



The Fred Meijer River Valley Rail Trails

Clinton Ionia Shiawassee • Grand River Valley • Flat River Valley



Design and Development Guidance



Prepared by:
The National Park Service River, Trails, and Conservation Assistance Program
In Cooperation with:
The Michigan Department of Natural Resources



Friends of the Fred Meijer River Valley Rail Trails ■ MDNR Sleepy Hollow State Park ■ Mid-West Michigan Trail Authority ■ Ionia County Parks and Recreation ■ Village of Saranac ■ Friends of the Fred Meijer Clinton Ionia Shiawassee Rail Trail ■ Shiawassee County Board of Commissioners ■ Michigan Trails and Greenways Alliance ■ Village of Ovid ■ Michigan Department of Natural Resources (MDNR) Parks and Recreation Division ■ National Park Service (NPS) Rivers, Trails,

“Do what you can, with what you have, where you are.” - Theodore Roosevelt

In July 2007 the State of Michigan embarked on a journey with the acquisition of the 42 mile rail corridor from Ionia to Owosso. The following report represents the evolution of this rail to trail journey and the outcome that transpired over a five-year period. Thank you to all of our planning project partners and members of the public who shaped the Fred Meijer River Valley Rail Trails. A special thank you is extended to Barbara Nelson-Jameson, National Park Service Rivers, Trails, and Conservation Assistance Program, who guided us through the comprehensive process to produce this design and development guidance document.

James Radabaugh, State Trails Coordinator, August 2013

and Conservation Assistance Program ■ Clinton County Green Space Commissioners ■ Montcalm County Board of Commissioners ■ Kent County Parks Department ■ City of Lowell ■ Lowell Area Recreation Authority ■ City of Belding ■ City of Greenville ■ City of Ionia ■ Ionia County Board Commissioner ■ Friends of the Fred Meijer Heartland Trail ■ Clinton County Board Commissioners ■ Michigan Department of Transportation ■ MDNR Ionia State Recreation Area ■ MDNR Flat River State Game Area ■ Clinton County Economic Alliance

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Note:

Located throughout the document are hyperlinks to studies, reports, websites, and other data that were instrumental in shaping the recommendations in this plan. Online viewers may click on the blue, underlined text to visit a site; print readers can view the URL in its entirety in the appendix.

Note:

The Trailway Concept Development Plans are included at the end of each Trailway Design chapter as a pull-out map.

DEDICATION

Trail enthusiasts have been dreaming and working toward a creation of regional rail trail across the middle of the Lower Peninsula for over twenty years. This dream will be realized in 2014 when nearly fifty miles of rail trail will be constructed. This eight-million dollar investment in the rail trail system contributes to Michigan being known as the Great Trail State.

This planning document is dedicated to all the volunteers, elected officials, the state and federal government offices and staff, who helped to define and bring the trail project to reality. This plan and community effort is also dedicated to Mr. Fred Meijer (1919-2011). His vision, leadership and generosity have advanced the Michigan rail trail movement. The creation of the Fred Meijer Mid-West Michigan Rail Trail Endowment to care for this regional rail trail system in perpetuity serves as an ideal model and sets the standard for others.

A special thank you and appreciation is extended to Fred and Lena Meijer, the Meijer family and The Meijer Foundation for their financial support. Their generosity towards the Michigan rail trail movement is immeasurable, providing a family legacy for people of all ages and abilities to enjoy for generations.





Introduction

Located in central Michigan, the Fred Meijer River Valley Rail Trails are a system of inactive rail corridors being re-purposed as rail-trails and adjacent rivers which offers a great opportunity to develop water trails in conjunction with rail trails. The “pedal and paddle” system provides tremendous recreational opportunities and a variety of experiences for public use and enjoyment. This plan addresses both non-motorized rail-trail and water trail recreation activities and development.

The acquisition, planning, development, and management of this trail system is a dynamic process; a “one-size-fits-all” approach does not apply. The evolution of this plan demonstrates the ongoing challenges, opportunities, funding, perseverance, and flexibility needed to bring the dream of a connected trail system to reality. This project initially began as an effort to plan and develop 42 miles of rail corridor known as the Fred Meijer Clinton Ionia Shiawassee Rail Trail (CIS RT). The rapid success of this effort quickly grew to include two additional rail-trail segments; the Fred Meijer Grand River Valley Rail Trail (Grand River RT) and the Fred Meijer Flat River Valley Rail Trail (Flat River RT). This comprehensive planning initiative will serve as a model for development of other sustainable rail trail projects.

LOCATION

The Fred Meijer Midwest Michigan Rail Trail

Network (Network) connects Gratiot, Montcalm, Ionia, Kent, Clinton, and Shiawassee counties. The cities of Greenville and Lowell serve as “Trail Hubs” where various segments of rail corridor, local, and national trails will intersect. The overall system is comprised of four primary segments:

Fred Meijer Heartland Trail (Heartland Trail) – 42 miles from Greenville to Alma

Fred Meijer Clinton-Ionia-Shiawassee Rail Trail (CIS RT) – 42 miles from Ionia to Owosso

Fred Meijer Grand River Valley Rail Trail (Grand River RT) – 16 miles from Ionia to Lowell

Fred Meijer Flat River Valley Rail Trail (Flat River RT) – 22 miles from Lowell to Greenville

When completed, the Network will serve the immediate communities of Owosso, Ovid, St. Johns, Fowler, Pewamo, Muir, Ionia, Saranac, Lowell, Belding Greenville, Stanton, Edmore, and Alma, as well as the greater Grand Rapids, Lansing, and Saginaw regions.

There are a number of township and county trail

systems that offer opportunities to connect the Network to the trail system in West Michigan which provides over 250 miles of public rail trail and includes the Fred Meijer White Pine Trail State Park, Musketawa Trail, and William Field Hart Montague Trail State Park. The Network adds an additional 125 miles to Michigan's over 2,000 mile rail trail system.

The CIS RT, Grand River RT, and Flat River RT corridors parallel and crisscross the Flat, Grand, and Maple Rivers. The rivers are suitable for paddling, giving an opportunity to create and promote the pedal and paddle recreation experience in Mid-Michigan.

HISTORY

Acquisitions

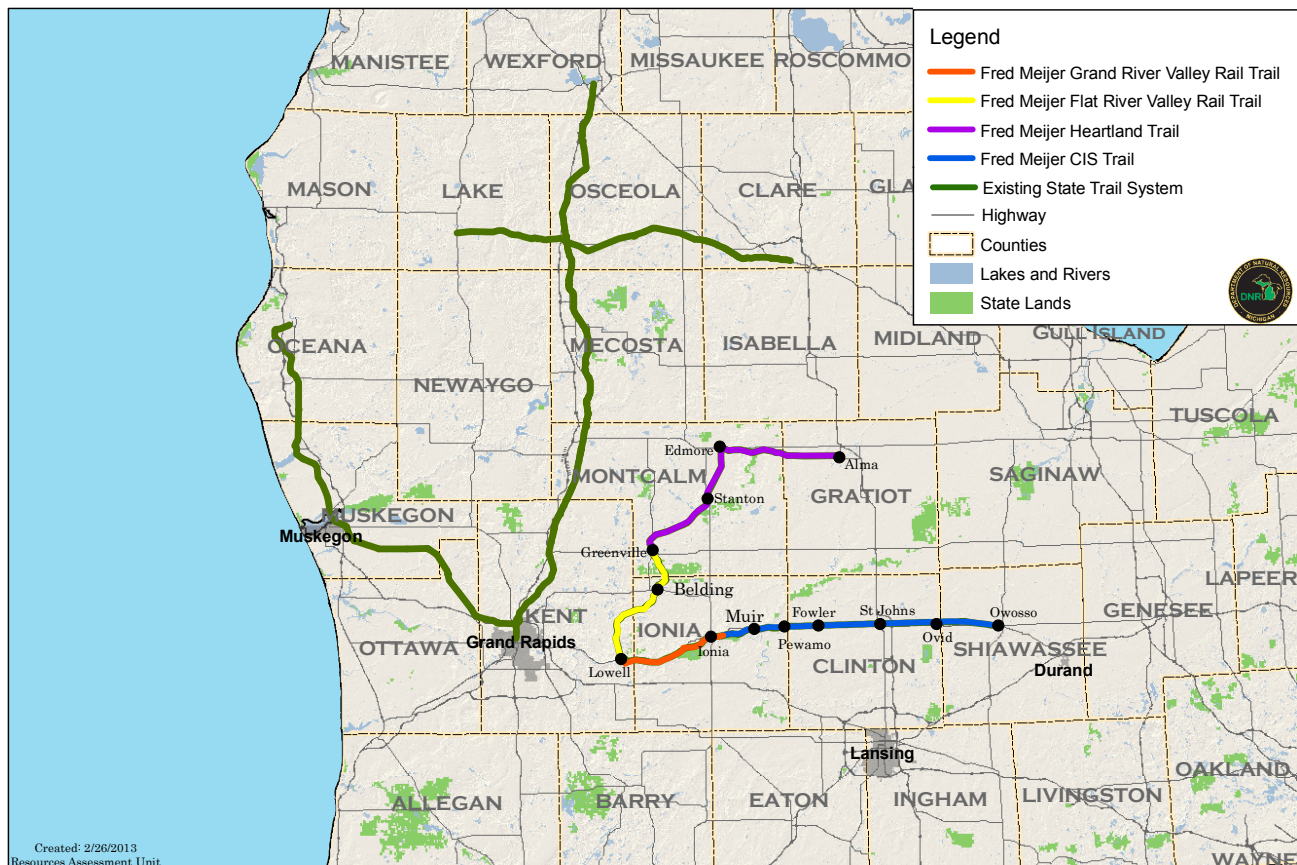
The first 29 mile section of the Heartland Trail, Greenville to Edmore, was acquired by the Friends

of the Fred Meijer Heartland Trail (Heartland Friends) in June 1994 from CSX Railroad. The purchase was made possible by the donation from Fred and Lena Meijer through The Meijer Foundation. Their continued generosity made additional acquisitions and development possible. The trail has now grown to over 42 miles of improved rail trail and is cared for by the Heartland Friends.

The Michigan Department of Natural Resources (MDNR) worked cooperatively with the Michigan Department of Transportation (MDOT) and the Heartland Friends to acquire an additional 80 miles of rail trail corridor for non-motorized recreation from Greenville to Owosso, referred to as the Fred Meijer River Valley Rail Trails (River Valley Rail Trails).

CIS RT – The former Central Michigan Railroad located in Ionia, Clinton, and Shiawassee counties was acquired by the state of Michigan in July

REGIONAL STATE RAIL TRAIL NETWORK



2007. The acquisition was funded with a grant from the Transportation Enhancement Program administered through MDOT, with a 20 percent match funded through a grant from the Michigan Natural Resources Trust Fund (MNRTF). The MDOT holds title as the 42 mile corridor was acquired under the State Transportation Preservation Act of 1976, PA 295, thus preserving the corridor in its entirety for future transportation purposes while the MDNR serves as land manager for use as an interim trail.

Grand River RT – The Heartland Friends and the MDNR collaborated to acquire the rail corridor from Ionia to Lowell. The MDNR purchased 8.5 miles of railroad corridor in January 2010 to extend state ownership west through the City of Ionia and the Ionia State Recreation Area. The Heartland Friends then gifted remaining 7.4 miles acquired from Rail America to the MDNR. The acquisition and gift increased the continuous length of the corridor under state ownership to over 57 miles.

Flat River RT – The Heartland Friends acquired the 22 mile section of rail corridor that connects the City of Lowell to the Heartland Trail and the



Clockwise: Bridge over Flat River in Belding, the corridor through State Game Area, paddling the Flat River.

City of Greenville in September 2010. They offered the corridor as a gift to the MDNR in December of 2011 extending the length of corridor under state ownership to 80 miles.

Management

As a condition of land management responsibility for railroad corridors, MDNR requested a single point of contact to serve as the local land manager to address the day-to-day operations, management, and maintenance. The Mid-West Michigan Trail Authority (Authority) was formed on May 13, 2010, as provided for under the Urban Cooperation Act of 1967 for this purpose. The Authority also directs the annual fund expenditures for the Network maintenance. Additional details on the Authority are provided in the [Mid-West Michigan Trail Authority Interlocal Agreement and Amendment](#).

Note: There have been ongoing discussion between the MDNR and the Heartland Friends concerning the possibility of gifting the Heartland Trail to the MDNR. The framework has been established for this to occur at any time in the future. This would consolidate and bring all rail corridors under state ownership making it the fifth largest rail trail in the country.



Existing Conditions, CIS RT. Clockwise: Trail tunnel under US-127 Business Route; Existing trestle and view from above; Maple River

Planning

In January 2009, MDNR requested assistance from the National Park Service Rivers Trail and Conservation Assistance Program (RTCA) to help develop and facilitate a planning process for CIS RT. The National Park Service's Visitor Experience and Resource Protection (VERP) planning model was adapted and used for planning this 42 mile rail trail from Ionia to Owosso.

The Friends of the River Valley Rail Trails (River Valley Friends) also requested assistance from RTCA for the Flat River RT and the Grand River RT as a means to ensure continuity between the rail trails. The planning model for the CIS RT served as the basis to create a unified and harmonious regional rail trail network. The application was approved and the project commenced in January 2012. This document is the culmination of these separate, but coordinated, planning efforts. The description of the Trailway Planning Process and resulting Design, Development and Management Plans for the River Valley Rail Trails are described in the following sections.

Note: The National Park Service - Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA staff provide technical assistance to community groups and governmental agencies at all levels, working to protect natural areas and water resources and enhance close-to-home outdoor recreation opportunities. ■



Existing Conditions, Grand River RT. Clockwise: Saranac Train Depot; River view; Grand River Trestle



Trailway Planning Process

Under the guidance and leadership of the National Park Service RTCA, the 125 mile Mid-West Michigan Rail Trail Network has come together through a collaborative process in cooperation with:

- Friends of the Fred Meijer Heartland Trail (Heartland Friends)
- Friends of the Fred Meijer Clinton-Ionia-Shiawassee Trail (CIS Friends)
- Friends of the Fred Meijer River Valley Rail Trail (River Valley Friends)
- Mid-West Michigan Trail Authority (Authority)
- The Meijer Foundation
- Various Michigan Foundations
- Volunteers
- Michigan Trails and Greenways Alliance (MTGA)
- Local Units of Government
- State of Michigan:
 - Department of Transportation (MDOT)
 - Department of Natural Resources (MDNR)

This dynamic and collaborative planning process began with the CIS RT from Ionia to Owosso. As the River Valley Rail Trails expanded, the same framework was used from Ionia to Lowell (Grand River RT) and Lowell to Greenville (Flat River RT). The comprehensive process draws on each

organization's strengths and planning experience, which evolves over time through the different stages of trail acquisition, development, management, and maintenance.

PLANNING FOR VISITOR EXPERIENCE AND RESOURCE PROTECTION

The Visitor Experience and Resource Protection Planning Process (VERP) is a proactive and goal driven process which defines:

- the visitor experience opportunities,
- the essential elements of those experiences,
- what resource conditions will support the type and level of use,
- how much land should be allocated to various visitor experience opportunities, and,
- where along the trail do those conditions occur.

