
VILLAGE OF LAKE ORION

Paint Creek Trail Extension



Adopted by the Lake Orion Village Council on February 23, 2015

A summary of the key findings for trail improvement and wayfinding opportunities in the Village of Lake Orion.

ACKNOWLEDGEMENTS

Lake Orion Village Council

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- Shauna Brown
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- John D. Ranville, President Pro-Tem
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February 10, 2015

Public Hearing:
February 23, 2015

Village of Lake Orion DDA Board of Directors

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- Robert Hollenbeck, Vice Chair
- Monica Squarcia, Treasurer
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- Gene Carlson, Board Member
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- Chris Barnett, Orion Township Representative
- Ken Van Portfliet, Village of Lake Orion Council Representative

Adopted by Village Council:
February 23, 2015

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Technical Assistance

This assessment was prepared by Oakland County Economic Development & Community Affairs-Main Street Oakland County Program for the Lake Orion Downtown Development Authority and the Village of Lake Orion.

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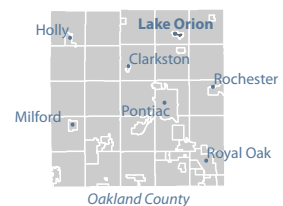
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- Paint Creek Trail
- Road
- Municipal Boundary
- Lake or River
- Recreation Land

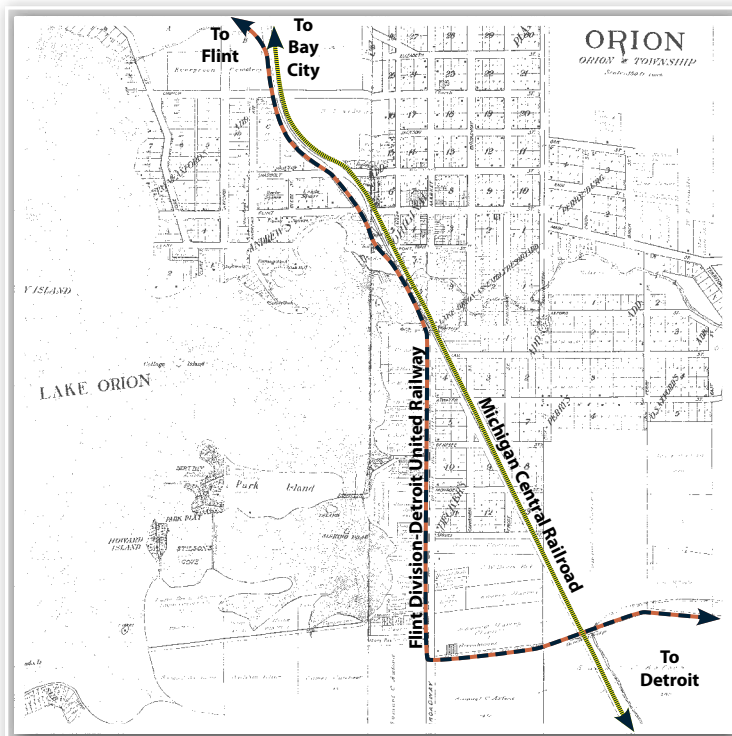


Village of Lake Orion



BACKGROUND

The Village of Lake Orion is located in northeastern Oakland County and is known for its natural surroundings, historic architecture and abundant water resources. In the early 1870s, the tracks of the Detroit and Bay City Railway (later know as Michigan Central and then Penn Central Railroad) reached Lake Orion and offered incoming passengers from Detroit an escape from city life. This new mode of transportation also provided area merchants with a fast and direct route to ship local produce and goods to Detroit and many stops in between. In early the 1900s, the Detroit United Railway also extended a line from Detroit to Flint and had stops in Royal Oak, Troy, Clawson, Rochester, Goodison, Lake Orion, Oxford and Ortonville. This electric railway provided passengers with a way to travel between towns for both work and recreation.



1908 Plat map of the Village of Lake Orion illustrating the Detroit United Railway and Michigan Central Railroads.

Both railroads cease to exist today, however 10.5 miles of the former Detroit and Bay City Railway right-of-way was purchased in 1983 and has been transformed into the Paint Creek Trail, Michigan's first Rails-to-Trail. The Paint Creek Trail extends from Rochester to Lake Orion and continues to provide users with a linear corridor for non-motorized transportation and recreation. The Paint Creek Trailways Commission owns and manages the 8.9 mile crushed limestone trail. Users can enjoy hiking, biking, cross-country skiing, horseback riding (north of Dutton Rd), fishing, wildlife viewing and nature photography. The trail also parallels and frequently crosses the Paint Creek– a high quality, cold water trout stream. Over the years, an effort has been made to enhance the amenities found along the trail and include many improved road/trail crossings, restroom facilities, interpretive signs, parking lots, art installations and scenic overlooks.

The Paint Creek Trailways Commission was established in 1981 through an Interlocal Agreement between the City of Rochester, City of Rochester Hills, Oakland Township, and Orion Township. Each community contributes to the annual Operating and Patrol budget and is also responsible for maintenance of the trail within their own jurisdiction. The Village of Lake Orion was added as a non-voting member in 2004 when the trail was extended up to Atwater Street.



PURPOSE

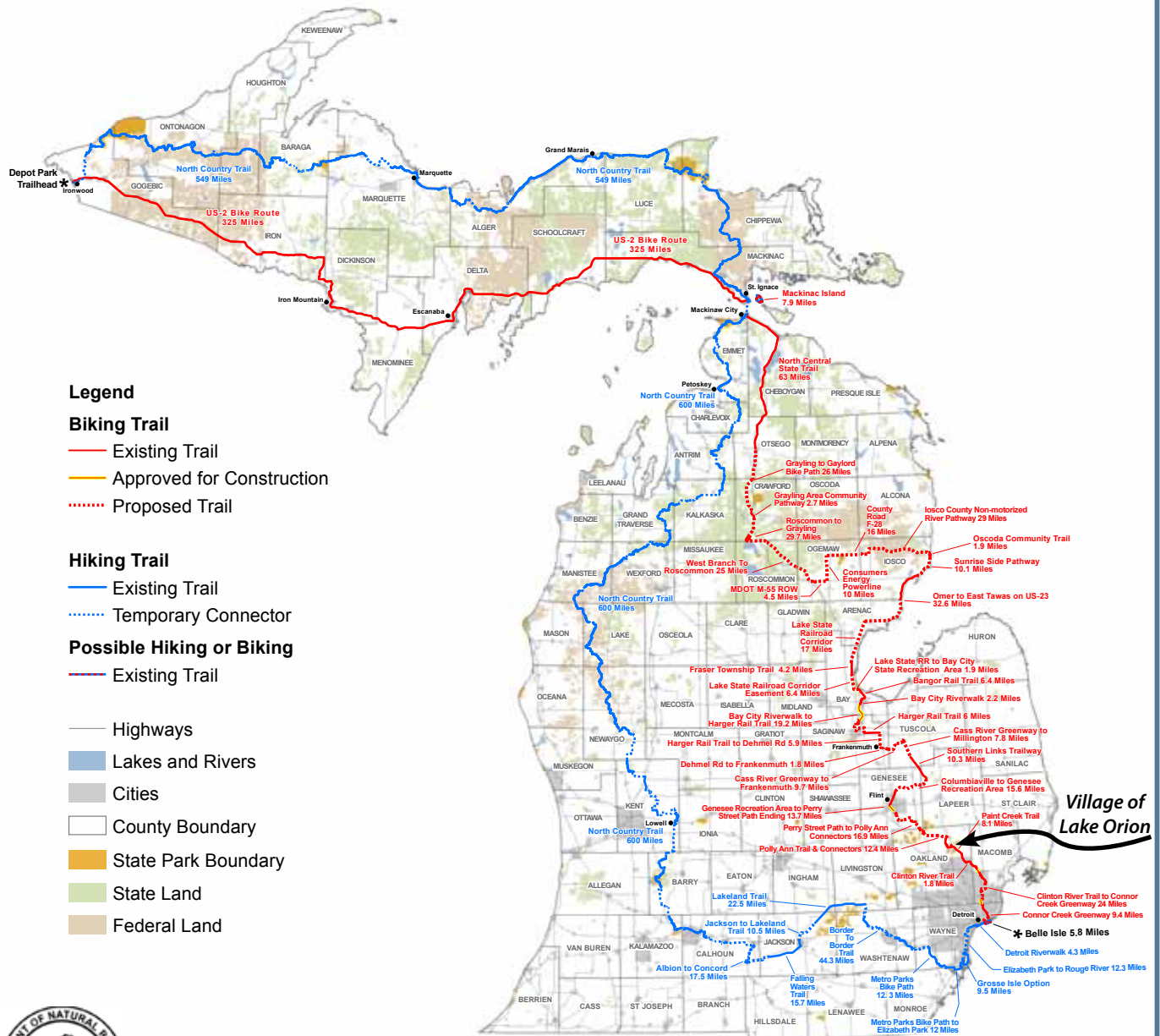
The Lake Orion Downtown Development Authority (DDA) and Village Officials identified the need to link the Paint Creek Trail with the historic downtown, local businesses, schools, neighborhoods, area restaurants and the Polly Ann Trail. The purpose of this analysis is to not only evaluate potential routes to extend the Paint Creek Trail, but to identify key destinations and the necessary wayfinding sign locations that will assist trail users and visitors with finding their way around the Village.

