus Falls State Hospital built in the 1870s, which is a National Register Historic Site.

The trail route is connected to secure parking and urban amenities in the downtown section of Fergus Falls, while also connecting the green spaces of seven city parks and recreation areas. The Otter Tail County section connects to a parking and water access area at Red River Lake, as well as a parking and bike access area at Anderson Lake.

As a high-quality destination trail, the Glacial Edge Trail is located independently from roadway alignments as much as possible throughout the City of Fergus Falls. This provides a relaxing atmosphere for trail users, as well as an added layer of safety from vehicular conflicts while exposing trail users to the scenic beauty of the surrounding landscape. 90% of the Glacial Edge Trail is designed as an off-road trail, separated from the roadway as a multi-use trail.

**Criteria #2: Well-located (i.e., Convenience of Access/ Adequate Length) to Serve Regional Population and/or Tourist Destination**

The Glacial Edge Trail will travel through the heart of downtown Fergus Falls, which is located on the Otter Tail River and is home to culture, historic, recreational and commercial destinations. The trail will be just one hour from the Fargo/Moorhead metro area (200,000 population), which is one of the top ten fastest growing cities in the U.S. and 2.5 hours from the Minneapolis/St. Paul metro area (more than 3,800,000 population). Fergus Falls is the Minnesota Legislature designated head of the 66-mile, Central Lakes State Trail, linking to the Wabegon Trail in Cassia, MN, and an ideal gateway to the county's more than 1,000 lakes and clean rivers. With 22 parks and three natural areas, the City of Fergus Falls has more green space per person than any other municipality with a population over 10,000 in Greater Minnesota. Existing non-motorized trails and walking trails (Prairie Wetlands Learning Center, North Country Trail, Fish and Game Lake) account for 18.9 miles and with this planned trail, bring the total to 26.8 miles within the city limits.

Fergus Falls is one of 18 Minnesota cities to receive the Blue Friendly Community designation in 2015 (League of American Bicyclists) and hosts the Lake Aloha 100, an 88-top ride around Lake Aloha each April, the most compact century ride in America. The City of Fergus Falls was also recently awarded designation as a North Country Trail Town by the North Country Trail Association.

**Criteria #3: Enhances Connectivity to Regional Destinations**

The Glacial Edge Trail will improve connections to existing trails, parks, and numerous historic and cultural destinations. Connectivity to regional destinations will include the following features:

- North Country National Scenic Trail, including an urban connector right through downtown Fergus Falls;
- Creating a continuous trail link from the Central Lakes State Trail to Maplewood State Park;
- Closer trail proximity to the Historic Phelps Mill County Park as well as Glendebough State Park for travelers coming east on I-94 from Fargo/Moorhead;
- Access to Class 3 whitewater kayaking sections on the Otter Tail River in Fergus Falls and world-class small mouth bass fishing along the trail and at Red River Lake and Anderson Lake;
- Direct regional trail connection to cultural sites such as the 150-year-old Historic Kitchielemie Campus, the old Red River Mill (1916), presently planned for redevelopment, as well as art displays at the Kitchielemie Gallery and local productions at the Fergus Falls Center for the Arts;
- Proximity to the Prairie Wetlands Learning Center with 300 acres of native and restored prairie, 28 wetlands and 3.5 miles of additional walking trails, including the Visitor Center's 2,000 square-foot exhibit area, the Bluestem State, classroom, and a multi-purpose meeting room.



Clockwise from Top Left: Bikes in Fergus Falls, the Otter Tail River, the Otter Tail River, the Otter Tail River, the Otter Tail River

**Criteria 2: Provides a Natural and Scenic Setting Offering a Compelling Sense of Place**

The Glacial Edge Trail will improve connections to existing trails, parks, and numerous historic and cultural destinations. Connectivity to regional destinations will include the following:

- North Country National Scenic Trail, including an urban connector right through downtown Fergus Falls;
- Significantly diminishing the gap from the Central Lakes State Trail to Maplewood State Park;

Closer trail proximity to the Historic Phelps Mill County Park as well as Glendalough State Park for travelers coming east on I-94 from Fargo/Moorhead;

Closing the final gap in the Heartland State Trail Extension;

Access to Class 3 whitewater kayaking sections on the Otter Tail River in Fergus Falls and world-class small mouth bass fishing along the trail;

Direct regional trail connection to cultural sites like the 150 year old Historic Kirkbride Campus, the old Red River Mill (1919), presently planned for redevelopment, as well as art displays at the Kaddatz Gallery and local productions at the Fergus Falls Center for the Arts;

Proximity to the Prairie Wetlands Learning Center with 330 acres of native and restored prairie, 28 wetlands and 3.5 miles of additional walking trails, including the Visitor Centers 2,500-square-foot exhibit area, the Bluestem Store, classrooms, and a multipurpose meeting room, and;

Trail connection to the M State Fergus Falls Campus and its natural prairie area.

Criteria #2 Images

Criteria 3

of the Red River, part of the 92% of Minnesota waters flowing north to Hudson Bay, and is distinguished by its fast, clear water and an amazing 272-ft drop in the river within the greater Fergus Falls area. Two Class 3 white-water sections exist in Fergus Falls, which take advantage of a 100-ft drop over the 6-mile stretch within the city limits.

Scenic vistas throughout the trail area reveal the stunning fall colors of maple, oak, birch, aspen and ash trees, as well as through a rolling oak savanna and agricultural landscape. Year-round recreation options include abundant fishing, viewing of native wildflowers, birding, fat tire biking, and water-oriented sports like kayaking and canoeing.

The trail route passes by the old Red River Mill, River Inn, Fergus Falls City Hall, and through the Historic Kirkbride Campus. Here, trail users will view the architectural style of the former Fergus Falls State Hospital built in the 1870s, which is a National Register Historic Site.

The trail route is connected to secure parking and urban amenities in the downtown section of Fergus Falls, while also connecting the green spaces of seven city parks and recreation areas. The Otter Tail County section connects to a parking and water access area at Red River Lake, as well as to a parking and bike access area at Anderson Lake.

As a high-quality destination trail, the Glacial Edge Trail is located independent from roadway alignments as much as possible throughout the City of Fergus Falls. This provides a relaxing atmosphere for trail users, as well as an added layer of safety from vehicular conflicts while exposing trail users to the scenic beauty of the surrounding landscape. 90% of the Glacial Edge Trail is designated as an off-road trail, segregated from the roadway as a multi-use trail.

Criteria #2: Well-located (i.e., Convenience of Access/ Adequate Length) to Serve Regional Population and/or Tourist Destination

The Glacial Edge Trail will travel through the heart of downtown Fergus Falls, which is located on the Otter Tail River and is home to culture, history, recreation and commercial destinations. The trail is just one hour from the Fargo/Moorhead metro area (200,000 population), which is one of the top ten fastest growing cities in the US, and 2.5 hours from the Minneapolis-St. Paul metro area (more than 3,000,000 population). Fergus Falls is the Minnesota Legislature designated head of the 66-mile, Central Lakes State Trail, linking to the Wabigoon Trail in Cassida, MN, and an ideal gateway to the county's more than 1,000 lakes and clean rivers. With 22 parks and three natural areas, the City of Fergus Falls has as much green space per person as any other municipality with a population over 10,000 in Greater Minnesota. Existing non-motorized trails and walking trails (Prairie Wetlands Learning Center, North County Trail, Fish and Game Land) account for 18.9 miles and with this planned trail, bring the total to 29.8 miles within the city limits.

Fergus Falls is one of 18 Minnesota cities to receive the Blue Friendly Community designation in 2015 (League of American Bicyclists) and hosts the Lake Alice 100, an 89-loop ride around Lake Alice each April, the most compact century ride in America. The City of Fergus Falls was also recently awarded designation as a North County Trail Town by the North County Trail Association.

Criteria #3: Enhances Connectivity to Regional Destinations

The Glacial Edge Trail will improve connections to existing trails, parks, and numerous historic and cultural destinations. Connectivity to regional destinations will include the following features:

- North County National Scenic Trail, including an urban connector right through downtown Fergus Falls;
- Creating a continuous trail link from the Central Lakes State Trail to Maplewood State Park;
- Close trail proximity to the Historic Phelps Mill County Park as well as Glendalough State Park for travelers coming east on I-94 from Fargo/Moorhead;
- Access to Class 3 whitewater kayaking sections on the Otter Tail River in Fergus Falls and world-class small mouth bass fishing along the trail and at Red River Lake and Anderson Lake;
- Direct regional trail connection to cultural sites such as the 150-year-old Historic Kirkbride Campus, the old Red River Mill (1919), presently planned for redevelopment, as well as art displays at the Kaddatz Gallery and local productions at the Fergus Falls Center for the Arts;
- Proximity to the Prairie Wetlands Learning Center with 330 acres of native and restored prairie, 28 wetlands and 3.5 miles of additional walking trails, including the Visitor Centers 2,500-square-foot exhibit area, the Bluestem Store, classrooms, and a multipurpose meeting room;

Criteria 3

[View full image](#)

- Trail connection to the M State Fergus Falls Campus and its natural pavilions.
- Trail overlaid with the Otter Tail County State Parkway, a 150-mile scenic drive created to display the county's historical and natural significance of Otter Tail County.

#### Criteria #4: Fills a Gap in Recreational Opportunity Within a Region

The Perham to Pelican Regional Trail Master Plan (completed in 2014), which is part of the Otter Tail County Trail System Plan, states, "Relative to other areas of the state, west-central Minnesota has fewer trails of statewide significance." Otter Tail County's 2,225 sq. miles comprise about 2.5% of the area of the state. It is noted that Minnesota has 4,300 miles of bike paths and trails or 1 mile of path/trail for every 21.5 square miles. Otter Tail County has approximately 1 mile of bike path for every 44 square miles. The 20 miles of Central Lakes Trail in Otter Tail County and on the south end of Fergus Falls, the Otter Tail County trail and its largest municipality. A significant trail gap exists between the Central Lakes Trail and Maplewood State Park. Maplewood State Park is a 10,279-acre park with 130 bird species, 50 species of mammals, 25 kinds of reptiles and amphibians. Maplewood State Park has 100,000 annual visitors, most coming by automobile. The Glacial Edge Trail is being developed to extend the Central Lakes State Trail through the greater Fergus Falls area to within 10 miles of Maplewood State Park and its 26 miles of year-round trails. By extending the Central Lakes State Trail northward with the 28-mile Glacial Edge Trail, a 137-mile

connected regional trail network will be completed. Furthermore, with the planned 28-mile Perham to Pelican Regional Trail (2016 bonding), the reality of a 350+ mile continuous bike route is that much closer. This significant gap would be strategically addressed by the Glacial Edge Trail by enabling bicyclists to access Maplewood State Park much more readily. Another significant bike path in this area is an 8-mile section of paved trail connecting Battle Lake to Glendebough State Park, including a loop trail and two small lakes within the park. This trail is 19 miles from Fergus Falls.

Unquestionably, this region of Minnesota is emerging as a regional recreational destination with unsurpassed resources for one of the fastest growing metro areas in the US (Fargo/Moorhead). The natural resources exist, if developed, to attract national and international visitors. The Glacial Edge Trail will have a significant and long-lasting recreational, economic and active-living benefit for the region and state.



Prairie parkland landscape of north Fergus Falls

#### Vision for the Glacial Edge Trail

##### Creating a Vision

The Vision and Guiding Principles for the Glacial Edge Trail was originally developed over the course of the 9-month planning process for the Fergus Falls portion of the trail and then updated during the planning process for the trail's extension to Maplewood State Park. Development of the Vision and Guiding Principles involved the two Project Advisory Groups, City Staff, County Staff, and the input of community members through public engagement efforts.

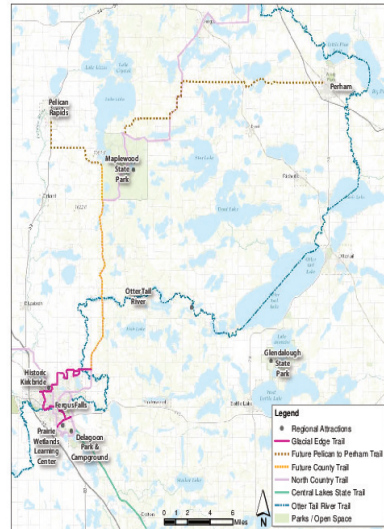


Figure 1.1: Regional Context Map

6 Fergus Falls Glacial Edge Trail Master Plan DRAFT 6/3/17

#### Regional Significance

The Glacial Edge Trail has regional significance as a planned 14-mile regional trail in west-central Minnesota that will extend the existing Central Lakes State Trail (55-mile trail from Osakis to Fergus Falls) north through the City of Fergus Falls and Otter Tail County to connect with future trails linking to Maplewood State Park and the Heartland State Trail. The Glacial Edge Trail will offer convenient regional trail system access for recreation use from the region as well as the entire state due to its central geographic location to three states (Minnesota, North Dakota and South Dakota). The trail route is located minutes away from I-94, and is in close proximity to the two major metro areas of Fargo/Moorhead (under 1 hour) and Minneapolis/St. Paul (approx. 2 1/2 hours).

The Greater Minnesota Regional Parks & Trails Commission (GMRPTC) has established four evaluation criteria for trails designated as Regional Non-Motorized Trails:

#### Criteria #1: Provides a High-Quality "Destination" Trail Experience

The Glacial Edge Trail is located in the hilly moraine of the glacial action that created ancient Lake Agassiz. The trail route travels along the Otter Tail River, through prairie wetlands, and past four of the more than thousand lakes for which Otter Tail County has received national recognition. Fergus Falls and Otter Tail County are in the heart of one of the largest grassland areas in the world and is host to very important and threatened waterfowl habitats. The 180-mile Otter Tail River is the true headwaters of

## Criteria 3: Well-located to Serve a Regional Need and/or Tourism Destination

The Glacial Edge Trail will travel through the heart of downtown Fergus Falls, which is located on the Otter Tail River, and is home to cultural, historic, recreational and commercial destinations. The trail is just one hour from the Fargo/Moorhead metro area (230,000 population), which is one of the top ten fastest growing cities in the US, and 2.5 hours from the Minneapolis/St. Paul metro area (more than 3,800,000 population). Fergus Falls is the Minnesota Legislature designated head of the 55-mile, Central Lakes State Trail, linking to the Wobegon Trail in Osakis, MN, and an ideal gateway to the countys more than 1,000 lakes and clean rivers. With 22 parks and three natural areas, the City of Fergus Falls has as more green space per person as any other municipality with a population over 10,000 in Greater Minnesota. Existing non-motorized bike and walking trails (Prairie Wetlands Learning Center, North Country Trail, Fish and Game Land) account for 18.9 miles and with this planned trail, bring the total to 29.5 miles within the city limits.

Fergus Falls is one of 18 Minnesota cities to receive the Bike Friendly Community designation in 2015 (League of American Bicyclists) and hosts the Lake Alice 100, an 88-lap ride around Lake Alice each April, the most compact century ride in America. The City of Fergus Falls was also recently awarded designation as a North Country Trail Town by the North Country Trail Association.

## Criteria #3 Images

### Criteria 2



of the Red River, part of the 25% of Minnesota waters flowing north to Hudson Bay, and is distinguished by its fast, clear water and an amazing 272-ft drop in the river within the greater Fergus Falls area. Two Class 3 white-water sections exist in Fergus Falls, which take advantage of a 100-ft drop over the 5-mile stretch within the city limits.

Scenic vistas throughout the trail area reveal the stunning fall colors of maple, oak, birch, aspen and ash trees, as well as through a rolling oak savanna and agricultural landscape. Year-round recreation options include abundant fishing, viewing of native wildflowers, birding, fat tire biking, and water-oriented sports like kayaking and canoeing.

The trail route passes by the old Red River Mill, river inn, Fergus Falls City Hall, and through the Historic Kirkbride Campus. Here, trail users will view the architectural style of the former Fergus Falls State Hospital built in the 1870s, which is a National Register Historic Site.

The trail route is connected to secure parking and urban amenities in the downtown section of Fergus Falls, while also connecting the green spaces of seven city parks and recreation areas. The Otter Tail County section connects to a parking and water access area at Red River Lake, as well as to a parking and bike access area at Anderson Lake.

As a highly quality destination trail, the Glacial Edge Trail is located independently from roadway alignments as much as possible throughout the City of Fergus Falls. This provides a relaxing atmosphere for trail users, as well as an added layer of safety from vehicular conflicts while exposing trail users to the scenic beauty of the surrounding landscape. 50% of the Glacial Edge Trail is designated as a multi-use trail, separated from the roadway as a multi-use trail.

**Criteria #2: Well-located (i.e., Convenience of Access/ Adequate Length) to Serve Regional Population and/or Tourist Destination**

The Glacial Edge Trail will travel through the heart of downtown Fergus Falls, which is located on the Otter Tail River and is home to cultural, historic, recreational and commercial destinations. The trail is just one hour from the Fargo-Moorhead metro area (300,000 population), which are one of the top ten fastest growing cities in the US, and 2.5 hours from the Minneapolis-St. Paul metro area (more than 3,000,000 population). Fergus Falls is the Minnesota Legislature designated head of the 65-mile, Central Lakes State Trail, linking to the Wabegon Trail in Cassia, MN, and an ideal gateway to the county's more than 1,000 lakes and clean rivers. With 22 parks and three natural areas, the City of Fergus Falls has more green space per person than any other municipality with a population over 10,000 in Greater Minnesota. Existing non-motorized trails and walking trails (Prairie Wetlands Learning Center, North Country Trail, Fish and Game Land) account for 18.9 miles and with this planned trail, bring the total to 29.8 miles within the city limits.

Fergus Falls is one of 18 Minnesota cities to receive the Blue Friendly Community designation in 2015 (League of American Bicyclists) and hosts the Lake Alice 100, an 88-mile ride around Lake Alice each April, the most compact century ride in America. The City of Fergus Falls was also recently awarded designation as a North Country Trail Town by the North Country Trail Association.

**Criteria #3: Enhances Connectivity to Regional Destinations**

The Glacial Edge Trail will improve connections to existing trails, parks, and numerous historic and cultural destinations. Connectivity to regional destinations will include the following features:

- North Country National Scenic Trail, including an urban connector right through downtown Fergus Falls;
- Creating a continuous trail link from the Central Lakes State Trail to Maplewood State Park;
- Close trail proximity to the Historic Phelps Mill County Park as well as Glendough State Park for travelers coming east on I-94 from Fargo/Moorhead;
- Access to Class 3 whitewater kayaking sections on the Otter Tail River in Fergus Falls and world-class small mouth bass fishing along the trail and at Red River Lake and Anderson Lake;
- Direct regional trail connection to cultural sites such as the 180-year-old Historic Kirkbride Campus, the old Red River Mill (1916), presently planned for redevelopment, as well as art displays at the Kaddatz Gallery and local productions at the Fergus Falls Center for the Arts;
- Proximity to the Prairie Wetlands Learning Center with 300 acres of native and meadow prairie, 28 wetlands and 3.5 miles of additional walking trails, including the Visitor Center's 2,000-square-foot exhibit area, the Bluestem Store, classrooms, and a multipurpose meeting room.

[View full image](#)

### Current Trail and Recreation Plans

Several existing trail and recreation plans support the development of the Glacial Edge Trail. These plans were reviewed and coordinated during the Glacial Edge Trail planning process.




Figure 2-3. Central Lakes Trail Map (2005)




Figure 2-4. Pedal Fergus Falls Trail and Bike Map (2017)




Figure 2-5. North Country Trail Route Map (2016)

### Central Lakes Trail

The Central Lakes Trail is a 55-mile state trail that runs through the heart of west-central Minnesota from Cass Lake to Fergus Falls. The trail is built on an abandoned railroad corridor purchased by the State in 1982. The paved, multi-use trail passes through the communities of Carlton, Bemidji, Bemisville, Brainerd, Garfield, Alexandria and Nelson, as well as through woodlands, grasslands, lakes, wetlands, and farm country.

Stearns County and Douglas County worked with the MN DNR and the MN DOT to finance construction of the trail. Other partners involved in the project include:

- The National Recreation Trusts Conservancy
- The Alaska Endowment
- Chambers of Commerce and Service Clubs
- Private Foundations
- Businesses
- City and township governments

### Pedal Fergus Falls

Pedal Fergus Falls, a chapter of the League Alliance of Minnesota, is a bicycle and pedestrian education and advocacy group for Fergus Falls. The group is dedicated to making biking and walking the safe, easy and fun choice in Fergus Falls. Pedal Fergus Falls serves as a resource to individuals, organizations and businesses who want to incorporate biking and walking into the daily life of residents and visitors to the area.

Pedal Fergus Falls has an interactive network vision map depicting existing primary and secondary bikeways. Some of these bikeways include specific bicycle or pedestrian related features such as bike lanes or shoulders, while others segments have been identified due to lower vehicle traffic, slower speeds, quality views or bike experience. Many segments of the preferred Glacial Edge Trail route overlap the Pedal Fergus Falls primary or secondary bikeways, supporting future bicycle and pedestrian use of these routes.

### North Country Trail

The North Country Trail (NCT) is a 4,000-mile trail stretching across seven states from New York to North Dakota. The trail is intended for long distance hiking and is used for solo winter camping, snowshoeing, long distance trail running, and to view and enjoy nature. The trail is administered through the National Park Service and accompanied in sections through local volunteers.

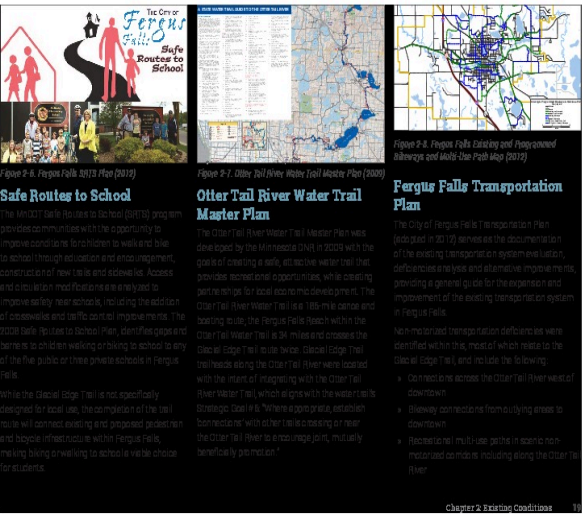
In Minnesota, the NCT passes through the Superior National Forest to the northern National Forest, passing through Duluth, Lake Superior and then to the James River in North Dakota. The Glacial Edge section of the NCT passes through Fergus Falls, crossing the preferred Glacial Edge Trail twice. In the future, the NCT will further connect the Glacial Edge Trail northeast of Fergus Falls to Maplewood Park.

10 Fergus Falls Glacial Edge Trail Master Plan

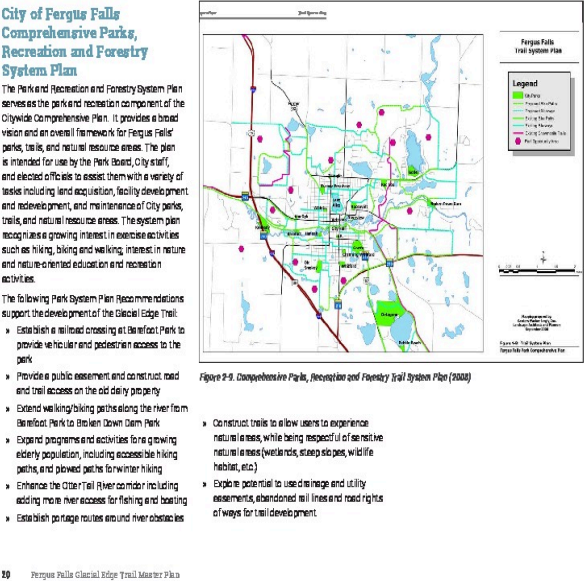
[View full image](#)

[View full image](#)

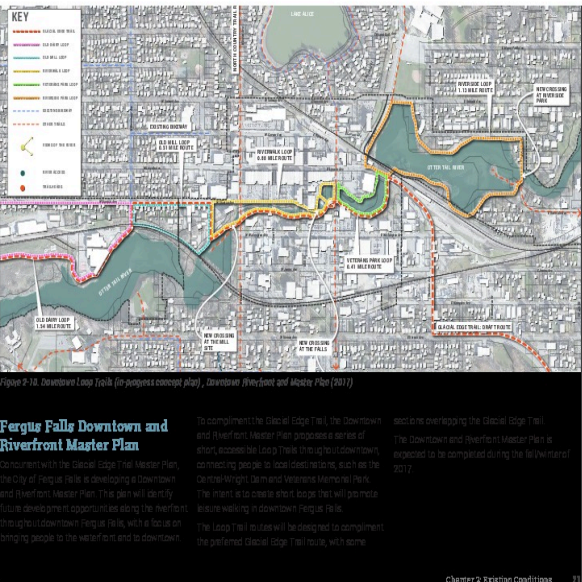
17 / 88



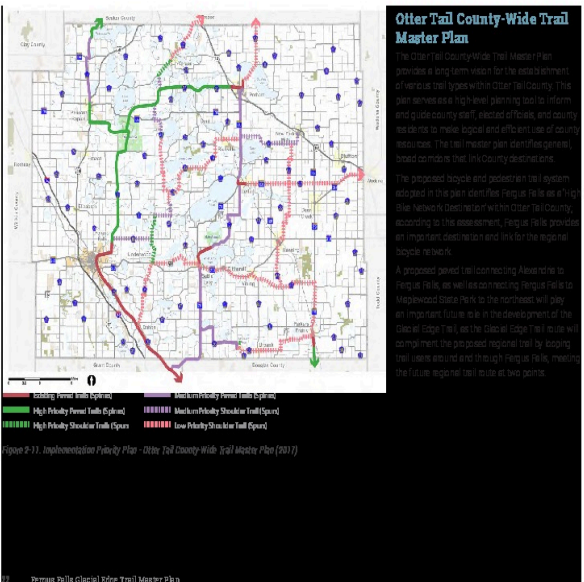
[View full image](#)



[View full image](#)



[View full image](#)



### Minnesota Statewide Bicycle System Plan

The Minnesota Statewide Bicycle System Plan was developed to identify Minnesota Department of Transportation (MnDOT) goals and vision for bicycle transportation, implementation strategies and performance measures to evaluate progress for supporting the state trunk highway network and surrounding communities.