The range of possible visitor experiences and resource conditions that can be managed and developed along the trail is determined by:

- public feedback, desires, and goals,
- the corridor's natural and cultural resources and physical conditions, and,
- other factors such as administrative and legislative policies.

Based on this information, possible management and development scenarios, or zones, are determined which describe the types of visitor uses and resource management objectives.

Using a common set of possible management zones, development alternatives are created for each rail trail. A preferred alternative is selected from stakeholder input and review and provides the basis for the trail system's development and management.

The following sections describe the planning process, step by step, with results from the three trail planning efforts.

PUBLIC ENGAGEMENT PROCESS

The planning and public engagement process for the River Valley Rail Trails started in 2009 with the CIS RT. Since it was the initial planning project, the CIS RT had a more dynamic and comprehensive public engagement process which defined the goals, objectives, and determined the user experience zones which were then applied to the Grand River RT and Flat River RT. Using the CIS RT as a model accelerated the planning and public engagement process for the other two trails.



Visitor Experience and Resource Protection Model

Planning Teams and Committees

All three trail planning efforts formed [Planning Teams and Planning Committees](#). The Planning Teams were relatively small and included staff from the MDNR and RTCA, representatives from the “Friends” groups, the Authority, and consultants from Prein & Newhof, an engineering firm, under contract for the Grand River Valley Rail Trail Ionia to Saranac Plan. The Planning Committees were comprised of local government entities and agencies, park and recreation departments, MDOT, MDNR, State land managers (State Parks, State Recreation Area, State Game Area), non-profit trail organizations, and business and chamber representatives.

The Planning Teams were responsible for:

- Project planning, facilitation, and public engagement process
- Formation of the Development Concept Plan including resource inventory, design alternatives, and final recommendations
- Development of the Implementation Plan including project cost projections, implementation phasing and strategy.

The Planning Committees were formed to:

- Contribute to project goals and objectives
- Represent their community, agency, organization
- Host and help with meeting arrangements
- Provide resource information
- Help guide planning decisions

Public Open Houses and Stakeholder Meetings

A variety of public meetings, presentations, open houses, and other public engagement



One of many public engagement meetings

opportunities were offered over the course of this comprehensive planning process. Collectively this information has helped to guide and shape the plan recommendations.

- In the spring of 2009, three Open Houses were held which gave the public an opportunity to help develop goals for the design, development and management of the CIS RT. Over 200 people attended the Open Houses. [Questionnaires](#) were available for public comment at the Open Houses, and comments were taken online. [Comments](#) that were compiled and assessed by the planning committee with help from Dr. Charles Nelson, Michigan State University, Department of Park, Recreation and Tourism.
- Two public open houses were hosted by the City of Ionia and the Village of Saranac in 2011, which focused on project design concepts for the Grand River RT from Ionia to Saranac.
- Numerous Friends Group meetings were advertised and open to the public from Owosso to Greenville to solicit public input and provide project updates.
- Stakeholder group meetings were held to discuss and review preliminary design alternatives with representatives of the Michigan Horse Council and Michigan Equine Partnership, and the Michigan Trails and Greenways Alliance.

Members of the Planning Team met with representatives from towns and villages along the trail corridors to discuss possible trail development alternatives for their community, including

encroachment and easement issues, trailhead needs, funding challenges, and development priorities. A series of presentations occurred during 2012 regarding project phasing, funding, and fundraising with an invitation to voluntarily contribute financially toward the local match portion of the project funding. Suggested amounts for financial support were used, with many contributing and several doubling up in their giving.

The Role of Friends Groups

Friends of the Fred Meijer CIS Trail ([CIS Friends](#)):

The friends groups have been instrumental in reaching out to the public to inform and build support. Their efforts include monthly meetings open to the public, newsletters, community events, and local fundraising events. The CIS Friends formed in 1999 “to promote the creation of a safe, multi-use trail for non-motorized recreation, utilizing the former Central Michigan Railroad corridor, between Ionia and Owosso, Michigan.”

Friends of the Fred Meijer River Valley Rail Trails ([River Valley Friends](#)): The River Valley Friends formed in February 2010 and are interested in the successful development, maintenance and management of the 37 miles of trail from Ionia to Greenville.



Friends of the Fred Meijer River Valley Rail Trails

Both groups participate in community events such as community expos and festivals which reach thousands of people annually. They also hold maintenance and clean-up work sessions to build community support for the trail. The River Valley Friends organize and host the Paddle to Peddle event which is a one day adventure tour where participants float the beautiful Flat River and then bike back to the starting point or destination to promote the water trail and rail trail recreation experience. ■



You got to have friends...



Results of Planning Process

GIVENS & EXISTING CONDITIONS

There are policies, legislation, formal agreements, and ownership conditions that apply to the River Valley Rail Trails that affect trail planning, development, and management. The primary “Givens” are listed below.

Givens:

- CIS RT, Flat River RT and Grand River RT corridors are owned by State Of Michigan.
- All rail corridors were acquired under state or federal “railbanking” terms thus preserving the future transportation purpose while allowing for an interim trail use. Corridor has to remain intact and is subject to [Railbanking Provisions of Federal law, section 8\(d\) of the national trails Act. 16 u.P.c.1247\(d\)](#).
- Trailways will be non-motorized use only.
- Motorized and equestrian use are restricted by deed on the gifted portions of the Flat River RT and the Grand River RT.
- Trails will be developed to [MDOT](#) and [American Association Of State Transportation](#) [And Highway Officials Standards](#), some of these requirements include that the trail be a minimum of 10’ wide, with 2’ wide shoulders, to create the 14’ clear zone.
- State owned trails and adjacent State lands such as Game Areas and Recreation Areas are subject to MDNR State Land Use Rules and the Land Use Order of the Director
- [The Threatened and Endangered Species Act](#) as it pertains to the Karner Blue Butterfly and habitat in the Flat River State Game area and any other possible occurrences of threatened and endangered species.
- Flat River State Game Area was purchased primarily with money from hunting licenses and is managed for wildlife habitat to support game hunting as the primary use as directed by the [Pittman-Robertson Federal Aid in Wildlife Restoration Act](#) and the [Dingell-Johnson Act](#).
- The development of the Flat River RT is subject to the Michigan Natural Rivers Act and the designation of the Flat River as a [State Natural River](#). The Flat River District is an overlay zoning district which has additional provisions, requirements, and restrictions protecting the riparian shoreline and river environment.

TRAIL VISION

The Planning Teams and Committees drafted and adopted the following purpose statements which guide trail development and management:

Trailway Purpose Statement:

“The River Valley Rail trails are part of a 125 mile regional non-motorized trailway network which connects mid-Michigan communities and State and local recreation lands and facilities. They provide places for people to participate in safe, healthy non-motorized transportation and multiuse recreation activities. The trail corridors run adjacent to the Grand, Flat, and Maple Rivers which offer outstanding scenic, wildlife, and water recreation opportunities. The trails provide access to significant historic and natural resources for interpretation and outdoor education. They will provide quality and distinctive recreation experiences and draw people from all over the state/region which will benefit and enhance the local economies.”

GOALS AND DESIRED FUTURES

Desired futures express what people hope the trail will become and what it will accomplish. They may be thought of as design and development goals and management objectives for the trail. Defining desired futures assures that trail development and management address the goals rather than the means.

The Planning Teams and Committees used a number of methods, previously described, to solicit public input to determine goals for visitor use and trail development. Five primary goals and thirteen related desired futures were identified from the public input.

1. Provide Non-Motorized Transportation and Multi-Use Recreation Activities

- The CIS RT accommodates a wide variety of non-motorized transportation trail uses and recreation activities including walking, biking, running, roller-blading, skateboarding, and horseback riding, while minimizing user conflicts and environmental impacts.
- The Flat River RT and the Grand River RT accommodate a variety of non-motorized transportation and recreation trail uses and activities including walking, biking, running, rollerblading, skateboarding, xc-skiing, while minimizing user conflicts and environmental impacts. Provides access to a variety of recreational activities such as canoeing, kayaking, fishing, and hunting.
- The Rail Trails provide different kinds of visitor uses and experiences through varying levels of trail development. This goal can be accomplished by “zoning” which describes the kind of uses and levels of development necessary to support the desired user experience and resource conditions.

Note: Because of public input and resource conditions, the CIS Trailway goals include horseback riding as a trail use and recreational activity. The Flat River RT and the Grand River RT goals, because of corridor deed restrictions, do not include horseback riding, but they do include canoeing, kayaking, fishing, and hunting.

2. Provide Safe and Healthy Non-Motorized Transportation and Recreation Use

- Users feel safe and secure because of sufficient law enforcement, ample lighting

at trailheads and parking facilities, administration of trail user etiquette policies, and minimizing user conflicts through trail design.

- Trail design and construction standards conform to the AASHTO Guide for Development of Bicycle Facilities and the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) standards.



The historic Sessions School in the Ionia State Recreation Area

Midwest Michigan Trail Network.

3. Benefit and Enhances Local Economies

- The Rail Trails benefit and enhance the local economies by drawing people from around the state and out of state because they provide a distinctive and attractive experience.
- The towns and villages are integral to the trailway visitor experience. There is improved access from the trail to downtown businesses and other features such as parks, museums, and local historic buildings. Towns and villages enhance the trail experience by improving and/or developing trailheads and trailside facilities that can accommodate increased use.
- There is ample information (published, web) that promotes trailway facilities, events, and visitor amenities (places to eat, visit, and stay).
- Partners develop a unified regional marketing approach to create a tourism destination.

4. Provide a Non-Motorized Trail Connection Between Mid-Michigan Communities and Beyond

- CIS RT, Grand River RT, and Flat River RT are part of the 125 mile Fred Meijer

- Connect communities and population centers, places of employment in rural, suburban, and city settings.
- The users have improved access to the Maple, Grand, and Flat Rivers for River Recreation.
- Provide improved access to Ionia State Recreation Area, Flat River Game Area, and Sleepy Hollow State Park.
- Are incorporated into other planning efforts such as municipal land use plans, non-motorized transportation plans and recreation plans.

5. Offer Opportunities for Learning About Natural, Historic, and Cultural Resources

- Users of the River Valley Rail Trails have the opportunity to learn about the area's natural, historic, and cultural resources through interpretive signage, exhibits, printed materials, and programming.
- Users will have improved access to the Flat River and the State Game and State Recreation Areas which provide opportunities to learn about sport hunting and sport fishing. ■



Trailway Design

USER EXPERIENCE AND MANAGEMENT ZONES

To address the visitor use and trail development goals identified by the public engagement process, the planning team developed three “User Experience Zones” to accommodate a variety of non-motorized transportation and recreation trail uses, activities, and experiences, through varying levels of trail development. The zones include:

Town and Village Zone may provide an area where people can walk, roller-blade, or bike along a well-defined and signed trail but not feel like they are very far away from their cars or park facilities. Trail design and development may include asphalt surface, modernized trailhead facilities and parking, picnic area, native landscaping, etc.

Requires greater level of maintenance and maintenance costs. This zone is easily accessed and high visitation levels are accommodated.

Rural Zone may be an area that is less accessible to facilities and trailheads, occurs primarily between towns through farmland and rural areas, users encounter fewer people, and uses may also include hiking and distance biking. On the CIS RT it may also include horseback riding. Trail design and development may include limestone fines or asphalt surface, wider

surface or parallel trails to accommodate equestrian use and minimize user conflicts, and greater distances between rustic trailhead facilities and parking. Less maintenance required.

Facilities accommodate moderate visitation levels. Encounters with others are likely at trailheads, points of interest and river access sites, otherwise trail use is dispersed.

Natural Zone occurs primarily between towns through wooded areas and/or along the river corridors. It may provide scenic views, access to river and river recreation, and access to other unique natural resources. Trail design and development will minimize impacts on natural resources and may affect trail surfacing, trail width, and limit some trail uses. Facilities may include rustic trailheads, scenic pullouts, boardwalks, and interpretive signage.

This zone character is natural overall; alterations are designed to blend with the natural landscape and minimize impact. Protecting and preserving natural resources are a high priority. Moderate to low visitation levels are accommodated. Trail use is dispersed but may encounter others at trailheads, points of interest and river access sites.

Based on the User Experience Zones, the planning team then factored in the corridor’s natural and cultural resources, existing physical conditions,

surrounding land uses, and other factors such as administrative and legislative policies to help define and delineate management zones. Management zoning describes the kinds of uses and levels of development necessary to support the desired user experience, resource conditions, and administrative policies. For example, highly sensitive natural areas that tolerate little if any recreational use may be managed for threatened and endangered species habitat and passive recreation activities that require limited resource disturbance and development. The three management zones, Town & Village, Rural, and Natural, illustrate differences in intended resource conditions, user experiences, level of development, and management actions. When taken as a whole, the management zones best achieve the visitor experience, resource condition, and socio-economic goals for the River Valley Rail Trails.

TRAIL DESIGN CRITERIA AND CONSIDERATIONS

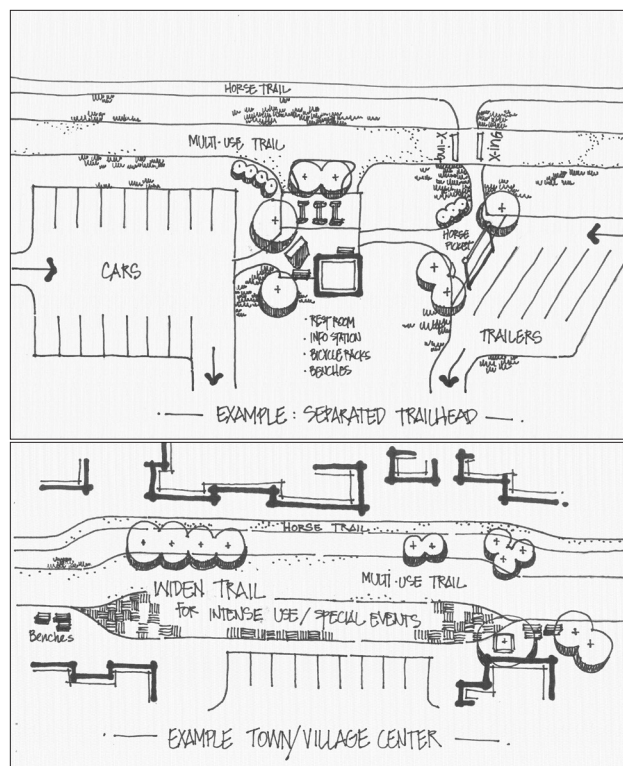
Accessibility and Non-Motorized Transportation Trail Standards

All MDNR outdoor recreation facilities that are being developed comply with the [American Disabilities Act \(ADA\) Standards for Outdoor Recreation Facilities](#). This includes the railway, trailheads, and support facilities.

Federal grant funds administered by the Michigan Department of Transportation will be used to help fund this project; therefore, it will be designed to the standards recommended by the American



Examples of MDNR-operated universally accessible trail facilities



Trailhead and Trail Design Concepts

Association of State Transportation and Highway Officials (AASHTO) Guide for Development of Bicycle Facilities and the MI Uniform Transportation Control Devices (MMUTCD) standards. Some of these requirements include that the trail be a minimum of 10' wide with 2' wide shoulders, to create the 14' clear zone. All trestle crossings will be designed to meet this 14' wide requirement.