An announcement was made in December 2012 by Governor Rick Snyder for a plan to create a hiking and biking trail that would extend from Belle Isle to Wisconsin. Since then, the Paint Creek Trail has been identified as a key component in the cross-state biking trail route. The proposed trail extension and wayfinding signage will help make essential connections and bring local tourism, economic development and recreational opportunities to Downtown Lake Orion.

It should be noted that an effort has been made to meet criteria and recommendations that are consistent with the Americans with Disabilities Act (ADA), American Association of State Highway and Transportation Officials (AASHTO) and the *Michigan Manual on Uniform Traffic Control Devices* (MMUTCD). During the design phase, official standards should be revisited as requirements may have been modified or updated. These standards may apply to the following:

- Trail surface type
- Trail width
- Warning and regulatory signs
- Road crossings
- Shared lane pavement markings
- Typeface on wayfinding signs
- Sign placement and height





June 11, 2014
Resource Assessment Section
Forest Resources Division
Michigan Department of Natural Resources

Proposed Governor's Showcase Trail

• Belle Isle to Wisconsin •

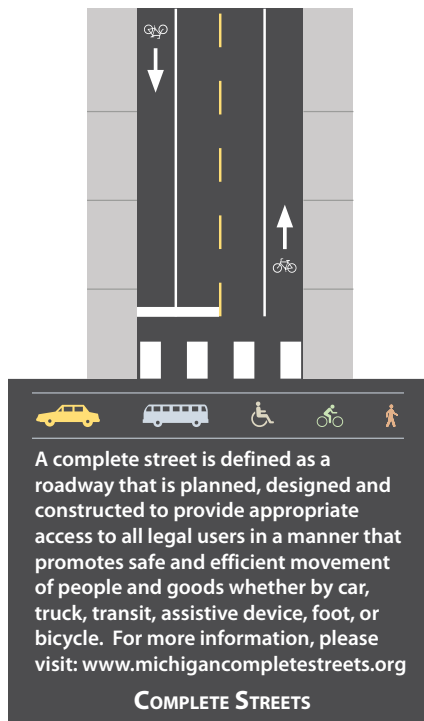
In December 2012, Governor Rick Snyder announced his plan for a hiking and biking trail extending from Belle Isle to Wisconsin. This announcement came as an outline to help the state become more environmentally friendly and energy-efficient. The Paint Creek Trail has been identified as a key component in the cross state biking trail. The proposed trail extension and wayfinding signage will help make essential connections and bring local tourism, economic development and recreational opportunities to Downtown Lake Orion.

COMPLETE STREETS

Lake Orion has jurisdiction over the streets and sidewalks in public right-of-way within the Village, with the exception of M-24, which is maintained by the Michigan Department of Transportation. The Department of Public Works is responsible for the maintenance and upkeep of these transportation corridors. Fortunately, the low traffic volumes, low speeds and low crash rates on the roads within the Village provide ideal facilities for Complete Streets considerations. Complete Streets are roadways planned, designed and constructed to accommodate safe access for all users. The Village Council passed a Complete Streets Resolution on September 12, 2011.



Complete Streets allow pedestrians, cyclists, equestrians, motorists, and public transit riders of all ages and abilities to safely move along and across roadways. Elements of Complete Streets may include sidewalks, crosswalks, signage, bike lanes, shared lane markings or wide shoulders. The Village requires the construction of sidewalks for certain types of new development within the Village. Creating these linkages will help provide safe routes to school, promote active and healthy lifestyles and accommodate a variety of users.



Winter Maintenance

Along with incorporating Complete Streets principles, winter maintenance is an essential part of any non-motorized network. According to the *Code of Ordinances of the Village of Lake Orion*:

- A. Owners, occupants and persons in control of any property shall be responsible for keeping all sidewalks adjoining the property clear of snow and ice as provided in this section. Ice shall be cleared by removal or application of sufficient quantities of deicing material or sand.
- B. Failure to remove snow or ice from a sidewalk for a period of 24 consecutive hours is a violation of this chapter.
- C. On sidewalks in the downtown area, accumulations of two or more inches of snow that falls and ice that forms, between the hours of 9:00 a.m. and 9:00 p.m., shall be removed immediately, with any snow that accumulates or ice that forms after 9:00 p.m. to be removed by 9:00 a.m. of the following day, with failure to comply with these requirements being a violation of this chapter.
- D. Upon a violation of a requirement of this section, in addition to and without regard to whether the violation is pursued as provided in § 92.32, the Village Manager may cause all snow and ice to be cleared and removed from the sidewalk, at the expense of all persons responsible, with payment of the village's actual and administrative costs and expenses incurred in doing so to be a joint and several debt to the village by all of the persons responsible, which shall be paid in full within 30 days of the village's billing to those persons, and which shall be secured by a lien on the property adjoining the sidewalk from the time the snow and/or ice is cleared and removed by the village.

(Ord. 8.01, passed 10-11-71; Am. Ord. 8.04, passed 2-12-07)



COMPLETE STREETS RESOLUTION

WHEREAS, the term "Complete Streets" describes a comprehensive integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, motor vehicle drivers, public transportation riders and drivers, and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities; and

WHEREAS, Increasing active transportation (e.g., walking, bicycling and using public transportation) offers the potential for improved public health, economic development, a cleaner environment, reduced transportation costs, enhanced community connections, social equity, and more livable communities; and

WHEREAS, A Complete Street is safe, comfortable, and convenient for travel by automobile, foot, bicycle, and transit regardless of age or ability; and

WHEREAS, The Michigan legislature has passed Complete Streets legislation that requires the Michigan Department of Transportation and local governments to consider all users in transportation related projects; and

WHEREAS, the Michigan Planning Enabling Act has been amended, requiring that all transportation improvements identified in a plan are appropriate to the context of the community and as applicable, considers all legal users of the public right of way; and

WHEREAS, Complete Streets support economic growth and community stability by providing accessible and efficient connections between home, school, work, recreation and retail destinations by improving the pedestrian and vehicular environments throughout communities; and

WHEREAS, Complete Streets enhance safe walking and bicycling options for school-age children, in recognition of the objectives of the national Safe Routes to School program; and

WHEREAS, the Village of lake Orion recognizes the importance of street infrastructure and modifications such as sidewalks, crosswalks, shared use paths, bicycle lanes, signage, narrow vehicle lanes and accessible curb ramps, that enable safe, convenient, and comfortable travel for all users; therefore

BE IT RESOLVED, that the Village of Lake Orion supports the future development of master plan amendments for multi-modal and non-motorized transportation plan and a Complete Streets ordinance that support ease of use and safety for all users of transportation systems within the Village of Lake Orion,

BE IT FURTHER RESOLVED, that the Village of Lake Orion, to the extent feasible, should include Complete Streets design considerations and practices as a routine part of municipal infrastructure planning and implementation, and approach transportation projects and programs as an opportunity to improve public and private streets and the transportation network for all users, working in coordination with other departments, agencies, and jurisdictions.