The goals of the plan include supporting regional and local bicycling needs and developing a connected network of state bicycle routes in partnership with national, state, regional and local partners.

Within District 4, which includes Fergus Falls and the surrounding area, the corridor connection between Alexandria and Fergus Falls, and then to Pelican Rapids and Detroit Lakes was identified as a State Priority Corridor. The Glacial Edge Trail, with connection to the Central Lakes Trail in south Fergus Falls, and connecting in north Fergus Falls to the future regional trail connection to Maplewood State Park and Pelican Rapids aligns with the priorities set forth in the Minnesota Statewide Bicycle System Plan.

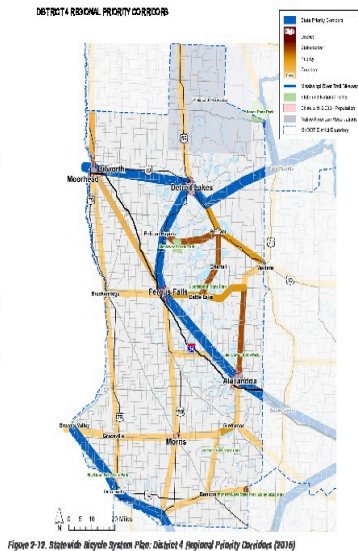


Figure 2-19. Statewide Bicycle System Plan: District 4 Regional Priority Corridors (2016)

Chapter 2: Existing Conditions 23

## Criteria 4: Fills a Gap in Recreational Opportunity Within the Region

The Perham to Pelican Rapids Regional Trail Master Plan (completed in 2014, which is part of the Otter Tail County Trail System Plan) states, Relative to other areas of the state, west-central Minnesota has fewer trails of statewide significance. Otter Tail County's 2,225 sq. miles comprise about 2.5% of the area of the state. It is noted that Minnesota has 4,000 miles of bike paths and trails or 1 mile of path/trail for every 21.5 square miles. Otter Tail County has approximately 1 mile of bike path for every 44 square miles. The 20 miles of Central Lakes Trail in Otter Tail County end on the south end of Fergus Falls, the Otter Tail County seat and its largest municipality. A significant trail gap exists between the Central Lakes Trail and Maplewood State Park. Maplewood State Park is a 10,279-acre park with 150 bird species, 50 species of mammals, 25 kinds of reptiles and amphibians. Maplewood State Park has 120,000 annual visitors; most coming by automobile. The Glacial Edge Trails strategic importance is to extend the Central Lakes State Trail through the greater Fergus Falls area to within 18 miles of Maplewood State Park and its 26 miles of year-round trails. By extending the Central Lakes State Trail northward with the 14-mile Glacial Edge Trail, a 137-mile connected regional trail network will be completed. Furthermore, with the planned 27-mile Perham to Pelican Rapids Trail (2016 bonding), the reality of a 350+ mile continuous bike route is that much closer. This significant gap would be strategically addressed the Glacial Edge Trail, by enabling bicyclists to access Maplewood State Park much more readily. Another significant planned bike path in the area is a 12-mile section of paved trail connecting Battle Lake to Glendalough State Park, which contains 5 miles of trail. This planned trail is 19 miles from Fergus Falls.

Unquestionably, this region of Minnesota is emerging as a regional recreational destination

with untapped resources for one of the fastest growing metro areas in the U.S. (Fargo/Moorhead). The natural resources exist, if developed, to attract national and international visitors. The Glacial Edge Trail will have a significant and long-lasting recreational, economic and healthy-living benefit for the region and state.

Criteria #4 Images

Criteria 4

- Trail connection to the M State Fergus Falls Campus and its natural parklands;
- Trail overlapping with the Otter Tail County State Parkway, a 140-mile scenic drive created to display the cultural, historical and natural significance of Otter Tail County.

Criteria #4: Fills a Gap in Recreational Opportunity Within a Region

The Perham to Pelican Rapids Regional Trail Master Plan (completed in 2014, which is part of the Otter Tail County Trail System Plan) states, "Relative to other areas of the state, west-central Minnesota has fewer trails of statewide significance." Otter Tail County's 2,225 sq. miles comprise about 2.5% of the area of the state. It is noted that Minnesota has 4,000 miles of bike paths and trails or 1 mile of path/trail for every 21.5 square miles. Otter Tail County has approximately 1 mile of bike path for every 44 square miles. The 20 miles of Central Lakes Trail in Otter Tail County and on the south end of Fergus Falls, the Otter Tail County seat and its largest municipality. A significant trail gap exists between the Central Lakes Trail and Maplewood State Park. Maplewood State Park is a 10,279-acre park with 130 bird species, 50 species of mammals, 25 kinds of reptiles and amphibians. Maplewood State Park has 120,000 annual visitors, most coming by automobile. The Glacial Edge Trail is being developed to extend the Central Lakes State Trail through the greater Fergus Falls area to within 16 miles of Maplewood State Park and the 26 miles of year-round trails by extending the Central Lakes State Trail northward with the 28-mile Glacial Edge Trail, a 137-mile

connected regional trail network will be completed. Furthermore, with the planned 20-mile Perham to Pelican Rapids Trail (P2P's bonding), the reality of a 340+ mile continuous bike route is that much closer. This significant gap would be strategically addressed the Glacial Edge Trail, by enabling bicyclists to access Maplewood State Park much more readily. Another significant bike path in the area is an 8-mile section of paved trail connecting Battle Lake to Glendabough State Park, including a loop trail around two small lakes within the park. This trail is 19 miles from Fergus Falls.

Unquestionably, this region of Minnesota is emerging as a regional recreational destination with untapped resources for one of the fastest growing metro areas in the U.S. (Fargo/Moorhead). The natural resources exist, if developed, to attract national and international visitors. The Glacial Edge Trail will have a significant and long-lasting recreational, economic and active-living benefit for the region and state.

Vision for the Glacial Edge Trail

Creating a Vision

The Vision and Guiding Principles for the Glacial Edge Trail was originally developed over the course of the 9-month planning process for the Fergus Falls portion of the trail and then updated during the planning process for the trail's extension to Maplewood State Park. Development of the Vision and Guiding Principles involved the two Project Advisory Groups, City Staff, County Staff, and the input of community members through public engagement efforts.



Preliminary path landscape of north Fergus Falls



## Vision, Trends & Engagement

### **Vision Statement:**

#### **Regional Demographic Information: -**

Otter Tail County has recently launched the Rural Rebound Initiative, with the goal of developing and implementing short and long term strategies to attract, develop, retain, and expand the workforce in Otter Tail County.

- The Millennial generation has shown more of a tendency to move to places that have the amenities they desire, such as recreation opportunities, rather than just moving for a job opportunity.

- West Central Initiative launched the Live Wide Open campaign to market what the West Central Minnesota region has to offer as a place to live, work, and start a business, including living where there is a wealth of natural and recreational amenities. The goal of this campaign is to encourage people to move, return to, and stay in the region.

- Growing portion of the population is older with strong interest in recreational trails.

## Demographic Support Material Uploads:

Description: Demographic, Recreation, and Public Health

[Recreation and Public Health 69de8c.pdf](#)

[Demographic, Recreation, and Public Health](#)

### Trends

#### Demographic Trends

- Otter Tail County has recently launched the Rural Revitalization Initiative, with the goal of developing and implementing short and long-term strategies to attract, develop, retain, and expand the workforce in Otter Tail County.
- The Millennial generation has shown more of a tendency to move to places that have the amenities they desire, such as recreation opportunities, rather than just moving for a job opportunity.
- West Central Initiative launched the Live, Work, and Start a Business campaign to offer a place to live, work, and start a business, including living where there is a wealth of nature and recreational amenities. The goal of this campaign is to encourage people to move where to and stay in the region.
- Growing portion of the population is older with strong interest in recreational trails.

#### Recreation Trends

- Fergus Falls, founded in 1914, is a historic and pedestrian education and advocacy group for the community. This group is focused on making biking and walking safe, easy, and fun choice in Fergus Falls. Their efforts include an awareness for people, organizations and businesses who would like to incorporate biking and walking into their way of life.
- In 2017, Fergus Falls became a chapter of the Bicycle Alliance of Minnesota (BAMN).
- Fergus Falls was designated as a Bicycle Friendly Community, Bronze level, by the League of American Bicyclists (TAB) in 2015. The city renewed its designation in 2019 and was designated as a Silver-level BFC.
- In 2019, Fergus Falls made the League of American Bicyclists' Top 10 list for the most number of Bicycle Friendly Businesses in the country. We have 18 Bicycle Friendly Businesses in town, with designations ranging from Bronze to Gold.
- Minnesota State Community and Technical College (M-STATE) in Fergus Falls was designated as a Bronze-level Bicycle Friendly University in 2019.
- Fergus Falls has continued to be involved with the April 30 Days of Biking event and consistently had high numbers of participants. In 2017, Fergus Falls participation in the April 30 Days of Biking event was third overall in the state and first in biking percentage on capita.
- Bike touring and bike events have increased in the Fergus Falls area over the last few years, with events such as the Bike 100 Triathlon.
- Visit Fergus Falls, a tourism organization for the area reports that information about biking is the most requested page visited on their website and they specifically target bicycle tourism with the website URL: [www.visitfergusfalls.com](http://www.visitfergusfalls.com).
- Otter Tail County completed and adopted its 1st County Wide Trail Master Plan in April 2017.
- Growing interest in off-road biking activities in the region, including mountain biking, gravel road biking and fat tire biking. Mountain bike trails are planned for Fether Park, Mountain

bike trails have been developed in Fether Park, which now has approximately 1.5 miles of trails. A parking area has been developed, which includes park signage, an information kiosk, bike parking and a bench. Guide signs have also been installed along the trail, giving electronic info and difficulty level for the trail users.

• The Lake Alice 100 event, which is a century ride that begins 1.15 mile Lake Alice, began in 2013.

• Seven bicycle repair stations have been installed in the community, in 15 places to 400 more in the future.

• Fergus Falls has partnered with the City to install more bike parking in downtown and other parts of the community. One major highlight included the installation of eight sculptural bike racks that were designed by local artists and placed at the Otter Tail County Historical Society Museum, the Fergus Falls Public Library, and in front of the four arts organizations downtown. The project was funded by a grant from the Lake Region Arts Council.

• The City has installed bike lanes on Cascade Street and College Way, and has expanded the downtown network to include Lake Alice and Westside Drive.

• Increase in paddle sports nationally (2012 - 2019) which could be better supported on the Otter Tail River, including stand up paddling (SUP), kayak paddling (17%), whitewater kayaking (10%), canoeing (8%).

• MNDNR has recently begun building its Paddlefest and "Can Paddle" events on the Otter Tail River adjacent to the planned Social Edge Trail.

• Fergus Falls was recently designated as a North County Trail Town.

Edge Trail, including the following:

- Revitalization of downtown Fergus Falls and the Otter Tail River, which will be guided by the Downtown & Riverfront Master Plan (adopted by the Fergus Falls City Council in December 2017).

- West Central Initiatives Comprehensive Economic Development Strategy (CEDS) includes an active transportation strategy targeting collaboration with state and local partners to expand and maintain the regional trail system.

- Connection to Central Lakes State Trail, Wobegon Trail, and Perham to Pelican Rapids Trail.

- The Central Lakes Trail Group hosts the Rail Trail 100, which takes advantage of the Wobegon Trail.

- The Adventure Cycling Association includes Fergus Falls as part of its Northern Tier Route, further promoting regional bike tourism.

- Otter Tail River recreational activities, including viewing of the falls/Central Dam, canoeing, kayaking, stand up paddling, fishing, and bird watching.

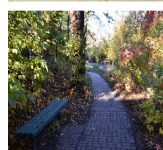
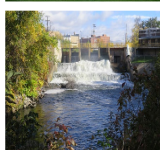
- Enhancement of the existing 4-block long River Walk along the Otter Tail River, which is currently a narrow walking path, into a 1.7 mile multi-use regional trail.

- The whitewater rapids on the Otter Tail River are a unique regional feature and

14 Glacial Edge Trail Master Plan

### Public Health Initiatives

- PartnersHIP 4Health is a collaborative initiative in Becker, Otter Tail, and Wilkin counties involving community and public health partners. One of PartnersHIP 4Health's initiatives is to promote active lifestyles by assisting communities with adopting community design and policies that encourage people to increase their physical activity and use of non-motorized transportation.
- Live Well Fergus Falls, which resulted from the Forward Fergus Falls initiative, is a Lake Region healthcare program that provides healthy lifestyles in Fergus Falls.
- The city of Fergus Falls completed a Safe Routes to School Plan, which includes seven schools in 2012.



Coastal View from Top Left: Biers in Fergus Falls. Coastal View and installed in front of the Fergus Falls Library (afternoon, between 10am and 4pm). The view is from the top of the hill, looking down the Otter Tail River, the Central Lakes State Trail, and the Central Lakes State Trail.

Glacial Edge Trail Master Plan 15

## Economic Development/Tourism

**Information:** Greater Fergus Falls and Otter Tail County offer a number of opportunities for economic development and tourism related to the planned Glacial



tourism opportunity as they are the only fast moving water within a 150 mile radius.

- Prairie Wetlands Learning Center, including hiking trails and a visitor/education center.

- Historic sites, including:

- River Inn

- Fergus Falls City Hall

- Kaddatz Hotel/Gallery

- Otter Tail County Courthouse

- Hillcrest Lutheran Academy

- Historic Kirkbride Campus

- Art galleries and studios in downtown

Fergus Falls, including Kaddatz Gallery,

Springboard for the Arts, Lake Region Arts

Council, Zachmann Art Studio, and

opportunities to highlight local artist Charles Beck.

- Future connections to Maplewood State Park, Glendalough State Park, Phelps Mill County/Regional Park, and Heartland/Paul Bunyan State Trails.

## Economic Development/Tourism Support Material Uploads:

Description: Economic Development and Tourism

[Economic Development and Tourism 6333fc.pdf](#)

### [Economic Development and Tourism](#)

#### Economic Development and Tourism Destination Opportunities

Greater Fergus Falls and Otter Tail County offer a number of opportunities for economic development and tourism related to the planned Glacial Edge Trail, including the following:

- Re-Activation of downtown Fergus Falls and the Otter Tail River, which will be guided by the Downtown & Riverfront Master Plan (adopted by the Fergus Falls City Council in December 2017).
- West Central Institute's Comprehensive Economic Development Strategy (CEDS) includes an active transportation strategy, targeting collaboration with state and local partners to expand and maintain the regional trail system.
- Connection to Central Lakes State Trail, Voyageur Trail, and Pentium to Pelican Rapids Trail.
- The Central Lakes Trail Group hosts the Red ITail 100, which takes advantage of the Voyageur Trail.
- The Adventure Cycling Association includes Fergus Falls as part of its Northern Tier Route, further promoting regional bike tourism.
- Otter Tail River recreational activities, including viewing of "the falls," Central dam viewing, kayaking, stand up paddling, fishing, and birdwatching.
- Enhancement of the existing 4 block long River Park along the Otter Tail River, which is currently a narrow parking path, into a 1.7 mile multi-use regional trail.

- The whitewater rapids on the Otter Tail River are a unique regional feature and tourism opportunity as they are the only fast moving water within a 150 mile radius.
- Prairie Ventures Learning Center, including hiking trails and a visitor education center.
- Historic sites, including:
  - River Inn
  - Fergus Falls City Hall
  - Haskett Historic Bakery
  - Otter Tail County Courthouse
  - Hillcrest Lutheran Academy
- Historic Kootenai Campus

- Art galleries and studios in downtown Fergus Falls, including Haskett Bakery, (sponsored for the Arts, Lake Region Arts Council, Zachmann Art Studio, and opportunities to highlight local artist Charles Beck.
- Future connections to Granddough State Park, Phillip M. County Park and Heartland Park, Banquet State Trails.

Trails and Tourism across the State M-607 and the University of Minnesota Tourism Center provide state-level information about biking and tourism that support economic development benefits related to trails.

- In 2015, bicycle event visitors supported \$14.9M of economic activity, including \$4.6M in labor income and 155 jobs.
- Bicycle event visitors spent an estimated \$8.5M while attending events.
- An estimated 50,122 visitors travel for bicycle-related events per year.



Otter Tail River kayaking access at Veterans Park

16 Glacial Edge Trail Master Plan

**Recreational Trends Informations:** - Pedal Fergus Falls, founded in 2014, is a bicycle and pedestrian education and advocacy group for the community. This group is focused on making biking and walking the safe, easy and fun choice in Fergus Falls. Their intent is to serve as a resource for people, organizations and businesses who would like to incorporate biking and walking into their way of life. In 2017, Pedal Fergus Falls became a chapter of the Bicycle Alliance of Minnesota (BikeMN).

- Fergus Falls was designated as a Bicycle Friendly Community by the League of American Bicyclists in 2015. The City renewed its application in 2019 and was designated as a Silverlevel BFC.

- In 2019, Fergus Falls made the League of American Bicyclists Top 10 list for the most number of Bicycle Friendly Businesses in the country. We have 18 Bicycle Friendly Businesses in town, with designations ranging from Bronze to Gold.

- Minnesota State Community and Technical College (M State) in Fergus Falls was designated as a Bronzelevel Bicycle Friendly University in 2019.

- Fergus Falls has continued to be involved with the April 30 Days of Biking event and consistently had high numbers of participants. In 2017, Fergus Falls participation in the April

30 Days of Biking event was third overall in the state and first in biking percentage per capita.

- Bike touring and bike events have increased in the Fergus Falls area over the last few years, with events such as the Bike MS TRAM.
- Visit Fergus Falls, a tourism organization for the area reports that information about biking is the third-most frequented page visited on their website, and they specifically target bicycle tourism with the website URL [www.BikeFergusFalls.com](http://www.BikeFergusFalls.com).
- Otter Tail County completed and adopted its 1st County-Wide Trail Master Plan in April 2017.
- Growing interest in off-road biking activities in the regions, including mountain biking, gravel road biking, and fat tire biking. Mountain bike trails are planned for Ferber Park. Mountain bike trails have been developed in Ferber Park, which now has approximately two miles of trails. A parking area has been developed, which includes park signage, an information kiosk, bike parking and a bench. Guide signs have also been installed along the trails, giving directional info and difficulty level for the two trails.
- The Lake Alice 100 event, which is a century ride that loops 1.15 mile Lake Alice, began in 2013.
- Seven bicycle repair stations have been installed in the community with plans to add more in the future.
- Pedal Fergus Falls has partnered with the city to install more bike parking in downtown and other parts of the community. One major highlight includes the installation of eight sculptural bike racks that were designed by local artists and placed at the Otter Tail County Historical Society Museum, the Fergus Falls Public Library, and in front of the four arts organizations downtown. The project was funded by a grant from the Lake Region Arts Council.
- The City has installed bike lanes on Cascade Street and College Way, and has expanded the sharrows network to include Lake Alice and Westside Drive.
- Increase in paddle sports nationally (2012-2015) which could be better supported on the Otter Tail River, including stand up paddling (26%), kayak paddling (17%), whitewater kayaking (10%), sea/tour kayaking (8%)
- MN DNR has recently begun holding its Paddlefest and I Can Paddle events on the Otter

## Tail River, adjacent to the planned Glacial Edge Trail.

- Fergus Falls was recently designated as a North Country Trail Town.

## Recreational Trends Support Material

### Uploads:

Description: Demographic, Recreation, and Public Health

[Recreation and Public Health\\_42db05.pdf](#)

[Demographic, Recreation, and Public Health](#)

## Public Health Values:

- Promotes physical activity
- Promotes healthy lifestyle
- Connects people to the outdoors
- Enhances mental health
- Encourages social interaction

## Public Health Values Narrative: -

PartnerSHIP 4 Health is a collaborative initiative in Becker, Clay, Otter Tail, and Wilkin counties involving community and public health partners. One of PartnerSHIP 4 Healths initiatives is to promote active lifestyles by assisting communities with adopting community design/land use policies and practices that encourage people to increase their physical activity and use of non-motorized transportation.

- Live Well Fergus Falls, which resulted from the Forward Fergus Falls initiative, is a Lake Region Healthcare program that promotes healthy lifestyles in Fergus Falls.

- The city completed a Safe Routes to School Plan, which includes seven schools, in 2012.

### Trends

#### Demographic Trends

- Otter Tail County has recently launched the Rural Retention Initiative, with the goal of developing and implementing short and long-term strategies to attract, develop, retain, and expand the workforce in Otter Tail County.
- The Millennial generation has shown more of a tendency to move to places that have the amenities they desire, such as recreation opportunities, rather than just moving for a job opportunity.
- Local media has launched the Live Well Minnesota campaign to market what the best of Minnesota has to offer as a place to live, work, and start a business, including living where there is a wealth of nature and recreational amenities. The goal of this campaign is to encourage people to move to and stay in the region.
- Growing portion of the population is older with strong interest in recreational trails.

#### Recreation Trends

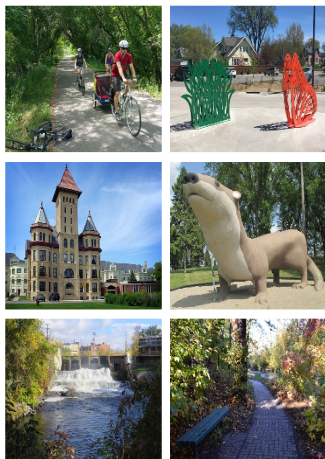
- Fergus Falls, founded in 1914, is a historic and picturesque town and a popular destination for the community. The town is located on a scenic lake and has a rich history of recreation and outdoor activities. The town is known for its scenic views, historic architecture, and recreational opportunities. The town is a popular destination for those looking for a peaceful and scenic getaway.
- In 2017, Fergus Falls became a chapter of the Bicycle Alliance of Minnesota (BAMN).

- Fergus Falls was designated as a Bicycle Friendly Community, Bronze level, by the League of American Bicyclists in 2015. The city renewed its application in 2019 and was designated as a Silver-level BFC.
- In 2019, Fergus Falls made the League of American Bicyclists' Top 10 list for the most number of Bicycle-Friendly Businesses in the country. We have 18 Bicycle-Friendly Businesses in town, with designations ranging from Bronze to Gold.
- Minnesota State Community and Technical College (MSTC) in Fergus Falls was designated as a Bicycle-Friendly University in 2019.
- Fergus Falls has continued to be involved with the April 30 Days of Biking event and consistently had high numbers of participants. In 2017, Fergus Falls' participation in the April 30 Days of Biking event was third overall in the state and first in biking percentage per capita.
- Bike touring and bike events have increased in the Fergus Falls area over the last few years, with events such as the Bike MTB TRAIL.
- Visit Fergus Falls, a tourism organization for the area, reports that information about biking is the most requested page on their website and they specifically target bicycle tourism with the website [www.visitfergusfalls.com](http://www.visitfergusfalls.com).
- Otter Tail County completed and adopted its Tail County Wide Trail Master Plan in April 2017.
- Growing interest in off-road biking activities in the region, including mountain biking, gravel road biking, and fat tire biking. Mountain bike trails are planned for Fether Park, Mountain

- Bike trails have been developed in Fether Park, which now has approximately 3.5 miles of trails. A parking area has been developed which includes parking, an information kiosk, bike parking and a bench. Guide signs have also been installed along the trail, giving directional info and difficulty level for the trail bike.
- The Lake Alice 100 event, which is a century ride that loops 113-mile Lake Alice, began in 2013.
- Seven bicycle repair stations have been installed in the community in its plans to add more in the future.
- Fergus Falls has partnered with the city to install new bike parking infrastructure and other parts of the community. One major highlight included the installation of eight sculptural bike racks that were designed by local artists and placed at the Otter Tail County Historical Society Museum, the Fergus Falls Public Library, and in front of the four arts organizations downtown. The project was funded by a grant from the Lake Region Arts Council.
- The City has installed bike lanes on Cascade Street and College Way, and has expanded the downtown network to include Lake Alice and Westside Drive.
- Increase in paddle sports nationally (2012 - 2019) which could be better supported on the Otter Tail River, including stand up paddling (SUP), kayak paddling (KAY), white-water kayaking (WAK), and trail kayaking (TK).
- MN DNR has recently begun holding its Paddlefest and "Can Paddle" events on the Otter Tail River adjacent to the planned Glacial Edge Trail.
- Fergus Falls was recently designated as a North Country Trail Town.