Rail Trail Support Facilities

Three levels or types trail support facilities were identified during the CIS RT planning process. Trailhead facilities are often developed as a local initiative or in partnership with the MDNR. Local trailhead facilities that support the River Valley Rail Trails exist or are currently under development in St. Johns, Pewamo, Muir, Ionia, Belding, Saranac, and Greenville.

Trail Parking/Access Sites will be developed based on need, local involvement, and funding availability. Adequate land under public control with access to the rail trail will be required. Road

Right of Way or other public lands conveniently located along the trail route make desirable areas for these types of rustic facilities. This type of initiative must be coordinated with the local agency that has jurisdiction over the land, such as a county road commission.

– *Trail Parking/Access Sites* are intended to provide a place to park and access the rail trail along the route. Often located between towns, they offer intermediate stops providing a place to stop, rest, or spot a vehicle. These facilities will consist of several parking spaces for vehicles, a bench, wayfinding signage, and are often located at various points of cultural or natural resource interest.

– *Trailheads* include parking for approximately 10 or more vehicles, trailer parking if appropriate, restroom facilities with potable water, and trail amenities such as picnic pavilions, benches, bike racks, gateway and wayfinding signage, and other compatible community park facilities that enhance community character.

– *Trailheads with Equestrian Accommodations* includes all of the features of a Trailhead including trailer parking and will support equestrian use. Expanded offerings may include hitching rails, mounting blocks, separation between horse trailer parking and non-trailer parking for safety reasons and an initial 1/8 to 1/4 mile separate horse trail that provides an opportunity for horses to drop manure before accessing trail.

Water Trail Access

Water trails are recreational routes on waterways with a network of public access points supported by broad-based community partnerships. They provide conservation and recreational opportunities. Water trails provide a form of recreation that is growing in popularity and enable the public to locate legal access points to lakes and rivers. Water trails are primarily oriented around non-motorized boating, but also serve other public recreation uses that require access to water (such as fishing, swimming, and sightseeing).

The River Valley Rail Trails parallel and cross the Flat, Grand, and Maple Rivers and provide a unique opportunity to develop and promote water trails in conjunction with the rail trails. Building on the work that the City of Greenville has done to inventory, map, and promote paddling on the Flat River, additional assessments should be done to:

- identify any existing access and launch sites that can also function as trailheads,
- identify launch site and/or trailhead improvements,
- address paddler safety hazards and concerns,
- add signage to identify landmarks such as bridges and other physical reference points and,
- determine if additional river access is needed.

For this planning effort, two levels of existing public river access sites are identified for the Maple, Grand, and Flat Rivers:

– *Improved Launch Sites*: Sites that provide safe and easy river access for paddlers via hard surfaced launch ramp or dock, parking, and signage. May or may not include potable water or restrooms.

– *River Access Sites*: Unimproved sites which provide public access to the river either on public lands or at road ends, with limited or restricted parking,



Examples of water trail launch facilities - universal access launch, hardened launch site, kayak storage, unimproved river access site.

and where shoreline and/or river conditions, such as current, may be less than ideal.

References for launch site development are available from the [National Park Service's Prepare to Launch](#) and the [Iowa Department of Natural Resources Water Trails Tool Kit](#).

Public Lands

There are three state-owned and -managed public land areas along the trail route in Montcalm and Ionia Counties; the Flat River State Game Area, the Ionia State Recreation Area and the Grand River State Game Area. These state lands have various rules, regulations, management plans: [Ionia Recreation Area Management Plan](#), [Flat River Game Area](#), and [Grand River Game Area](#). There are active hunting zones located along various portions of the Flat River RT and the Grand River RT. Development plans should include adequate signage and efforts to identify these adjacent zones and communicate purpose and appropriate use of these state lands. Access to these public lands from the rail trail and the development of any amenities along the route such as observations areas/viewing platforms, water access/landings, signage, etc., must be coordinated with the local management to ensure new activities support and are consistent with the missions of the Game and Recreation Areas. ■



Trailway Design: Clinton Ionia Shiawassee Rail Trail

This section will delineate the trail corridor management zones, address and illustrate trail development possibilities such as trail design and surfacing, identify trail heads and facilities, and discuss possible trail connections.

Project Overview

Trailway design and development alternatives were reviewed and discussed by the Planning Committee and stakeholder groups such as the Michigan Horse Council, Michigan Equine Partnership, Michigan Trails and Greenways Alliance, and the Friends. Meetings were also held with city and village officials along the trailway to discuss possible trail use and development alternatives for their communities.

The Planning Team, Committee, and stakeholder groups all agreed with the definition and conceptual application of management (user experience) zones. The boundaries for the Town and Village Zones will be determined through further field reconnaissance and discussion with city and village officials.

Trail Design

Four trail design and development concepts were considered, including:

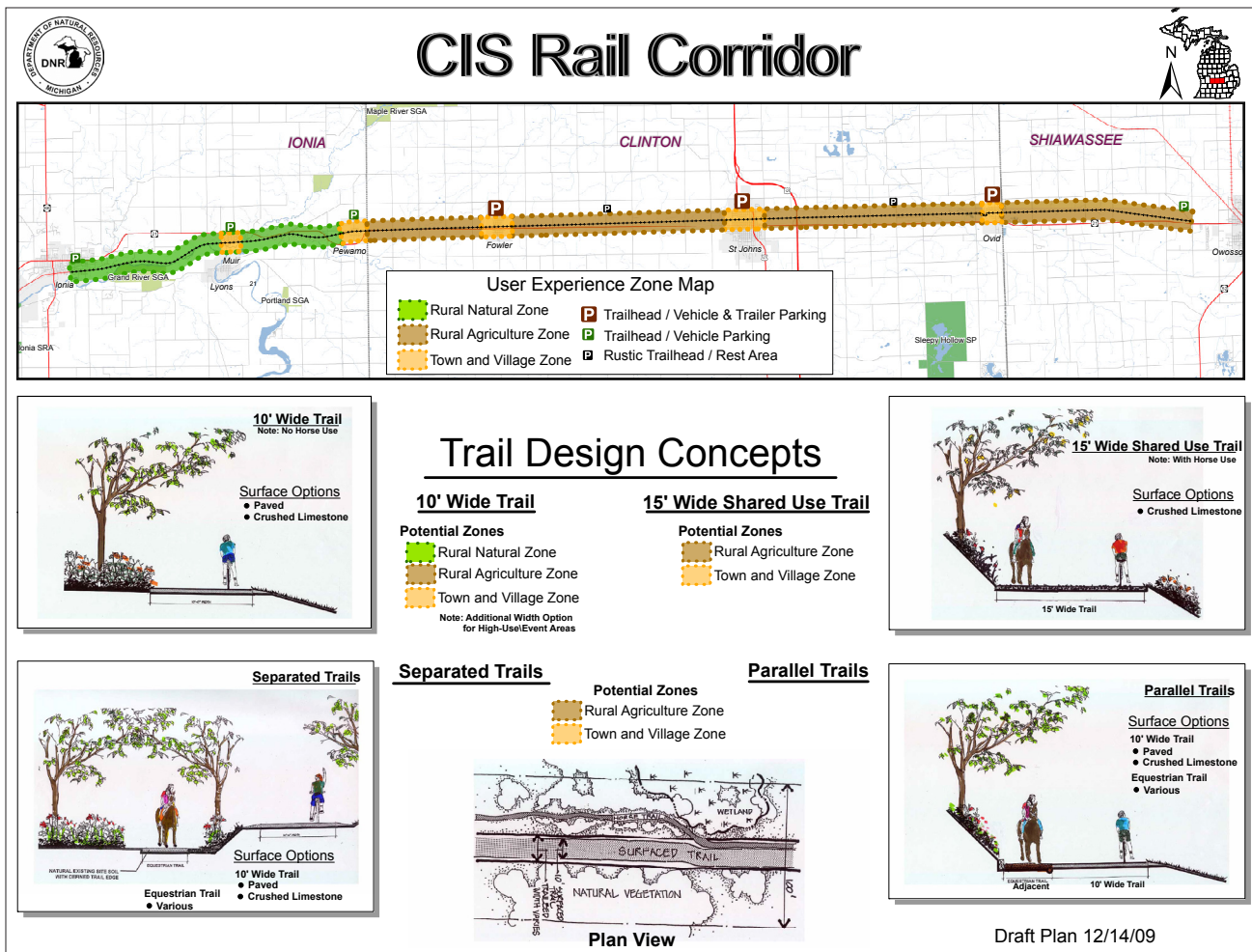
1. 10' wide trail
2. 15' wide shared use trail

3. Separate trails (divided by a vegetative buffer)
4. Parallel trails - 10' wide non-motorized trail with a separate, adjacent bridle trail

The Committee and the Friends preferred the Separated Trail Design Concept wherever possible. If resource characteristic prohibited a separate trail, they then preferred the Parallel Trails. The majority of the Planning Committee did not support the Shared Use Trail, except where there are pinch points such as bridges, culverts, and road crossings, because of their safety concern about pedestrians and cyclists being in close proximity to horse traffic.

The Equestrian Stakeholders preferred the Parallel Trails with horses on a grass surface adjacent to a 10' wide hard surface trail. Parallel Trails with adjacent grass or natural surface makes it easy for the equestrians to stay off the hard surface and keep most of the horse manure on the grass. Other equestrian trail design considerations and recommendations included:

- Any separate equestrian trail will be natural surface with a recommended minimum clearance of 5' in width and 12' vertical.
- Provide horses an open rather than screened view of other trail users so they are not spooked.



Trail design concepts for the CIS Rail Trail Corridor

If a vegetative buffer is a consideration, use only low shrubs or intermittent trees.

- If horses are to use the shoulder of the hard surface trail, both sides should be used so they are traveling in the same direction as the other trail users.
- If using separate trails consider constructing at similar grades because horses can be spooked by various distractions from above.



- Signage indicating a shared use trail etiquette (shared use triangle)

Local town and village

ordinances will affect trail use and design and vary between municipalities. For example, the City of St. John's does not allow horses through town. This is compounded by the fact that the typical 100' corridor narrows in some areas within the downtown. A bypass route around St. Johns will have to be pursued by the equine user groups. The Villages of Ovid, Fowler, and Pewamo do not restrict horses and support all non-motorized multi-use through their communities.

A majority of the Planning Committee and the Friends preferred a paved asphalt surface. Corridor improvements with paved asphalt surface are the most expensive alternative estimated at over \$100,000 more per mile than crushed stone and may be cost prohibitive. Therefore, there was general agreement that the Town and Village Zone would be 10' paved asphalt. The Rural Zone would

be crushed limestone with either a separate or parallel horse trail and the Natural Zones would be a 10' wide crushed limestone.

Other design and development considerations include railway turnouts w/ benches for resting or viewing, scenic overlooks, consistent trail signage, gateways to communities, and improved public access from the railway to the Maple and Grand Rivers.

CIS Rail Trail Development Recommendations

Additional field inventories and assessment (resource characteristics, bridges and culverts, encroachments, existing support facilities) were conducted to better determine the suitability and feasibility of the design and development alternatives.

The **Town and Village Zone** will include asphalt surface, primary trailhead facilities and parking, picnic area, native landscaping, etc. Trail surface may be wider than the standard 10' to accommodate higher use and possible events and festival type activities. The additional surface width could be enhanced by using alternative hard surface materials such as brick pavers or concrete to create a separate area and a distinct look.

The communities of Ovid, St. Johns, Fowler, Pewamo, and Muir all have existing parks or public spaces along the CIS RT in their town centers which can be further developed and enhanced as trailheads. Facilities and signage should be considered that welcome trail users into the towns and to venture off the trail to enjoy the community's scenery, heritage, and character as described in the Trail Towns section. Better access to the Maple River and improved launch sites to support paddling sports should be considered in Muir and Pewamo.

The **Rural Zone** is suitable for equestrian use from Owosso to Pewamo. Where conditions allow, the recommendation is for Separated Trails, a 10' wide limestone fines trail on the rail bed and a separated

parallel trail for horses off the rail bed. When resource conditions prohibit this design, then the recommendation is for a 10' limestone fines surface trail and parallel trail on the rail bed with varying degree of separation (buffer). Pinch points such as structural crossing (bridges, culverts) and road crossing will require all uses on the same trail surface for short stretches.

Separate equestrian trail will be natural surface with a recommended minimum clearance of 5' in width and 12' vertical. Actual trail location and degree of separation will be determined during the engineering phase. The physical conditions of the corridor will determine the most appropriate trail design. Equestrian trailheads with trailer parking could be located at outside of Owosso and in Ovid, Fowler, and Pewamo.

Rustic trailhead facilities will provide access between longer stretches of trail from Ovid to St. Johns and St. Johns to Fowler.

The **Natural Zone** between Pewamo and Ionia, along the river corridor, provides scenic views, access to rivers and river recreation, and access to other unique natural resources. Trail design and development will be a standard 10' wide limestone fines surface with 2' natural surface shoulders to



Separated and parallel equestrian trails

minimize impacts on natural resources. Facilities may include rustic trailheads, scenic overlooks, boardwalks, and interpretive signage.

Equestrian use is not recommended for the Natural Zone (Pewamo to Ionia). Natural resource conditions and physical limitations such as narrowing corridor, steep banks, long trestle bridges, and heavily wooded stretches do not consistently allow for a continuous separated or parallel equestrian trail.

Connectivity

The CIS has a number of opportunities to enhance and/or develop new connections to local parks and community assets including:

- Access for trail users and paddlers to the Maple River, a tributary of the Grand River, in the communities of Pewamo and Muir and within the Maple River State Game Area
- Access to the Maple River State Game Area and Ionia State Recreation Area for hiking, camping, hunting, fishing
- A new connection (led by equestrian groups) to Sleepy Hollow State Park, approximately 3

miles south, to access camping facilities and equestrian trails

- A new rail trail connections and extensions to downtown Owosso east to Durand

Equestrian Bypass Routes and Connections

Public road right of way and easements across private land have been used successfully in other recreational programs (such as the snowmobile) to achieve connectivity and increase riding distances. A similar approach will help achieve:

- A bypass route for horses around the City of St. Johns
- An equestrian connection from Pewamo to the Ionia State Recreation Area
- A connection from the CIS RT to Sleepy Hollow State Park

Facilities providing overnight accommodations for horses would help to create multi-day riding opportunities between the Ionia State Recreation Area and Sleepy Hollow State Park which have designated equine facilities.


The Maple River Water Trail


The Maple River is a 74.1-mile-long (119.3 km)[1] tributary of the Grand River. The headwaters are in Shiawassee County, south of Owosso, and it flows west through Clinton, Gratiot, and Ionia counties, flowing into the Grand River at Muir. Other cities it flows through along the way include Ovid, Elsie, and Maple Rapids. Although much of the River corridor is privately owned, the Maple River State Game Area has 8 unimproved boat ramps at scattered locations along the river, including a carry down launch site for paddle craft with limited parking off Fitzpatrick Road and parking, hard surface ramp, and restroom off French Road. Muir has a hard-surfaced ramp, restrooms and the site is signed. In Pewamo, there is a private campground, launch, and canoe and tube rental facility.