Motion to Adopt By Council Member Toth; Seconded by Council Member Stumkat and adopted.

AYES: 6; NAYS: 0; ABSENT: 1. Resolution passed on September 12, 2011.

PUBLIC PARTICIPATION

A number of opportunities and methods to gain public input for the Paint Creek Trail extension route and wayfinding sign locations were considered. The first of which was a public workshop that was held on August 6, 2014 at the Orion Art Center in order to solicit input on the trail extension through the Village, identify key destinations, existing challenges/hazards and other potential improvements. A brief presentation on the history of the trail, current conditions through the Village, a questionnaire and a number of related maps and posters were on display. In addition to the public, various stakeholders from the following organizations were invited to participate at the workshop: DDA members, Village staff, elected officials, Police, Fire, Parks & Recreation and trail councils.



Stakeholder input session

An online trail user survey was also publicized to residents, visitors, business owners and trail users. This survey was specifically designed so that stakeholders had an opportunity to answer multiple choice and open-ended questions related to current conditions and future trail extension improvements. A total of 173 surveys were completed from July-September 2014. Comments and input from the workshop sessions and the surveys were taken into consideration for the recommendations made in the evaluation.



Guided walk to evaluate potential trail route options

Further, Village residents and the public were given the opportunity to familiarize themselves with the potential routes during a guided walk. Participants evaluated several potential trail route options and observed conditions like slope, vegetation, right-of-way ownership, roadway conditions and connectivity to destinations. A number of potential areas of concern were identified during the walk that were not apparent in discussions or identified on maps with aerial photos. Participants then reconvened at the Orion Art Center to discuss existing conditions and refine route options and other necessary improvements.

PAINT CREEK TRAIL EXTENSION

In September 2008, an analysis was done in Oakland County to study the major gaps in the regional trail system. The Paint Creek to Polly Ann Trail Gap Analysis resulted in four potential connectors. Each of the proposed routes would provide trail users with variety of amenities, create diverse user experiences, limit certain user groups and vary in accessibility. Providing multiple connector routes between regional trails will help to improve the non-motorized transportation options for the communities that they pass through. It should be noted that all of the proposed connectors should be explored and are considered important to the overall County Trail Network.

From 2008 Oakland County Trails Master Plan Gap Analysis

Purple Route –

Approximate Length: 6.00 mi

This route would traverse to the south, within and/or near Bald Mountain State Recreation Area, along Kern Road, Clear Creek Drive and utilize the existing safety path along Waldon Road.

Yellow Route –

Approximate Length: 4.33 mi

This route utilizes existing safety path from the Paint Creek Trail to Glanworth, M-24, along Clarkston Road, Pine Tree Road, Heights, and Joslyn Roads.

Blue Route –

Approximate Length: 3.65 mi

This route would traverse from the Paint Creek Trail, north along M-24 to Drahner Road and connect into the Polly Ann Trail.

Green Route –

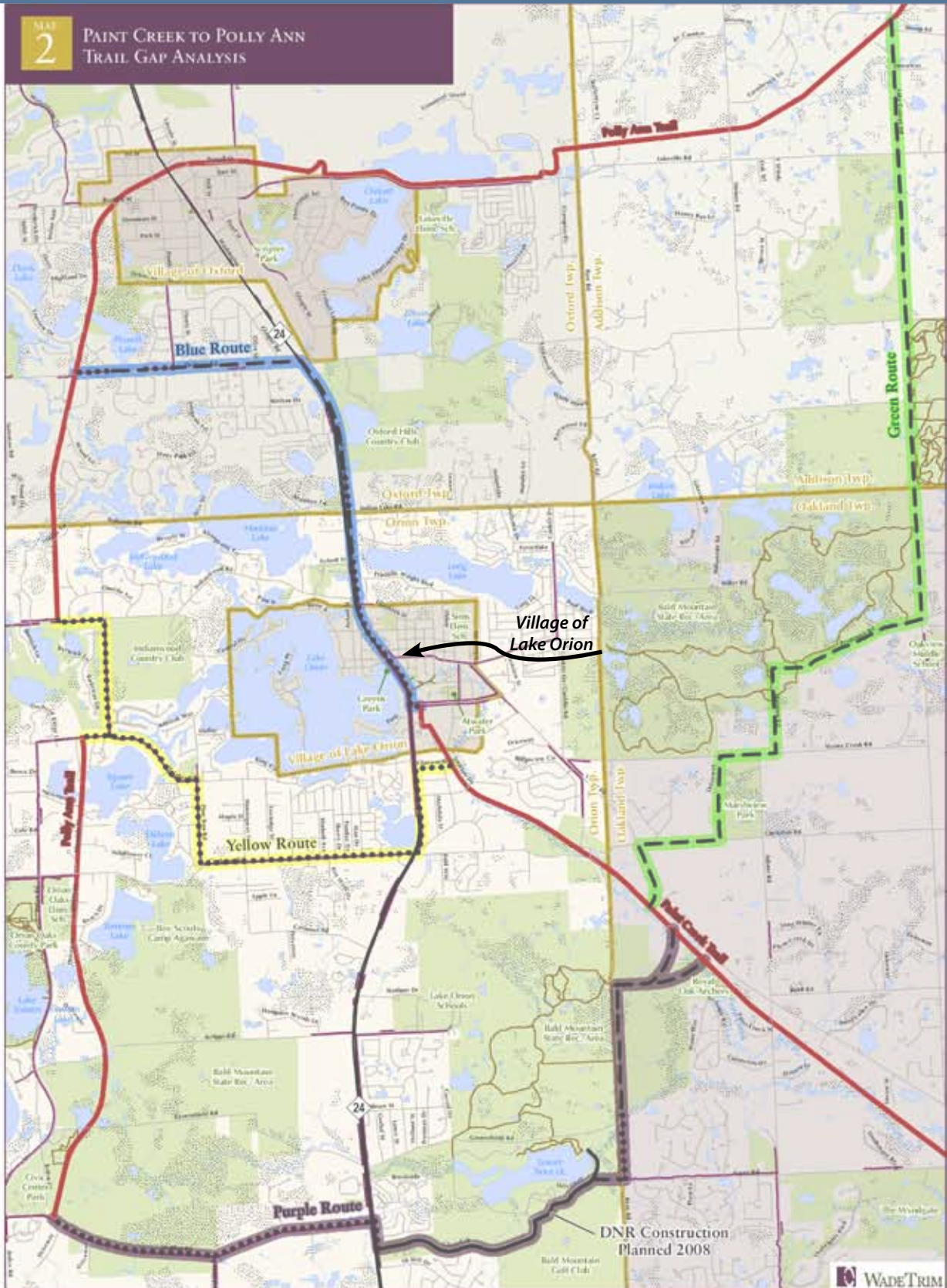
Approximate Length: 6.81

This route would traverse to the north from the Paint Creek Trail, along Orion Road and Clarkston Road, within Marshview Park, along Bald Mountain State Recreation Area utilizing Stoney Creek, Harmon and Predmore Roads, to Lake George Road.

For the purposes of this analysis, the portion in Lake Orion of the Blue Route identified in the *Oakland County Trails Master Plan-Paint Creek Trail to Polly Ann Trail Gap Analysis* will be the main focus. Within the Village, four main routes were studied and discussed with stakeholders. Maps of the four routes and preliminary observations can be found on the following pages.