### Public Health Initiatives

- PartnerSHIP 4 Health is a collaborative initiative in Becker, Clay, Otter Tail, and Wilkin counties involving community and public health partners. One of PartnerSHIP 4 Healths initiatives is to promote active lifestyles by assisting communities with adopting community design/land use policies and practices that encourage people to increase their physical activity and use of non-motorized transportation.
- Live Well Fergus Falls, which resulted from the Forward Fergus Falls initiative, is a Lake Region Healthcare program that promotes healthy lifestyles in Fergus Falls.
- The city of Fergus Falls completed a Safe Routes to School Plan, which includes seven schools, in 2012.



Clockwise from Top Left: Biers in Fergus Falls, Sculpture Area and installed in front of the Fergus Falls Library (left), town (center), and on the shore of Lake Alice (right). The sculpture of a person is located along the Otter Tail River. The Central Fergus Falls Community Center.

**Public Involvement Summary:** The planning process was a collaborative effort involving the City of Fergus Falls and representatives from trail, recreation, and natural resource-related agencies/advocacy groups. A Project Advisory Group was formed consisting of representatives from city staff, other agencies/advocacy groups, members of the city's Bicycle and Pedestrian Advisory Committee, and a City Council member. City staff included representatives from the Community Development, Parks/Recreation/Forestry, and Economic Development departments. Trail, recreation, and natural resource-related agencies/advocacy groups represented were Otter Tail County, Minnesota Dept. of Natural Resources, West Central Initiative, Lake Region Health Care, North Country Trail Association, Pedal Fergus Falls, and PartnerSHIP4Health. The Project Advisory Group met three times during the planning process November, December, March and participated in the two public open houses. HKGi, the project's consultant team, facilitated meetings throughout the planning process.

In addition, a property owners meeting was held in November 2016. Of the 17 property owners invited, the city was able to meet with 10 of them in person. All owners of property adjacent to the trail route were specifically encouraged to attend to the two community open houses through a mailed invitation.

Meeting minutes from the Project Advisory Group and property owners meetings are located in the Meeting Notes attachment.

Two public open houses were conducted during the planning process, which took place in December 2016 and April 2017. The goals of the public open houses were as follows:

Public Open House #1 (December 8, 2016) provided an orientation to the overall project, shared information about existing and planned trails, described the planned future regional trails network, identified general route alternatives for the Glacial Edge Trail, and gained community feedback on alternative routes as well as their general preferences for the design features of the trail.

Public Open House #2 (April 25, 2017) presented the preferred trail route segment by segment, proposed the final master plan vision and guiding principles, shared concepts for the design of the various types of trail corridors (off-road, adjacent to roadway, shared roadway, and the River Walk), proposed priorities and phasing of trail construction over time, and gained community feedback on the recommendations.

**Master Plan Amendment Process: Otter Tail County Segments**

The primary trail route for the Master Plan Amendment to extend the Glacial Edge Trail through Otter Tail County was identified through the Otter Tail County-Wide Trail Master Plan (2017). This plan identified the connection from Fergus Falls to Maplewood State Park as a Proposed Spine Paved Trail, to be aligned with CSAH 1 and 3. With the planned construction of the Perham to

Pelican Rapids Regional Trail (also identified through this process as a Proposed Spine Paved Trail), the intention to further fill this High Priority Connection with a master planning effort was deemed the next step towards completing the county's network.

In 2017, as part of Otter Tail County's Master Trail Plan, a Project Management Team (PMT) and a Project Steering Committee (PSC) were established. Both played important roles guiding the master plan. The PSC was composed of a variety of County business owners, government officials, and local citizens. The PMT was composed of County and State employees who currently play active roles in managing the County's recreation and transportation systems. The project was composed of a three-part process over a 18 month timeframe. As part of that process, concepts were developed and refined by the PMT and PSC in June 2016. Eventually, the concepts were presented at public open houses located in Perham, Pelican Rapids, Parkers Prairie, and Fergus. The community was asked several feedback questions to better understand what needs the County-Wide Trail Master Plan should fulfill.

In 2019, based on the recommendation of Joe Czapiewski, Otter Tail County and the City of Fergus Falls decided to jointly amend the Glacial Edge Trail (GET) Master Plan, to extend the GET trail route an additional 14 miles from Fergus Falls to Maplewood State Park, consistent with Otter Tail County's Master Trail Plan. The planning process was a collaborative effort involving the City of

Fergus Falls and representatives from trail, recreation, and natural resource-related agencies/advocacy groups. Similar to the County's master planning process and original GET master planning process, project consultants, with the assistance of County and City staff, facilitated a community engagement process that proposed and confirmed a preferred trail route, along with trailhead locations and general trail design. Due to unforeseen interruptions in the planning process, primarily as a result of the COVID-19 pandemic, the project schedule was extended over 2020 and into 2021, with modifications made to accommodate for web-based engagement to avoid in-person events. A project advisory group was formed at the beginning of the Amendment planning process. This advisory group consisted of representatives from County and City staff, Minnesota DNR, Maplewood State Park, West Central Initiative, North Country Trail Association, Lake Regional Health Care, Otter Tail County Commission, PartnerSHIP 4 Health, and Visit Fergus Falls. The Project Advisory Group met three times over the course of the planning project.

A variety of methods were employed to gather broader community input, as well as targeted input from adjacent property owners to the proposed trail alignment. Input received was recorded, synthesized, and used to determine preferences and to refine the draft and final master plan amendment. Methods included a project website, letter to property owners, and the use of the Social Pinpoint service in lieu of an in-person community open house due to COVID-19. A



map of the proposed trail route and accompanying information about the project was shared through this web tool. A total of 416 people visited the Social Pinpoint site, and 62 comments were collected over a 2-month period of time. The Social Pinpoint site was advertised through the letter to property owners, the project website, and both the Otter Tail County and Fergus Falls social media accounts.

The project team determined that it was very important to gather feedback from residents and property owners adjacent to the proposed trail route. A letter was mailed to all property owners along the trail route (on both sides of the roadway), soliciting feedback and comments on the proposed trail. The letter was accompanied with a set of printed, scaled maps of the proposed trail route. Letter recipients were encouraged to contact County staff to discuss their ideas or concerns. Over the course of the comment period, the County received 35 email and phone responses and also received 10 responses through the County's Facebook page.

The attached appendix contains meeting summaries of the PSC and summaries of public engagement comments.

**Public Involvement Support Material Uploads:**

[Engagement Notes - Original Plan and Amendment](#)

## Development & Implementation

### **Development Plan Overview : Preferred Trail Route (Fergus Falls):**

The preferred Glacial Edge Trail route through Fergus Falls was determined through an iterative process involving Fergus Falls city staff, the Project Advisory Group, local stakeholders and advocates for river recreation and healthy lifestyles. This chapter describes four trail segments within the Fergus Falls section of the Glacial Edge Trail - South, Central, North Central, and Far North. It was clear early on in the planning process that the trail route would be easier to build if split into segments. These smaller trail segments are intended to be used for the purpose of phasing the funding, design, and construction of the full 14-mile trail. These segments were determined by changes in land use, development density, scenic and natural areas, and local landmarks. The boundaries of these segments shifted slightly during the planning process to better align with implementation, cost-estimation, and phasing strategies. The extents and names of the four segments are not intended to guide marketing and branding of the Glacial Edge Trail.

The following pages in this chapter describe in detail the trail features and amenities within each segment of the Glacial Edge Trail. The narrative is accompanied by a plan showing the preferred trail route, preferred spur connections, existing local/regional/state bicycle and pedestrian connections, new and existing trailhead locations, community destinations and specific locations for intersection treatments.

The segment maps also show trail routes that were identified as interim routes. These are short-term or temporary routes that could be used as an alternative until the preferred route is constructed. Additionally, considered routes are noted on the segment maps. These are routes that were considered throughout the planning process as possible routes, but were not selected as the final preferred route.

The preferred trail route connects to existing and future planned trails. In some cases, the trail route overlaps an existing trail. In other instances, the trail route augments an existing trail route to create a local loop. These local loops and access points were important points of discussion during the planning process. However, it should be stressed that the emphasis on decision-making for the final preferred trail route is focused on creating a regional trail, providing recreational opportunities and connections, and to take advantage of the natural and scenic viewing and interaction opportunities that the Glacial Edge Trail will provide.

In a few segments of the Fergus Fall section of the Glacial Edge Trail, there are identified interim trail routes identified, such as at City Hall Park and the West River Loop to Lincoln Avenue. These interim routes overlap existing facilities and can be used as short-term routes

until future segments of the Glacial Edge Trail are completed.

### South Segment

The South Segment is a 2.83 mile stretch beginning at the Central Lakes Trailhead. This segment primarily consists of a multi-use path adjacent to the roadway, taking advantage of an existing trail along Hwy 210 and Pebble Lake Road. At Vernon Avenue, the trail will have separate bicycle and pedestrian facilities, with on-road bike lanes and existing sidewalks along Vernon Avenue and Sheridan Street until Washington Avenue. At Washington Avenue, the trail will continue as a multi-use path adjacent to the roadway until Veterans Memorial Park.

The trail spur from Cascade Street along Hwy 210 to Pebble Lake Road will connect trail users to the Prairie Wetlands Learning Center, where recreational trails meander through restored wetland and natural habitat areas. This segment also connects trail users at two points to the North Country Trail, as well as to commercial and retail connections along Pebble Lake Road.

This segment has one railroad crossing at Sheridan Street south of Junius Avenue.

### Community Destinations (South Segment)

- Prairie Wetlands Learning Center
- Central Lakes Trailhead/Central Lakes Trail
- North Country Trail
- Adams Park/Grotto Lake/Otto the Otter
- Veterans Memorial Park

### Trailheads (South Segment)

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.

- Prairie Wetlands Learning Center
- Central Lakes Trailhead
- Adams Park/Grotto Lake
- Veterans Memorial Park

### Trail Spurs and Connections (South Segment)

- North Country Trail
- Multi-use path on Pebble Lake Road (south of Hwy 210)
- Multi-use path on State Hwy 210 (west of Pebble Lake Road)
- North Country Trail at S Cascade Street and at Central Lakes Trailhead
- Spur into Adams Park/Grotto Lake

- Bikeway on Channing Avenue at Pebble Lake Road

#### Intersection Treatments (South Segment)

- S Cascade St and Hwy 210
- Pebble Lake Rd and Hwy 210
- Pebble Lake Rd and Douglas Ave
- Pebble Lake Rd and Channing Ave
- Pebble Lake Rd and Bancroft Ave
- Pebble Lake Rd and Alcott Ave
- Pebble Lake Rd and Vasa Ave
- Pebble Lake Rd and Concord St
- Vernon Ave and Burlington
- Vernon Ave and Sheridan St
- Sheridan St and Hampden Ave
- Sheridan St and the RR
- Sheridan St and Junius Ave
- Sheridan St and Washington Ave
- Sheridan St and Sherman St
- Lincoln Ave at Veterans Memorial Park

#### Central Segment

The Central Segment is a 3.75-mile segment focused on bringing trail users to the riverfront of the Otter Tail River, as well as to local attractions throughout downtown Fergus Falls. The route overlaps portions of the existing River Walk trail, a local 0.3-mile pedestrian path along the south side of the river. With the Glacial Edge Trail, this path will be upgraded to 10-ft widths where possible. Despite the more urban conditions of this segment, the majority of this part of the Glacial Edge Trail will be an off-road path.

This segment shows two options between the Central-Wright Dam and Stanton Avenue, both of which involve a new river crossing with a bicycle/pedestrian bridge. The Falls Crossing Option proposes a new river crossing south of the Central-Wright Dam, with opportunity for a new viewing platform of the historic dam, connecting trail users to the River Inn, and along the north side of the river bluff. The Mills Crossing Option proposes upgrading the entire length of the existing River Walk to regional trail standards, with a new river crossing at George B. Wright Park, connecting to Vine Street, just past the Old Mill site, which will likely be re-developed in the near future. An interim route is proposed for the near term use of the Glacial Edge Trail, which brings the users through City Hall Park to Washington Avenue to cross the river at Union Street.



To avoid a difficult railroad crossing at the waters edge, the trail will use an existing sidewalk along the North side of Stanton Avenue between Union and Broadway Avenues, along with on-road bike lanes. At Broadway Avenue, the trail will cross the railroad, which will require a permanent crossing (currently there is a temporary crossing here), and then meander along the rivers edge, providing views to Hannah Park and connecting to Barefoot Park. Here, another railroad crossing is necessary at St. Andrews Street.

On-road facilities will connect from Barefoot Park to the Otter Tail Historical Society, and then off-road facilities will connect trail users to the M State campus as well as a bikeway connection at Linden Street. M State has proposed an off-road path through the east portion of their campus, providing a further viewing amenity for trail users.

#### Community Destinations (Central Segment)

- Veterans Memorial Park
- Otter Tail River
- Federal Courthouse
- River Walk and North Country Trail
- Central-Wright Dam and Pisgah Dam
- Historic River Inn
- Downtown businesses and retail
- City Hall and City Hall Park
- George B. Wright Park
- Old Mill Site at Stanton Ave
- Barefoot Park and the old dairy site
- Otter Tail Historical Society and current Farmers Market location
- M State campus
- MnDNR natural area

#### Trailheads (Central Segment)

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.

- Veterans Memorial Park
- City Hall Park
- Broadway Ave and the River
- Barefoot Park
- Otter Tail Historical Society/Van Dyk Park
- M State

#### Trail Spurs and Connections (Central Segment)

- River Walk
- North Country Trail Urban Connector
- North Country Trail at Union Ave
- Bikeway along Broadway Ave
- Multi-use riverside path along Otter Tail Dr and Tower Rd
- Bikeway at Linden St and M State
- Multi-use path at Fir Ave
- Otter Tail Water Trail

#### Intersection Treatments (Central Segment)

- Existing HAWK signal intersection at Cascade St and the River Walk
- Union Ave and Stanton Ave
- Stanton Ave and Oak St
- Stanton Ave and Broadway Ave
- RR crossing at Broadway Ave
- RR crossing at St. Andrews St at Barefoot Park
- Lincoln Ave at St. Andrews St
- N Tower Rd at Spartan Dr
- RR and intersection crossing at Fir Ave and Tower Rd

#### North Central Segment

The North Central Segment is characterized by linking the trail user to the rural landscape of the north Fergus Falls area. Beginning at the intersection of Tower Road and Fir Avenue, the trail will meander through the Historic Kirkbride Campus and County Government Center as an adjacent-to-roadway path, with a new trailhead within the circle drive on Kirkbride Boulevard. The trail will then head north and continue as an off-road facility past the Veterans Home. At Skogmo Boulevard the trail will return back to an adjacent-to-roadway path, with excellent views north towards the prairie pothole landscape.

At Cleveland Avenue (County Hwy 27), the Glacial Edge Trail will use a recently-installed multi-use trail along the west side of the road, crossing Cleveland Avenue at Woodland Drive.

From this intersection, there are three options for the trail route to connect to Ferber Park, a nature-based park and attraction. There is a potential partnership with the MnDNR at this point in the trail for interpretive landscape design and improved ecological function.

The options were determined through community and city staff input during the planning process. The Woodland Option is the southern-most trail route, and would make this segment 3.66 miles long. This option takes advantage of the right-of-way along Woodland Drive and

Woodland Loop, as well as a utility easement connecting to Stonybrook Road.

From here, the trail would turn north and continue as an off-road trail along the wetland areas to Ferber Park.

The 244th Street Option is the central option shown on the trail map. Using this option, the North Central Segment would be 4.03 miles long. This option takes advantage of the existing multi-use path along the west side of Cleveland Avenue, and turns east just south of 244th Street. Here, another utility easement would connect trail users to wetland views and to Ferber Park, with a spur connection at Northwood Lane.

The 250th Street Option is the northern-most trail route, and would make the North Central Segment 4.42 miles in length. This option would continue north along Cleveland Avenue, using the causeway over the lake north of 244th Street. The adjacent-to-roadway path would then continue to 250th Street, and turn east. At Century Oak Loop, the trail would turn south and continue to Ferber Park.

#### Trailheads (North Central Segment)

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.

- Kirkbride Campus
- Ferber Park

#### Trail Spurs and Connections (North Central Segment)

- Multi-use trail at Fir Ave and Tower Rd
- Sidewalk at Fir Ave
- Multi-use trail at Cleveland Ave
- Connection to Northwood Ln (244th St Option)

#### Intersection Treatments (North Central Segment)

- Fir Ave at Cottage Dr
- Fir Ave at Oak St
- Cleveland Ave and Woodland Dr
- Cleveland Ave and Tower View Rd (244th and 250th St Options)
- Cleveland Ave and N Woodland Dr (244th and 250th St Options)

#### Community Destinations (North Central Segment)

- Historic Kirkbride Campus

- Veterans Home
- Prairie potholes and rural landscape of north Fergus Falls
- Ferber Park

#### Far North Segment

The Far North segment has a distinct rural character for the Glacial Edge Trail. This 3.62-mile segment connects trail users from Ferber Park through north Aurdal and Fergus Falls Township. From Ferber Park, the trail overlaps an existing snowmobile route, circling Opperman Lake to the south as an off-road trail. At County Highway 111, the trail will continue eastward as a multi-use trail adjacent to the roadway along 245th Street.

The trail will use an existing pedestrian walkway across the Otter Tail River at 245th Street, with a future connection to the Otter Tail River Water Trail. The trail will then continue eastward as an adjacent-to-roadway trail along the north side of 245th Street to County Highway 1. Here, the trail will cross to a new trailhead at the Otter Tail County Highway Garage property. This is the terminus of the Glacial Edge Trail, as it connects to the existing North Country Trail and multi-use path at County Highway 1, as well as connecting to the future regional trail connection northeast to Maplewood State Park.

An additional loop connection is proposed for the Glacial Edge Trail. This loop will add 1.22 miles of off-road trail through the Chautauqua Ice Margin, a significant destination and viewing area of Hoot Lake to the south.

#### Trailheads (Far North Segment)

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.

- Ferber Park
- Otter Tail County Highway Garage location and intersection with the North Country Trail

#### Trail Spurs and Connections (Far North Segment)

- Chautauqua Ice Margin Loop
- Connection to multi-use trail and North Country Trail (existing and future) at County Hwy 1
- Otter Tail Water Trail at 245th Street crossing

#### Intersection Treatments (Far North Segment)

- 245th Street at County Hwy 111
- 245th Street at County Hwy 1

### Community Destinations (Far North Segment)

- Ferber Park
- Chautauqua Ice Margin Loop
- Views of Hoot Lake
- Views of Prairie Pothole Lake east of Ferber Park
- Crossing of Otter Tail River at 245th Street

### Preferred Trail Route: Otter Tail County

The preferred Glacial Edge Trail route through Otter Tail County was initially identified through the Otter Tail County-wide Trail Master Plan (2017). This route was designated as a High Priority Paved Trail Spine, with emphasis on connection from Fergus Falls to Maplewood State Park, connecting to the Perham to Pelican Rapids Regional Trail (also designated as a High Priority Paved Trail Spine). Through an iterative process involving Otter Tail County staff along with the guidance of the Project Advisory Group (consisting of local stakeholders and advocates for recreation and healthy lifestyles), the trail route was refined. While the general alignment with CSAH 1 and 3 remained, the trail location on the east or west side of the roadway has been examined, along with roadway crossings. The Otter Tail County section of the Glacial Edge Trail is located in an area with many small wetland areas (prairie potholes) that dot the landscape. The trail location as shown in the following pages attempts to avoid any disturbance of wetland areas. Where this is not feasible, boardwalk construction is suggested, as a means to maintain existing elevations and drainage patterns along the surface of the land, while providing a continuous and separated trail experience.

This chapter describes three trail segments within the Otter Tail County section of the Glacial Edge Trail - Highway 1, Red River Lake, and Maplewood State Park. It was clear early on in the planning process that the trail route would be easier to understand if split into segments. These smaller trail segments are intended to be used for the purpose of phasing the funding, design, and construction of the full 14-mile trail. The extents and names of the four segments are not intended to guide marketing and branding of the Glacial Edge Trail.

The following pages in this chapter describe in detail the trail features and amenities within each segment of the Otter Tail County section of Glacial Edge Trail. The narrative is accompanied by a plan showing the preferred trail route, existing local/regional/state bicycle and pedestrian connections, new and existing trailhead locations, community destinations and specific locations for intersection treatments. State-designated snowmobile routes are also shown as reference, and in some places, the snowmobile route overlaps with the proposed trail route.

The planning process for the Otter Tail County section of the Glacial Edge Trail overlapped



with detailed design and construction of the Perham to Pelican Rapids Regional Trail, as it was being planned through Maplewood State Park. An alternate route for the Glacial Edge Trail is proposed and shown in the Maplewood State Park Segment. As plans are solidified for the Perham to Pelican Rapids Regional Trail, a decision can be confirmed for the Glacial Edge Trail route, ensuring a continuous connection between these two significant trails.

The emphasis on decision-making for the final preferred trail route will be focused on creating a regional trail, providing recreational opportunities and connections, and to take advantage of the natural and scenic viewing and interaction opportunities that the Glacial Edge Trail will provide.

This amended portion of the trail is grade separated. Just like on the Perham to Pelican Rapids Regional Trail, there are instances that require the trail to move closer to the road due to wetlands, lakes, etc. However, like the Perham to Pelican Rapids Regional Trail, curbing and other barriers will be utilized as necessary.

#### Highway 1 Segment

The Highway 1 Segment begins where the terminus of the Far North Segment ends, and where the existing County Trail along Highway 1 terminates at the Otter Tail County Garage. This 3.9-mile segment primarily runs along the east side of CSAH 1. Previously, a trail was planned along this route; grading for the trail was completed, but the trail was not built. Use of this trail bed in winter months by snowmobilers will continue in alignment with the Glacial Edge Trail route along CSAH 1, as similar to many state and regional trails through rural areas.

At CSAH 18, the trail will intersect with a planned segment of the County's paved shoulder network.

The decision to align the Glacial Edge Trail in this segment with the east side of the roadway was a result of preference voiced by the residents who live along the west side of the roadway, and the acknowledgement that the number of driveway and roadway crossings would be less.

The views along this segment are indicative of the prairie pothole landscape. It is anticipated that the trail will remain within the County right-of-way. A number of potential wetland conflicts have been identified, but until survey-level site analysis is completed, it is unclear whether wetland mitigation or boardwalk construction will be needed to avoid disturbance of sensitive habitat and drainage areas.

Along the straightaway of CSAH 1 south of where the road turns east and intersects with CSAH 10, the trail route will cross the roadway with a mid-block trail crossing and transfer

north to run along the west side of CSAH 3.

#### Trailheads (Highway 1 Segment)

A trailhead is proposed at the Otter Tail County Garage site, which will serve as a rest area for people using both the Glacial Edge Trail and the County's trail south along CSAH 1.

Suggested amenities at this location include:

- ADA designated parking stalls
- Kiosk with map, wayfinding
- Bench
- Bicycle fix-it station

#### Trail Spurs and Connections (Highway 1 Segment)

- Otter Tail County trail along CSAH 1
- Glacial Edge Trail (Fergus Falls) Far North Segment
- Intersection with CSAH 18 (planned) paved shoulder, as part of the Otter Tail County network

#### Boardwalk Sections (Highway 1 Segment)

Based on study of aerial photography and GIS parcel information, it appears that the bituminous Glacial Edge Trail can be constructed within the existing County right-of-way, avoiding conflict with existing designated wetlands. However, there are (5) locations where the adjacent wetland is very close to the right-of-way boundary.

#### Intersection Treatments (Highway 1 Segment)

- CSAH 1 at the Otter Tail County Garage/Trailhead site (high visibility crosswalk with potential user-activated pedestrian signal)
- CSAH 18 (marked crosswalk)
- Aurdal River Road (marked crosswalk)
- Stavanger Church Road (marked crosswalk)
- Approximately half-mile south of CSAH 1/CSAH 10 intersection (mid-block crosswalk with high-visibility markings, user-activated signal)
- CSAH 10 (marked crosswalk)

#### Community Attractions (Highway 1 Segment)

- Overlap of trail with Otter Trail Scenic Byway
- Views of prairie pothole and pastoral landscape

#### Red River Lake Segment

The Red River Lake Segment begins at the point where the trail route transitions from CSAH 1 to CSAH 3, after crossing CSAH 10, and ends at CSAH 22. This segment is 4.2 miles long.

Starting from the CSAH 10 crossing, the trail runs along the west side of CSAH 3, past a large tract of property owned by the U.S. Fish and Wildlife Service. The Red River Lake bridge crossing is located approximately 1.2 miles north of the CSAH 10 intersection.