Improved trail surfaces, clockwise: base course of asphalt trail, limestone trail, asphalt trail


Fred Meijer Maple River Valley Rail-Trail (CIS) Concept Development Plan


 Natural Zone


 Town Village Zone


 Rural Zone


 Lakes and Rivers


 State Land


 Regional Rail-Trail Network



 Improved Launch Site

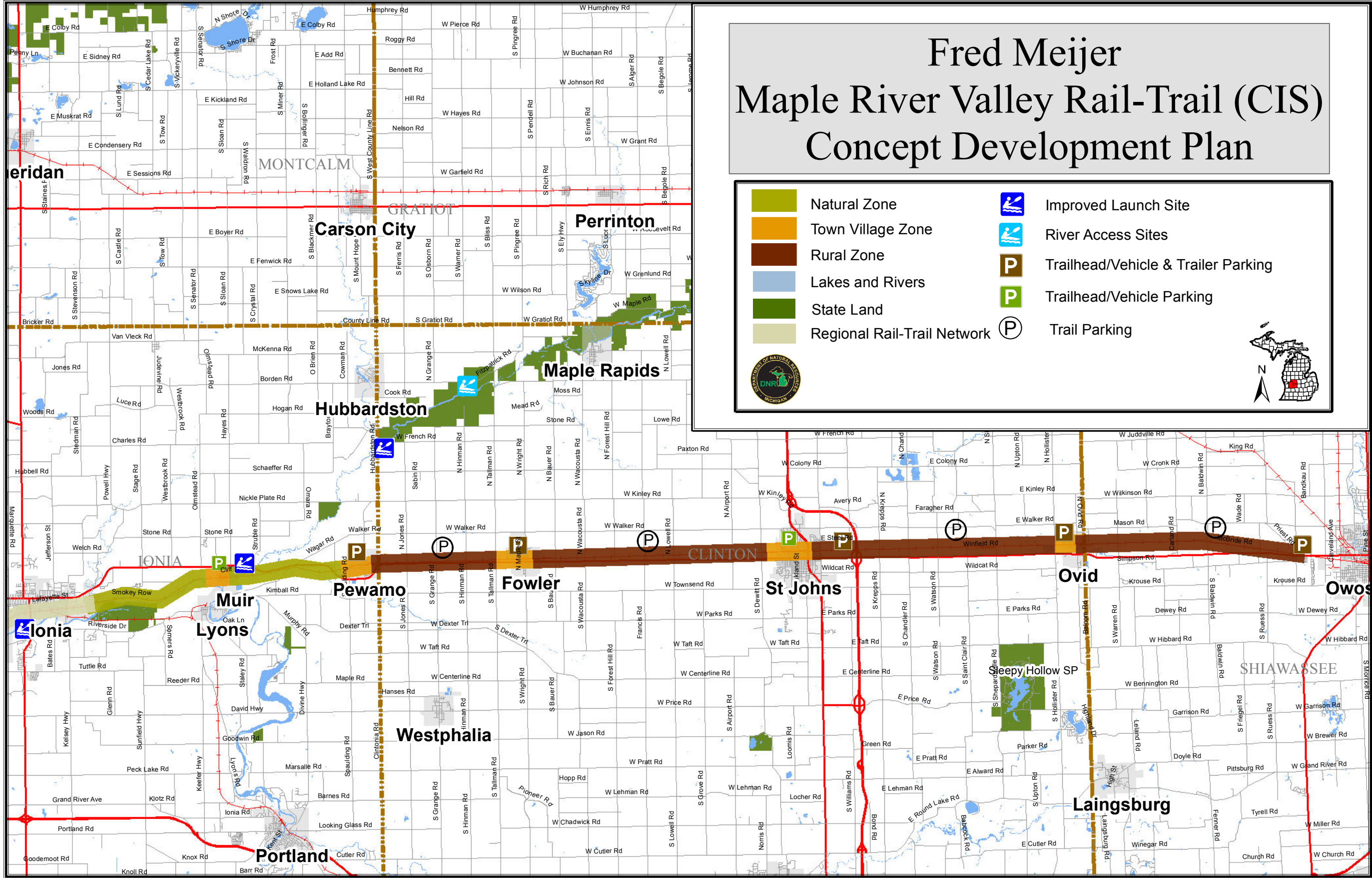
 River Access Sites

 Trailhead/Vehicle & Trailer Parking

 Trailhead/Vehicle Parking

 Trail Parking





There is very little available information on paddling the Maple River, such as float times, distances to launch sites, river conditions, etc. The opportunity to work with the [Friends of the Maple River](#), the Maple River State Game Area, and area paddlers and outfitters should be explored to assess river conditions, identify possible launch sites to improve public access, develop and distribute paddling information (launch sites, river conditions, float times), and to identify and address any safety concerns to support the development of the water trail. ■



Trailway Design: Grand River Valley Rail Trail

This section will delineate the trail corridor management zones, address and illustrate trail development possibilities such as trail design and surfacing, identify trail heads and facilities, and discuss possible trail connections.

Project Overview

Trailway design and development alternatives were reviewed and discussed by the Planning Committee including the City of Ionia, the Village of Saranac, the MDNR and various professional consultants. The consulting firm of Prein & Newhof was selected as the project engineer through a competitive bidding process to prepare trail design development plans.

While the design and development process may have utilized a different approach towards achieving goals, all recommendations are consistent with the Trailway Statement (page 14) and all applicable policies and laws.

Trail Design Considerations

The Planning Committee agreed with the definition and conceptual application of management (user experience) zones. There are three primary and distinct zones present along the corridor. The Town and Village Zone through the communities of Ionia and Saranac are separated by the Natural Zone which includes the four miles through the Ionia

State Recreation Area. The scenic 466' trestle over the Grand River serves as a “gateway” and natural divider at the west end of Ionia between the Town and Village Zone and the Natural Zone, while the Prairie Creek Bridge serves as the “gateway” divider on the east side of the city between the Grand River Valley RT and the CIS RT. The balance of the corridor from Saranac to Lowell is open and rural lending itself to the Rural Zone.

State Highway Crossing Consideration

The M-66 Michigan Department of Transportation (MDOT) right-of-way crossing in downtown Ionia located just north of the Ionia Fair Grounds presents a special design and construction challenge. The existing volume of vehicular traffic and the designated truck route status for Michigan Highway and the 100,000 plus visitors that are expected annually along the corridor will require an in depth analysis. The City of Ionia commissioned the firm of Prein & Newhof to complete a separate traffic study and analysis complete with traffic counts and recommendations for a pedestrian crossing. Various options and recommendations for the M-66 crossing are included in the study: [Dexter Street/M-66 Pedestrian Safety Study](#). The City of Ionia, MDOT and MDNR have agreed to a separated grade crossing at this location. Efforts are underway to secure additional funds for a pedestrian bridge. This will create the safest



A bridge for pedestrians ensures a safe crossing for all trail users.

crossing for pedestrians while minimizing traffic congestion.

The Natural Zone between the two communities provides for a high-quality, natural-resource-based user experience along the Grand River. Four miles of the rail trail Natural Zone lies within the Ionia State Recreation Area (Recreation Area). Special design and development consideration was given to this section of the rail corridor to ensure compatibility with the [Management Plan for Ionia State Recreation Area](#). The area between the rail corridor and the river within the Recreation Area is designated as a Primitive Management Zone. It accounts for over 540 acres and represents 12% of the park. The purpose of this management zone designation is to preserve and protect the Grand River Floodplain. In addition to the Primitive Management Zone an Ecologically Sensitive Management Zone is also present along the very eastern portion of the rail trail natural zone within the Recreation Area. This 230 acre area represents 5% of the Recreation Area and is designated for purposes of protecting the habitat of bald eagles, a heron rookery, trumpeter swans, and protected upland (grassland) birds. This Recreation Area management zone carries ‘Seasonal’ conditions for the protection of these bird species during active nesting are imposed from February 1 to July 15. A majority of the area located south of the rail corridor to the main road through the Recreation Area is designated as the Developed Recreation Zone. It

totals nearly 500 acres and represents 11% of the park. This area along the rail corridor is one of the primary locations for the mountain bike trails. The main road serves as a natural divider as the equine trails and camping facilities are located south of the road in the Natural Resource Recreation Management Zone.

There was general agreement that the Town and Village Zones in Ionia and Saranac would be paved asphalt surface. The Natural Zone between the communities would be crushed limestone. Other design and development considerations included railway turnouts with benches for resting or viewing, scenic overlooks, consistent trail signage, gateways to communities, and improved public access from the railway to the Grand River.

There was consideration for both paved trail and a crushed limestone trail surfaces. The rail trail through the Recreation Area is located primarily in the Primitive and Ecologically Sensitive Management Zones, therefore the crushed limestone surface was preferred and viewed as most compatible.

Grand River Valley Rail Trail Development Recommendations

Additional field inventories and assessment (resource characteristics, bridges and culverts, encroachments, existing support facilities) were conducted during the project engineering to better

determine the suitability and feasibility of the corridor design and development.

The following recommendations are modified excerpts from the Prein & Newhof report:

The Town and Village Zone

City of Ionia and the Village of Saranac will include 10' asphalt trail surface, primary trailhead facilities, parking, picnic areas, and native landscaping. Trail surface widths may be expanded in the future to accommodate higher use and possible events and festival type activities. The additional surface width could be enhanced by using alternative hard surface materials such as brick pavers or concrete to create a distinct look. The Hot Mix Asphalt surface will follow route generally established by the old railroad track ballast. There will be some variance to this route, especially through the linear park in downtown Ionia that will break up the “straight line” effect of the trail within the city limits. The trail will provide a convenient surface for many trail uses including roller-bladers, walkers with strollers, and families with wagons, as well as all levels of bicyclists.

A linear park is proposed from the trailhead site, just over a mile east to Cleveland Street. This corridor will be a unique portion of the trail system as it meanders through the backyards of homes in an established neighborhood. The trail alignment will include a noticeable curvature enhanced with landforms and new landscaping. Existing vegetation

along the edges of the 100' wide right-of-way will be preserved to further enhance the trail and to buffer the trail activity from the existing neighbors. Pull-off resting spaces with benches or tables will be strategically located along the two-mile park to provide respite opportunities for trail users.



A linear park enhances trail users' experience in Ionia.

Ionia Trailhead

The Ionia trailhead site, located near downtown Ionia, is a 1.5-acre parcel at the intersection of Dexter Street and Adams Street. This location will serve as a destination facility for the 10-mile non-motorized trail to or from Saranac as well as the 125 mile network. Fully developed, the site will include a multi-purpose trailhead building that provides restrooms, a covered porch for picnicking, a community room, and offices for Ionia's Chamber of Commerce. The building style will mimic the historical railroad architecture from the turn of the 19th century and be located along Dexter Street to provide a welcoming gateway into the downtown area.

Additional trailhead amenities include an 8,000 SF playground, a ¼-acre open green space, a historical railroad relic used as a focal point, parking for approximately forty cars and appropriate landscape treatment to enhance the site. Lighting fixtures, signage and site furniture will further capture the railroad theme from the historical past. The trail itself will pass through the trailhead site providing convenient access to the restrooms, picnic area, playground, green space and parking lot.



Trail development will capitalize on existing amenities, such as bridges.

Saranac Trailhead

The village is a wonderfully picturesque town with its railroad museum and quaint downtown. Although the specific details for the Saranac Trailhead are pending, the site offers an abundance of opportunities. Complete with several hundred feet of frontage along the Grand River and an existing boat launch facility, this site will serve as the trailhead for the existing Kathy Sue Ferguson Riverwalk as well as the Grand River Valley Rail Trail.

The **Rural Zone** starts at the west end in the Village of Saranac at Parsonage Street extending west through the countryside to the south east portion of Lowell. The area is rural in character, predominately farmland, woodlots, and rural residential. The trail will be 10' wide with 2' aggregate shoulders. The tread may be either limestone fines or asphalt, depending on project cost and budget constraints. This section of trail may start out with a crushed limestone tread and be paved at a future date depending on use and funding availability.

The Natural Zone

Between Ionia and Saranac will rival the most beautiful trails in the State of Michigan. The unique elevated view from the rail bed of the adjacent forested wilderness and farmland will be a popular destination. Views out over the Grand River from the trestle are breathtaking. The Natural Zone along the river corridors, provides scenic views, access to rivers and river recreation, and access to other unique natural resources.



Aerial view of proposed trailhead in Ionia.

A majority of this zone runs through the Ionia State Recreation Area. Trail design and development will be a standard 10' wide limestone fines surface with 2' natural surface shoulders to minimize impacts on natural resources. Access to existing facilities and the development of trail amenities including rustic trailheads, scenic overlooks, boardwalks, and interpretive signage within the Recreation Area will need to be coordinated with the manager.

Equestrian use is not recommended for the Natural Zone (Ionia to Saranac). Natural resource conditions and physical limitations such as narrowing corridor, steep banks, long trestle bridges, and heavily wooded stretches do not consistently allow for a continuous separated or parallel equestrian trail.

Connectivity

The Grand River RT has a number of opportunities to enhance and/or develop new connections to local parks and community assets. The communities of Ionia and Saranac have existing trail systems, parks and/or public spaces along the rail trail in their town centers which can be further developed and enhanced as trailheads. Facilities and signage should be considered that welcome trail users into the towns and to venture off the trail to enjoy the community's scenery, heritage, and character.

Connections include:

- The Ionia Fred Thwaites Grand River Trail - easterly along the former C&O railroad right-of-way from just west of Jackson Street to Mill



Aerial view of proposed trailhead in Saranac.