MAP
2

PAINT CREEK TO POLLY ANN TRAIL GAP ANALYSIS



Oakland County Trails Master Plan

• Paint Creek Trail to Polly Ann Trail Gap Analysis •

Route A

Approximate Length: 1.36 miles

Challenges:

- Work with landowners to acquire easements
- Route requires pedestrians to cross multiple residential driveways
- Stop signs at almost every intersection

Opportunities:

- Route is located along Village streets with low speeds and low traffic volumes
- Routes uses a combination of on-road shared lane markings for cyclists and sidewalks for pedestrians
- Route is one block off of Broadway (Historic Downtown) and passes by the new Village Offices & Police Station



Route B

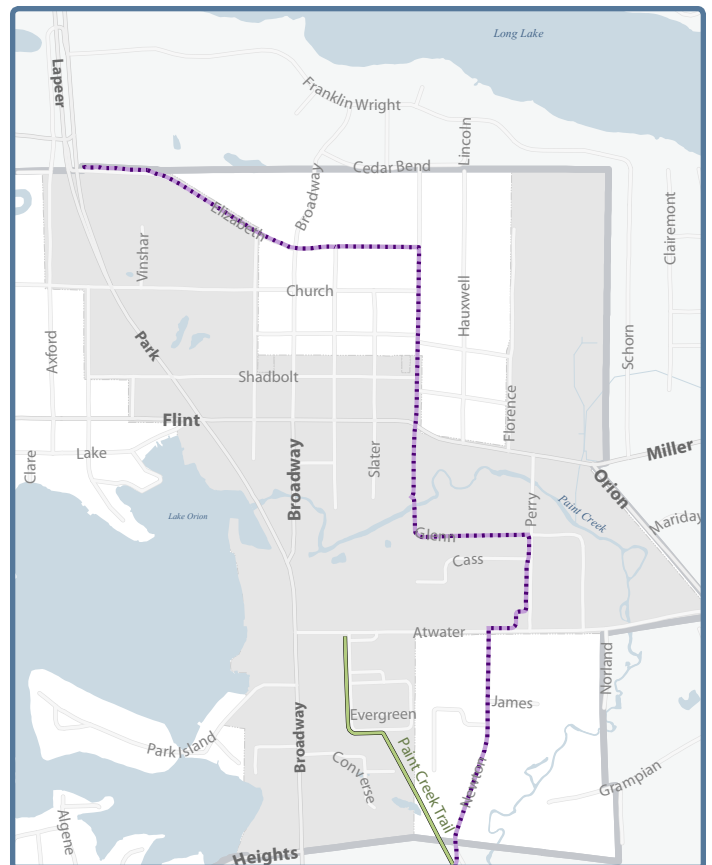
Approximate Length: 1.49 miles

Challenges:

- Route is three blocks away from Historic Downtown
- Many gaps in the sidewalk system-poor pedestrian facilities
- Route requires pedestrians to cross multiple residential driveways

Opportunities:

- Route passes Atwater Park
- Route is located along Village streets with low speeds and low traffic volumes



Route C

Approximate Length: 1.18 miles

Challenges:

- On-street parking and narrow road lane widths for on-road cycling facilities
- Narrow sidewalk along the east side of M-24
- High traffic volumes on M-24 and Broadway
- Route requires pedestrians to cross multiple residential driveways

Opportunities:

- Route passes through Historic Downtown
- Signalized intersection at Atwater & M-24
- Avoid a number of commercial driveways on M-24



Route D

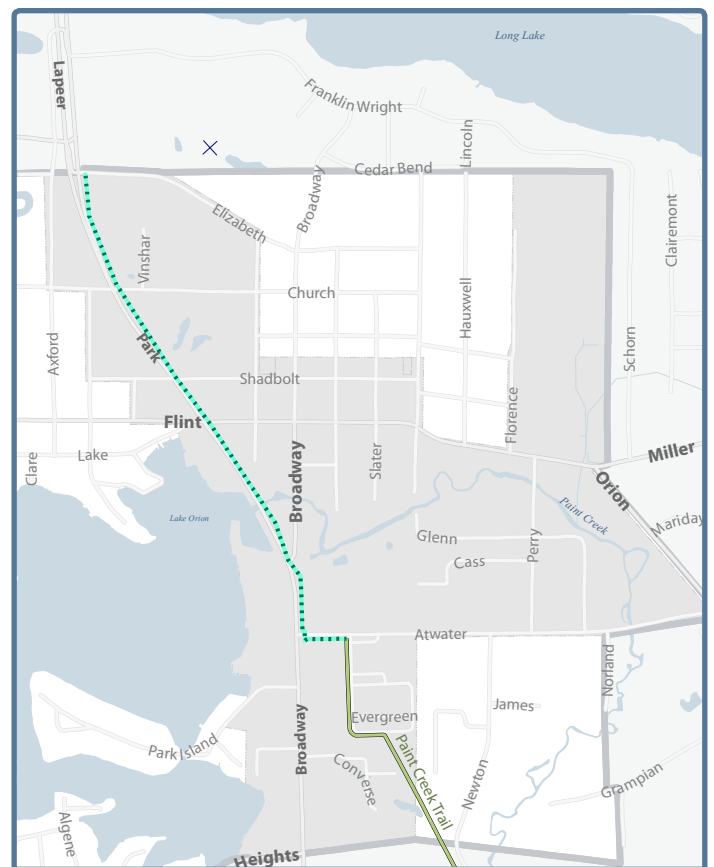
Approximate Length: 0.76 miles

Challenges:

- Route is located next to M-24 with high traffic volumes and higher speeds
- Narrow sidewalk along the east side of M-24
- Route requires pedestrians to cross multiple commercial driveways

Opportunities:

- Dam at Lake Orion/Paint Creek is visible
- Traffic signals at located at major intersections to assist pedestrian road crossings
- Route follows historic Michigan Central Railroad right-of-way



After reviewing comments from stakeholders and the user survey, Route A has become the preferred option. This route would extend the Paint Creek Trail north from its current terminus, across Atwater Street along the eastern boundary of Lake Orion Lumber. The trail would continue over the Paint Creek using the existing park pathway and bridge in Meek's Park to Anderson Street. Using a combination of sidewalks for pedestrians and on-road shared lane markings for cyclists, the route will extend north along Anderson Street and west on Elizabeth Street to M-24.

This route is ideal for promoting the historic downtown and local tourism destinations. Through pedestrian wayfinding signage, nearby destinations can be called out while being mindful of the small-town character of the Village. The local attractions include:

- Downtown
- Historic Sites
- Farmer's Market
- Meek's Park
- Children's Park
- Anderson Street Trailhead
- Village Offices & Police Station
- Church Street Trailhead
- Restaurants & Businesses



View of Anderson Street



Potential Lumber Yard linkage



Bridge over Paint Creek



View of Elizabeth Street near M-24

ACTION PLAN

Throughout the evaluation process, the comments provided by the public, community stakeholder input and trail user feedback have been considered. The following priorities have been identified for this project:

Action Item 1: Extend the Paint Creek Trail through Lake Orion by providing a safe, accessible and user friendly route for the residents and visitors to the Village.

- Design non-motorized facilities to meet ADA and Universal Design guidelines
- Support the principles of Complete Streets within the Village
- Provide improvements and facilities that will enhance and be consistent with the small town character of the Village

Action Item 2: Create a unified signage program in the Village of Lake Orion and help visitors locate key destinations.

- Work with Village Officials and other stakeholders to identify key trail access points and trailhead parking areas
- Develop appropriate wayfinding signage to/from the trail into the historic downtown, Village parks, M-24 and trailheads

Ensure that regulatory signs conform to the Michigan Manual of Uniform Traffic Control Devices and ADA standards

Action Item 3: Provide non-motorized opportunities that support local tourism initiatives and healthy and active lifestyles.