At the existing bridge crossing, there is a 6ft-wide raised sidewalk on both sides of the roadway, and the speed limit along the road lowers to 35mph just north and south of the bridge crossing. The trail route will take advantage of the existing sidewalk at this point, splitting to utilize both sidewalks on either side of the roadway. Intersection treatments (marked crosswalks and user-activated signal) will provide safety measures for trail users crossing the roadway here. This is a temporary solution, similar to the bridge over Highway 10 on the Perham to Pelican Rapids Regional Trail.

A trailhead location is proposed on the north side of the Red River Lake crossing, in coordination with an existing water access point that is owned and operated by the Mn DNR. Red River Lake is also part of the Otter Tail County Water Trail system.

From the trailhead location, the Glacial Edge Trail route will continue north along the east side of the roadway to CSAH 22, curving around Sproul Lake and Rice Lake. Here, there are opportunities for interpretive elements and wildlife viewing of migratory bird species.

#### Trailheads (Red River Lake Segment)

A trailhead is proposed at the existing MnDNR water access point at Red River Lake. Today, there is an existing parking area and dock access to the lake. Suggested trailhead amenities at this location include:

- Bike racks
- Information kiosk with interpretive elements
- Bench(es)
- Picnic table
- Portable restroom facility with handwashing station

#### Trail Spurs and Connections (Red River Lake Segment)

- Otter Tail River Water Trail
- Red River Lake Access

#### Boardwalk Sections (Red River Lake Segment)

Based on study of aerial photography and GIS parcel information, it appears that the bituminous Glacial Edge Trail can be constructed mostly within the existing County right-of-way, avoiding conflict with existing designated wetlands. The decision to shift the trail from the west to east side north of the Red River Lake crossing was influenced by the longer length of roadway adjacent to Rice Lake, potentially creating a conflict for the water body.

#### Intersection Treatments (Red River Lake Segment)

- CSAH 3 south of Red River Lake Bridge (marked crosswalk)
- CSAH 3 north of Red River Lake Bridge (marked crosswalk and user-activated crosswalk signal)
- 300th Street crossing (marked crosswalk)
- CSAH 22 crossing (marked crosswalk)

#### Community Attractions (Red River Lake Segment)

- Red River Lake (fishing, non-motorized lake access, wildlife viewing)
- Sproul Lake (fishing, wildlife viewing)
- Rice Lake (fishing, wildlife viewing)

#### Maplewood State Park Segment

The Maplewood State Park Segment begins at CSAH 22 and continues north along CSAH 3 for 6.1 miles to terminate at the west side of Maplewood State Park, where the trail will enter the park. No portion of the Glacial Edge Trail is within Maplewood State Park. The GET will connect with another trail segment that goes through Maplewood State Park. The terminus also intersects with the planned Perham to Pelican Rapids Regional Trail.

This segment of the Glacial Edge Trail is characterized greatly by the increased presence of wetlands and lakes along the trail route. The complex network of wetlands through this area of Otter Tail County presents an excellent trail experience. However, this segment also poses the biggest challenge for trail construction, with narrow roadway, narrow (or non-existent) paved shoulders, and increased likelihood of additional land acquisition and need for boardwalk construction to avoid unnecessary disturbance of wetlands.

The trail segment begins on the east side of the roadway. At Emery Drive, the trail will cross CSAH 3 and continue along the west side of the roadway. This decision was influenced by the quantity and length of potential wetland conflicts.

At the crossing of CSAH 24, the proposed trail alignment will continue north along CSAH 3 along the west side of the roadway for approximately (2) miles to terminate at 380th Street. Here, the Glacial Edge Trail meets the planned Perham to Pelican Rapids Regional Trail. A marked crosswalk will allow trail users to cross CSAH 3 safely and enter Maplewood State Park. The intention is for the Glacial Edge Trail to meet the Perham to Pelican Rapids Regional Trail in this area; changes in the final trail alignment for Perham to Pelican Rapids Regional Trail may result in slight changes to the Glacial Edge Trail.

An alternative route is shown, which could result in the Glacial Edge Trail meeting with the

Perham to Pelican Rapids Regional Trail within the State Park, potentially providing an enhanced trail experience through the natural area. This alternate route would cross CSAH 24, turn east and run alongside the State Park perimeter, turning into the State Park. This alternate route will require significant study and coordination with MN DNR and construction of the Perham to Pelican Rapids Regional Trail to design and complete, with all best practices employed to avoid wildlife disturbance throughout the State Park.

#### Trailheads (Maplewood State Park Segment)

Two potential trailhead locations are proposed in this segment. At Emery Drive, there is an opportunity for the County to partner with a local business, Ye Olde Schoolhouse, which is a family-friendly bar/restaurant in a historic schoolhouse building. The restaurant has a parking area and could cater to trail users. A second, or alternative trailhead location could be located at the Anderson Lake access area, which has an existing parking and fishing area. This property is currently owned by Mocassin Valley Campground.

Trailhead amenities suggested at these locations include:

- Designated ADA parking
- Kiosk with interpretive elements
- Bike racks
- Bench(es)
- Shade (landscaping or structure)

#### Boardwalk Sections (Maplewood State Park Segment)

Based on study of aerial photography and GIS parcel information, it appears that the bituminous Glacial Edge Trail through this segment will require construction of the trail over some distance of wetland area. Potential wetland conflict areas have been noted on the segment map; all areas will need to be field and survey verified with careful study to recommend foundation and construction assemblies for the trail. Where possible, boardwalk segments can be combined with wider lookout or observation areas and interpretive elements.

#### Intersection Treatments (Maplewood State Park Segment)

- Emery Drive (marked crosswalk)
- 340th Street (marked crosswalk)
- CSAH 24 (marked crosswalk)

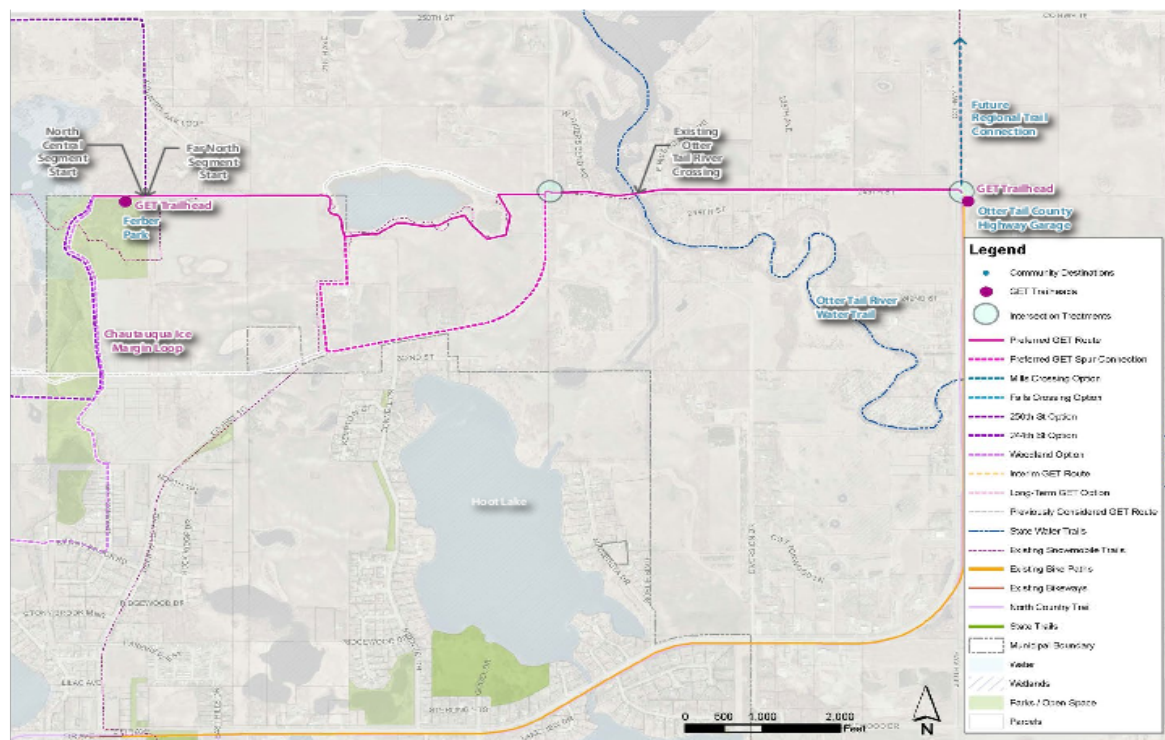
#### Community Attractions (Maplewood State Park Segment)

- Overlap with the Otter Trail Scenic Byway north of CSAH 24
- Ye Olde Schoolhouse
- Anderson Lake
- Crystal Lake



## Development Plan Items/Images

### [Far North Segment Route](#)



Chapter 3. Preferred Trail Route

39

### [Highway 1 Segment Route](#)



Maplewood State Park Segment Route

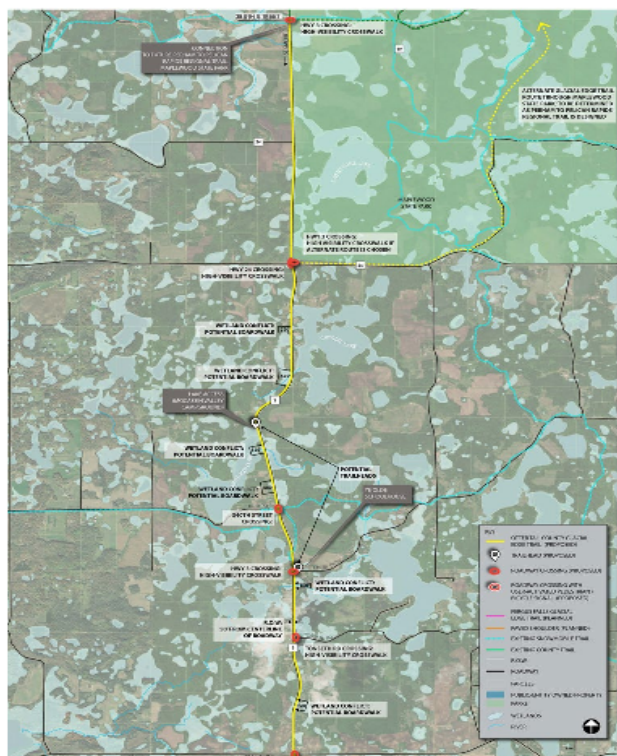


Figure 3-9. Maplewood State Park Segment



Lake Access and Parking Area at Anderson Lake



Ye Olde Schoolhouse

North Central Segment Route



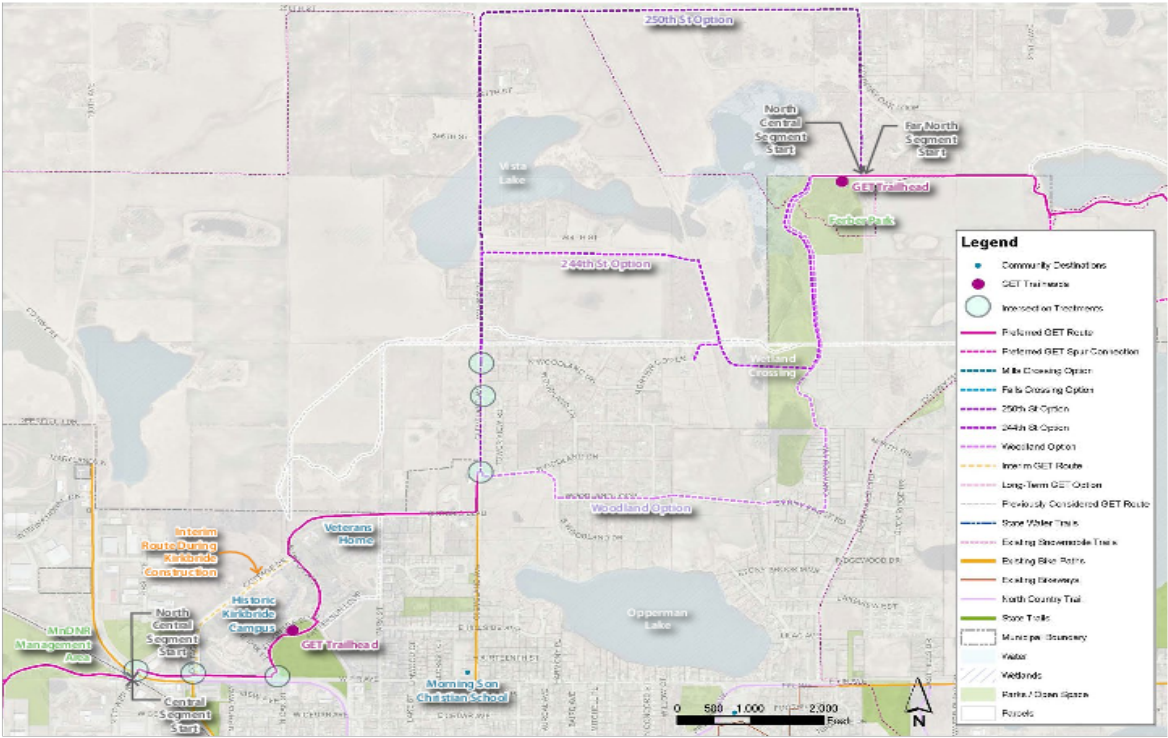


Figure S-4. North Central Segment Route Map

Central Segment Route

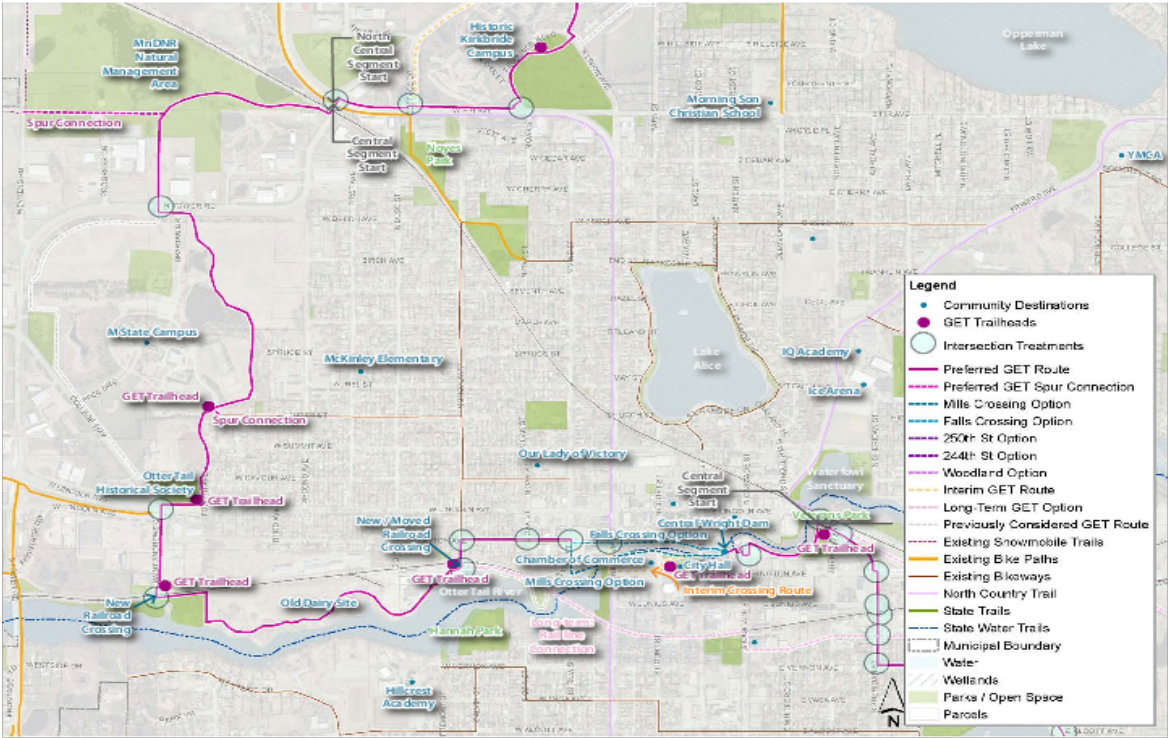


Figure S-3. Central Segment Route Map

## South Segment Route

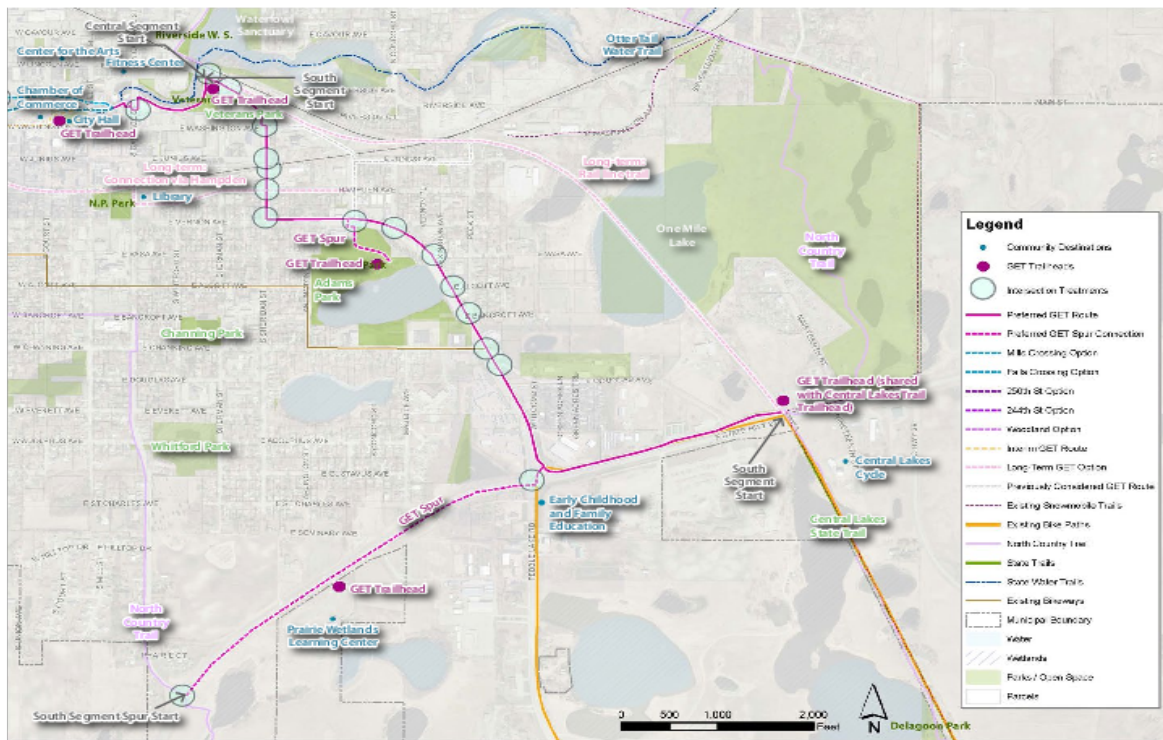


Figure 3-2: South Segment Route Map

Chapter 3: Preferred Trail Route 33

### Acquisition Plan Overview : Land Protection and Acquisition: Fergus Falls

The majority of the Glacial Edge Trail through Fergus Falls requires a 16-foot width (10-ft paved area with 3-ft clear and recovery zone on either side of the trail). As much as possible, the trail route takes advantage of the many publicly-owned properties throughout Fergus Falls and the surrounding areas. Public land ownership shown in Figure 4-3 include land owned by the City of Fergus Falls, Fergus Falls Port Authority, the State of Minnesota, M State University, as well as Otter Tail Power Company (a quasi-public land owner).

For trail segments that cross public-owned property, the City of Fergus Falls will need to permanently protect the trail corridor and trailheads for regional trail use with easements or joint powers agreements. For land that is privately owned with existing utility or roadway easements, the City of Fergus Falls will need to acquire public recreational easements for the trail corridor. For land that is privately owned without current easements, the City of Fergus Falls will need to acquire public access rights for the trail corridor.

Land protection strategies include park dedication, direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale, life estate and



negotiations with developers and land owners.

Depending on the route options chosen in the future, anticipated land acquisition costs are estimated between \$964K and \$1.6M. These estimates are based on an assumption of an acquisition cost of \$3.00/SF with a 16-ft wide trail corridor. Land costs will vary depending on negotiations and existing easements.

Additionally, the City of Fergus Falls will need to actively negotiate an additional rail crossing at Barefoot Park. The existing railroad crossing at Buse Street could be negotiated for a swap for a permanent railroad crossing at Broadway Avenue. The preferred trail route includes a minimal number of railroad crossings while attempting to bring trail users to the riverfront as much as possible.

#### Land Protection and Acquisition: Otter Tail County

The Glacial Edge Trail through Otter Tail County will primarily be constructed within the County roadway right-of-way. This easement ranges in width from 50' to 75' from the centerline of the roadway. At a minimum, the trail will require a 16-foot width (10-ft paved area with 1-2 ft clear and recovery zone on either side of the trail and clearance for minimal grading). Where possible, the trail route takes advantage of a few publicly-owned properties, such as the Otter Tail County garage site and the MnDNR Public Water Access site at Red River Lake for trailhead locations. Public land ownership shown in Figure 4-6 includes land owned by the State of Minnesota, Otter Tail County, Minnesota DNR, and the City of Fergus Falls.

For trail segments that cross public-owned property, the Otter Tail County will need to permanently protect the trail corridor and trailheads for regional trail use with easements or joint powers agreements.

At the time of implementation, all segments of the trail will require further engineering and site survey to determine the exact alignment. Where it is not possible to construct the trail within the County right-of-way, private land will need to be acquired or a public land access easement will need to be created.

Land protection strategies include park dedication, direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale, life estate and negotiations with developers and land owners.

#### **Acquisition Plan Items/Images**

[Land Protection and Acquisition 0327c3.pdf](#)

[Land Protection and Acquisition](#)

Land Protection and Acquisition: Fergus Falls

The majority of the Glacial Edge Trail through Fergus Falls requires a 10-foot width 10-ft paved area with 3-ft clear and recovery zone on either side of the trail), as much as possible. The trail route takes advantage of the many publicly-owned properties throughout Fergus Falls and the surrounding areas. Public land ownership shown in Figure 4-3 include land owned by the City of Fergus Falls, Fergus Falls Port Authority, the State of Minnesota, M State University, as well as Otter Tail Power Company (a quasi-public land owner).

For trail segments that cross public-owned property, the City of Fergus Falls will need to permanently protect the trail corridor and trailheads for regional trail use with easements or port powers agreements. For land that is privately owned, the existing utility or roadway easements, the City of Fergus Falls will need to acquire public recreational easements for the trail corridor. For land that is privately owned in rural current easements, the City of Fergus Falls will need to acquire public access rights for the trail corridor.

Land protection strategies include park dedication, direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale. The estate and negotiations with developers and land owners.

Depending on the route options chosen in the future, anticipated land acquisition costs are estimated between \$184K and \$1.6M. These estimates are based on an assumption of an acquisition cost of \$3000/ft with a 10-ft wide trail corridor. Land costs will vary depending on negotiations and existing easements.

CENTRAL SEGMENT (Central Urban Trailhead to Downtown Park)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	23.15	\$111,100.00	
Public	1.60		
Right	1.23		
Total Acquisition Cost		\$111,100.00	

CENTRAL SEGMENT (Mid-Century Office)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	17.78	\$177,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$177,144.00	

CENTRAL SEGMENT (Park Crossing Office)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	17.78	\$177,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$177,144.00	

Additionally, the City of Fergus Falls will need to actively negotiate an additional trail crossing at Bedford Park. The existing railroad crossing at Bedford Park could be negotiated for a swap for a permanent railroad crossing at Broadway Avenue. The preferred trail route includes a minimum number of railroad crossings while attempting to bring trail users to the effort as much as possible.

NORTH CENTRAL SEGMENT (Downtown Office)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	14.15	\$141,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$141,144.00	

NORTH CENTRAL SEGMENT (Mid-Century Office)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	14.15	\$141,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$141,144.00	

NORTH CENTRAL SEGMENT (Mid-Century Office)			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	14.15	\$141,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$141,144.00	

SOUTH CENTRAL SEGMENT			
	LN 17	ESTIMATE 12/2017	
Walking	1.30		
Bridge	0		
Private	14.15	\$141,144.00	
Public	1.20		
Right	1.20		
Total Acquisition Cost		\$141,144.00	

Total Project Acquisition Costs			
	Cost	Estimate	
Cost	\$184,000.00	\$1,600,000.00	

Table 4-3: Estimated Land Acquisition Costs

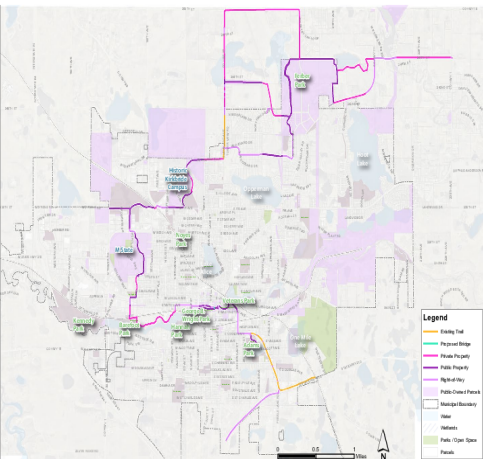


Figure 4-3: Glacial Edge Trail - Land Acquisition: Fergus Falls

Land Protection and Acquisition: Otter Tail County

The Glacial Edge Trail through Otter Tail County will primarily be constructed within the County existing right-of-way. The easement ranges in width from 50 to 175 feet from the centerline of the roadway. At a minimum, the trail will require a 10-foot width (10-ft paved area with 3-ft clear and recovery zone on either side of the trail and clearance for minimal goods). Where possible, the trail route takes advantage of the many publicly-owned properties, such as the Otter Tail County, Minnesota DNR and the Minnesota DNR Public Access sites at Red River Lake for trailhead locations. Public land ownership shown in Figure 4-4 includes land owned by the State of Minnesota, Otter Tail County, Minnesota DNR and the City of Fergus Falls.