Street

- The Ionia County Fairgrounds - a direct link will provide important non-motorized pedestrian access connecting the fairgrounds to downtown businesses and services
- The Saranac Kathy Sue Ferguson Riverwalk
- Enhancing access for trail users and paddlers to the Grand River
- Access to the Ionia State Recreation Area for hiking, camping, hunting, fishing

Equestrian Bypass Routes and Connections

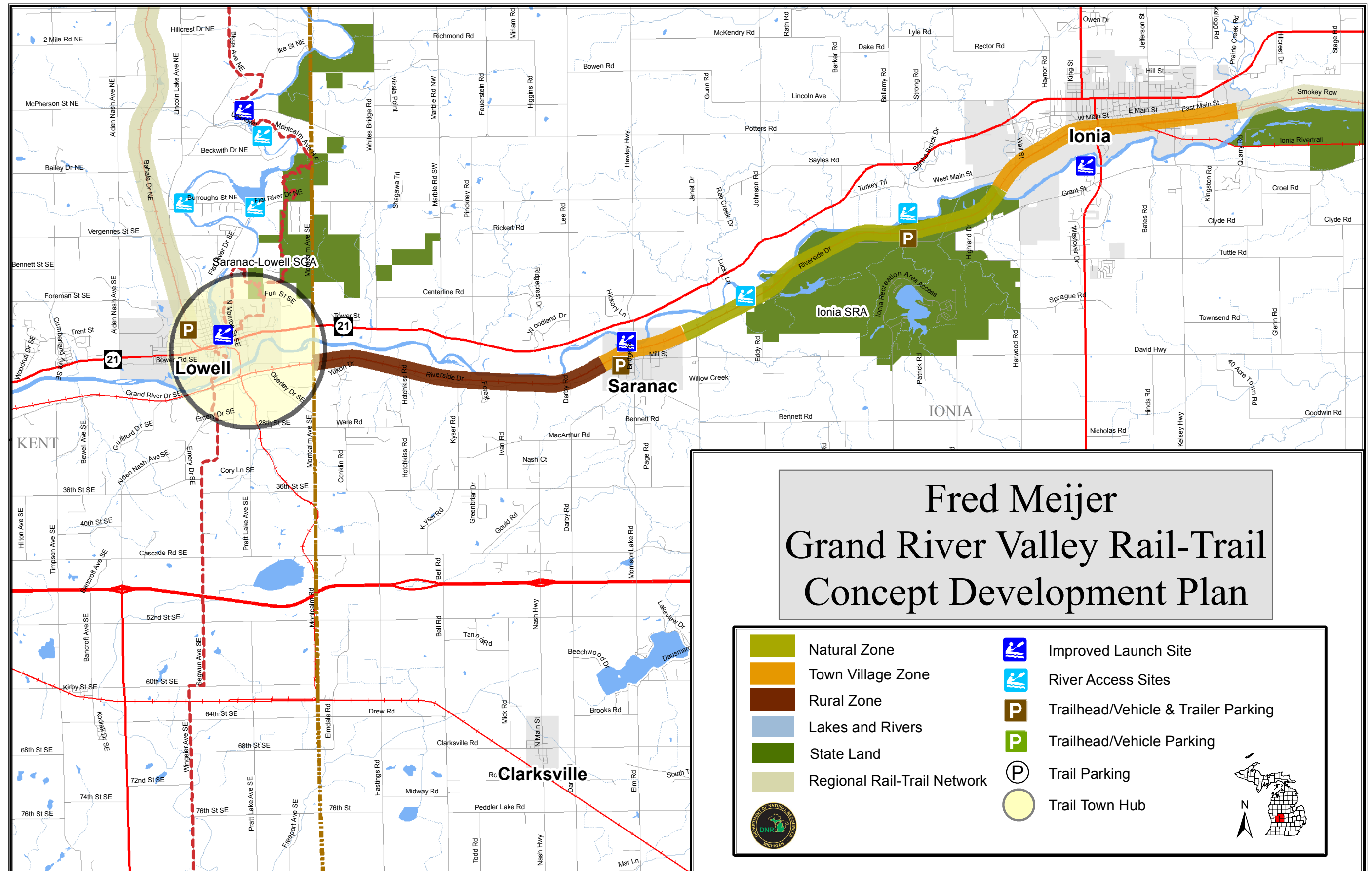
Bypass routes around the City of Ionia and the natural management zones would provide opportunities for longer riding distances and greater connectivity. The use of public road right of way and permissions from private landowners have been used successfully in other recreational programs (such as the snowmobile) to increase riding distances and achieve connectivity. Similar agreements would help to achieve the bypass around the City of Ionia which does not permit horses and also help to connect the equine facilities at the Ionia State Recreation Area to the CIS RT in Pewamo. Facilities providing overnight accommodations for horses would help to create a multi-day riding opportunities between the Ionia State Recreation Area and Sleepy Hollow State Park which both have designated equine facilities.

Grand River Water Trail Access

The 260 mile Grand River is Michigan's longest river and 2nd largest watershed (5,572 sq. miles). Efforts are underway by the [Middle Grand River Organization of Watersheds](#) to enhance the paddling experience on the Grand by providing better and safe river access sites and paddler information. The stretch from Ionia to Saranac is approximately 9 miles long and runs through the Ionia State Game Area, where there is one rustic launch site and one unimproved access site. The stretch from Saranac to Lowell is approximately 7

miles long where the Flat River, a tributary, flows into the Grand. Launch sites are currently found at the Ionia Fairgrounds (parking, hard surface ramp, signed) and communities of Saranac and Lyons (parking, hard surface ramp, signage).

There are two river access sites within the Ionia State Recreation Area; Stephens Point walk in access (unimproved) and a rustic launch site on Riverside Road. The opportunity to improve both access sites should be explored, with a possible dual purpose water and bike trailhead at Riverside Road and trail connection to campground and mountain bike facilities. ■





Trailway Design: *Flat River Valley Rail Trail*

This section will delineate the trail corridor management zones, address and illustrate trail development possibilities such as trail design and surfacing, identify trail heads and facilities, and discuss possible trail connections.

Project Overview

In January 2012 The Friends of the Fred Meijer River Valley Rail Trails, MDNR, and NPS-RTCA formalized the planning committee with representation from the cities, counties, Friends Groups, MDNR, MDOT, Authority, and agreed upon a collaborative planning process for the Flat River Valley Rail Trail Development Concept Plan. Committee members were in agreement with many of the goals and objectives that were identified for the CIS RT and adopted the user experience zone definitions which were applied to the Flat River corridor. The Planning Team met with city managers and staff from Greenville, Belding, and Lowell to discuss trail facilities and level of development within their community. The meetings also addressed the phasing of trail development and cost projections.

Although the CIS RT, the Grand RT, and the Flat River RT have incorporated many of the same goals, design standards, and development concepts there are several significant differences:

- Equestrian use is not allowed on the Flat River

RT. Motorized and equestrian use are restricted by deed on the gifted portions of the Flat River RT and the Grand River RT.

- There is greater emphasis on compatible river recreation (paddling and fishing), improving access to the Flat River and promoting the Flat River Water Trail in conjunction with the Flat River RT.
- The Cities of Greenville and Lowell are junctions or hubs for multiple trails which converge within their boundaries. Greenville is the hub for the 42 mile FMHT, the 22 mile Flat River RT, the 7.5 mile Fred Meijer Flat River Trail, and the Flat River Water Trail. Lowell is the hub for the 16 mile Grand River RT, the 22 Flat River RT, the North Country National Scenic Trail headquartered in Lowell, and the Flat River Water Trail.
- A significant portion of the Flat River RT runs adjacent to the Flat River, a state designated Natural River and through the Flat River State Game Area which may impact trail design and construction and will require minimal disturbance to the corridor's natural resources.
- The Cities of Greenville and Belding are further along in their trail planning and grant requests to develop trail and/or improve their trailhead facilities.

Trail Design Considerations and Development Alternatives

The Planning Committee suggested we show river access and water trail launch sites along the Flat River in the Development Concept Plan. The Planning Team then decided to do the same for the Grand and Maple Rivers and to promote the “pedal and paddle” concept for all three trails.

Since a significant portion of the Flat River RT runs through the Flat River State Game Area, the planning team reviewed and considered the [policies and management objectives for the game area](#) which impact trail design and development. A crushed limestone fines trail surface is recommended through the State Game Area. Considerations for the State Game Area include:

- The Flat River State Game Area is managed for wildlife habitat to support game hunting
- The Area is also managed for threatened and endangered species such as the Karner Blue Butterfly, which depends on maintained linear openings like railroad ROW's lay their eggs in ground litter and feed on wild lupine. Trail construction will have to be sensitive to the Karner Blue habitat and breeding seasons (late May and mid July). Trail engineering and construction may require input from the United States Fish & Wildlife Service.
- Recreational activities permitted include hunting, fishing, hiking, wildlife watching, bird watching, river tubing, and paddling.
- Off road vehicles, mountain bikes and horses are not allowed on State Game Area Trails. There may be a potential issue with mountain bikes accessing the State Game Area from the



Karner Blue Butterfly (threatened and endangered species) and wild lupine, found in the State Game Area.

Flat River RT.

- The river is very heavily used in summer for tubing and paddling through the State Game Area, there are three unimproved road end access sites to the Flat River that could possibly be improved launch sites in the future.
- The Area is used heavily for hunting from October 1 through December so it will be necessary to post hunting regulations and cautionary signage for trail users.

The Flat River is designated by the State as a [Natural River](#), through a program administered by the MDNR. The program was developed to preserve, protect and enhance our state's finest river systems for the use and enjoyment of current and future generations by allowing property owners their right to reasonable development, while protecting Michigan's unique river resources. The Program requires a set of development standards on private as well as public lands, that the local municipalities approved upon designation.

Trail design and development considerations due to this designation are outlined in the [Flat River Zoning Ordinance](#):

- The Flat River Zoning District is designated as 300' out from and along the ordinary high water mark of the river.
- Zoning does not apply to municipalities.
- The first 25' from the ordinary high water mark is called the Natural Vegetation Strip.
- The Natural Vegetative Strip is a protected area to be left in nearly its natural state which will require minimal impact stairs, pathways and docks to and on the water's edge.
- Setbacks for buildings are 100' from the water's edge with an additional 50' if a bluff lot.
- Permits are required for the location and size of buildings and structures such as docks, boardwalks, bridges, and river access stairs.
- Public restroom/outhouse should be a closed-system vault-type facility
- Properties grandfathered in by the State can maintain their docks and lawns to the water's edge if they choose to do so.



The Flat River's status as a 'Natural River' helps protect it.

The rail corridor runs adjacent to the river from Ingalls Road to Belding's municipal boundary and then from Belding north through the game area to approximately West Baker Road south of Greenville. Trail planners will have to work with the MDNR Natural Rivers Program Administrator on the engineering and design for this segment of the Flat River RT and Flat River water trail. This stretch of trail is included in the Natural Zone which emphasizes that trail design and development minimize impacts on the natural resources.

Development Recommendations

The **Town and Village Zone** will have 10' asphalt surface (minimum), 2' aggregate shoulders, primary trailhead facilities and parking, picnic area, native landscaping, etc., and are planned for:

- Greenville - from the end of the Heartland Trail at M-57 and Jackson's Landing south to the City's southern boundary, south of Fairplains St. and north of Fletcher Rd.
- Belding – from Bridge to Bridge, Flat River Bridge at Kiddville Rd. south to Bridge just north of M-44
- Lowell – from Vergennes Rd. near High School south to Foreman Rd. where the rail trail stops and the Lowell Connector begins. The Lowell Connector is being planned to link the Flat River RT and Grand River RT.

Trail surface may be wider than the standard 10' to accommodate higher use and possible events and festival type activities. Greenville and Lowell are considered to be trail hubs because they have multiple regional and local trails connecting within the community.



Greenville is a Trail Hub which connects local and regional trails

Greenville has two regional rail trails, the Heartland Trail entering from the northeast and the Flat River RT entering from the south. The local Fred Meijer Flat River Trail circles Greenville connecting to both rail trails creating a web of intersecting trails and access opportunities throughout the community. Although the City has multiple trailheads to try and disperse the use and avoid overloading any one facility, Jackson's Landing, below the bridge on M-57, provides access to the Heartland Trail, Flat River RT, Fred Meijer Flat River Trail, and also the Flat River Water Trail. This area may need to be expanded, which could include additional land acquisition, to provide for the construction of the Flat River RT and accommodate additional parking for trail users.

Greenville has taken the lead in promoting the [Flat River Water Trail](#) and has developed public launch sites and paddling information for trip planning and safety. There are two launch sites for paddlers, Tower Riverside Park, off Greenville Rd. and Jackson's Landing. The City Recreation Department also rents canoes and kayaks. Greenville to Lowell is approximately 28 river miles and takes from 7-10 hours to paddle, Greenville to Belding takes approximately 4-6 hours through the State Game Area and offers a very scenic and family

friendly outdoor recreation experience. There is opportunity for Belding and Lowell to collaborate with Greenville to develop and distribute uniform paddling information, address safety concerns and launch sites, and promote the use of the Flat River Water Trail.



Jackson's Landing is a paddling launch site in Greenville

Belding is uniquely defined by the three bridges that cross the Flat River. The northern bridge serves as a “gateway” and separates the city and the Flat River State Game Area. The southern bridge (which lies just north of M-44 along the Flat River) serves as the “gateway” to the city from the south. All 3 trestle crossings are deemed in good repair and proposed improvements include minor structural work to maintain the integrity of the structure and the construction of 14’ wide timber deck with railings on top of the bridge structure.

In 2000 the Belding community developed a Pathway Masterplan, as part of the “Building a Better Belding” initiative. The pathway system with riverfront access received the highest ranking for public improvements. The Flat River RT is the spine of the pathway system and connects to the Central Riverside Park and walking trail, Water Street Park and the Silk City Nature Trail. It also connects to the downtown sidewalk system, trail friendly businesses, and a series of unique buildings and public spaces including the fully restored historic Depot and Belrocton Museum. The Depot currently serves as a community center and meeting facility with ample parking which could be easily be incorporated into a primary trailhead facility. There are future plans to connect with the Lightning Bend Preserve, a popular nature preserve

with one mile of river frontage, and is adjacent to the Flat River State Game Area.



City of Belding Parks, Flat River, and trail connections.

The City was awarded a \$1,016,000 Federal Transportation Enhancement Grant from MDOT and a \$300,000 Recreation Trails Program MDNR grant (March 2013) to develop the 2.2 mile section of trail which begins at the north end of the city at Long Lake Road and concludes at the south end of the city, ending at Wells Road. The remaining project costs will be covered by the City and private donations.

The total project funding is estimated at \$1,500,000. Engineering and design will be performed throughout the spring, summer and autumn of 2013, with construction of the trail beginning in spring 2014.

The stretch of the Flat River from Greenville to Belding is a popular stretch, as mentioned above, for paddling. As you approach Belding, paddlers encounter an improved boat launch at East Riverside Park and if they continue on, must portage around the Belding Dam (Main and Water Streets) at the Water Street Park. There is a launch site in the park below the dam, for paddling downstream of Belding. An additional water trail launch site is being considered for Lightning Bend

Park.

Lowell is the terminus for two regional rail trails the Flat River RT entering from the north and the Grand River RT from the east. The North Country National Scenic Trail administered by the National Park Service also passes through Lowell. The Lowell Area Recreational Authority (LARA) comprised of the City of Lowell, Vergennes and Lowell Townships have been actively planning a local trail network and multiple trailhead facilities. While efforts are underway to identify and develop a primary “direct” route to connect the trails, there are sidewalks and local streets through residential areas and the downtown business district that provide trail access and connectivity. Lowell envisions itself as a “Trail Center” or Hub where public parking, restroom facilities, points of interest, public spaces and places, shops, goods, and services are available for trail users throughout the town connected by a series of trails, walkways and pedestrian friendly local streets.

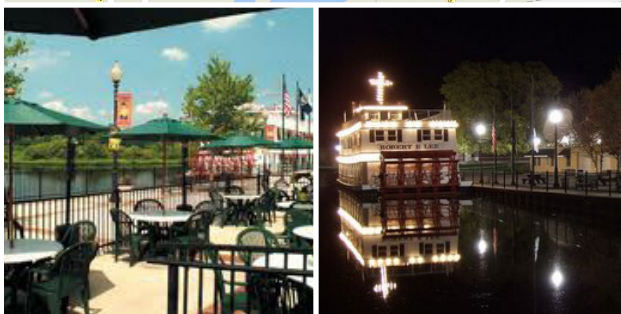
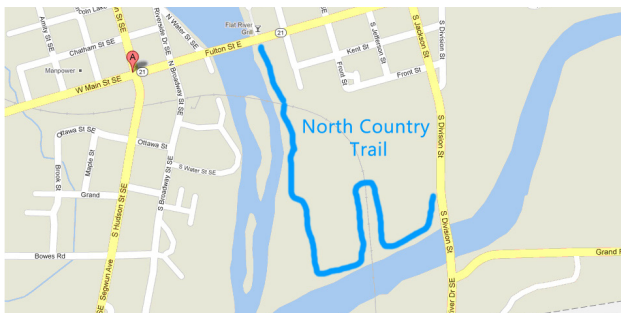
The **Rural Zone** starts from where the rail trail corridor departs from the river, south of Smyrna (between Button and 5 Mile Rd.) and extends south to Vergennes Rd. at the north end of Lowell. The area is rural in character: predominately farmland, woodlots, and rural residential. The

trail will be 10’ wide with 2’ aggregate shoulders. The tread may be either limestone fines or asphalt, depending on project cost and budget constraints. If trail development is phased and as budgets allow, this section of trail may start out with a limestone fines tread and be paved at a future date. Because this zone is less accessible to trail users, trail use will be dispersed and may include hiking and distance biking. Trail design and development should incorporate greater distances between rustic trailhead facilities and parking, therefore less maintenance is required.