- Construct non-motorized facilities and install related amenities at Village parks and designated trailheads that will support and enhance the Governor's Showcase Trail
- Participate in trail related events that promote health and wellness
- Create consistent looking maps, marketing materials, online resources and visitor's guide to promote Lake Orion and the Paint Creek Trail



BUDGET ITEM DETAILS

The scope items being proposed are in compliance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). The proposed amenities are all located within public property and road rights-of-way. Details of each scope item can be found on the following pages. Further refinement of scope items and cost estimates will be needed from a qualified engineer prior to seeking grant funds.

Although the project needs to competitively bid out the scope items, it is the intent to use local sign fabricators and contractors to complete the project. By using local businesses for this project, it helps strengthen the local and state economy.

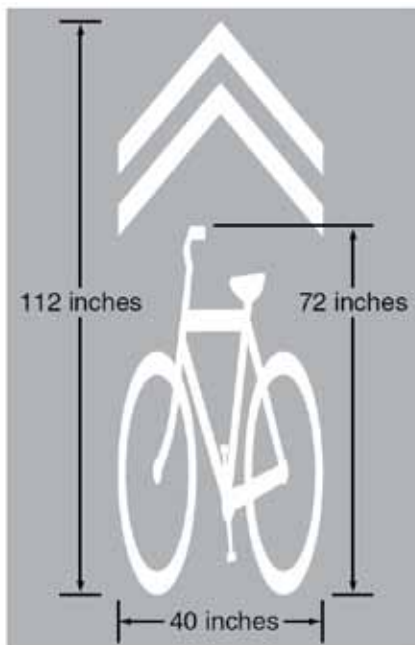
Proposed Scope Items

Scope Item	DDA Boundary	Comments
Continental Crosswalk	Yes	Across Atwater Commons & Atwater Street
Detectable Warning Strip	Yes	
10' Sidewalk Extension	Yes	To Atwater Street
Bike/Ped Warning Sign & Hardware	Yes	Atwater Street W11-15
20' wide easement or acquisition	Yes	East edge of Lumber Yard
10' wide multi-use trail & 2' shoulders	Yes	Surface TBD
Fence/Railing	Yes	Along Lumber Yard Property
Sharrow-Shared Lane Markings	Yes	Anderson St & Elizabeth St
Sharrow-Shared Lane Markings	No	Anderson St & Elizabeth St
Standard Crosswalk Markings	Yes	Anderson St & Elizabeth St
Standard Crosswalk Markings	No	Anderson St & Elizabeth St
Trail Wayfinding Sign & Hardware	Yes	Anderson St & Elizabeth St
Trail Wayfinding Sign & Hardware	No	Anderson St & Elizabeth St
Bike Fix-it Station (Optional)	Yes	Trailhead & Downtown
Trailhead Kiosk (Optional)	Yes	Anderson Street Trailhead
Contingency		
Mobilization		
Landscape Restoration		
Soil Erosion Control		
Professional Fees		
Maintaining Traffic		
Permits		
Prevailing Wage		

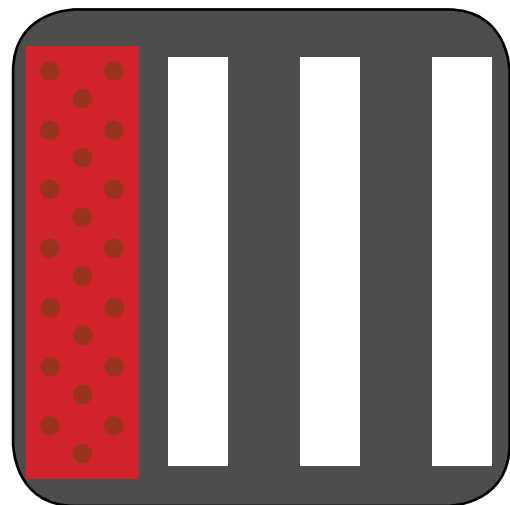
PAVEMENT MARKINGS

Quantity	varies
Estimated Price	\$TBD total
Definition	Pavement markings provide guidance and information to trail users. Shared lane markings or sharrows assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane, alert road users of the lateral location bicyclists are likely to occupy within the traveled way, encourage safe passing of bicyclists by motorists and reduce the incidence of wrong-way bicycling.
Location	Pavement markings will be used at all trail/road intersections and where the trail may change direction.
Universal Access Design Considerations	<ul style="list-style-type: none"> * Detectable warning strips are required at all hazardous vehicular areas to comply with ADA guidelines * Contrasting color treatments for maximum visibility
Crime Prevention Measures	<ul style="list-style-type: none"> * Applied directly to asphalt or concrete surface
Environmentally friendly/ Innovative Technology	<ul style="list-style-type: none"> * Constructed using long lasting materials

Shared Lane Marking (Sharrow)



Detectable Warning Strip & Continental Crosswalk Markings



REGULATORY & WAYFINDING SIGNS

Quantity	varies
Estimated Price	\$TBD total
Definition	Regulatory signs are intended to alert trail users or drivers on what they should do (or not do) under a given set of circumstances. Wayfinding signs provide directional information to trail users for nearby destinations.
Location	Regulatory signs will be located at all trail/road intersections.
Universal Access Design Considerations	<ul style="list-style-type: none"> * Located on accessible route * Contrasting color treatments for maximum visibility
Crime Prevention Measures	<ul style="list-style-type: none"> * Constructed using hidden fasteners * Fixed in place
Environmentally friendly/ Innovative Technology	<ul style="list-style-type: none"> * Constructed using long lasting materials * Retroreflective material

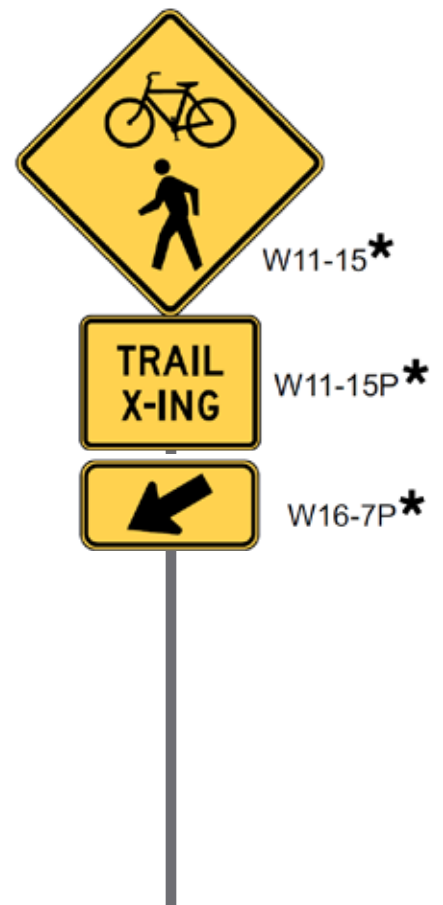


Trail Wayfinding Sign



Urban Trail Marker
(design needs further refinement)

Bike/Ped Warning Sign



INFORMATION KIOSK

Quantity	1
Estimated Price	\$TBD total
Definition	Information kiosks provide a place to post trail maps, advertise trail related and community events, post rules and regulations as well as other information to be communicated to trail users. Information may be changed seasonally.
Location	Information kiosks are to be placed at high-use locations along the trail, such as staging areas, downtown gateways and other trail access points.
Dimensions	W-75" x H-60"
Universal Access Design Considerations	<ul style="list-style-type: none"> * Located on accessible route * Contrasting color treatments for maximum visibility * Interpretive information panels in a variety of formats
Crime Prevention Measures	<ul style="list-style-type: none"> * Constructed using hidden fasteners * Fixed in place * Interpretive exhibits to be fabricated using scratch resistant material, spray paint is also removable, ink is non-fading
Environmentally friendly/ Innovative Technology	<ul style="list-style-type: none"> * Constructed using long lasting materials * QR Code to get additional information * May include weather resistant bulletin board to display event information or other trail related information