For trail segments that cross public-owned property, the Otter Tail County will need to permanently protect the trail corridor and trailheads for regional trail use with easements or port powers agreements.

At the time of implementation, all segments of the trail will require further engineering and site survey to determine the exact alignment. Where it is not possible to cross within the existing County right-of-way, private land will need to be acquired or a public land access easement will need to be created. Land protection strategies include park dedication, direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale. The estate and negotiations with developers and land owners.

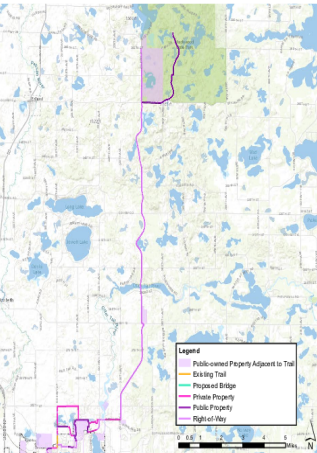


Figure 4-4: Glacial Edge Trail - Land Acquisition: Otter Tail County

## Development Features

The following listings detail the features and amenities that are or will be developed as a part of the Development Plan

### **Development Feature 1: On-Road Trail (Fergus Falls)**

The on-road sections of the Glacial Edge Trail (GET) are located primarily in the Central and South Segments, where the trail context is more urban or residential. These are areas along the trail route where either the setbacks of existing buildings or roadway widths are narrow and make it difficult to construct a 10-ft multi-use paved trail. Within the on-road sections of the Glacial Edge Trail, pedestrians will be encouraged to use the existing sidewalk infrastructure throughout downtown Fergus Falls. Bicyclists will be encouraged to use bicycle lanes, which will be demarcated through reflective striping. Where possible, the on-road bike lanes will have additional separation from vehicular traffic through a 2-ft buffer lane (with diagonal reflective striping) and flexible bollards. These bollards can be removed during the winter to ease snow removal. Figure 3-15 (see attachment) shows a one-side option for on-road bicycle facilities. Here, both directions of bicycle travel are located on the same side of the roadway. Here, parking may not have to be restricted to one side of the roadway (depending on the width of the existing roadway). Figure 3-16 (see attachment) shows a more typical on-road bicycle lane arrangement. Here, a 4-ft bicycle lane (with buffer and possibly flexible bollards) is located on both sides of the road.

[View full image](#)

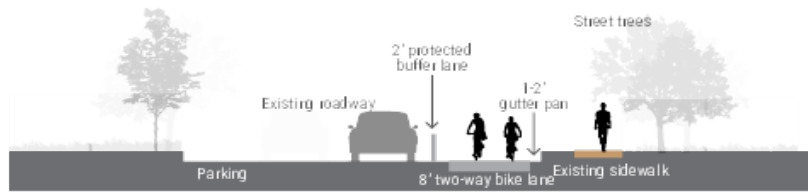


Figure 3-15. Fergus Falls GET: On-Road One-Side Typical Section

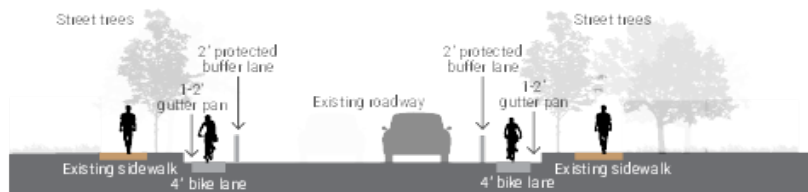


Figure 3-16. Fergus Falls GET: On-Road Two-Side Typical Section

### On-Road Trail: Fergus Falls

The on-road sections of the Glacial Edge Trail (GET) are located primarily in the Central and South Segments, where the trail context is more urban or residential. These are areas along the trail route where either the setbacks of existing buildings or roadway widths are narrow and make it difficult to construct a 10-ft multi-use paved trail.

Within the on-road sections of the Glacial Edge Trail, pedestrians will be encouraged to use the existing sidewalk infrastructure throughout downtown Fergus Falls. Bicyclists will be encouraged to use bicycle lanes, which will be demarcated through reflective striping.

Where possible, the on-road bike lanes will have additional separation from vehicular traffic through a 2-ft buffer lane (with diagonal reflective striping) and flexible bollards. These bollards can be removed during the winter to ease snow removal.

Figure 3-15 shows a one-side option for on-road bicycle facilities. Here, both directions of bicycle travel are located on the same side of the roadway. Here, parking may not have to be restricted to one side of the roadway (depending on the width of the existing roadway).

Figure 3-16 shows a more typical on-road bicycle lane arrangement. Here, a 4-ft bicycle lane (with buffer and possibly flexible bollards) is located on both sides of the road.

## Development Feature 2: Off-Road Trail (Fergus Falls)

The off-road sections of the Glacial Edge Trail (GET) are intended to provide a high-quality scenic experience for trail users. These sections are completely removed from roadway corridors. Where possible, the trail is located between two different types of land cover or use. For instance, the preferred trail route through M State Campus in the Central Segment is situated at the tree line, providing some shade at certain times of day and varying the trail experience. These sections will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area. See Figure 3-17 (attachment).

[View full image](#)

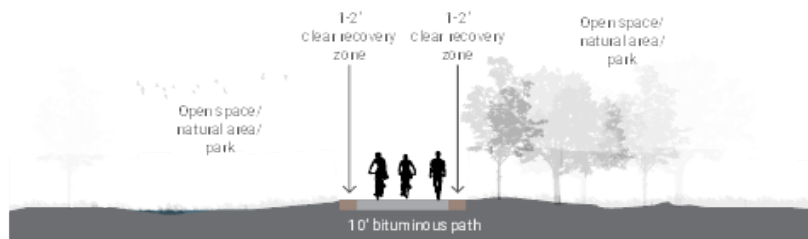


Figure 3-17. Fergus Falls GET: Off-Road Typical Section

#### Off-Road Trail: Fergus Falls

The off-road sections of the Glacial Edge Trail (GET) are intended to provide a high-quality scenic experience for trail users. These sections are completely removed from roadway corridors. Where possible, the trail is located between two different types of land cover or use. For instance, the preferred trail route through M State Campus in the Central Segment is situated at the tree line, providing some shade at certain times of day and varying the trail experience. These sections will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area.



Figure 3-18. Fergus Falls GET: Adjacent to Roadway Typical Section

#### Adjacent to Roadway Trail: Fergus Falls

The sections of the Glacial Edge Trail (GET) that are located adjacent to the roadway are primarily comprised of existing multi-use paths within Fergus Falls, such as the existing path from the Central Lakes Trailhead to Vernon Avenue along Pebble Lake Road and the existing path along Cleveland Avenue (County Highway 27) in north Fergus Falls. These sections, along with newly-installed adjacent-to-roadway sections within the Glacial Edge Trail will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area.

Shade trees and boulevard planting can provide additional amenity to these sections. Where possible, the adjacent-to-roadway sections will be located as far away from vehicular traffic as the site context permits.

### Development Feature 3: Adjacent to Roadway Trail: Fergus Falls

The sections of the Glacial Edge Trail (GET) that are located adjacent to the roadway are primarily comprised of existing multi-use paths within Fergus Falls, such as the existing path from the Central Lakes Trailhead to Vernon Avenue along Pebble Lake Road and the existing path along Cleveland Avenue (County Highway 27) in north Fergus Falls. These sections, along with newly-installed adjacent-to-roadway sections within the Glacial Edge Trail will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area. Shade trees and boulevard planting can provide additional amenity to these sections. Where possible, the adjacent-to-roadway sections will be located as far away from vehicular traffic as the site context permits. See Figure 3-18 (attachment).

[View full image](#)



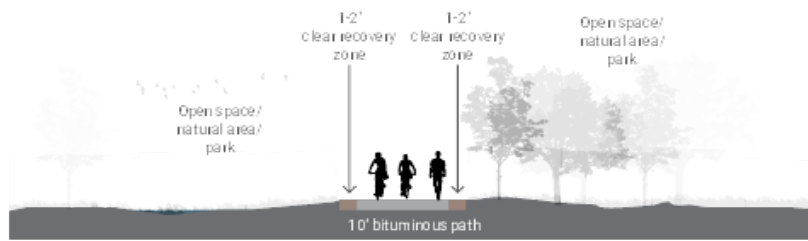


Figure 3-17. Fergus Falls GET: Off-Road Typical Section

#### Off-Road Trail: Fergus Falls

The off-road sections of the Glacial Edge Trail (GET) are intended to provide a high-quality scenic experience for trail users. These sections are completely removed from roadway corridors. Where possible, the trail is located between two different types of land cover or use. For instance, the preferred trail route through M State Campus in the Central Segment is situated at the tree line, providing some shade at certain times of day and varying the trail experience. These sections will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area.



Figure 3-18. Fergus Falls GET: Adjacent to Roadway Typical Section

#### Adjacent to Roadway Trail: Fergus Falls

The sections of the Glacial Edge Trail (GET) that are located adjacent to the roadway are primarily comprised of existing multi-use paths within Fergus Falls, such as the existing path from the Central Lakes Trailhead to Vernon Avenue along Pebble Lake Road and the existing path along Cleveland Avenue (County Highway 27) in north Fergus Falls. These sections, along with newly-installed adjacent-to-roadway sections within the Glacial Edge Trail will be 10-ft wide paths (8-ft wide paths where necessary) with a 1-2-ft recovery zone buffer on either side of the paved area.

Shade trees and boulevard planting can provide additional amenity to these sections. Where possible, the adjacent-to-roadway sections will be located as far away from vehicular traffic as the site context permits.

## Development Feature 4: River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam. The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector. The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions. In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

[View full image](#)

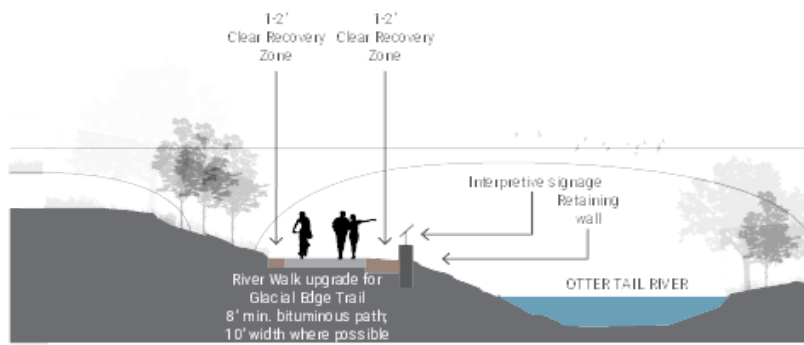


Figure 3-19. Glacial Edge Trail: River Walk Section (Mill Crossing Option)



View from existing River Walk

#### River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam.

The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector.

The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions.

In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

### Development Feature 5: River Balcony Trail (Falls Crossing Option)

The Falls Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment involves creating a new water crossing of the Otter Tail River southwest of the Central-Wright Dam from the existing River Walk. The trail route would then connect the south patio of the existing River Inn along the top of the river bluff to Stanton Avenue and Union Avenue. This idea was conceptualized during the planning work completed for the Fergus Falls Downtown and Riverfront Master Plan. In the Falls Crossing Option for the Glacial Edge Trail, this route would compliment the existing River Walk along the southern bank of the river and create an upper trail, referred to as the 'River Balcony'. The Falls Crossing Option trail would include a 10-ft wide bituminous path along the edge of the river bluff, providing views across the river and to the existing River Walk. The path would have 1-2-ft recovery zones on either side, and possibly flexible bollards along the north side of the trail to protect trail users from vehicle traffic. Currently, the land adjacent to this trail route section is used for downtown business parking.

[View full image](#)

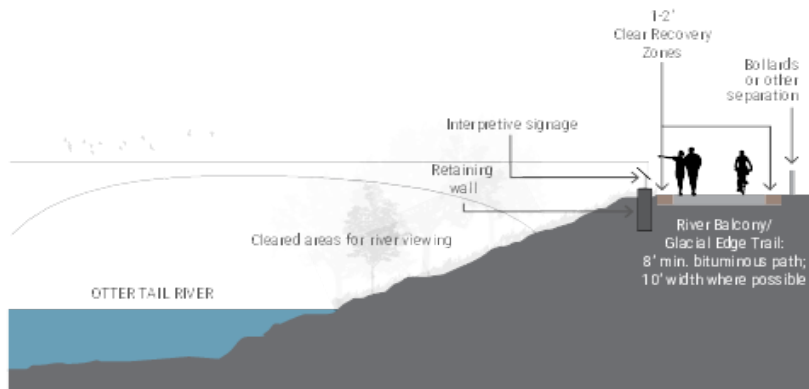


Figure 3-20. Glacial Edge Trail: River Balcony Section (Falls Crossing Option)



View from Court Street towards Mill Street and potential site of Glacial Edge Trail for the Falls Crossing Option

### River Balcony Trail (Falls Crossing Option)

The Falls Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment involves creating a new water crossing of the Otter Tail River southwest of the Central Wright Dam from the existing River Walk. The trail route would then connect the south patio of the existing River Inn along the top of the river bluff to Stanton Avenue and Union Avenue.

This idea was conceptualized during the planning work completed for the Fergus Falls Downtown and Riverfront Master Plan. In the Falls Crossing Option for the Glacial Edge Trail, this route would complement the existing River Walk along the southern bank of the river and create an upper trail, referred to as the 'River Balcony'.

The Falls Crossing Option trail would include a 10-ft wide bituminous path along the edge of the river bluff, providing views across the river and to the existing River Walk. The path would have 1-2-ft recovery zones on either side, and possibly flexible bollards along the north side of the trail to protect trail users from vehicle traffic. Currently, the land adjacent to this trail route section is used for downtown business parking.

## Development Feature 6: Trail Surface & Width

- The trail will be a consistent, bituminuous-paved, 10' wide trail where feasible; 8' wide trail where limited by existing conditions.
- A buffer recovery zone of 2' on either side of the paved trail is preferred for off-road and adjacent-to-roadway trail conditions. This zone is typically a crushed gravel surface.
- Where necessary in urban conditions, the trail will separate pedestrian users from bicyclists through existing sidewalks and new on-street bike lanes.
- The trail shall have concrete curb ramps at all roadway intersection crossings.
- The trail route minimize curves and steep slopes in order to meet ADA accessibility guidelines.
- Designed to be in accordance with the Trail Planning, Design, and Development Guidelines of the Minnesota Department of Natural Resources.

[View full image](#)

## Trail Corridor Design and Features

### Trail Surface & Width

- The trail will be a consistent, bituminous-paved, 10' wide trail where feasible, 8' wide trail where limited by existing conditions.
- A buffer/recovery zone of 2' on either side of the paved trail is preferred for off-road and adjacent-to-roadway trail conditions. This zone is typically a crushed gravel surface.
- Where necessary in urban conditions, the trail will separate pedestrian users from bicyclists through existing sidewalks and new on-street bike lanes.
- The trail shall have concrete curb ramps at all roadway intersection crossings.
- The trail route minimize curves and steep slopes in order to meet ADA accessibility guidelines.
- Designed to be in accordance with the Trail Planning, Design, and Development Guidelines of the Minnesota Department of Natural Resources.

### Trail Corridor & Destinations

- Connects important social and cultural destinations in the community
- Links urban, residential, rural, and natural areas throughout Fergus Falls and Otter Tail County
- Brings trail users along the Otter Tail River and connects to many lakes and water bodies.
- Connect regional and state trail users from south Fergus Falls to north Fergus Falls and to Maplewood State Park.

### Trailheads

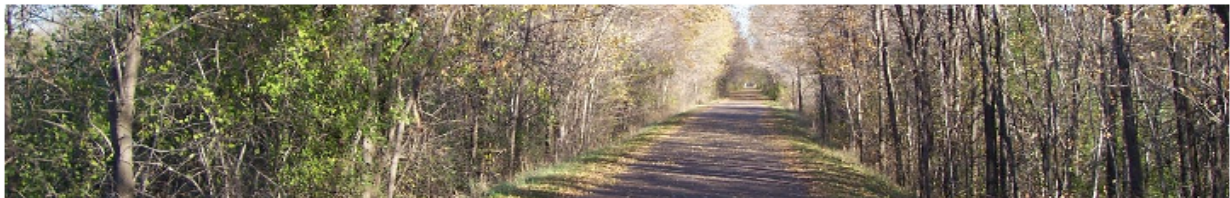
The main trail access will be at trailhead locations along the Glacial Edge Trail. Local access to the trail will be available at all road and trail crossings, and marked with consistent wayfinding signage.

- At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.
- Trailheads can be upgraded to include trail support facilities, like benches, bike racks, picnic tables, picnic shelters, water, etc.
- Art or interpretive signage could be incorporated at trailheads and access points.

### Trailhead Locations

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. The following fourteen (14) locations are recommended for Glacial Edge Trail trailheads:

- Central Lakes Trailhead (existing, to be shared with the Glacial Edge Trail)
- Prairie Wetlands Learning Center
- Adams Park/Grotto Lake
- Veterans Memorial Park
- City Hall Park
- Broadway Avenue at the Otter Tail River
- Barefoot Park
- Otter Tail Historic Society
- M State Campus
- Historic Kirkbride Campus
- Ferber Park
- Hwy 1/Otter Tail County Garage
- Red River Lake
- Ye Olde Schoolhouse and/or Anderson Lake



Paved trail through wooded landscape

## Development Feature 7: Trail Corridor & Destinations

- Connects important social and cultural destinations in the community - Links urban, residential, rural, and natural areas throughout Fergus Falls and Otter Tail County - Brings trail users along the Otter Tail River and connects to many lakes and water bodies. - Connect regional and state trail users from south Fergus Falls to north Fergus Falls and to Maplewood State Park

[View full image](#)



## Trail Corridor Design and Features

### Trail Surface & Width

- The trail will be a consistent, bituminous-paved, 10' wide trail where feasible, 8' wide trail where limited by existing conditions.
- A buffer/recovery zone of 2' on either side of the paved trail is preferred for off-road and adjacent-to-roadway trail conditions. This zone is typically a crushed gravel surface.
- Where necessary in urban conditions, the trail will separate pedestrian users from bicyclists through existing sidewalks and new on-street bike lanes.
- The trail shall have concrete curb ramps at all roadway intersection crossings.
- The trail route minimize curves and steep slopes in order to meet ADA accessibility guidelines.
- Designed to be in accordance with the Trail Planning, Design, and Development Guidelines of the Minnesota Department of Natural Resources.

### Trail Corridor & Destinations

- Connects important social and cultural destinations in the community
- Links urban, residential, rural, and natural areas throughout Fergus Falls and Otter Tail County
- Brings trail users along the Otter Tail River and connects to many lakes and water bodies.
- Connect regional and state trail users from south Fergus Falls to north Fergus Falls and to Maplewood State Park.

### Trailheads

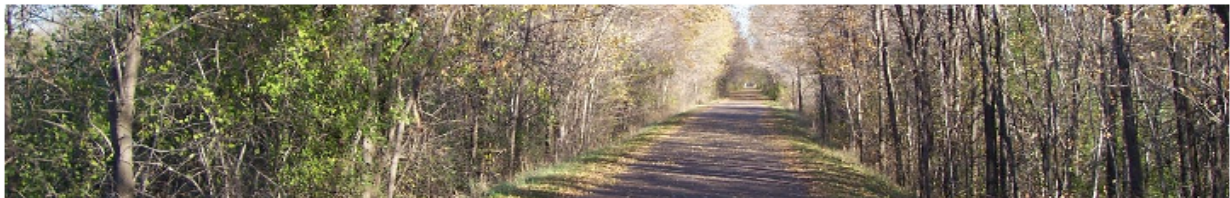
The main trail access will be at trailhead locations along the Glacial Edge Trail. Local access to the trail will be available at all road and trail crossings, and marked with consistent wayfinding signage.

- At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.
- Trailheads can be upgraded to include trail support facilities, like benches, bike racks, picnic tables, picnic shelters, water, etc.
- Art or interpretive signage could be incorporated at trailheads and access points.

### Trailhead Locations

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. The following fourteen (14) locations are recommended for Glacial Edge Trail trailheads:

- Central Lakes Trailhead (existing, to be shared with the Glacial Edge Trail)
- Prairie Wetlands Learning Center
- Adams Park/Grotto Lake
- Veterans Memorial Park
- City Hall Park
- Broadway Avenue at the Otter Tail River
- Barefoot Park
- Otter Tail Historic Society
- M State Campus
- Historic Kirkbride Campus
- Ferber Park
- Hwy 1/Otter Tail County Garage
- Red River Lake
- Ye Olde Schoolhouse and/or Anderson Lake



Paved trail through wooded landscape

## Development Feature 8: Trailheads & Trailhead Locations

The main trail access will be at trailhead locations along the Glacial Edge Trail. Local access to the trail will be available at all road and trail crossings, and marked with consistent wayfinding signage.

- At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage
- Trailheads can be upgraded to include trail support facilities, like benches, bike racks, picnic tables, picnic shelters, water, etc.
- Art or interpretive signage could be incorporated at trailheads and access points

**Trailhead Locations**

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. The following fourteen (14) locations are recommended for Glacial Edge Trail trailheads:

- Central Lakes Trailhead (existing, to be shared with the Glacial Edge Trail)
- Prairie Wetlands Learning Center
- Adams Park/Grotto Lake
- Veterans Memorial Park
- City Hall Park
- Broadway Avenue at the Otter Tail River
- Barefoot Park
- Otter Tail Historic Society
- M State Campus
- Historic Kirkbride Campus
- Ferber Park
- Hwy 1/Otter Tail County Garage
- Red River Lake
- Ye Olde Schoolhouse and/or Anderson Lake

[View full image](#)

## Trail Corridor Design and Features

### Trail Surface & Width

- The trail will be a consistent, bituminous-paved, 10' wide trail where feasible, 8' wide trail where limited by existing conditions.
- A buffer/recovery zone of 2' on either side of the paved trail is preferred for off-road and adjacent-to-roadway trail conditions. This zone is typically a crushed gravel surface.
- Where necessary in urban conditions, the trail will separate pedestrian users from bicyclists through existing sidewalks and new on-street bike lanes.
- The trail shall have concrete curb ramps at all roadway intersection crossings.
- The trail route minimize curves and steep slopes in order to meet ADA accessibility guidelines.
- Designed to be in accordance with the Trail Planning, Design, and Development Guidelines of the Minnesota Department of Natural Resources.

### Trail Corridor & Destinations

- Connects important social and cultural destinations in the community
- Links urban, residential, rural, and natural areas throughout Fergus Falls and Otter Tail County
- Brings trail users along the Otter Tail River and connects to many lakes and water bodies.
- Connect regional and state trail users from south Fergus Falls to north Fergus Falls and to Maplewood State Park.

### Trailheads

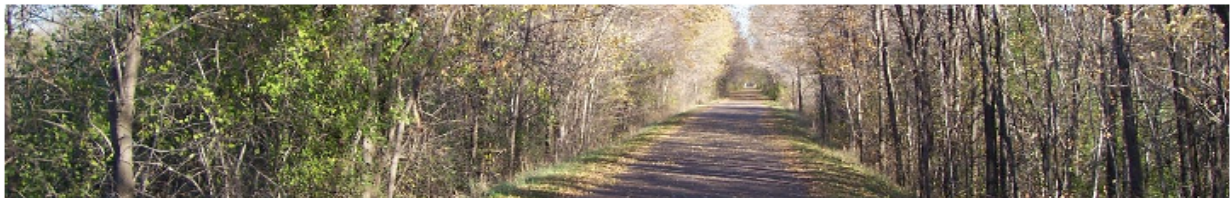
The main trail access will be at trailhead locations along the Glacial Edge Trail. Local access to the trail will be available at all road and trail crossings, and marked with consistent wayfinding signage.

- At a minimum, trailheads will provide parking spaces, including ADA parking, as well as wayfinding and signage.
- Trailheads can be upgraded to include trail support facilities, like benches, bike racks, picnic tables, picnic shelters, water, etc.
- Art or interpretive signage could be incorporated at trailheads and access points.