The **Natural Zone** occurs primarily where the trail parallels the Flat River, within the Flat River State Game Area from Fletcher Rd. to the Bridge north of Belding near Long Lake Road, and then again from the Bridge at M-44 south of Belding along the river to where the rail trail departs the river between Button and 5 Mile Rd. This stretch of the trail provides scenic views, access to river and river recreation, and access to other unique natural resources. Trail design and development will have to take into consideration the Natural Rivers designation requirements, the Flat River State Game Area Management objectives, and the Karner Blue Butterfly Threatened and Endangered Species status. Trail planners will have to work with the MDNR to minimize impact on natural resources which may affect trail surfacing, trail width, and limit some trail uses. Dispersed moderate to low trail use is anticipated along this scenic and natural stretch. Facilities should be designed to blend with the natural landscape and may include scenic pullouts, river access sites, boardwalks, and interpretive signage.

Connectivity

The Flat River RT has a number of opportunities to enhance and/or develop new connections of local and regional significance. The communities of Greenville and Belding have existing trail systems, parks and/or public spaces along the rail trail in their town centers which can be further developed and enhanced as trailheads.



Lowell is a trail hub connecting national, regional and local trails



Natural zone is a great place to enjoy the scenery.

In Lowell, LARA has been actively planning, raising funds to make the major connection between the Grand River RT and the Flat River RT. The two rail corridors are connected by a portion of active railroad, a rail with trail connection is recommended as a long term solution. Facilities and signage should be considered that welcome trail users into the towns and to venture off the trail to enjoy the community's scenery, heritage, and character.

[The North Country National Scenic Trail \(NCNST\)](#) is a 4,600 mile trail administered by the National Park Service in cooperation with Federal, State, and local agencies, as well as private volunteer organizations, and which travels from New York to North Dakota. Over 2,000 miles of the trail is open to the public and when completed it will be the longest continuous trail in the United States. The NCNST heads north from Middleville and the Middleville State Game Area into the City of Lowell. Lowell is home to the headquarters of the NCNST and the North Country Trail Association. There is the opportunity to connect the River Valley Rail Trails to the NCNST and an extensive national system of long distance trails.



North Country National Scenic Trail

Other connections to local parks and community assets include:

- The Lowell to Elmdale state rail trail will connect the Flat and Grand River RT's to parks and trails in southern Kent County.
- Local community trails in the Greater Grand Rapids Area (Ada, Cascade, and Grand Rapids Township) will help connect the River Valley RT system to the extensive West Michigan rail trail network.

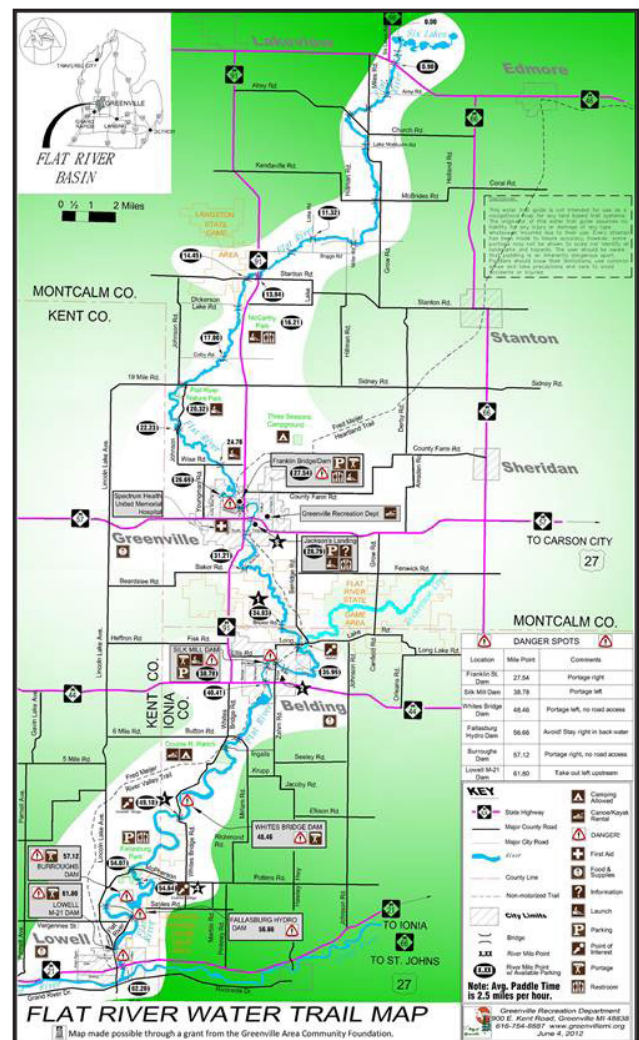
Flat River Water Trail Access

Much of the Flat River is great for paddling, especially in the spring and early summer; the 28 mile stretch (7-10 hours) from Greenville downstream to Lowell is the best. A moderate current, changing bottom types, vegetative cover, fish and wildlife, and a historic covered bridge make this an enjoyable stretch to paddle. The Fallsburg Bridge is on the National and State Registers of Historic Places. Efforts are underway to promote the Flat River Water Trail and enhance the paddling experience by providing safe and better river access and paddler information. There are two canoe liveries, 6 improved launch sites, and 2 sites which need improvement located at White Bridge Rd and in the State Game Area. There are five portages on the Flat River: Greenville, Belding, Burroughs, Lowell Dam, and Old Smyrna Dam.

Universal access launches should be considered in Greenville, at the Jackson Landings site, and in Belding before the dam at the Lightning Bend Preserve or the East Riverside Park. The Belding Recreation Plan calls for improving river access at both sites. This would allow a 4-6 hour (approx. 12 miles) trip for mobility impaired paddlers.

Better coordination between the cities of Greenville, Belding, and Lowell to provide uniform public information (launch sites, river conditions, float times), address safety hazards and paddler concerns, and identify launch site and/or trail head improvements would further enhance and promote the Flat River Water Trail.

The **Paddle to Pedal** is a one day adventure tour held by the Friends of the River Valley Rail Trails to promote the bike trail-water trail recreation experience. It starts at the Water Street Park in Belding with a 2-2.5 hours paddle down the Flat River to the Double RR Ranch just south of Smyrna. After the float, participants transition to a bike ride that ends at Fallasburg Park just north of Lowell. This event could be expanded to include the cities of Greenville and Lowell to better promote the Flat River Valley Rail Trail and Water Trail. ■



Flat River Water Trail

Fred Meijer Flat River Valley Rail-Trail Concept Development Plan

Natural Zone

Town Village Zone

Rural Zone

Lakes and Rivers

State Land

Regional Rail-Trail Network

Improved Launch Site

River Access Sites

P

Trailhead/Vehicle & Trailer Parking

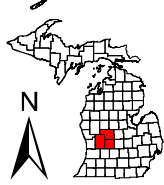

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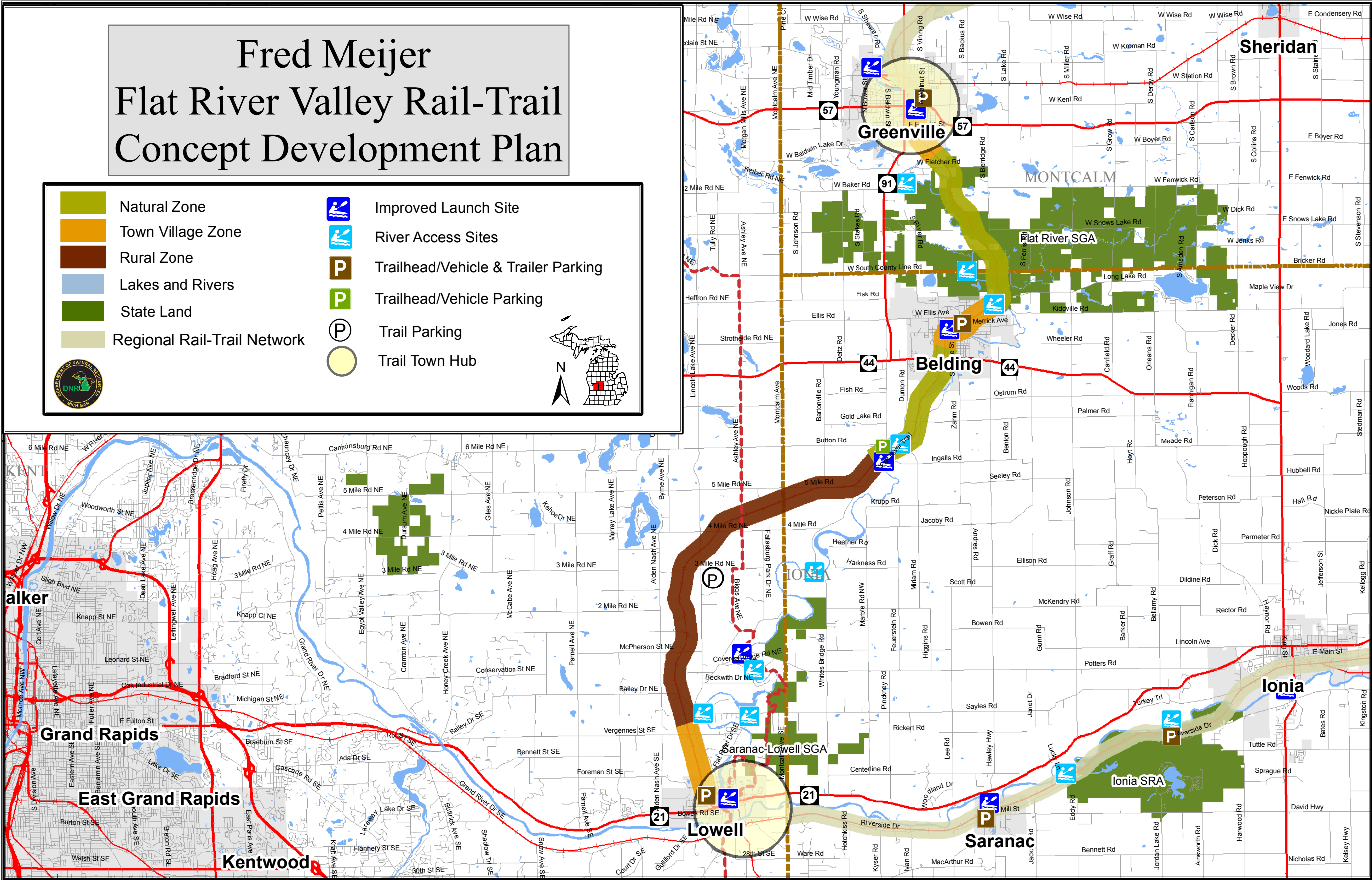
Trailhead/Vehicle Parking

P

Trail Parking

Trail Town Hub







Creating a Unified Regional Network

PROJECT BRANDING AND REGIONAL MARKETING


Branding

A goal of the River Valley Rail Trails is to have a unified regional marketing approach to help create a tourism destination. Developing visible connections along the land and water trails and within the trail towns can help define the region and acknowledge a sense of place. This visual link and graphic identity (often referred to as branding) greets people, both residents and visitors alike, and leads them to the special places within the communities or along the trails. If done well, project branding can unify and strengthen regional identity through graphic standards, signage standards, consistent trail amenities, and cohesive interpretive themes and stories.

Developing an easily navigable and understandable brand identity for the River Valley Rail Trail system should be considered and applied to signage for the land and water trail system and trail amenities such as community gateways. For example, the 141-mile [Great Allegheny Passage Trail](#) system has become a major attraction in southwestern Pennsylvania and western Maryland, where tourism from the trail is valued at over \$40 million per year (2008) and growing [Great Allegheny Passage Economic Impact Study (2007–2008)]. The Trail Town

Program, in partnership with the Allegheny Trail Alliance and several participating communities, redefined signage on the trail, both in terms of message and design, and worked to develop new sign standards and protocols. The graphic identity establishes the “Passage” as a unified and significant trail system and as such encourages greater trail use as well as tourism in the adjacent trail town communities. See examples below from the Great Allegheny Passage Signage Guidelines.

Another example is from the [Iron Ore Heritage Trail](#), a 48 mile trail in Michigan’s Upper Peninsula, which travels from Marquette to Republic. It is a year-round trail that connects communities and people to the region’s historic sites and human stories. Through a multitude of interpretation methods, they share the story of the Marquette Iron Range and the over 160 years of mining ore that changed the landscape of Marquette County and the United States. The trail signs are made from the

Official Logo Formats		Logo Colors	
		GAP Red PMS 201 C=0, M=50, Y=32, K=14	
		GAP Blue PMS 313 C=40, M=0, Y=4, K=7	
		GAP Yellow PMS 141 C=0, M=10, Y=26, K=0	
		Black K=100	

Standard logo format and color palate to maintain consistent brand appearance



Iron Ore Heritage Trail signs and sculptures tell the story of mining iron ore

iron, which was mined in the region, and enhances the interpretive story. They use art effectively along the trail to tell the stories and enrich the trail experience for both tourists and residents, such as the school groups who frequent the trail to access the historic sites and learn about their area mining history.

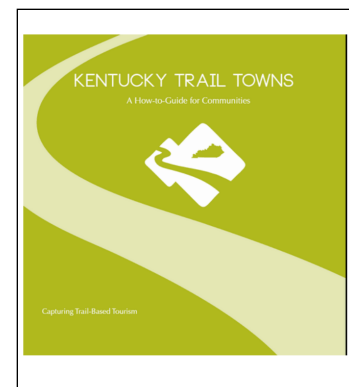
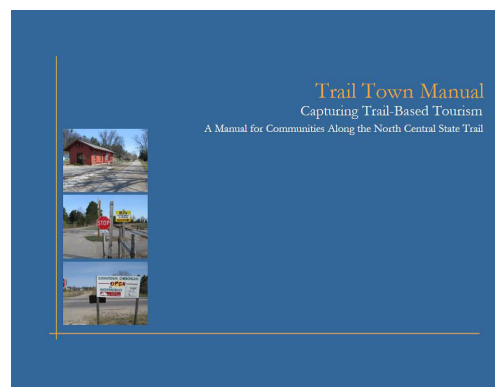
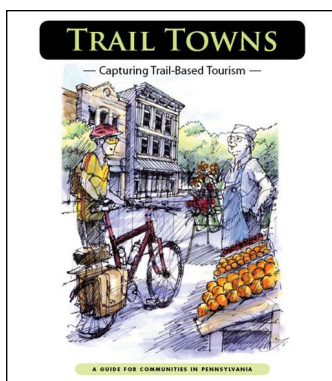
Trail Towns

Trails have proven to be sought-after facilities for most communities because they not only increase nearby property values but they contribute to sense of place and maximize the economic potential of trail based tourism. A goal for the River Valley RT

is to benefit and enhance the local economies by drawing people from around the state and out of state because they provide a distinctive and attractive experience. Communities around the country and here in Michigan are increasingly utilizing the ‘Trail Town’ model of economic revitalization that places trails as the centerpiece of a tourism-centered strategy for small town revitalization.