Example of Information Kiosk

BIKE FIX-IT STATION

Quantity	2
Estimated Price	\$TBD total
Definition	A Bike Fix-It Station includes all the tools necessary to perform basic repairs and maintenance, from changing a flat to adjusting brakes. The tools and air pump are securely attached to the stand with stainless steel cables and tamper-proof fasteners. Hanging the bike from the hanger arms allows the pedals and wheels to spin freely while making adjustments.
Location	Bike Fix-It Stations should be located at a trailhead or in the Downtown.
Dimensions	W-20" x H-59"
Universal Access Design Considerations	<ul style="list-style-type: none"> * Located on accessible route * Contrasting color treatments for maximum visibility * Height meets ADA requirements
Crime Prevention Measures	<ul style="list-style-type: none"> * Constructed using hidden fasteners * Fixed in place * Stainless steel cables are tamper proof
Environmentally friendly/ Innovative Technology	<ul style="list-style-type: none"> * Constructed using long lasting materials



Example of Bike Fix-It Station

DOWNTOWN DESTINATIONS

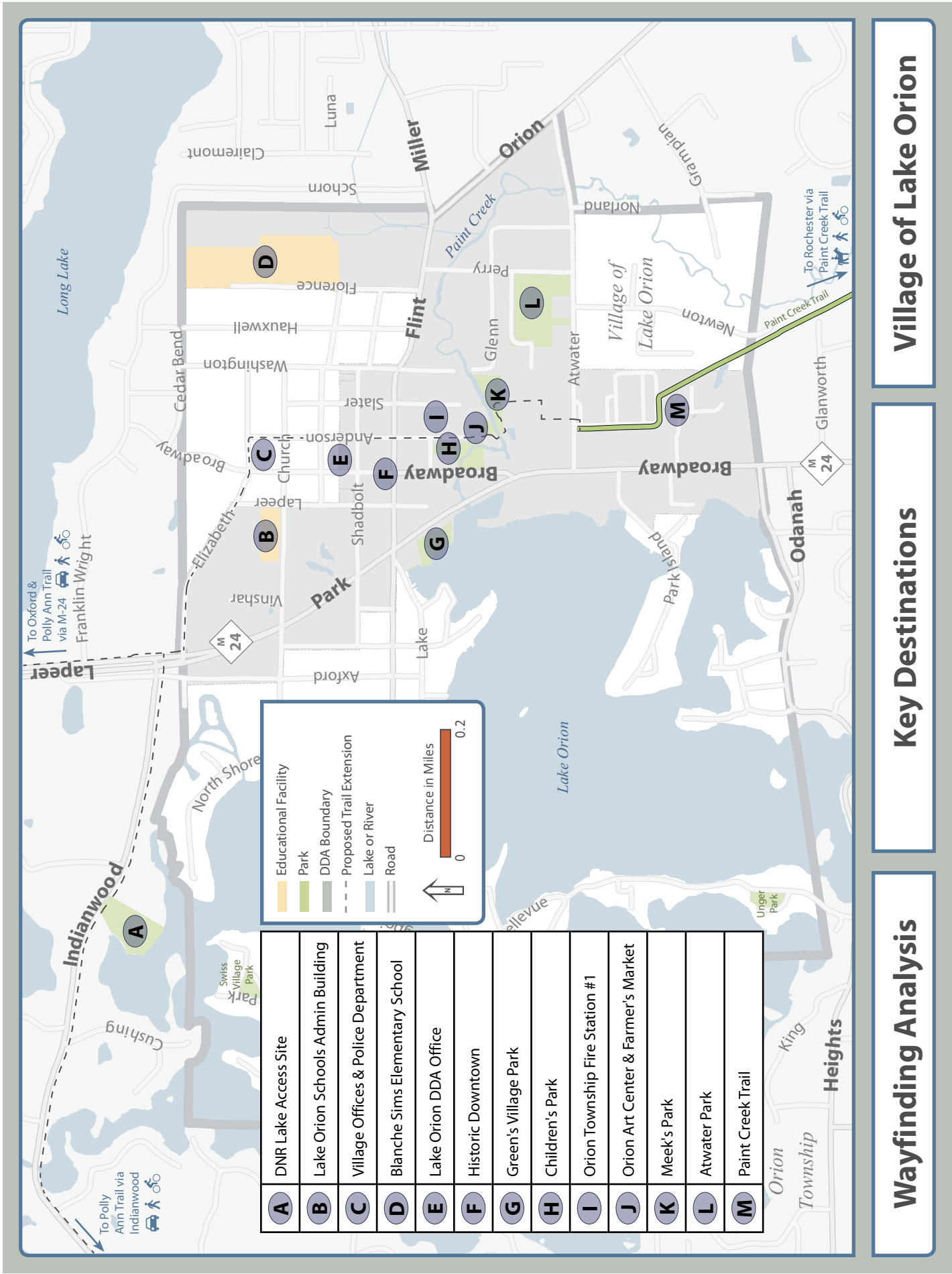
For well over a century, the Village of Lake Orion has been known as a destination for city dwellers looking for an escape to a resort community on the lake. After reviewing the comments from the surveys and public workshop, the following key points of interest were identified and should be considered on wayfinding signage:

- DNR Lake Access Site
- Lake Orion Schools Admin Building
- Village Offices & Police Department
- Blanche Sims Elementary School
- Lake Orion DDA Office
- Historic Downtown
- Green's Village Park
- Children's Park
- Orion Township Fire Station #1
- Orion Art Center & Farmer's Market
- Meek's Park
- Atwater Park
- Paint Creek Trail



Recommendations

- Identify each of the major destinations with a monument sign
- Verify that existing and potential wayfinding signs direct visitors to correct destinations



Village of Lake Orion

Key Destinations

Wayfinding Analysis

WAYFINDING SIGN LOCATIONS

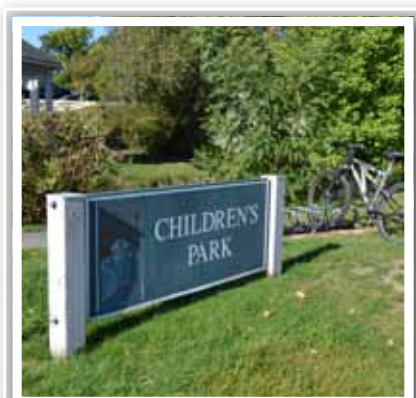


Examples of wayfinding signage for Lake Orion

Creating a system of wayfinding signs around the Village will assist visitors and trail users with locating area attractions, off-trail amenities, special points of interest and public parking areas. It is necessary to carefully locate wayfinding signs at major decision points where motorists and pedestrians may need to change direction in order to locate a destination. The overall design, content, consistency, colors, typeface size and materials should be thought through to create a positive visitor experience.