### Trailhead Locations

Trailheads are recommended at locations with existing trailhead facilities or existing parking facilities. They are also located at specific points along the trail with great views or connections to community destinations. The following fourteen (14) locations are recommended for Glacial Edge Trail trailheads:

- Central Lakes Trailhead (existing, to be shared with the Glacial Edge Trail)
- Prairie Wetlands Learning Center
- Adams Park/Grotto Lake
- Veterans Memorial Park
- City Hall Park
- Broadway Avenue at the Otter Tail River
- Barefoot Park
- Otter Tail Historic Society
- M State Campus
- Historic Kirkbride Campus
- Ferber Park
- Hwy 1/Otter Tail County Garage
- Red River Lake
- Ye Olde Schoolhouse and/or Anderson Lake



Paved trail through wooded landscape

## Development Feature 9: General Trail Design

Trail geometry depends greatly on the expectations of the users. A trail intended for multiple users, such as pedestrians, bicyclists, and users with mobility aids will need to have gradual changes in slope and avoid sharp turning radii. **Pavement Width** The trail width must take into consideration the geometry of the trail, number of users, types of users, and potential conflicts. The standard pavement width of a multi-use trail is 10 feet. The width may vary over the course of the trail, due to existing site conditions. A minimum width of 8 feet for an adjacent-to-roadway and off-road trail will still allow for pedestrians and bicyclists to share the trail, however with potentially reduced speeds when passing. The preferable surface of a multi-use trail is bituminous asphaltic pavement, as it provides a smooth riding surface for all users. The depth of the asphalt will depend on the type of soils in the area. If the trail is intended to have limited vehicular access for maintenance operations, the depth of the asphalt may need to be increased. A typical minimum depth for bituminous asphalt is a 2.5-inch course underlain with a minimum of 7.5-inch depth of aggregate. **Clear and Recovery Zones** In addition to the paved width, it is recommended that multi-use trails have shoulders of 2 feet in width, known as recovery zones, surfaced with crushed gravel aggregate, compacted turf, or concrete. These shoulders provide an added measure of safety for the user should they lose control and leave the paved width of the path. The recovery zone allows an area to safely recover and maneuver



back onto the path. Additionally, a clear zone is recommended on either side of the paved path. This clear zone is free from any obstructions or hazards, such as low-hanging tree limbs, signs, or street furniture. A vertical 10-ft clear zone is recommended above the trail surface, and a horizontal 3-ft clear zone is recommended on either side of the paved trail width. Signs intended to communicate to trail users should be located outside of the clear zone, but within 6 feet of the paved trail width.

**Drainage** Proper drainage allows rainwater and surface runoff to flow away from the trail path. Inadequate drainage can cause safety concerns and damage the trail facility. Typically trails are sloped at a 2% grade (1.5% on CSAH roadways) perpendicular to the path of travel to allow water to flow away from the path. Additional infrastructure, such as culverts, ditches, and storm sewer basins may need to be installed near the trail facility to allow for proper drainage.

**Steep Grades** The steepness of a trail plays a large role in inviting users of all abilities to use the trail. Trails with shallow grades and places for resting will appeal to a wider range of users. The Minnesota Department of Natural Resources (DNR) and the Minnesota Department of Transportation (DOT) recommend the following guidelines regarding trail grades and the maximum length a certain grade can be held without interruption: - 7% for up to 400 feet - 8% for up to 300 feet - 9% for up to 200 feet - 10% for up to 100 feet - Grades between 10-12% are only practical for distances under 100 feet - Grades above 12% are strongly discouraged. If steep slopes are unavoidable due to site conditions, or in order to maintain reasonable trail construction costs, some options exist that are recommended by the Minnesota DNR and DOT: - Widen the trail to allow riders to pass walkers - Provide signage to alert users of upcoming steep grades - Extend stopping distances at intersections - Provide a series of short switchbacks to contain speeds for bicyclists and mobility aid users.

**Creek and Wetland Crossings** A number of methods exist to allow the trail to cross creeks, wetlands, ditches and streams. - Extend an existing culvert or install a new culvert - Construct a boardwalk to elevate the trail above the wetland. (This method is recommended for portions of the North Central Segment and throughout all of the Otter Tail County segments). Generally, a boardwalk is not considered a bridge unless it spans more than 20 feet or is elevated above grade more than 10 feet. - Exploration of pre-cast concrete slabs (vs. wood/plank construction) could be considered for deck assembly of boardwalk segments, to provide a smooth surface and potentially extend the life of the facility.

[View full image](#)

## General Trail Design

Trail geometry depends greatly on the expectations of the users. A trail intended for multiple users, such as pedestrians, bicyclists, and users with mobility aids will need to have gradual changes in slope and avoid sharp turning radii.

### Pavement Width

The trail width must take into consideration the geometry of the trail, number of users, types of users, and potential conflicts. The standard pavement width of a multi-use trail is 10 feet. The width may vary over the course of the trail, due to existing site conditions. A minimum width of 8 feet for an adjacent-to-roadway and off-road trail will still allow for pedestrians and bicyclists to share the trail, however with potentially reduced speeds when passing.

The preferable surface of a multi-use trail is bituminous asphaltic pavement, as it provides a smooth riding surface for all users. The depth of the asphalt will depend on the type of soils in the area. If the trail is intended to have limited vehicular access for maintenance operations, the depth of the asphalt may need to be increased. A typical minimum depth for bituminous asphalt is a 2.5-inch course underlain with a minimum of 7.5-inch depth of aggregate.

### Clear and Recovery Zones

In addition to the paved width, it is recommended that multi-use trails have shoulders of 2 feet in width, known as recovery zones, surfaced with crushed gravel aggregate, compacted turf, or concrete. These shoulders provide an added measure of safety for the user should they lose control and leave the paved width of the path. The recovery zone allows an area

to safely recover and maneuver back onto the path. Additionally, a clear zone is recommended on either side of the paved path. This clear zone is free from any obstructions or hazards, such as low-hanging tree limbs, signs, or street furniture.

A vertical 10-ft clear zone is recommended above the trail surface, and a horizontal 3-ft clear zone is recommended on either side of the paved trail width. Signs intended to communicate to trail users should be located outside of the clear zone, but within 6 feet of the paved trail width.

### Drainage

Proper drainage allows rainwater and surface runoff to flow away from the trail path. Inadequate drainage can cause safety concerns and damage the trail facility. Typically trails are sloped at a 2% grade (1.5% on CSA H roadways) perpendicular to the path of travel to allow water to flow away from the path. Additional infrastructure, such as culverts, ditches, and storm sewer basins may need to be installed near the trail facility to allow for proper drainage.

### Steep Grades

The steepness of a trail plays a large role in inviting users of all abilities to use the trail. Trails with shallow grades and places for resting will appeal to a wider range of users. The Minnesota Department of Natural Resources (DNR) and the Minnesota Department of Transportation (DOT) recommend the following guidelines regarding trail grades and the maximum length a certain grade can be held without interruption:

- 7% for up to 400 feet
- 8% for up to 300 feet
- 9% for up to 200 feet
- 10% for up to 100 feet
- Grades between 10-12% are only practical for distances under 100 feet
- Grades above 12% are are strongly discouraged

If steep slopes are unavoidable due to site conditions, or in order to maintain reasonable trail construction costs, some options exist that are recommended by the Minnesota DNR and DOT:

- Widen the trail to allow riders to pass walkers
- Provide signage to alert users of upcoming steep grades
- Extend stopping distances at intersections
- Provide a series of short switchbacks to contain speeds for bicyclists and mobility aid users

### Creek and Wetland Crossings

A number of methods exist to allow the trail to cross creeks, wetlands, ditches and streams:

- Extend an existing culvert or install a new culvert
- Construct a boardwalk to elevate the trail above the wetland. (This method is recommended for portions of the North Central Segment and throughout all of the Otter Tail County segments). Generally, a boardwalk is not considered a bridge unless it spans more than 20 feet or is elevated above grade more than 10 feet.
- Exploration of pre-cast concrete slabs (vs. wood/plank construction) could be considered for deck assembly of boardwalk segments, to provide a smooth surface and potentially extend the life of the facility.

## Development Feature 10: Bridge Crossings

**Existing Bridge Crossings** There are three existing river bridge crossings present along the Glacial Edge Trail route. In the Red River Lake Segment, the Glacial Edge Trail will cross the Red River Lake. The existing bridge affords views of Red River Lake to the east and to the west. A 6-ft wide raised sidewalk runs along both sides of the bridge. The plan is to utilize the existing bridge and raised sidewalks for the trail. On either side of the bridge abutments, a roadway crossing will allow trail users to use both sides of the bridge for travel, as there is not enough width to maintain the 10' wide trail through this section. Future bridge reconstruction (not planned at this time) should consider how the 10' shared use trail can be maintained as continuous at this crossing. A trailhead is planned here, in coordination with the existing MnDNR water access location. In the Far North Segment, the trail route crosses the Otter Tail River at 245th Street, where there is an existing pedestrian way. Here, the trail route will become an on-road facility with pedestrians using the existing sidewalk along the north side of the bridge, and bicyclists using an on-street bike lane or shared lane. In the Central Segment, the interim route crossing the Otter Tail River at Union Avenue will provide a short-term river crossing for trail users. The longterm vision for the Central Segment involves two new options for crossing the Otter Tail River downtown with the construction of a new bicycle and pedestrian bridge at either end of the existing River Walk. These options are the Old Mill

Crossing and the Falls Crossing. Old Mill Crossing - Concept The Old Mill Crossing concept shows a new bicycle and pedestrian crossing at the west end of the existing River Walk, connecting trail users to the north side of the Otter Tail River, landing on the west side of the Old Mill site on the west side of downtown Fergus Falls. This concept involves the upgrade of the existing River Walk to meet the standards of the regional trail width and surface. Due to the steep change in grade at this point between the southern bank and the northern bank of the river at this point, the length of this new bridge would need to be extended in order to keep a shallow grade for a variety of users. The design of this bridge could echo the aesthetics of the railroad crossing nearby, as well as respect the quiet, scenic quality of the river at this point. An existing sewer line crosses the river at this location and could potentially be raised and relocated in conjunction with the Old Mill Crossing bridge. Additionally, a carry-in facility for portaging kayakers and canoes could be integrated into the design of the bridge landing at the southern bank to further integrate the Glacial Edge Trail with the Otter Tail River Water Trail. Figure 3-21 is a sketch drawing of the Old Mill Crossing concept. The view of the sketch is from the peninsula extending from the west end of the River Walk looking east towards the Old Mill Site and the Union Avenue Bridge. Falls Crossing Concept Through community input for both the Glacial Edge Trail Master Plan process and through the Fergus Falls Downtown and Riverfront Master Plan process, the desire for additional viewing of the Central-Wright Dam has been identified. Currently, the dam can be viewed from the Mill Street Bridge and the Cascade Street Bridge, although it is difficult to see. The Falls Crossing Concept aims to bring regional trail users across the Otter Tail River with a perfect view of the Central-Wright Dam, just southwest of the dam, spanning the river from the existing River Walk to the south end of the River Inn. This new bridge crossing would provide an excellent viewing platform for visitors and users, as well as would complement the existing River Walk trail by creating a downtown 'loop trail', encircling the river where the water is flowing at a high velocity and is exciting to view. The trail route would continue under the Mill Street Bridge along the north side of the river, which would require new design and structure of this bridge support. The trail route would then continue up the bank of the river to the river bluff at the edge of an existing parking lot, and continue along the bluff until meeting Union Avenue and Stanton Avenue. This concept would be integrated into the 'River Balcony' concept created during the Fergus Falls Downtown and Riverfront Master Plan, and could contribute to the goals of bringing people better views and access to the Otter Tail River. Figure 3-22 is a sketch drawing of the Falls Crossing Concept. The view of this sketch is from the current walkway above the Central-Wright Dam, looking west down-river towards the proposed Falls Crossing Bridge. Red River Lake Crossing The Otter Tail County section of the Glacial Edge Trail will cross Red River Lake, utilizing the existing bridge and adjacent pedestrian facilities for the trail. Today, a 6-ft wide raised sidewalk runs along both sides of the bridge. On either side of the bridge abutments, proposed roadway crossings will allow trail users the choice of using either side for travel, as there is not enough width to maintain the 10-ft wide path through this section. Future bridge construction (not planned at this time) should consider how the trail can be maintained

as continuous over the water crossing. The existing bridge affords views to the east and to the west overlooking Red River Lake. A trailhead is planned here, in coordination with the existing MnDNR water access location.

[View full image](#)

## Bridge Crossings

### Existing Bridge Crossings

There are three existing river bridge crossings present along the Glacial Edge Trail route. In the Red River Lake Segment, the Glacial Edge Trail will cross the Red River Lake. The existing bridge affords views of Red River Lake to the east and to the west. A 6-ft wide raised sidewalk runs along both sides of the bridge. The plan is to utilize the existing bridge and raised sidewalks for the trail. On either side of the bridge abutments, a roadway crossing will allow trail users to use both sides of the bridge for travel, as there is not enough width to maintain the 10' wide trail through this section. Future bridge reconstruction (not planned at this time) should consider how the 10' shared use trail can be maintained as continuous at this crossing. A trailhead is planned here, in coordination with the existing MnDNR water access location.

In the Far North Segment, the trail route crosses the Otter Tail River at 245th Street, where there is an existing pedestrian way. Here, the trail route will become an on-road facility with pedestrians using the existing sidewalk along the north side of the bridge, and bicyclists using an on-street bike lane or shared lane.

In the Central Segment, the interim route crossing the Otter Tail River at Union Avenue will provide a short-term river crossing for trail users. The long-term vision for the Central Segment involves two new options for crossing the Otter Tail River downtown with the construction of a new bicycle and pedestrian bridge at either end of the existing River Walk. These options are the Old Mill Crossing and the Falls Crossing.

### Old Mill Crossing - Concept

The Old Mill Crossing concept shows a new bicycle and pedestrian crossing at the west end of the existing River Walk, connecting trail users to the north side of the Otter Tail River, landing on the west side of the Old Mill site on the west side of downtown Fergus Falls. This concept involves the upgrade of the existing River Walk to meet the standards of the regional trail width and surface. Due to the steep change in grade at this point between the southern bank and the northern bank of the river at this point, the length of this new bridge would need to be extended in order to keep a shallow grade for a variety of users.

The design of this bridge could echo the aesthetics of the railroad crossing nearby, as well as respect the quiet, scenic quality of the river at this point.

An existing sewer line crosses the river at this location and could potentially be raised and re-located in conjunction with the Old Mill Crossing bridge. Additionally, a carry-in facility for portaging kayakers and canoes could be integrated into the design of the bridge landing at the southern bank to further integrate the Glacial Edge Trail with the Otter Tail River Water Trail.

Figure 3-21 is a sketch drawing of the Old Mill Crossing concept. The view of the sketch is from the peninsula extending from the west end of the River Walk looking east towards the Old Mill Site and the Union Avenue Bridge.

### Falls Crossing Concept

Through community input for both the Glacial Edge Trail Master Plan process and through the Fergus Falls Downtown and Riverfront Master Plan process, the desire for additional viewing of the Central Wright Dam has been identified. Currently, the dam can be viewed from the Mill Street Bridge and the Cascade Street Bridge, although it is difficult to see.

The Falls Crossing Concept aims to bring regional trail users across the Otter Tail River with a perfect view of the Central Wright Dam, just southwest of the dam, spanning the river from the existing River Walk to the south end of the River Inn.

This new bridge crossing would provide an excellent viewing platform for visitors and users, as well as would complement the existing River Walk trail by



Figure 3-21. Mill Crossing Concept



Figure 3-22. Falls Crossing Concept

creating a downtown 'loop trail', encircling the river where the water is flowing at a high velocity and is exciting to view.

The trail route would continue under the Mill Street Bridge along the north side of the river, which would require new design and structure of this bridge support. The trail route would then continue up the bank of the river to the river bluff at the edge of an existing parking lot, and continue along the bluff until meeting Union Avenue and Stanton Avenue.

This concept would be integrated into the 'River Balcony' concept created during the Fergus Falls Downtown and Riverfront Master Plan, and could contribute to the goals of bringing people better views and access to the Otter Tail River.

Figure 3-22 is a sketch drawing of the Falls Crossing Concept. The view of this sketch is from the current walkway above the Central-Wright Dam, looking west down river towards the proposed Falls Crossing Bridge.

### Red River Lake Crossing

The Otter Tail County section of the Glacial Edge Trail will cross Red River Lake, utilizing the existing bridge and adjacent pedestrian facilities for the trail. Today, a 6-ft wide raised sidewalk runs along both sides of the bridge. On either side of the bridge abutments, proposed roadway crossings will allow trail users the choice of using either side for travel, as there is not enough width to maintain the 10-ft wide path through this section. Future bridge construction (not planned at this time) should consider how the trail can be maintained as continuous over the water crossing.

The existing bridge affords views to the east and to the west overlooking Red River Lake. A trailhead is planned here, in coordination with the existing MnDNR water access location.

## Intersection Treatments

Over the course of the Glacial Edge Trail route, there are (33) roadway and railroad crossings that have been identified for future improvements to increase the safety and visibility of pedestrians and bicyclists using the trail. The majority of these crossings are located in the South and Central Segments where the trail route passes through commercial and residential areas with higher traffic counts. In general, all roadway crossings of the Glacial Edge Trail are recommended to have a high-visibility crosswalk and forward stop-bar markings for vehicles. Table 3-1 and Figure 3-15 show the identified intersections and recommended treatments for the Glacial Edge Trail.

### High-Visibility Crosswalks & Forward Stop Bars

Standard crosswalk markings consist of two parallel white stripes painted on the roadway surface outlining the crosswalk area. High-visibility crosswalks consist of patterns that are more visible to drivers, such as continental, zebra, ladder, or solid patterns. Highly-reflective paint or heat-applied in-laid striping is recommended to maximize the visibility of pedestrians and bicyclists at crosswalks.

Additionally, forward stop bars can be used to indicate where vehicles should stop before a crosswalk. Locating these stop bars 10 to 20 feet ahead of the crosswalk provides an extra separation between the pedestrian or bicyclist and vehicle.

## Pedestrian Signals

Pedestrian signals serve to communicate to drivers and pedestrians when it is appropriate for pedestrians to enter the roadway. Pedestrian signals are generally recommended along the Glacial Edge Trail at intersections that currently are signalized for vehicles but are lacking in pedestrian facilities. Pedestrian signals should be installed in combination with high-visibility crosswalks and forward stop bars where possible.

### High-Visibility At-Grade Railroad Crossings

High-visibility at-grade railroad crossing treatments include a combination of raised surface treatments for the pedestrian to safely cross railroad tracks, high-visibility markings at the railroad crossing, and signs communicating to trail users to look both ways for oncoming rail traffic.

### User-Activated Rectangular Rapid Flashing Beacons (RRFBs)

Rectangular Rapid Flashing Beacons (RRFBs) are used in conjunction with high-visibility crosswalks and forward stop bars to provide an enhanced warning to vehicles to yield to pedestrians. RRFBs have a rapid strobe-like warning flash, are extremely bright, and can be specifically aimed towards vehicle traffic. These types of crossings are particularly useful for mid-block crossings or at un-signalized crossings. A number of user-activated RRFBs are recommended along the Glacial Edge Trail at locations with higher volumes of traffic.

## Development Feature 11: River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam. The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector. The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions. In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

[View full image](#)



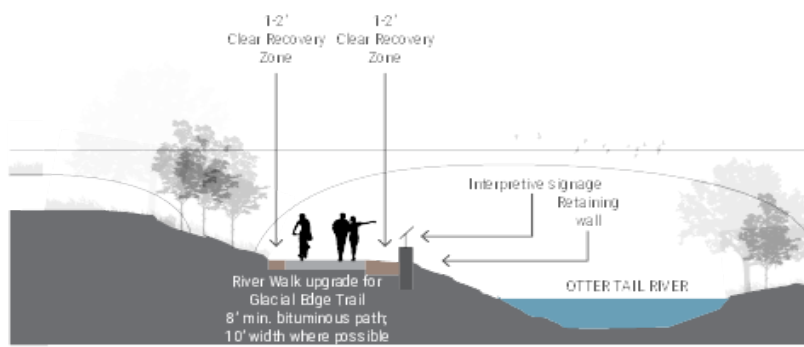


Figure 3-19. Glacial Edge Trail: River Walk Section (Mill Crossing Option)



View from existing River Walk

#### River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam.

The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector.

The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions.

In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

## Development Feature 12: Intersection Treatments

Over the course of the Glacial Edge Trail route, there are (48) roadway and railroad crossings that have been identified for future improvements to increase the safety and visibility of pedestrians and bicyclists using the trail. The majority of these crossings are located in the South and Central Segments where the trail route passes through commercial and residential areas with higher traffic counts. In general, all roadway crossings of the Glacial Edge Trail are recommended to have a high-visibility crosswalk and forward stop-bar markings for vehicles. Table 3-1 and Figure 3-15 show the identified intersections and recommended treatments for the Glacial Edge Trail. High-Visibility Crosswalks & Forward Stop Bars Standard crosswalk markings consist of two parallel white stripes painted on the roadway surface outlining the crosswalk area. High-visibility crosswalks consist of patterns that are more visible to drivers, such as continental, zebra, ladder, or solid patterns. Highly-reflective paint or heat-applied in-laid striping is recommended to maximize the visibility of pedestrians and bicyclists at crosswalks. Additionally, forward stop bars can be used to indicate where vehicles should stop before a crosswalk. Locating these stop bars 10 to 20 feet ahead of the crosswalk provides an extra separation between the pedestrian or bicyclist and vehicle. Pedestrian Signals Pedestrian signals serve to communicate to drivers and pedestrians when it is appropriate for pedestrians to enter the roadway. Pedestrian signals are generally recommended along the



Glacial Edge Trail at intersections that currently are signalized for vehicles but are lacking in pedestrian facilities. Pedestrian signals should be installed in combination with high visibility crosswalks and forward stop bars where possible. High-Visibility At-Grade Railroad Crossings High-visibility at-grade railroad crossing treatments include a combination of raised surface treatments for the pedestrian to safely cross railroad tracks, high-visibility markings at the railroad crossing, and signs communicating to trail users to look both ways for oncoming rail traffic. User-Activated Rectangular Rapid Flashing Beacons (RRFBs) Rectangular Rapid Flashing Beacons (RRFBs) are used in conjunction with high-visibility crosswalks and forward stop bars to provide an enhanced warning to vehicles to yield to pedestrians. RRFBs have a rapid strobe-like warning flash, are extremely bright, and can be specifically aimed towards vehicle traffic. These types of crossings are particularly useful for mid-block crossings or at un-signalized crossings. A number of user-activated RRFBs are recommended along the Glacial Edge Trail, at locations with higher volumes of traffic.

[View full image](#)

creating a downtown 'loop trail', encircling the river where the water is flowing at a high velocity and is exciting to view.

The trail route would continue under the Mill Street Bridge along the north side of the river, which would require new design and structure of this bridge support. The trail route would then continue up the bank of the river to the river bluff at the edge of an existing parking lot, and continue along the bluff until meeting Union Avenue and Stanton Avenue.

This concept would be integrated into the 'River Balcony' concept created during the Fergus Falls Downtown and Riverfront Master Plan, and could contribute to the goals of bringing people better views and access to the Otter Tail River.

Figure 3-22 is a sketch drawing of the Falls Crossing Concept. The view of this sketch is from the current walkway above the Central Wright Dam, looking west down river towards the proposed Falls Crossing Bridge.

### Red River Lake Crossing

The Otter Tail County section of the Glacial Edge Trail will cross Red River Lake, utilizing the existing bridge and adjacent pedestrian facilities for the trail. Today, a 6-ft wide raised sidewalk runs along both sides of the bridge. On either side of the bridge abutments, proposed roadway crossings will allow trail users the choice of using either side for travel, as there is not enough width to maintain the 10-ft wide path through this section. Future bridge construction (not planned at this time) should consider how the trail can be maintained as continuous over the water crossing.

The existing bridge affords views to the east and to the west overlooking Red River Lake. A trailhead is planned here, in coordination with the existing MnDNR water access location.

### Intersection Treatments

Over the course of the Glacial Edge Trail route, there are (33) roadway and railroad crossings that have been identified for future improvements to increase the safety and visibility of pedestrians and bicyclists using the trail. The majority of these crossings are located in the South and Central Segments where the trail route passes through commercial and residential areas with higher traffic counts. In general, all roadway crossings of the Glacial Edge Trail are recommended to have a high-visibility crosswalk and forward stop-bar markings for vehicles. Table 3-1 and Figure 3-15 show the identified intersections and recommended treatments for the Glacial Edge Trail.

### High-Visibility Crosswalks & Forward Stop Bars

Standard crosswalk markings consist of two parallel white stripes painted on the roadway surface outlining the crosswalk area. High-visibility crosswalks consist of patterns that are more visible to drivers, such as continental, zebra, ladder, or solid patterns. Highly-reflective paint or heat-applied in-laid striping is recommended to maximize the visibility of pedestrians and bicyclists at crosswalks.

Additionally, forward stop bars can be used to indicate where vehicles should stop before a crosswalk. Locating these stop bars 10 to 20 feet ahead of the crosswalk provides an extra separation between the pedestrian or bicyclist and vehicle.