The “Trail Town” concept was developed by the Allegheny Trail Alliance, a coalition of trail organizations along the Great Allegheny Passage, a 141-mile multi-use trail running through Pennsylvania and Maryland. A “Trail Town” is a destination along a distance trail, whether a rail trail, water trail, or hiking trail, which caters to various trail users, both residents and visitors, where the trail is an integral and important part of the community. Trail Towns provide trail users with goods and services they need and an inviting place to venture off the trail to enjoy the community’s scenery, heritage, and character. The local communities along the River Valley RT network are encouraged to work in cooperation with the MDNR and friends groups to pursue the Trail Town strategy.

Information about how a community can successfully become a “trail town” is available from the “Trail Towns, Capturing Trail Based Tourism, A Guide for Communities in Pennsylvania” and from LIAA, a state-wide land-use nonprofit organization, who developed a Trail Town Manual for Communities Along the North Central State Trail (Michigan).



Make your town a Trail Town: click on a cover to view a Trail Town manual.

Trail Hubs

Trail Hubs are expanded versions of Trail Towns. The primary difference is that Trail Hubs often have multiple regional and local trails connecting within the community. Collectively they form a wide-ranging network of trails and public walkways that offer multiple locations/facilities to access and support the trails. They often have multiple trailheads.



Traverse City is considered a Trail Hub

Greenville and Lowell are examples of hubs for different reasons: Greenville has two regional rail trails, the FM Heartland Trail entering from the northeast and the Flat River RT entering from the south. The local FM Flat River Trail circles the community connecting with both rail trail creating a web of intersecting trails and access opportunities throughout the city. Multiple trailheads, trail parking and trail access points are also dispersed throughout the community to minimize overloading of a single facility.

Lowell is the terminus for two regional rail trails the Flat River RT entering from the north and the Grand River RT from the east. There is currently no direct trail connection between these two trails. Local streets, sidewalks, and the local trails serve as the connectivity. The Lowell Area Recreational Authority comprised of the City of Lowell, Vergennes and Lowell Townships have been actively planning a local trail network and trailhead facilities. The North Country National Scenic Trail (4,600 miles) administered by the National Park Service and the North Country Trail Association also passes through Lowell which serves as their National headquarters.

TRAIL CONNECTIONS AND CONNECTIVITY

Another goal for the River Valley Rail Trails is to “Provide a Non-motorized Trail Connection between Mid-Michigan Communities and Beyond.” Opportunities exist to develop connections between the 125 mile Mid-Michigan Rail Trail network and other trail systems, public lands, and river corridors/water trails. These regional connections help form Michigan’s Statewide network of trails.

Trail Network

There are several ongoing efforts to extend and grow the 125 mile regional network. This includes the possibility to connect the CIS RT to the City of Owosso and beyond extending southeast to the community of Durand. This would add 12 miles of rail trail to the regional system. There are a number of township trail systems that offer opportunities to connect the Mid-Michigan Rail Trail network to another state rail trail network that provides over 250 miles of public rail trail in West Michigan and includes the White Pine, Musketawa, Kal Haven, Hart Montague, Grand Haven, Paul Henry Thornapple, Kent Trails, and others.

The MDNR is in the process of acquiring an additional five miles of rail trail from Lowell south to Elmdale. This segment of rail trail helps to connect Kent County Parks and Trails in the southeast portion of the county while helping to advance efforts of the North Country National Scenic Trail. Over 2,000 miles of this trail are open to the public and when completed it will be the longest continuous trail in the United States. In the City of Lowell, there is the opportunity to connect the River Valley Rail Trails into the extensive national system of trails.

Long Distance Hiking and Biking

The State and National trail networks provide opportunities for long distance hikers and bikers to stay at overnight accommodations in the

towns or camp at a variety of public and private campgrounds along the way. Trail users along the Fred Meijer River Valley Rail Trails will find public campgrounds at the following facilities:

- Ionia State Recreation Area
 - Ionia Equestrian Rustic
 - Ionia Group
 - Ionia Modern
- Sleepy Hollow State Park
 - Sleepy Hollow Modern
 - Group
 - Equestrian
- Bertha Brock Park, Ionia County

Pedal and Paddle

Because the River Valley Rail Trails parallel either the Grand River or a tributary of the Grand, there is tremendous potential to develop a Pedal and Paddle recreational experience, especially along the Flat and Grand Rivers. People can “spot a bike” at a takeout site along the trail down river, drive back up to the launch site, paddle the river to their destination/takeout, and ride their bike back to get their car and retrieve their kayak/canoe. The River Valley Friends have hosted several pedal and paddle events on the Flat River in the past which have been successful and more will be planned as the trails are developed and launch sites improved to create a distinctive recreational destination. ■



Pedal, paddle!



Trail Implementation

The three primary elements of Trail Implementation are Engineering, Project Funding and Construction. The cost to engineer and construct a trail will vary based on the surface materials and other unique project characteristics such as road and drive crossings, bridges and culverts, and attention to other sensitive items such as cultural, historical and natural features. Trail construction is often accomplished in multiple segments. Portions of the River Valley Rail Trails including the Ionia to Saranac, Ionia to Owosso, and a segment within Belding are being developed simultaneously with this planning initiative as funding becomes available. The following summary provides an overview of the implementation process.

ENGINEERING

Engineering can be divided into two basic categories, design engineering and construction engineering.

Design Engineering involves the preparation of construction bid documents including technical drawings and specifications required to build the trail project based on the Design Concept Plans. Pre-engineering work such as surveys (site, topographic, boundary) and other detailed studies for bridges, structures, traffic, etc., may be necessary to help guide design. The construction bid documents will specify trail width and surface materials, layout,

safety signage, road crossings, bridges, culverts, site grading, drainage, and landscape restoration. Detailed cost estimates are refined based on the quantities and units of measurement derived from the bid documents. The project is issued for bid once construction documents are complete. A pre bid meeting (either optional or mandatory) may be beneficial based on the complexity of the project.

Construction engineering occurs during project development. The project engineer will review contracts, shop drawings, and provide onsite inspections required to verify quantities, construction methods and materials meet the specified requirements. Construction engineering also includes review and approval of contractor payment requests, preparation of punch lists items prior to project completion and final inspection.

Engineering studies and the construction engineering have been completed for the fifty miles of corridor from Saranac to Owosso, and the Belding section.

The following sections of corridor will require engineering:

- Saranac to Lowell – 6 miles
- Lowell Connector – route to be determined
- Greenville to Belding – 5 miles
- Belding to Lowell – 13 miles

FUNDING

Funding to improve the eighty miles of rail trail from Greenville to Owosso will require a comprehensive strategy utilizing state and federal grants, contributions from the local units of government, and other private funds. The initial budget for trail development that includes paved surface through each of the Town Village Zones and crushed limestone for the Rural Zones and the Natural Zones is \$12,500,000.

DEVELOPMENT BUDGET

<i>Trail</i>	<i>Miles</i>	<i>Project Budget</i>
Ionia to Saranac	10	\$1,825,000
Ionia to Owosso	42	\$5,280,000
City of Belding	3	\$1,580,000
Lowell -Greenville	18	\$1,920,000
Saranac to Lowell	6	\$495,000
Lowell Connector	3	\$1,400,000
Total		\$12,500,000

FUNDING STRATEGY

State rail trail development is typically funded through competitive grant programs. Two of the most popular programs are the Michigan Natural Resources Trust Fund (MNRTF) program and the Transportation Alternatives Program administered by the MDOT. Both programs require some level of match funding, 25 percent minimum for MNRTF and a range of 20 percent minimum for Transportation Alternatives Program (TAP) to a 50 percent required match for requests over \$1,000,000. The maximum grant amount for development from the MNRTF is \$300,000, there is no maximum amount for the Transportation Alternatives Program grants. Due to the competitive nature of both grant programs any money that is raised locally and privately will be an extremely important component in the funding mix. A comprehensive funding strategy that utilizes multiple sources and grants is recommended to achieve an efficient and expedited build-out scenario. The following example suggests target

funding amounts (to be spread over a 3-5 year period) from the various grant programs and sources.

FUNDING SOURCES

<i>Source</i>	<i>Amount</i>
MDOT Enhancement/TAP	\$6,455,000
Natural Resources Trust Fund	\$1,800,000
Recreation and Trails Program	\$600,000
Local Community Contributions	\$295,000
Private	\$3,350,000
Total	\$12,500,000

CONSTRUCTION

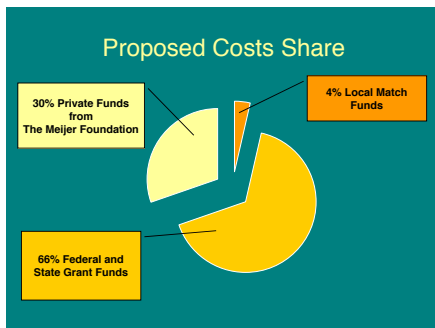
Construction will happen in multiple phases based on funding availability, geographic boundaries and the specific scope of work. The average length of time to improved state owned rail trail surfaces for non-motorized use typically exceeds ten years. The eighty miles of River Valley Rail Trail improvements have been a priority and are on an accelerated schedule due in part to the tremendous interest, community support, and from the generous financial contribution from The Meijer Foundation.

CIS RT CONSTRUCTION MODEL

The MDNR secured grant funding for design engineering from the Recreation Trail Program (RTP) and has contracted for these services through a competitive bidding process. The MDNR had an inventory and analysis performed for the existing bridges and trestles located along the 42 mile corridor ([the Ionia to Owosso Rail Corridor Bridge Investigations August 2011 prepared by Prein & Newhof](#)). This work includes an evaluation of the structural integrity and aesthetic qualities of each structure, as well as recommendations for improvements to restore and extend the service life of the structures for multi-use recreation. The study includes cost estimates for the immediate and long range needs.

Phase One Scope of Work:

Construction shall consist of approximately 8 miles of 10' wide paved asphalt trail surface with a 2' shoulder clearance safety zone on each side through the towns of Muir, Pewamo, Fowler, St. Johns, and Ovid. The towns will be connected by a 10' wide crushed limestone surface trail with a 2' shoulder clearance safety zone on each side. There are nine bridges and trestles along the 42 mile corridor that are also included in this scope of work. The estimated preliminary budget for construction is estimated at \$5,280,000. The bridge and trestle improvements for this project are estimated at \$1,400,000. This includes over \$500,000 in repairs, replacements and repainting to prepare the structures for the bridge decking and railings to make it ready for recreational trail use. The Mid-West Michigan Trail Authority pledged an additional \$50,000 toward this project bridge restoration and maintenance. The project is scheduled for bid and construction in 2014.



CIS RT CONSTRUCTION FUNDING SUMMARY

<i>Source</i>	<i>Amount</i>
State and Federal Grants	
MDOT Enhancement	\$2,400,000
Natural Resources Trust Fund 2012	\$600,000
Natural Resources Trust Fund 2011	\$300,000
Recreation Improvement Fund	\$200,000
Local Community Match	
Towns and Villages	\$50,000
Townships	\$30,000
Counties	\$45,000
Friends of the CIS	\$55,000
Private Funding	
The Meijer Foundation	\$1,600,000
Total Project Budget	\$5,280,000



Trail amenities and universally-accessible support facilities, such as picnic areas and shelters, restrooms, and interpretive signage.

Phase Two Scope of Work:

This phase consists of 28 miles of separate bridle trail within the 100' corridor from Owosso to Pewamo. A separate bypass route around the City of St. Johns will be required; it has not been included in the cost estimate. The area will be cleared and brushed as needed to provide for horse travel along the natural surface through the Rural Zones between the communities. Horse-friendly accommodations and separate travel surface for horses through the town village zones in Ovid, Fowler, and Pewamo are recommended. Active involvement from the equine community will be required for the staking and layout of the bridle trail within the corridor and the bypass route around St. Johns.

Bridle Trail Development

28 miles @ \$8,500 per mile =
Total Project Cost \$238,000

GRAND RIVER RT CONSTRUCTION

The MDNR is collaborating with the City of Ionia, the Village of Saranac, and Ionia County to secure grant funding for the design engineering and construction of the ten miles of rail trail from Ionia

to Saranac. Grant funding from the Recreation Trail Program (RTP) was secured and the city contracted for engineering services through a competitive bidding process. Work is expected to be issued for bid in 2013. The trestle bridges for this section of trail were evaluated as part of the engineering and included an evaluation of the structural integrity and aesthetic qualities of each structure, as well as recommendations for improvements for multi-use recreation.

Phase One Scope of Work:

Phase one construction shall consist of approximately 5 miles 10' wide paved asphalt trail surface with a 2' shoulder clearance safety zone on each side through the towns of Ionia and Saranac. 5 miles of crushed limestone surface improvements 10' wide with 2' shoulder clearance safety zone on each side will connect the paved sections and include over 730' of bridge decking and railing improvements. The following preliminary budget for construction has been established at \$1,825,000 based on a variety of data sources.

GRAND RIVER RT CONSTRUCTION FUNDING SUMMARY

<i>Source</i>	<i>Amount</i>
MDOT Enhancement City of Ionia	\$950,000
MDNR -RTP	\$300,000
MNRTF Ionia County	\$300,000
Local Match	\$60,000
The Meijer Foundation	\$215,000
Total	\$1,825,000

Phase Two Scope of Work:

The City of Ionia contracted with Prein & Newhof to perform a Traffic Study at the trail crossing location on M-66 located just north of the Ionia County Fairgrounds. The study noted that a pedestrian crossing at M-66 would be challenging and included several recommendations to improve crossing opportunities. One of the methods was to create a separated grade crossing by building a pedestrian bridge. This would create the safest alternative for trail users and minimize any traffic congestion due to trail use.

The bridge would utilize the existing railroad alignment to build up the grade though landforms to minimize the length of the bridge structure. This cost effective approach would enable a bridge to be constructed for approximately \$500,000. Efforts are underway to secure the necessary additional funding for this scope of work.

FLAT RIVER RAIL TRAIL CONSTRUCTION

The River Valley Friends and the City of Belding worked to expedite the first phase of construction on the Flat River RT. Both MDOT and the MDNR collaborated to identify grant funding that enabled an accelerated construction schedule for the segment of rail trail within the city. Development of 2.2 miles and three major bridge structures crossing the Flat River define the limits for this construction. The City of Belding contracted for engineering services through a competitive bid process and the firm of Williams & Works was awarded the engineering contract.