Recommendations

- Use contrasting colors and symbols that are easy to read from a distance and complement the downtown and residential areas
- Consider adding distances to amenities in addition to directional arrows
- When possible, mount new signs to existing light poles to reduce the number of obstacles along heavily traveled pedestrian pathways and remove old unnecessary or duplicate signage
- Conduct a sign asset inventory for gateway signs, park signs and monument signs at Village owned properties and in addition to proposed wayfinding signs, create a full signage plan and guidelines
- Ensure the Village branding and typeface on signs are consistent and ADA compliant; signs should be upgraded to the new style when possible
- Evaluate potential obstructions and lighting conditions; it may be ideal to up-light gateway signs and monument signs as a safety feature and increase readability at night
- Review Village sign ordinance and work with local businesses to reduce sign clutter that is unsightly, and distracting along major thoroughfares to maintain a consistent streetscape and viewshed



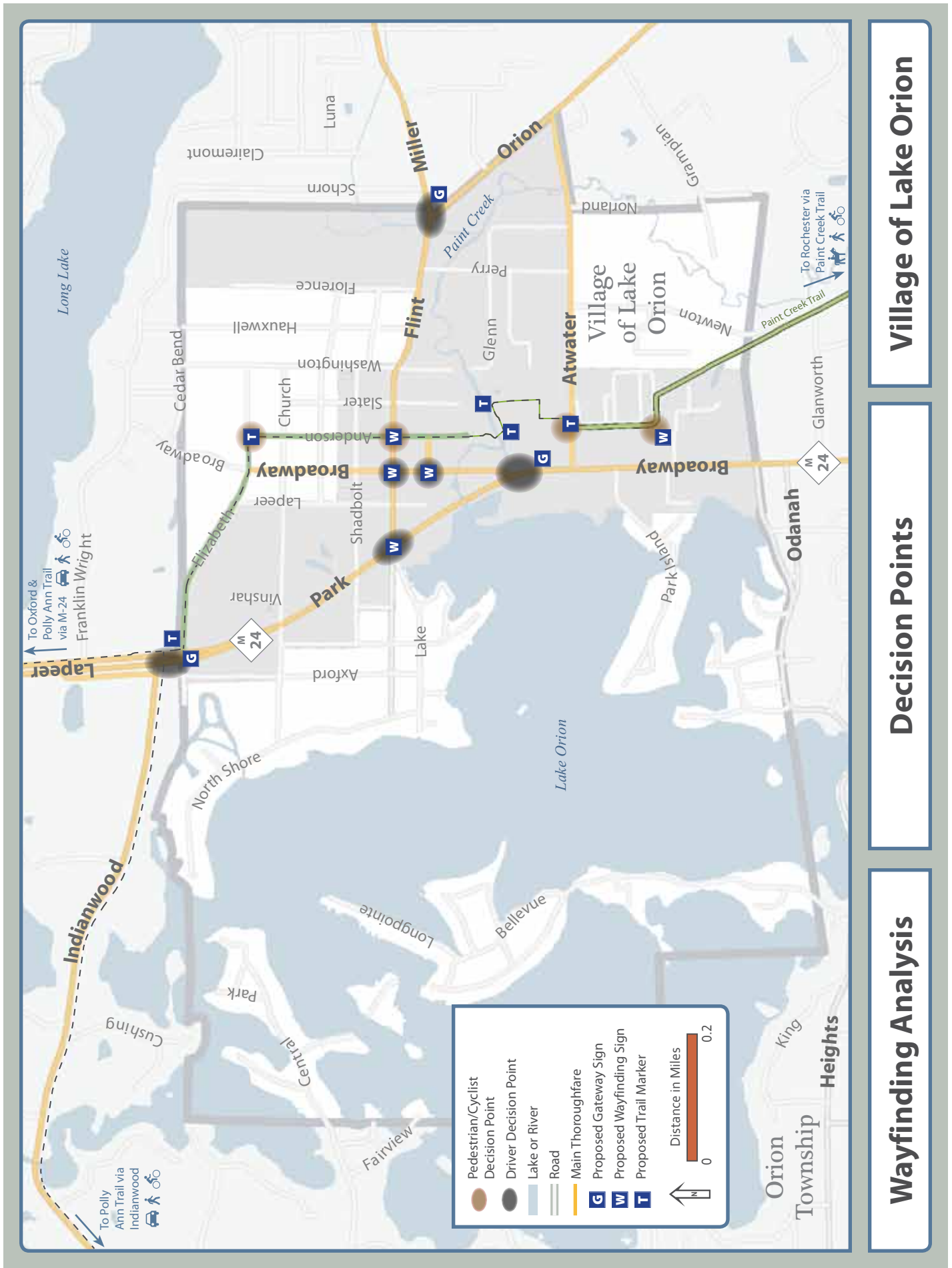
Existing park monument sign



Existing wayfinding sign



Existing gateway sign along M-24



Village of Lake Orion

Decision Points

Wayfinding Analysis

HERITAGE TOURISM

The history of an area can be subtly reflected in architectural styles, road names, land parcel shapes and building orientation. Since the late 1800s, Lake Orion has been known as a resort community and for many years relied on seasonal visitors and local trade to support the local economy. As transportation routes and modes have improved and the population has grown and dispersed around Southeastern Michigan, the Village has been able to maintain much of its small town charm.

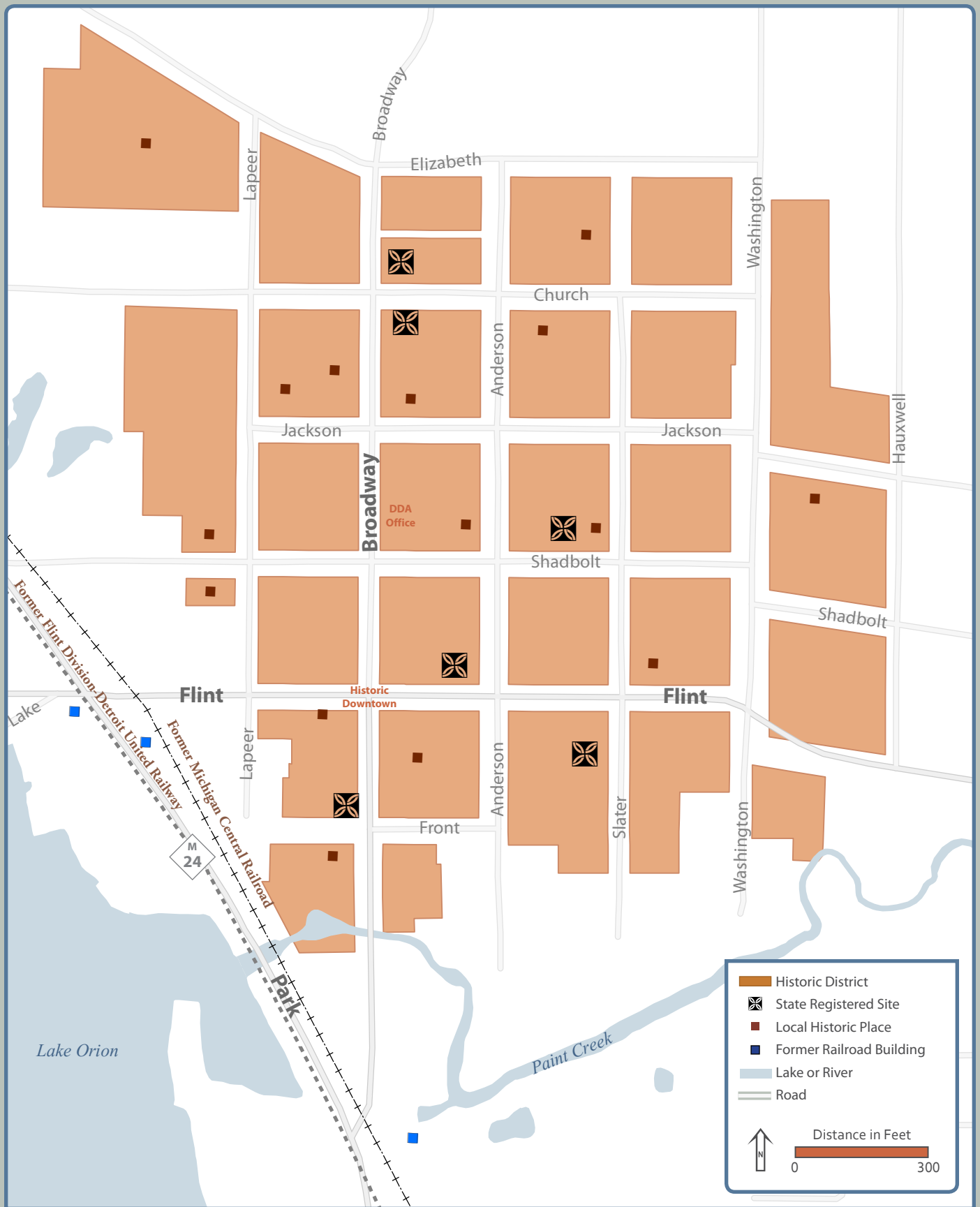
In addition to the abundant water resources and parks in the Village, a well distributed collection of local and state historic sites exist in the area. In 2006, a nationally recognized historic district was created in and around the downtown. At the time of the Historic District application, it was estimated that the Village had 217 contributing historic structures. A prime opportunity exists in this area to promote and market the numerous historic and natural resources. The National Trust for Historic Preservation defines heritage tourism as “traveling to experience the places, artifacts and activities that authentically represent the stories and people of the past,” and heritage tourism can include cultural, historic and natural resources.