### Pedestrian Signals

Pedestrian signals serve to communicate to drivers and pedestrians when it is appropriate for pedestrians to enter the roadway. Pedestrian signals are generally recommended along the Glacial Edge Trail at intersections that currently are signalized for vehicles but are lacking in pedestrian facilities. Pedestrian signals should be installed in combination with high visibility crosswalks and forward stop bars where possible.

### High-Visibility At-Grade Railroad Crossings

High-visibility at-grade railroad crossing treatments include a combination of raised surface treatments for the pedestrian to safely cross railroad tracks, high-visibility markings at the railroad crossing, and signs communicating to trail users to look both ways for oncoming rail traffic.

### User-Activated Rectangular Rapid Flashing Beacons (RRFBs)

Rectangular Rapid Flashing Beacons (RRFBs) are used in conjunction with high-visibility crosswalks and forward stop bars to provide an enhanced warning to vehicles to yield to pedestrians. RRFBs have a rapid strobe-like warning flash, are extremely bright, and can be specifically aimed towards vehicle traffic. These types of crossings are particularly useful for mid-block crossings or at un-signalized crossings. A number of user-activated RRFBs are recommended along the Glacial Edge Trail, at locations with higher volumes of traffic.

TAG	LOCATION	SEGMENT (Per Seg 7 mile)	RECOMMENDATION				
			High-Visibility Crosswalk	Forward Stop Bar	User-Acknowledged A/P/S	Precedence Signal	High-Visibility A/P Grade M Crossing
1	Cassadon St and Hwy 210	South	X	X	X		
2	Potter Lake Rd and Hwy 210	South	X	X		X	
3	Potter Lake Rd and Douglas Ave	South	X	X			
4	Potter Lake Rd and Channing Ave	South	X	X	X		
5	Potter Lake Rd and Bancroft Ave / Pack St	South	X	X			
6	Potter Lake Rd and Abbott	South	X	X			
7	Potter Lake Rd and Moss Ave	South	X	X			
8	Potter Lake Rd and Concord St	South	X	X			
9	Vernon Ave and Burlington Ave	South	X	X, X	X		
10	Vernon Ave and Sheridan Ave	South	X, X	X, X			
11	Sheridan St at Hampden Ave	South	X, X	X, X			
12	Sheridan St at RR	South					X, X
13	Sheridan St at Juniper Ave	South	X	X			
14	Sheridan Ave and Washington Ave	South	X	X			
15	Sheridan St at Sherman St	South	X	X			
16	Lincoln Ave at Veterans Park	South	X	X			
17	Cassadon St and the Riverwalk	Central		X			
18	Union Ave and Stanton Ave	Central	X	X	X		
19	Stanton Ave and Vine St	Central	X	X			
20	Stanton Ave and Oak St	Central	X	X			
21	Stanton Ave and Broadway	Central	X	X			
22	Broadway at RR	Central					X
23	Bancroft Park at RR	Central					X
24	St Andrews St at Lincoln Ave	Central	X	X		X	
25	Tower Rd at Stanton Dr	Central	X	X	X		
26	Tower Rd at Fir Ave	North Central	X	X			X
27	Fir Ave at Cottage Dr	North Central	X	X		X	
28	Fir Ave at Oak St	North Central	X	X			
29	Cleveland Ave and Woodland Dr	North Central	X	X	X		
30	Cleveland Ave and Tower View Rd	North Central	X	X			
31	Cleveland Ave and N Woodland Dr	North Central	X	X			
32	Co Hwy 111 and S 25th St	Far North	X	X			
TAG	LOCATION	SEGMENT (Close to County)	RECOMMENDATION				
			High-Visibility Crosswalk	Forward Stop Bar	User-Acknowledged A/P/S	Precedence Signal	High-Visibility A/P Grade M Crossing
33	CSN 1 at 24th St / County Garage	Highway 1	X	X	X		
34	CSN 18	Highway 1	X	X			
35	Aurora River Rd	Highway 1	X	X			
36	Swaninger Church Rd	Highway 1	X	X			
37	CSN 1 Crossing	Highway 1	X	X	X		
38	CSN 10 Crossing	Highway 1	X	X			
39	CSN 3 Crossing South of Red River Lake	Red River Lake	X	X			
40	CSN 3 Crossing North of Red River Lake	Red River Lake	X	X	X		
41	30th St	Red River Lake	X	X			
42	CSN 3 at CSN 22	Red River Lake	X	X			
43	CSN 3 at Tonsen Rd	Maplewood CP	X	X			
44	CSN 3 at Emery Dr	Maplewood CP	X	X			
45	34th St	Maplewood CP	X	X			
46	CSN 24	Maplewood CP	X	X			
47	CSN 3 at State Park Entry	Maplewood CP	X				
48	CSN 3 at CSN 24 (Alameda Route)	Maplewood CP	X				

Table 3-1: Crossings and Recommendations

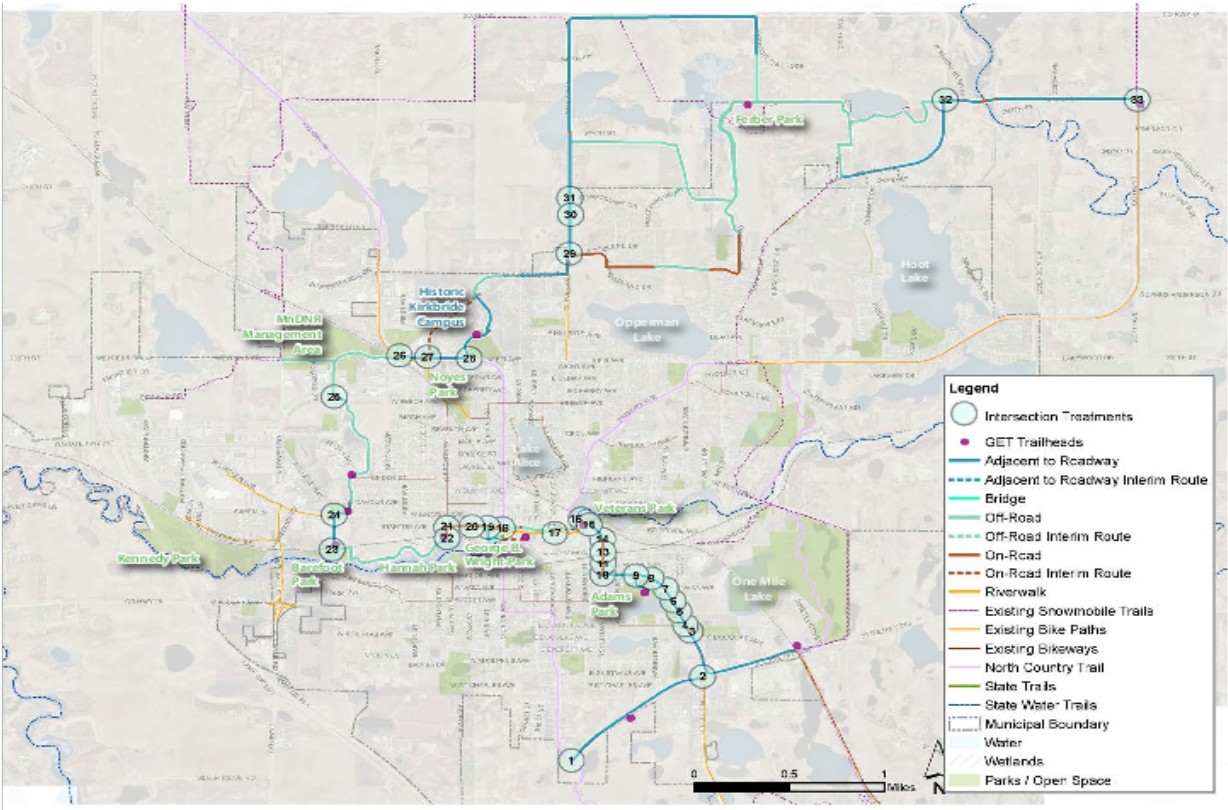


Figure 3-23: Glacial Edge Trail Intersection Treatments: Fergus Falls

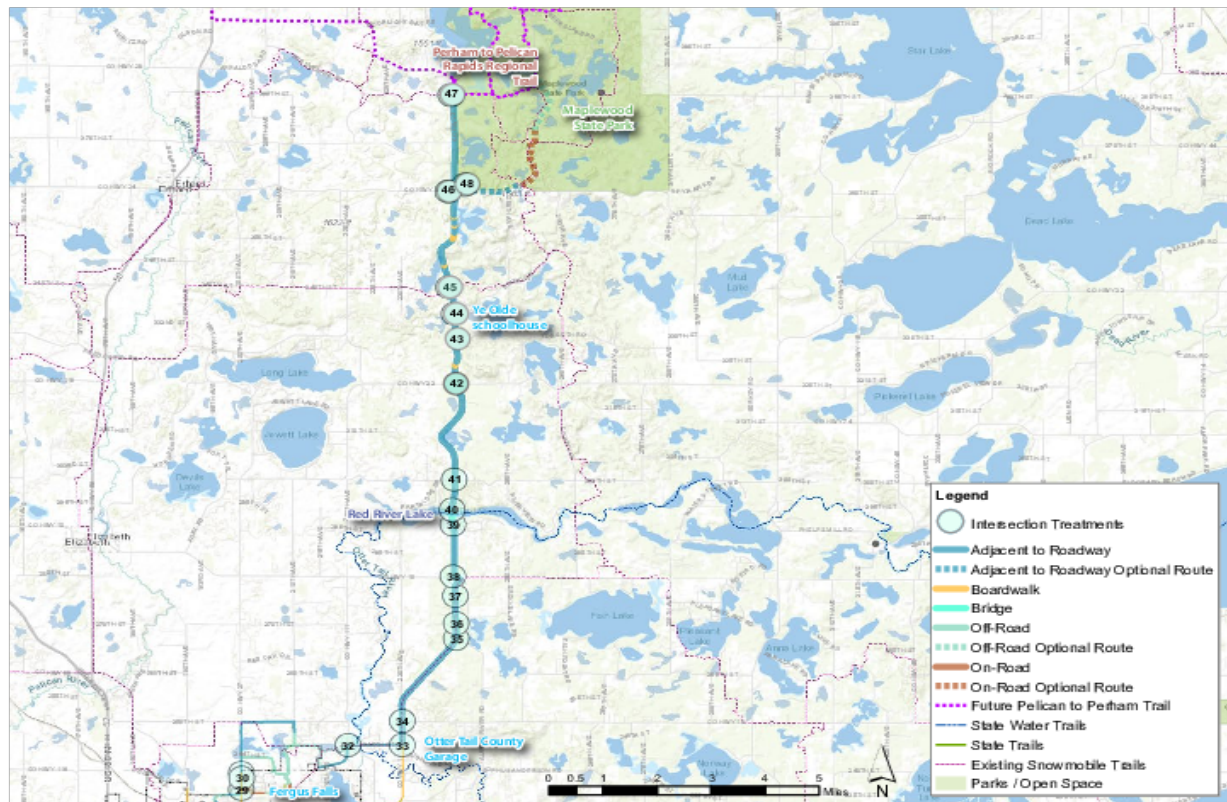


Figure 3-24: Glacial Edge Trail Intersection Treatments: Otter Tail County

62 Glacial Edge Trail Master Plan

### Development Feature 13: Adjacent to Roadway Trail: Otter Tail County

The trail experience along the majority of the Otter Tail County section of the Glacial Edge Trail (GET) consists of a 10' bituminous trail with a 2-ft recovery zone buffer on either side, in alignment with a county highway. Where space allows, a 24-ft ditch separates the trail from the edge of the roadway pavement, which today has a 2'-10" paved shoulder along most of the route. The County right-of-way varies along the trail route, ranging from 50 to 75 feet from the center line of the road. Where necessary, additional easement may be needed to accommodate for the trail. See attachments for Figures 3-12 and 3-13.

[View full image](#)



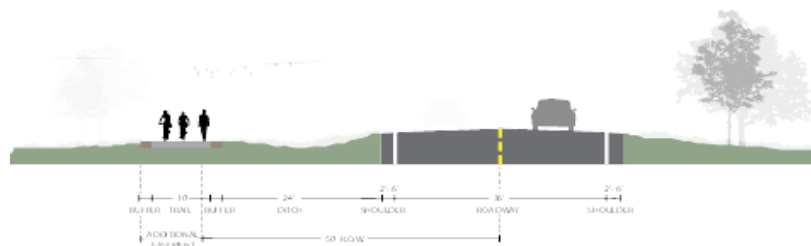


Figure 3-12. Otter Tail County GET: Typical Adjacent to Roadway Section with 50' ROW (CSAH 3)

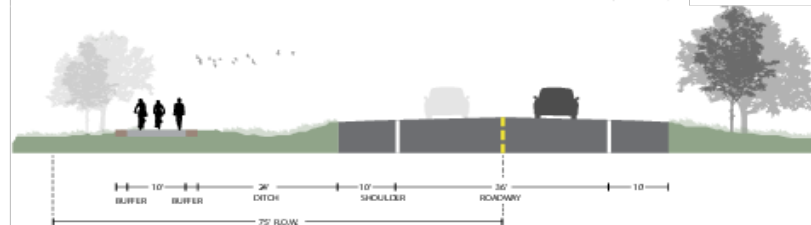


Figure 3-13. Otter Tail County GET: Typical Adjacent to Roadway Section with 75' ROW (CSAH 1)

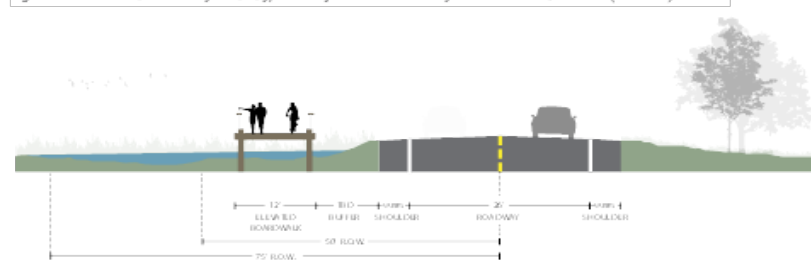


Figure 3-14. Otter Tail County GET: Typical Section with Boardwalks (over wetland areas)

#### Adjacent to Roadway Trail: Otter Tail County

The trail experience along the majority of the Otter Tail County section of the Glacial Edge Trail (GET) consists of a 10' bituminous trail with a 2-ft recovery zone buffer on either side, in alignment with a county highway. Where space allows, a 24-ft ditch separates the trail from the edge of the roadway pavement, which today has a 2'-10" paved shoulder along most of the route. The County right-of-way varies along the trail route, ranging from 50 to 75 feet from the center line of the road. Where necessary, additional easement may be needed to accommodate for the trail.

#### Boardwalk Trail: Otter Tail County

Throughout the Red River Lake Segment and the Maplewood State Park Segment of the Otter Tail County section of the Glacial Edge Trail (GET), there are a handful of areas where the trail route crosses designated wetland areas. Where possible, the trail route avoids wetlands, maintaining construction within the county right-of-way. Where it is not possible to avoid a wetland area, the trail will be constructed as a boardwalk (either with pre-cast concrete slabs or with wood or composite decking). Construction of a boardwalk with pier construction will have lower impact on the surrounding wildlife and decrease the amount of disturbance during construction of the trail. The boardwalk segments will also serve as a focal point for viewing wildlife and taking in scenic views. Construction of the boardwalk segments will potentially require further permitting and coordination with natural resource agencies.

### Development Feature 14: Boardwalk Trail: Otter Tail County

Throughout the Red River Lake Segment and the Maplewood State Park Segment of the Otter Tail County section of the Glacial Edge Trail (GET), there are a handful of areas where the trail route crosses designated wetland areas. Where possible, the trail route avoids wetlands, maintaining construction within the county right-of-way. Where it is not possible to avoid a wetland area, the trail will be constructed as a boardwalk (either with pre-cast concrete slabs or with wood or composite decking). Construction of a boardwalk with pier construction will have lower impact on the surrounding wildlife and decrease the amount of disturbance during construction of the trail. The boardwalk segments will also serve as a focal point for viewing wildlife and taking in scenic views. Construction of the boardwalk segments will potentially require further permitting and coordination with natural resource agencies.

[View full image](#)



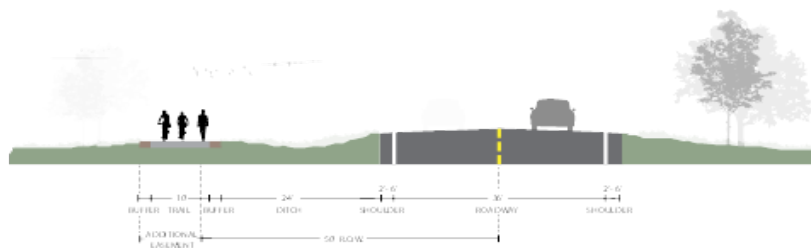


Figure 3-12. Otter Tail County GET: Typical Adjacent to Roadway Section with 50' ROW (CSAH 3)

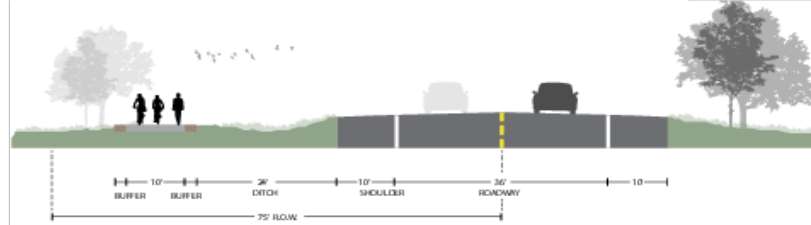


Figure 3-13. Otter Tail County GET: Typical Adjacent to Roadway Section with 75' ROW (CSAH 1)

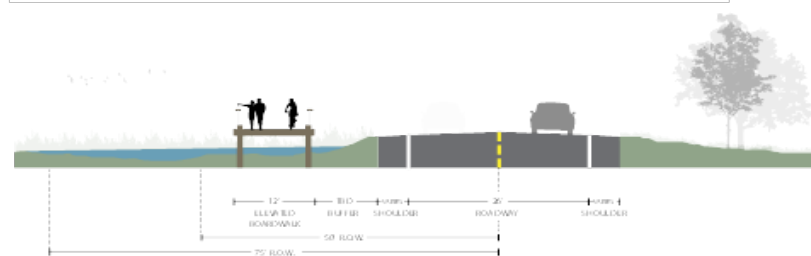


Figure 3-14. Otter Tail County GET: Typical Section with Boardwalks (over wetland areas)

#### Adjacent to Roadway Trail: Otter Tail County

The trail experience along the majority of the Otter Tail County section of the Glacial Edge Trail (GET) consists of a 10' bituminous trail with a 2-ft recovery zone buffer on either side, in alignment with a county highway. Where space allows, a 24-ft ditch separates the trail from the edge of the roadway pavement, which today has a 2'-10" paved shoulder along most of the route. The County right-of-way varies along the trail route, ranging from 50 to 75 feet from the center line of the road. Where necessary, additional easement may be needed to accommodate for the trail.

#### Boardwalk Trail: Otter Tail County

Throughout the Red River Lake Segment and the Maplewood State Park Segment of the Otter Tail County section of the Glacial Edge Trail (GET), there are a handful of areas where the trail route crosses designated wetland areas. Where possible, the trail route avoids wetlands, maintaining construction within the county right-of-way. Where it is not possible to avoid a wetland area, the trail will be constructed as a boardwalk (either with pre-cast concrete slabs or with wood or composite decking). Construction of a boardwalk with preconstruction will have lower impact on the surrounding wildlife and decrease the amount of disturbance during construction of the trail. The boardwalk segments will also serve as a focal point for viewing wildlife and taking in scenic views. Construction of the boardwalk segments will potentially require further permitting and coordination with natural resource agencies.

## Development Feature 15: River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam. The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector. The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions. In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

[View full image](#)

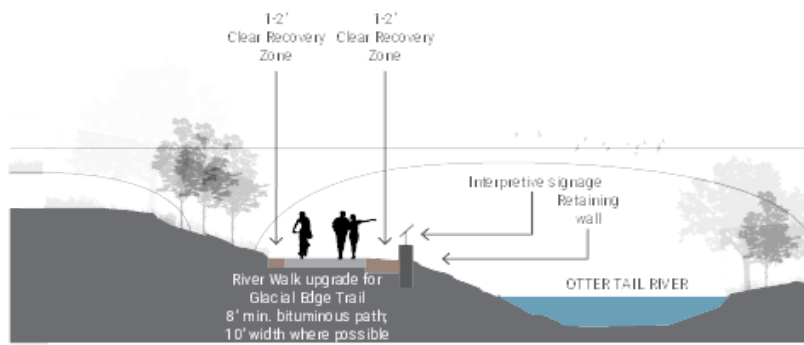


Figure 3-19. Glacial Edge Trail: River Walk Section (Mill Crossing Option)



View from existing River Walk

### River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam.

The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector.

The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions.

In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

## Development Feature 16: River Walk Trail (Mill Crossing Option)

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam. The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector. The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions. In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

[View full image](#)

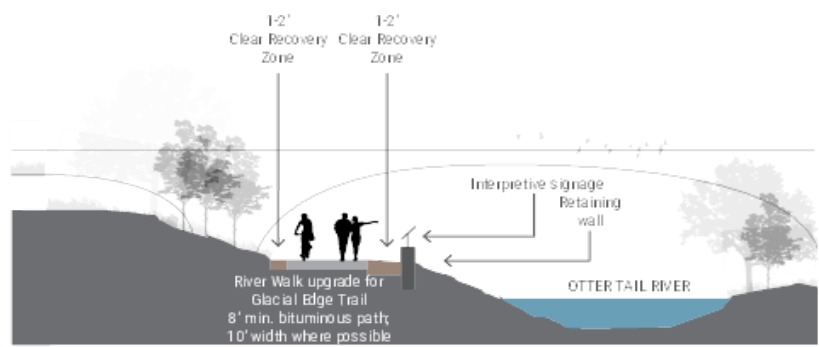


Figure 3-19. Glacial Edge Trail: River Walk Section (Mill Crossing Option)



View from existing River Walk

**River Walk Trail  
(Mill Crossing Option)**

The Mill Crossing Option for the Glacial Edge Trail (GET) shown in the Central Segment includes the entire 0.3 mile length of the existing River Walk. The River Walk is a 4-5-ft wide path which begins at Veterans Memorial Park and runs along the south bank of the Otter Tail River to George B. Wright Park at Union Street. The River Walk is well-loved by the residents of Fergus Falls, as it is one of the few places where one can experience the Otter Tail River and view the Central-Wright Dam.

The River Walk path is located below the bridge crossings at Mill Street, Court Street, and Union Street, and also overlaps the North Country Trail Urban Connector.

The River Walk is designed for pedestrian use, and is not currently ADA accessible. The River Walk path surface is comprised of modular pavers, which can be slippery in winter or rain conditions.

In the Mills Crossing Option shown in the Glacial Edge Trail, the section of trail at the existing River Walk would be upgraded to have an 8-10-ft width, a continuous bituminous surface, and recovery zone buffers on either side of the trail. This will require some earthwork and retaining walls along the north edge of the trail, in order to achieve slopes compliant with ADA accessibility standards. Here, there is an opportunity to include educational/interpretive signage to share the history of the riverfront in downtown Fergus Falls.

**Implementation Plan :** This Master Plan is a long-range vision, which will require collaboration between the City of Fergus Falls, Otter Tail County, Otter Tail Power Company, property owners and stakeholders throughout the region. Land acquisition, construction, stewardship, operations and maintenance will primarily be the responsibility of the City of Fergus Falls within the City of Fergus Falls, Fergus Falls Township, and Aurdal Township. Otter Tail County will take responsibility for land acquisition, construction, stewardship, operations and maintenance throughout Otter Tail County for the trail beginning at the County Garage on CSAH 1 and terminating at Maplewood State Park, with the possibility of integrating other user groups for various responsibilities during construction and beyond.

**Summarize Acquisition and Development Costs To-Date : None**

Parks and Trails Legacy Funding		
Acquisition	Development	Total

Non-Parks and Trails Legacy Funding
Arts & Cultural Heritage Legacy

Acquisition	Development	Subtotal

**Clean Water Legacy Funding**

Acquisition	Development	Subtotal

**Outdoor Heritage Legacy Funding**

Acquisition	Development	Subtotal

**Local and Other Funding Sources****Local Funding**

Acquisition	Development	Subtotal

**Environment & Natural Resources Trust Fund**

Acquisition	Development	Subtotal

**Other Funding**

Acquisition	Development	Subtotal

**Grand Total Investments to Date – All Sources Listed : \$0**

**Acquisition and Development Cost Projections : Preliminary Cost Estimate: Fergus Falls**

A preliminary cost estimate was developed based on the preferred trail route with options for the river crossing in the Central Segment as well as the options for the North Central Segment links. Limited physical site inspections were conducted to determine the existing conditions of the trail route; no site surveys were conducted nor engineering studies created as of the completion of this master plan. This cost estimate is intended to give baseline information to

assist in decision-making for future trail options, as well as provide a foundation for securing funding to implement the Glacial Edge Trail.