Phase One Scope of Work

Construction will consist of bridge improvements including any necessary structural repairs and the addition of decking and railings required for recreational use. Trail surface improvements between the three bridges will be paved asphalt 10' in width with 2' shoulder clearance safety zones on each side. The northern most bridge serves as the "gateway" and natural transition to the Flat River State Game Area. Surface improvements north of this bridge to Long Lake Road will change to 10' wide crushed limestone with 2' shoulder clearance safety zones on each side. The following preliminary budget for construction has been established at \$1,500,000 based on a variety of data sources.

FLAT RIVER RT CONSTRUCTION FUNDING SUMMARY

<i>Source</i>	<i>Amount</i>
MDOT Enhancement City of Belding	\$1,016,000
MDNR – RTP	\$300,000
Local Match	\$25,000
The Meijer Foundation	\$92,000
Other	\$67,000
Total	\$1,500,000

TRAILHEAD CONSTRUCTION

This funding model does not address any trailhead support facilities. Trailhead planning and development initiatives are recommended to occur independently and cooperatively with the trail surface improvements. Local communities along the route are encouraged to plan and develop trailheads and support facilities within their communities to serve the trail users. Existing public and private facilities often provide instant solutions (either temporary or even permanent) such as Departments of Public Work facilities, township halls, municipal offices, schools, churches, and even partnerships with local business can provide places to park access the trail and obtain essential services. Longer range plans may involve land acquisitions and the development of parking, restroom buildings, pavilions, shelter buildings, and other trail amenities. ■



New trailhead at Pewamo welcomes trail users.



Trail Operations, Management, & Maintenance

SUSTAINABLE PARTNERSHIP MODEL

The MDNR has advocated for the creation of a sustainable model for rail trail ownership, development, maintenance, and management for the 125 mile rail trail network. This will provide continuity, maximize efficiencies, and capitalize on partner strengths. The State of Michigan as title holder of the property brings expertise and capacity to address all legal and landownership matters. The MDNR provides comprehensive knowledge and expertise in the areas of resource management, stewardship, forestry, fisheries, wildlife, and recreation planning to help provide guidance for the development of the trail.

The formation of the Trail Authority brings communities and local units of government together for a collaborative management and maintenance approach that creates a seamless public recreation corridor. The “Friends” Groups, the heart and soul of the rail trail, bring passion, dedication, and the personal commitment for trail up-keep and special projects. The final and essential piece of this model is the Fred Meijer Mid-West Michigan Rail Trail Endowment that will generate a sustainable source of annual funding for routine maintenance and management of the 125 mile rail trail network.

The Mid-West Michigan Trail Authority was created in May 2010 under the [Urban Cooperation Act 1967 Act 7](#), to enter into an agreement with the State of Michigan for the operation, management, maintenance, of the CIS RT for the use and enjoyment of the residents and visitors of the Clinton, Ionia, and Shiawassee Counties. The local units of government that make up the Trail Authority include Ionia and Shiawassee counties and the City of St. Johns. Additional counties and/or other local units of government may become a part of the Trail Authority upon the approval of the governing bodies to accommodate the growth of the state owned River Valley Rail Trails.

The Authority in cooperation with the MDNR will establish trail rules, policies, and regulations. The MDNR will continue to provide guidance for routine maintenance. Routine annual maintenance will be funded through the Fred Meijer Mid-West Michigan Rail Trail Endowment while major infrastructure repair/improvements will be addressed by the state on state owned lands.

PARTNER ROLES AND RESPONSIBILITIES

There are numerous benefits associated with the creation of a collaborative partnership for long-term rail trail sustainability. The partnership addresses

the operations, management and maintenance for the network. Partner roles, opportunities and responsibilities include:

Partner Roles and Responsibilities

Michigan Department of Natural Resources

State Ownership of Railroad Corridor

Hold title and defend ownership

Administer all property issues/transactions

Overall Liability Responsibility

Lead Planning and Development Role

Grant writing capabilities for acquisition and development

Preliminary design and engineering guidance

Overall Guidance for Management and Maintenance

Resource Management of Trail Corridors (wildlife, fish, forest)

Maintenance within State Recreation and Game Area

Trail Authority

Legal Entity and Governing Board

Expand Capacity for Development and Daily Management / Maintenance

Local Input for Trail Design, Construction, and Management

Lead Marketing and Promotional Role

Friends Groups:

Trail Advocacy

Fundraising

Assist with Trail Maintenance

Special Events and Projects

Non-government Representation

Municipalities (Village and City

Departments of Public Works, County Road Commission)

Provide equipment and maintenance services within jurisdictional boundaries

Provide cost for services maintenance

and repairs through Act 51 - Interlocal Agreement

Corporate and Business Partners

Provide volunteers and sometimes equipment and materials for a specific maintenance event and/or development project.

MAINTENANCE

The Meijer Foundation, MDNR, MGTA, and the Heartland Friends worked to address the ongoing maintenance requirements for the entire 125-mile regional rail trail network. The Fred Meijer Mid-West Michigan Rail Trail Endowment was established to address the long-term maintenance and sustainability of this rail trail network. The Grand Rapids Community Foundation serves as the asset manager for the Endowment Fund. The distribution of the maintenance funds will be determined annually by the Authority. Maintenance funds should be dispersed systematically evaluating the corridor as a whole and not on a per mile average cost. The Authority should set aside a portion of their funds to account for periodic and long term maintenance repairs and costs.

Maintenance Schedules and Costs

The average cost to maintain and manage a mile of developed rail trail is estimated by the MDNR to be between \$1,000 and \$1,250 per year. Although costs can range as widely as \$500 to \$3,000 per mile per year depending on level of care, trail site conditions, trail surface/s, and trail amenities. Because these trails parallel and cross rivers, there are numerous culverts, steep side slopes, and over 20 bridges and trestles which will necessitate additional maintenance and maintenance costs.

Friends group volunteers, such as the CIS Friends and the River Valley Friends, are critical to keeping routine maintenance costs down. They can help provide monthly monitoring of trail conditions,



Mowing and brushing are routine maintenance activities

brush and limb removal, mowing and edging, clearing culverts, and coordinating annual cleanups.

There are three levels of maintenance; Routine Maintenance, Periodic Maintenance and Long Term Care. Because the frequency of maintenance performed and methods of handling maintenance situations vary, please use the following information as a guide.

Maintenance Schedule

Routine Maintenance

Litter control and trash removal
Vegetation Management - mow and edge shoulders
Cleaning – blow or sweep debris off trail
Trim and prune brush and limbs
Maintain “clear vision areas” at all driveway and road crossings
Down-tree and root removal
Clear drainages and culverts
Seasonal inspections

Periodic Maintenance (annual or as needed)

Grade and compact aggregate surface
Add aggregate if needed
Seal cracks on asphalt surface

Re-stripe on asphalt surface
Remove encroaching vegetation
Repair signs, replace posts
Bridge inspections
Repair boardwalk decking, replace hazardous boards

Long Term Maintenance (5-30 years)

Asphalt seal coating (5 yrs)
Asphalt repairs, overlayments (10 yrs)
Asphalt tread replacement (20 yrs)
Aggregate - pull material from outside of trail to form berm, form crown or outslope (5 yrs)
Refill and regrade aggregate (10 yrs)
Reseal boardwalk decking (5-7 yrs)
Bridge structural repair/decking replacement (25-30 yrs)

Maintenance Partnerships

The planning committee discussed who has what resources (equipment, manpower, agreements) to assist with trail and trail facility maintenance. Possible maintenance partnership arrangements include:

- MDNR Ionia State Recreation Area and the Flat River State Game Area have equipment and manpower within their Area boundaries for maintenance. Any extension of equipment and services will depend on budget.
- City/Village Departments of Public Works could provide equipment and services within their jurisdiction and possibly outside using the Act 51 (Interlocal Agreement) cost for services rate schedule.
- County Road Commissions could provide equipment and services outside their jurisdiction if it is cost effective and agreements are in place.
- Friends Groups, with additional training and coordination, will provide routine and some periodic maintenance.

Maintenance of the Fred Meijer River Valley Rail Trail network will require a collaborative

effort between the MDNR, Friends Groups, municipalities, the private sector, and the Authority. MDNR will require that maintenance agreements be in place as each phase of the project is constructed.

Volunteer Maintenance Programs

Trail Ambassador Program

The Traverse Area Recreation and Transportation Trails, Inc. (TART Trails) and the Sleeping Bear Heritage Trail developed and implemented a volunteer Trail Ambassador Program which monitors trail conditions, provides visitor outreach, and conducts routine trail maintenance. Trail Ambassadors regularly ride, walk, or ski the trail to monitor it for maintenance and interact with the trail users. Trail Maintenance Ambassadors have additional maintenance equipment training and skills for routine maintenance such as mowing, grooming for cross-country skiing, sign installation, and removing downed trees and branches. The Ambassadors wear bright orange vests which identify them as someone who is knowledgeable about the trail, happy to answer questions, and respond to safety and maintenance matters.

Trail Ambassadors duties include:

- Use the trail frequently,
- Represent the trail positively and exemplify proper trail etiquette,
- Monitor and report on trail conditions, trail checklist,
- Minor (non-mechanical) trail maintenance,
- Provide information to trail users and answer questions,
- Provide minor mechanical assistance and emergency communications, and
- Wear Trail Ambassador identification.

Trail Maintenance Ambassadors have additional duties which include:

- Regularly check and report on specific sections of the trail for safety and maintenance issues,
- Check for trail hazards: damaged-missing signs, benches, pavement markings, bridge



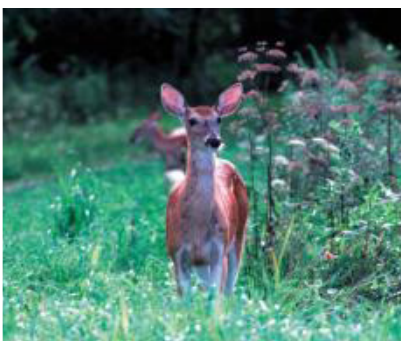
Friends groups helping to install signage and clean-up trails

conditions,

- Ensure “clear vision areas” at all driveway & road crossings,
- Check trailheads for cleanliness, and
- Report vandalism

Adopt-a Trail

Adopt-a Trail programs, modeled after the Adopt-a Highway program, are popular programs for organizations, businesses and corporate partners to focus their volunteer efforts and make a contribution to their community. Trail adopters commit to monitoring their segment of trail about once each month (spring through fall) and perform light maintenance work, pick up litter and trash, and report larger maintenance issues to a trail manager or trail volunteer coordinator. There are numerous examples of adopt-a trail programs which could be customized to help maintain the Fred Meijer River Valley Rail Trail. ■



Appendix

INTRODUCTION

Mid-West Michigan Trail Authority Interlocal Agreement and Amendment:

http://www.michigan.gov/documents/MDNR/Agreement_and_Amendment_432352_7.pdf

TRAILWAY PLANNING PROCESS

List of participants for each trail:

http://www.michigan.gov/documents/MDNR/planning_committee_432354_7.pdf

Questionnaire:

http://www.michigan.gov/documents/MDNR/Questionnaire_432356_7.doc

Comments:

http://www.michigan.gov/documents/MDNR/Comments_432355_7.pdf

CIS Friends:

<http://www.cistrail.org/JointheFriendsGroup.aspx>

River Valley Friends:

<http://www.rivervalleyrailtrails.org/>

RESULTS OF THE PLANNING PROCESS

Railbanking Provisions of Federal Law, Section 8(d) of the National Trails Act. 16 U.P.C.1247(d):

<http://www.railstotrails.org/ourWork/advocacy/policyAndFunding/railbanking.html>

MDOT and American Association of State Transportation and Highway Officials Standards for Pedestrian and Bicycle Facilities:

http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdcompleteinteractive.pdf

http://www.fhwa.dot.gov/environment/recreational_trails/guidance/manuals.cfm

The Threatened and Endangered Species Act:

<http://www.fws.gov/endangered/laws-policies/>

Pittman-Robertson Federal Aid in Wildlife Restoration Act and the Dingell-Johnson Act:

<http://cfr.regstoday.com/50cfr80.aspx>

Michigan Natural Rivers Program:

http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_31442---,00.html

TRAILWAY DESIGN

American Disabilities Act (ADA) Standards for Outdoor Recreation Facilities:

http://www.fhwa.dot.gov/environment/recreational_trails/guidance/manuals.cfm

National Park Service Prepare to Launch:

<http://preparetolaunch.river-management.org/>

Iowa Department of Natural Resources Water Trails Tool Kit:

<http://www.iowadnr.gov/Recreation/CanoeingKayaking/WaterTrailDevelopmentTools/WaterTrailsToolkit.aspx>

Ionia Recreation Area Management Plan:

http://www.michigan.gov/documents/dnr/ionia_general_mgmt_plan_complete_412636_7.pdf

Flat River Game Area:

http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/SGA_Habitat-Mgmt/Flat_River_SGA_hab-mgmt.pdf

Grand River Game Area:

http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/SGA_Habitat-Mgmt/Grand_River_SGA_hab-mgmt.pdf

TRAILWAY DESIGN: CLINTON IONIA SHIAWASSEE RAIL TRAIL

Friends of the Maple River:

<http://www.friendsofthemapleriver.org/index.html>

TRAILWAY DESIGN: GRAND RIVER RAIL TRAIL

The Dexter Street/M-66 Pedestrian Safety Study:

http://www.michigan.gov/documents/MDNR/M_66_Study_432358_7.pdf

Management Plan for Ionia State Recreation Area:

http://www.michigan.gov/documents/dnr/ionia_general_mgmt_plan_complete_412636_7.pdf

Middle Grand River Organization of Watersheds:

http://www.mgrow.org/Home_Page.php

TRAILWAY DESIGN: FLAT RIVER RAIL TRAIL

Flat River State Game Area Policies and Management Objectives:

http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/SGA_Habitat-Mgmt/Flat_River_SGA_hab-mgmt.pdf

Flat River Natural River:

http://www.michigan.gov/documents/dnr/preliminary_NR_plan_183377_7.pdf

Michigan Natural Rivers Program:

http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_31442---,00.html

Flat River Zoning Ordinance:

<http://www.vergennestwp.org/flat.html>

City of Greenville - Flat River Water Trail Map:

<http://gycomrec.com/Recreation-and-Parks/Kayak,-Canoe---Tube.aspx>

North Country National Scenic Trail:

<http://www.nps.gov/noco/index.htm>

CREATING A UNIFIED REGIONAL NETWORK

Great Allegheny Passage Trail:

<http://www.atatrail.org/>

Iron Ore Heritage Trail:

<http://ironoreheritage.com/>

Great Allegheny Passage Trails Towns:

<http://www.atatrail.org/pv/docs/1TTManual.pdf>

LIAA's Trail Town Manual for Communities Along the North Central State Trail:

http://www.cheboygancounty.net/_library/CompleteTrailManual_NoAllegheny.pdf

Kentucky Trail Towns:

<http://www.kentuckytourism.com/industry/industry/adventure.aspx>

TRAIL IMPLEMENTATION

Ionia to Owosso Rail Corridor Bridge Investigations:

http://www.michigan.gov/documents/dnr/rep_2011-08_Bridge_Investigations_449749_7.pdf

TRAIL OPERATIONS, MANAGEMENT, AND MAINTENANCE

Urban Cooperation Act 1967 Act 7:

<http://www.legislature.mi.gov/documents/mcl/pdf/mcl-act-7-of-1967-ex-sess-.pdf>