All segments of the trail will require site surveys, engineering, permitting, and in-depth site analysis prior to construction.

Costs were derived using a number of sources, including referring to other recent trail construction costs in the state, as well as referring to the Costs for Pedestrian and Bicyclist Infrastructure Improvements (prepared for the Federal Highway Association, 2013).

The following are included in the cost estimate provided here:

- Trail Construction, such as installing new paving or widening existing paving to complete the trail surface.
- On-Road Facilities, such as bike lanes or shared lane markings
- Sidewalk Installation, where bicycle and pedestrian facilities are separated
- Bridge Crossings, such as the proposed Mill Crossing Bridge or the proposed Falls Crossing Bridge
- Retaining Walls, and earthwork necessary for sections along steep slopes Boardwalks through wetland areas
- Trailhead Facilities
- Intersection Treatments, based on the recommendations listed in Chapter 3
- Wayfinding Allowance, to include signage and trail markers
- Engineering, which assumes a cost of 18% of the total construction cost
- Acquisition Costs associated with acquiring necessary easements for segments of the trail that cross private property

It should be noted that these cost estimates do not include site furnishings (such as benches, trash receptacles, or bike racks), lighting along the trail, landscaping or landscape restoration costs, permitting costs, or on-going operations and maintenance of the trail.

#### Preliminary Cost Estimate: Otter Tail County

A preliminary cost estimate for the Otter Tail County section of the Glacial Edge Trail was developed in 2021. This estimate is based on the preferred trail route with options for the Maplewood State Park Alternative Route included as an additional spur or link. Limited physical site inspections were conducted to determine the existing conditions of the trail route. No site surveys were conducted nor engineering studies created as of the completion of this master plan. This cost estimate is intended to give baseline information to assist in decision-making for future trail options, as well as provide a foundation for securing funding to implement the Glacial Edge Trail.



All segments of the trail will require site surveys, engineering, permitting, and in-depth site analysis prior to construction. Retaining walls, stormwater infrastructure, roadway or driveway modifications were not included as part of this cost estimate. Costs were derived using a number of sources, including referring to other recent trail construction costs in the state, as well as referring to the Costs for Pedestrian and Bicyclist Infrastructure Improvements (prepared for the Federal Highway Association, 2013).

The following are included in the cost estimate provided here:

- Trail Construction, such as installing new bituminous paving with aggregate base course to complete the trail surface.
- Boardwalks through wetland areas
- Trailhead Facilities, to include signage for parking, trailhead kiosk, seating and trash/recycling receptacle or other modest site furnishings
- Intersection Treatments, based on the recommendations listed in Chapter 3
- Wayfinding Allowance, to include signage and trail markers
- Engineering, which assumes a cost of 18% of the total construction cost
- Acquisition Costs associated with acquiring necessary easements for segments of the trail that cross private property. Without further survey-level information and design of the trail, it is not known if any acquisition costs will be needed to complete the project. At this time, no costs are listed.

It should be noted that these cost estimates do not include lighting along the trail, landscaping or landscape restoration costs, permitting costs, or ongoing operations and maintenance of the trail.

Seeding for native plants and grasses using MnDNR Roadside seed mixes suited for the adjacent ecological plant community is recommended where soil is disturbed.

### **Cost Estimate Support Information Uploads**

[Preliminary Cost Estimates 5536b7.pdf](#)

### **Acquisition and Development Phasing Plan : Phasing: Fergus Falls**

Through the process of creating this master plan, there was general agreement from the Project Advisory Group and the community stakeholders regarding the priorities and phasing for the Glacial Edge Trail. All involved recognize that completing the trail will not happen overnight, and identifying priorities, which align with phasing, will help to ensure that the trail becomes a reality over time. The following criteria were identified, which helped to determine the phasing of the trail segments, which is outlined in Figure 4-1: Glacial Edge Trail Project Phasing:

- Capitalize on existing segments of the trail, such as the multi-use path from the Central Lakes

Trailhead, along Pebble Lake Road into downtown Fergus Falls, and connecting this segment to the existing River Walk. Connecting these two segments of the trail route will create a significant impact right away (1B)

- Focus on securing major funding sources for the big ticket items in the Central Segment, such as the Falls or Mills Crossing options of the River, upgrading the existing River Walk, and securing the acquisition and construction funding for the proposed segment along the river at the old dairy site (2D)
- Continue to work with the Minnesota DNR and M State University to complete the Central Segments (2E and 2F)
- Coordinate efforts to complete Phase 3 and Phase 4 as the planning and implementation for Ferber Park is developed further. This will inform some of the decisions for options in the North Central Segment

The following outlines the breakdown of priorities within each Phase. These priorities and phases are keyed in the cost estimate located later in this chapter.

#### Phase 1: South Segment

- 1A. Upgrade of existing trail from the Central Lakes Trailhead to Vernon/Burlington (already constructed) including intersection treatments and wayfinding
- 1B. Upgrade of existing trail at Vernon/Burlington intersection to Veterans Memorial Park, including new riverfront trailhead at Veterans Memorial Park/River Walk
- 1C. Trail spur connection from the North Country Trail to Pebble Lake Road, connecting the Glacial Edge Trail to the Prairie Wetlands Learning Center.

#### Phase 2: Central Segment

- 2A. River Walk through Veterans Memorial Park to the Central-Wright Dam
- 2B-FC. A new river crossing at the Central-Wright Dam with views of the falls (Falls Crossing Option) and associated trail route along the north side of the river to Union Avenue
- 2B-MC. Upgrade of existing River Walk along the entire length with a new river crossing connecting the old mill site (Mills Crossing Option)
- 2C. Reconstruction of Stanton Avenue from Union Avenue to Broadway Avenue with enhanced streetscape and intersection treatments
- 2D. Trail construction through the old dairy site to Barefoot Park, crossing the railroad and continuing on St. Andrews Street to Lincoln Avenue
- 2E. Otter Tail Historical Society through M State Campus
- 2F. Off-road trail through MnDNR management area

#### Phase 3: North Central Segment

- 3A. Fir Avenue and Tower Road through the Historic Kirkbride Campus and Veterans Home to Skogmo Boulevard and the existing multi-use trail on Cleveland Avenue.

3B-S. Woodland Option using existing roadway through the Woodland neighborhood, utility easement to scenic wetland area to Ferber Park

3B-C. 244th Street Option using an existing Otter Tail Power property south of 244th Street at Cleveland Avenue to connect to a scenic wetland area to Ferber Park

3B-N. 250th Street Option continuing the trail along Cleveland Avenue to 250th Street; 250th Street to Country Oak Loop to Ferber Park

#### Phase 4. Far North Segment

4A. In alignment with the current snowmobile route, continuing the trail from Ferber Park to County Highway 111, including the Chautauqua Ice Margin Loop

4B. County Highway 111 along 245th Street across the Otter Tail River to County Highway 1 to complete the Glacial Edge Trail and create a future regional trail connection

#### Phasing: Otter Tail County

Since funding and construction of the Perham to Pelican Rapids Regional Trail is ahead of funding and construction of the Glacial Edge Trail, it is recommended that phasing of construction of the Otter Tail County segments occur from north to south. Funding has already been secured for most of the Perham to Pelican Rapids Regional Trail; construction of the Silent Lake Segment and the East Segment are now underway currently.

In particular, the Far North segment of the Fergus Falls portion of the trail, which is the connection to the Otter Tail County portion, is anticipated to be the final segment to be funded and constructed. Whereas, the West Segment of the Perham to Pelican Rapids Trail, which is the northern terminus of the Glacial Edge Trail, is already funded and currently scheduled for construction in 2022. This phasing will also prioritize trail connections to Maplewood State Park which is a major regional destination and anticipated to generate significant use of the Glacial Edge Trail.

While phasing is generally recommended to align with the three trail segments, if necessary, development of the trail could also be phased based on where the trail is located on the east vs. the west side of the roadway. Therefore, the Maplewood State Park and Red River Lake segments could be split into two phases each.

#### Phase 1: Maplewood State Park Segment

This phase will include construction of the trail along CSAH 3 from 380th Street on the north to CSAH 22 on the south. The trail will be located on the west side of the roadway from 380th Street to Emery Drive, then on the east side from Emery Drive south to CSAH 22. This phase will include one trailhead, six boardwalks, and two high-visibility crosswalks. This phase is the longest and highest cost segment.

### Phase 2: Red River Lake Segment

This phase will include construction of the trail along CSAH 3 from CSAH 22 on the north to CSAH 10 on the south, and a short section of CSAH 10 between CSAH 3 and CSAH 1. The trail will be located on the east side of the roadway from CSAH 22 to the Red River Lake bridge, then on the west side from Red River Lake bridge south to CSAH 1. This phase will include one trailhead, the Red River Lake bridge improvements, and three high-visibility crosswalks.

### Phase 3: Highway 1 Segment

This phase will include construction of the trail along CSAH 1 from CSAH 10 on the north to 245th Street (Otter Tail County Garage) on the south. The trail will be located on the west side of the roadway. This phase will include one trailhead, five boardwalks, and three high-visibility crosswalks.

### Phasing Plan Support Information Uploads

[Project Phasing\\_e71e60.pdf](#)

### Cost Projections for Implementation Plan

**Acquisition:** 1540080

**Development:** 13872485.2

**Projected Total:** 15412565.2

**Repair & Replacement:**

## Operations & Programming

### Joint Organizations

**Responsibilities:** Management and operations of the Glacial Edge Trail will primarily be the responsibility of the City of Fergus Falls, managed through the Parks and Recreation Department and Otter Tail County, managed by the Parks & Trails Department. The City and the County are entering into a cooperative agreement for the purpose of encouraging long-term interagency coordination and cooperation in the development, management, and operation of the Glacial Edge Trail. This cooperative agreement establishes general principles and specific tasks that will be adhered to by the City and the County.

Both the City of Fergus Falls and Otter Tail County will establish annual budgets to provide capital and operating funds for the Glacial Edge Trail. Projects similar to the Glacial Edge Trail have shown annual operations and maintenance costs to be around \$1,800 per linear mile of trail, which includes activities such as crack-sealing, sealcoating, snow removal, mowing, and landscape maintenance adjacent to the trail.

### Joint Organizations Support Material Uploads

[GET Cooperative Agreement b9f961.pdf](#)

**Operational Sustainability:** N/A

**Natural Resources Sustainability:** The Glacial Edge Trail route provides access to a number of scenic and natural landscapes within and surrounding Fergus Falls. The

Prairie Wetlands Learning Center, the Otter Tail River throughout downtown Fergus Falls, the Fergus Falls State Wildlife Management Area, and the acres of rural and scenic landscapes in north Fergus Falls and Aurdal Township are existing natural resource assets that will be further highlighted with completion and use of the regional Glacial Edge Trail.

With the development of the Glacial Edge Trail, environmental impacts will be minimized wherever possible. Best practice construction methods, the preservation of surrounding and adjacent natural resources and coordination with local agencies to combine capital improvement projects with trail construction to limit the impacts are all recommended for implementation of the plan.

Where the trail corridor is constructed in rural areas, trees may need to be planted or replaced. There may also be opportunities to combine the trail construction with restoration of native prairie planting along the trail route to assist with site drainage and provide vital pollinator habitat throughout Fergus Falls, especially in the Far North and North Central Segments.

The City of Fergus Falls has committed to actively working with the Minnesota DNR to coordinate trail planning and construction throughout DNR-owned properties.

Land Use Strategies: Fergus Falls



The following opportunity sites have been identified for further enhancement and restoration of the land for habitat value and increased functionality of landscape features (see map on page 75):

- The Old Dairy site in the Central Segment along the Otter Tail River contains soils that have been contaminated through years of industrial use. Here, there is opportunity to restore this site with native riparian vegetation, as well as address impervious surface runoff with rain gardens, infiltration beds, and other best practice stormwater features.
- The M State Campus provides an opportunity to combine a naturalized trail corridor strategy throughout the trail route with interpretive or educational features along the trail, engaging students, faculty, and staff in the on-going stewardship of the Glacial Edge Trail throughout the university community.
- DNR managed area at Tower Road and Fir Avenue provides opportunities to build partnerships between the City of Fergus Falls and the Minnesota DNR to restore wetland areas and the prairie landscape with native vegetation. Additional footpaths and interpretation can link to the Glacial Edge Trail to educate the public about the natural history of the area.
- Ferber Park has excellent opportunities to establish a long-term native plant restoration strategy. Future park master planning will include wetland and habitat restoration considerations.

#### Land Use Strategies: Otter Tail County

The following opportunity sites have been identified for further enhancement and

restoration of the land for habitat value and increased functionality of landscape features (see map on page 76):

- Otter Tail County Garage site has an opportunity for native savanna restoration at and around the future trailhead site.
- USFWS Property at CSAH 10 and CSAH 3 has opportunity for continued land management and native restoration to target nesting bird species.
- MnDNR water access area at Red River Lake has opportunity to integrate stormwater BMP (Best Management Practices) into future parking lot upgrades to address potential runoff or water quality issues. There are also opportunities for shoreline restoration to enhance habitat.
- Otter Tail County ROW: The typical trail section through Otter Tail County provides for a 24' vegetated buffer strip (ditch section) between the edge of the roadway and the trail. In some cases, the county ROW will extend further beyond the edge of the trail. These areas provide an opportunity for seeding of hardy native flowers and plants along long stretches of the trail corridor. MnDOT has prepared a wide variety of seed mixes using native species, specifically designed for roadways to address habitat and erosion.

## Natural Resources Sustainability Support Material Upload

[Ecological and Land Resources 92f719.pdf](#)

**Programming:** 1800

**Programming Plan :** The Glacial Edge Trail will primarily be used as a passive recreational amenity, allowing users to choose where to access the trail, when to access the trail, and the duration of recreation for each individual.

Concurrently, there are a number of health-related activities that occur today that have been identified as potential opportunities for use on the Glacial Edge Trail:

- Lake Region Run
- Central Lakes Duathlon
- Turkey Trot
- TRAM-MS The Ride Across Minnesota
- Paddlefest
- DNR I Can Paddle Program

Meanwhile, fat tire biking in the winter months has been gaining in popularity throughout the state and the region. Future users may include advocates for this new recreational activity.

Cross-country skiing and snowshoeing have been identified as secondary uses for the trail, if light grooming is performed to make conditions favorable. The City of Fergus Falls Parks and Recreation Department may explore options for obtaining winter trail grooming equipment to enhance trail use in the future.

Other local groups that may have interest in

using the Glacial Edge Trail for future trail and outdoor programming activities include:

- Minnesota Waters and Prairie Chapter of the Glacial Edge Chapter of the North Country Trail Association
- Local service clubs, such as
  - Sunrise Rotary Club
  - Fergus Falls Noon Kiwanis
  - Fergus Falls Otter Risers Kiwanis
  - Sertoma
  - Noon Rotary
  - Riverside Lions
  - Eagles Club
  - VFW
- Otter Tail County Soil and Water Conservation District
- Otter Tail Historical Society
- Fergus Falls Area YMCA
- Fergus Falls Fitness Center
- Lake Region Healthcare Health & Wellness Hub

## Programming Support Material Uploads

[Lake Region Run 7a5f54.jpg](#)

[Central Lakes Duathlon 5d1cb4.jpg](#)

[Turkey Trot 7e32df.jpg](#)

[Paddlefest Fergus Falls 1a7e9b.jpg](#)

[TRAM Fergus Falls 71563b.jpg](#)

**Marketing:** The City of Fergus Falls, as the implementing agency, will partner with other public and private entities to build awareness of the Glacial Edge Trail and develop a multi-pronged marketing strategy. Outreach and marketing will occur through websites, publications, events, signage, and other strategies.

**Otter Tail County**

- The County has just adopted the Otter Tail County-Wide Trail Master Plan which recognizes the GET as an important regional trail in Otter Tail County trail network.

**MN DNR**

- Manages the state trails that connect to the planned GET, including the Central Lakes Trail, Lake Wobegon Trail, Heartland Trail, and Paul Bunyan Trail, as well as Maplewood State Park and Glendalough State Park. Outreach and marketing for these state level recreation destinations could include the GET.

**Otter Tail Lakes Country Association**

- Find Your Inner Otter initiative

**Fergus Falls Convention & Visitors Bureau**

- Visit Fergus Falls initiative
- Provides resources relating to the Pine to Prairie Birding Trail

**Fergus Fall Chamber of Commerce**

- Located along the Otter Tail River and the planned GET route
- Hosts major community events, such as Shop/Move/Groove, Taste of Fergus Falls, Frostbite Festival

**PartnerSHIP 4 Health**

- This 4-County partnership promotes active living and provides resources that could include outreach for the GET.

**North Country Trail Association - Minnesota Waters & Prairie Chapter**

- Fergus Falls was recently designated as a North Country Trail Town, which relates to

how towns along the North Country Trail promote the trail and town as recreation destinations.

**Pedal Fergus Falls**

- Serves as a bicycle and pedestrian education and advocacy group for Fergus Falls which could include users of the GET.

**Lake Region Healthcare**

- Promotes and provides resources related to health and wellness opportunities in the community which could include the GET.

**Explore Minnesota Tourism**

- Provides marketing and resources for destinations state-wide.

**Research and User Metrics:** In addition to committing to the research initiatives encouraged by the Greater Minnesota Regional Parks and Trails Commission, such as visitation counts, use profiles, recreation demands and trends surveys, the City of Fergus Falls and Otter Tail County will be actively involved in research and data collection related to health and active living initiatives, once the trail is partially or fully constructed.

As follow-up implementation efforts to this plan, it is recommended that the City of Fergus Falls pursue an engineering study to determine specific parameters, cost estimates, and preliminary design for the Mill Crossing and Falls Crossing Options, as well as the options presented in the North Central Segment regarding wetland and water body crossings.

**Total Maintenance and Operations**

**Budget:**

**Total Maintenance and Operations**

**Expenses:** 1800

**Total Maintenance and Operations**

**Revenues:** 0

**Annual Programming Cost :** 0





## Attachments

Document	Description	Filename
Location Map	Regional Trail Connectivity	<a href="#">1461681885993-GET Connectivity Map.pdf</a>
Location Map	Proposed Trail Route	<a href="#">1461681904179-Glacial Edge Trails 041516mxd.pdf</a>
Resolution	City and County Resolutions	<a href="#">1461681923402-Resolutions.pdf</a>
Letters Of Support	Letters of Support	<a href="#">1461681940466-Letters of Support.pdf</a>
Photo	Select Trail Location Aerials	<a href="#">1461681978623-Pictures.pdf</a>
Other	Supporting Plans and Documents	<a href="#">1461681997697-GET Supporting Plans and Documents.pdf</a>
Rgnl Trail MNclassification4 Upload	Criteria 4	<a href="#">Criteria 4 68ae56.pdf</a>
Development Acquisition Plan Upload	Far North Segment Route	<a href="#">Figure 3-5 Far North Segment de2c6c.pdf</a>
Development Acquisition Plan Upload	Highway 1 Segment Route	<a href="#">Figure 3-7 Highway 1 Segment ec3111.pdf</a>
Development Acquisition Plan Upload	Red River Lake Segment Route	<a href="#">Figure 3-8 Red River Lake Segment f52bc5.pdf</a>
Development Acquisition Plan Upload	Maplewood State Park Segment Route	<a href="#">Figure 3-9 Maplewood State Park Segment 309613.pdf</a>
Development Feature Upload		<a href="#">Adjacent to Roadway and Boardway Trails - Otter Tail County 92e043.pdf</a>
Development Feature Upload		<a href="#">Adjacent to Roadway and Boardway Trails - Otter Tail County b83083.pdf</a>
Development Feature Upload		<a href="#">River Walk trail (Mill Crossing) bd97af.pdf</a>
Development Feature Upload		<a href="#">Trail Corridor Design and Features a62f1d.pdf</a>
Development Feature Upload		<a href="#">Trail Corridor Design and Features 815bf4.pdf</a>
Development Feature Upload		<a href="#">Trail Corridor Design and Features 9a9784.pdf</a>

Development Feature Upload		<a href="#">General Trail Design 85f977.pdf</a>
Development Feature Upload		<a href="#">Bridge Crossings 73a6d1.pdf</a>
Rgnl Trail MNclassification2 Upload	Criteria 2	<a href="#">Criteria 2 60b0d3.pdf</a>
Rgnl Trail MNclassification3 Upload	Criteria 3	<a href="#">Criteria 3 80e05a.pdf</a>
Rgnl Trail MNclassification1 Upload	Criteria 1	<a href="#">Criteria 1 577993.pdf</a>
Park Trail Map	Amended Trail Segment - Includes Otter Tail County Portion	<a href="#">Updated Trail Route a48861.pdf</a>
Regional Map Uploads	Regional Context Map	<a href="#">Figure 1-1 Regional Context 69764f.pdf</a>
Regional Map Uploads	Otter tail County-Wide Trail Master Plan	<a href="#">Figure 2-11 Otter Tail County-Wide Trail Master Plan f53fc4.pdf</a>
Regional Map Uploads	Figure 2-13 Statewide Bicycle System Plan	<a href="#">Figure 2-13 Statewide Bicycle System Plan - District 4 41d5a9.pdf</a>
Development Acquisition Plan Upload	North Central Segment Route	<a href="#">Figure 3-4 North Central Segment efbe01.pdf</a>
Site Map Upload	Destinations in Fergus Falls	<a href="#">Figure 2-1 FF Destinations e95ccb.pdf</a>
Rgnl Trail Classification1 Upload		<a href="#">Trail Experience d46455.pdf</a>
Development Acquisition Plan Upload	Central Segment Route	<a href="#">Figure 3-3 Central Segment c5baa4.pdf</a>
Public Involvement Summ Upload	Engagement Notes - Original Plan and Amendment	<a href="#">Appendix GET Amended December 2021 web b8163b.pdf</a>
Regional Demographic Upload	Demographic, Recreation, and Public Health	<a href="#">Recreation and Public Health 69de8c.pdf</a>
Public Health Values Upload	Demographic, Recreation, and Public Health	<a href="#">Recreation and Public Health 988766.pdf</a>
Recreational Trends Upload	Demographic, Recreation, and Public Health	<a href="#">Recreation and Public Health 42db05.pdf</a>
Economic Development Tourism Upload	Economic Development and Tourism	<a href="#">Economic Development and Tourism 6333fc.pdf</a>
Rgnl Trail Classification3 Upload		<a href="#">Regional Map f27248.pdf</a>

Rgnl Trail Classification2 Upload		<a href="#">Connectivity and Users_89ad2b.pdf</a>
AcqDev Cost Projections Upload	Preliminary Cost Estimates	<a href="#">Preliminary_Cost_Estimates_5536b7.pdf</a>
Ad Phasing Plan Upload	Project Phasing	<a href="#">Project_Phasing_e71e60.pdf</a>
Acquisition Plan Overview Upload	Land Protection and Acquisition	<a href="#">Land_Protection_and_Acquisiti on_0327c3.pdf</a>
Ecological Land ResPlan Upload	Stewardship of Ecological and Land Resources	<a href="#">Ecological_and_Land_Resourc es_92f719.pdf</a>
Programming Plan Upload	Lake Region Run	<a href="#">Lake Region Run_7a5f54.jpg</a>
Programming Plan Upload	Central Lakes Duathlon	<a href="#">Central Lakes Duathlon_5d1cb4.jpg</a>
Programming Plan Upload	Turkey Trot	<a href="#">Turkey Trot_7e32df.jpg</a>
Programming Plan Upload	Paddlefest Fergus Falls	<a href="#">Paddlefest Fergus Falls_1a7e9b.jpg</a>
Programming Plan Upload	TRAM Fergus Falls	<a href="#">TRAM Fergus Falls_71563b.jpg</a>
Development Acquisition Plan Upload	South Segment Route	<a href="#">Figure_3-2_South_Segment_14fcab.pdf</a>
Development Feature Upload		<a href="#">On-Road_Trail_Fergus_Falls_5fbd30.pdf</a>
Development Feature Upload		<a href="#">Off-Road_Trail_Fergus_Falls_87c6de.pdf</a>
Development Feature Upload		<a href="#">Adjacent_to_Roadway_Trail_-_Fergus_32354d.pdf</a>
Development Feature Upload		<a href="#">River_Walk_Section_(Mill_Crossing_Option)_589eab.pdf</a>
Development Feature Upload		<a href="#">River_Balcony_Trail_(Falls_Cr ossing_Option)_5561f2.pdf</a>
Development Feature Upload		<a href="#">Crossing_Concepts_ae46b5.pdf</a>
Development Feature Upload		<a href="#">Crossing_Concepts_8a7989.pdf</a>
Development Feature Upload		<a href="#">Intersection_Treatments_615a85.pdf</a>
Joint Org Responsibilities Upload	Cooperative Agreement - Otter Tail Co and Fergus Falls	<a href="#">GET_Cooperative_Agreement_b9f961.pdf</a>
Additional Attachment	City of Fergus Falls - Adopting Amendment Resolution	<a href="#">City_Resolution_-_GET_f95721.pdf</a>
Additional Attachment	Summary of Plan Amendment Changes	<a href="#">Summary_of_Changes_-_GET_Amendment_b56219.pdf</a>