Many buildings in the downtown have retained architectural details and historic appearance.

Recommendations

- Tell the story and celebrate the past. Create a system of interpretive signs located at significant buildings or sites around the Village.
- Create a map and walking route of important sites
- Preserve and rehabilitate historically significant resources
- Explore the possibility of a boutique hotel or bed and breakfast in the area that would be accommodating to trail users
- Create a marketing campaign to market heritage tourism in the area
- Seek Pure Michigan Trail and Trail Town designation



Historic Resources

Village of Lake Orion

PARKING DOWNTOWN

Public parking is an essential component of any successful downtown district. Lake Orion has a mix of on-street parking and dedicated public parking lots. For the most part, on-street spaces are limited to two hours and the public lots are posted as 23 hour parking. The private lot on the southeast corner of Shadbolt and Broadway restricts public parking Monday-Friday from 6 a.m.-6 p.m.

Recommendations

- Number or name the public parking lots to assist visitors with locating them
- Create a Visitor's Guide and highlight public parking areas, on-street parking, handicap parking locations and bicycle racks
- Add public parking lots to online mapping services
- In addition to the existing trailhead parking just east of 383 S Broadway, consider designating the lot on the southwest corner of Anderson and Front Street for use as a trailhead and adding the following amenities:
 - Information Kiosk with map of surrounding area
 - Restroom facilities
 - Bike fix-it station
 - Bike racks
 - Benches
 - Trash and recycle receptacles
- Reduce the number of regulatory signs in the Village. For example, the MMUTCD recommends *To minimize the number of parking signs, blanket regulations that apply to a given district may, if legal, be posted at district boundary lines.* (Section 2B.47.09)
- Conduct a sign asset inventory in the Village. Ensure that sign height, orientation and content are consistent and compliant with MMUTCD and *Code of Ordinances of the Village of Lake Orion.*



*Parking Plaque Standard Orientation
from MMUTCD Section 2B.47*



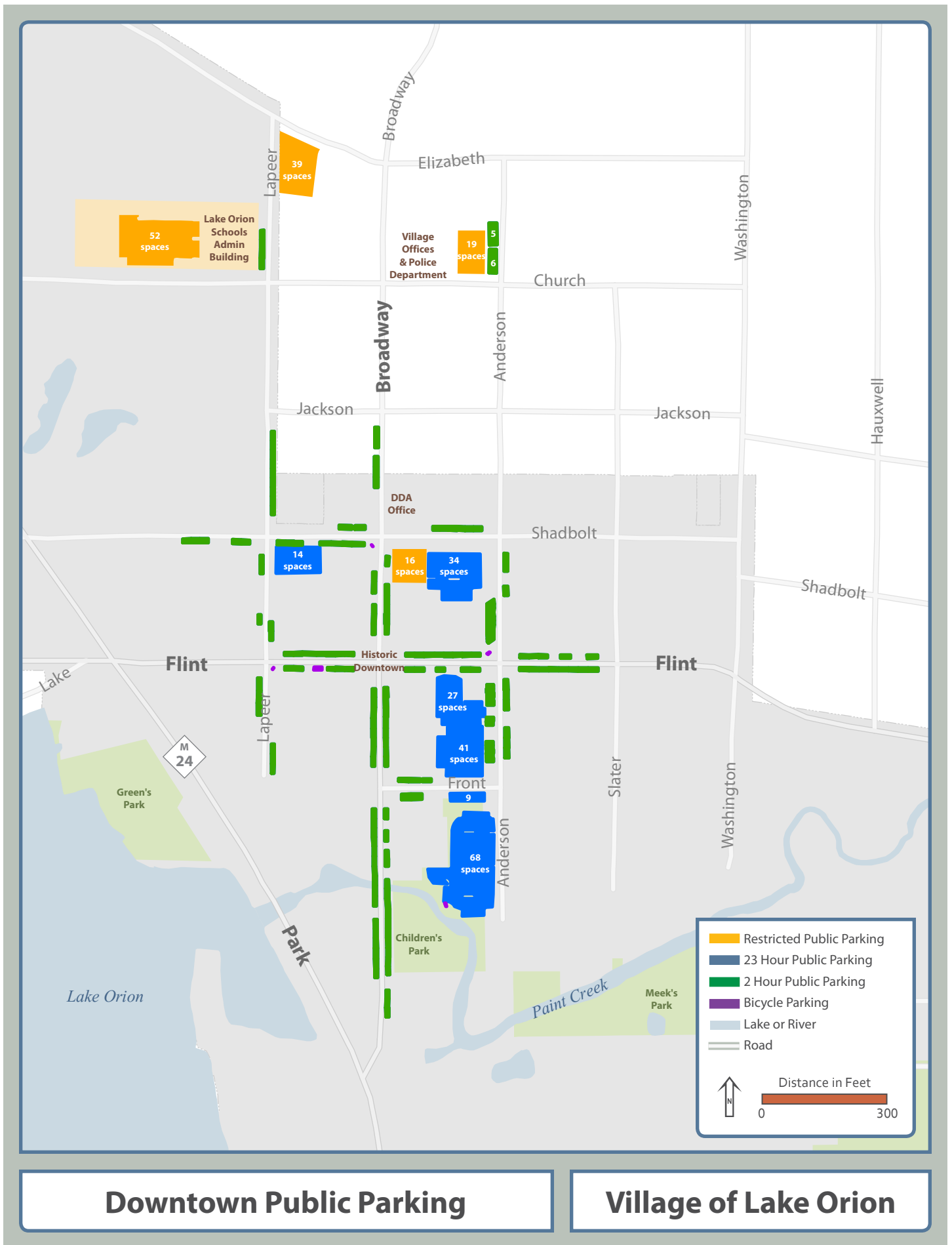
Compliant on-street parking signs



Non-compliant parking signs



Non-compliant parking signs



GREEN INFRASTRUCTURE

In 2009, a Green Infrastructure Vision was developed for Oakland County in order to identify areas in the landscape that are in need of local protection and link the remaining valuable ecological lands. These lands include large natural areas, important wildlife habitats, wetlands, riparian corridors, and areas that reflect key elements of Oakland County's biological diversity.

This locally driven initiative gathered input from a wide variety of stakeholders. In 2005, key stakeholders from Lake Orion and Orion Township participated in one of many work sessions focusing on natural resource connectivity. The area surrounding the Paint Creek has been identified as a key recreational link in the County Vision.



What is Green Infrastructure?

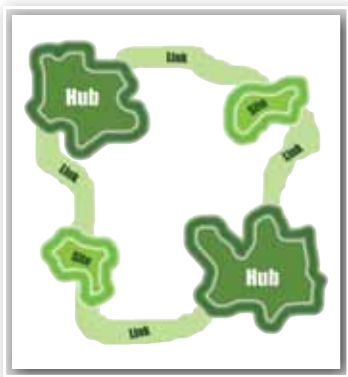
Green infrastructure is the interconnected network of open spaces, natural areas, and waterways. This network supports native species, maintains natural ecological processes, sustains air and water resources and contributes to health and quality of life. It also focuses on conservation values and the services provided by natural systems in concert with, instead of in opposition to, land development.

Benefits of Green Infrastructure

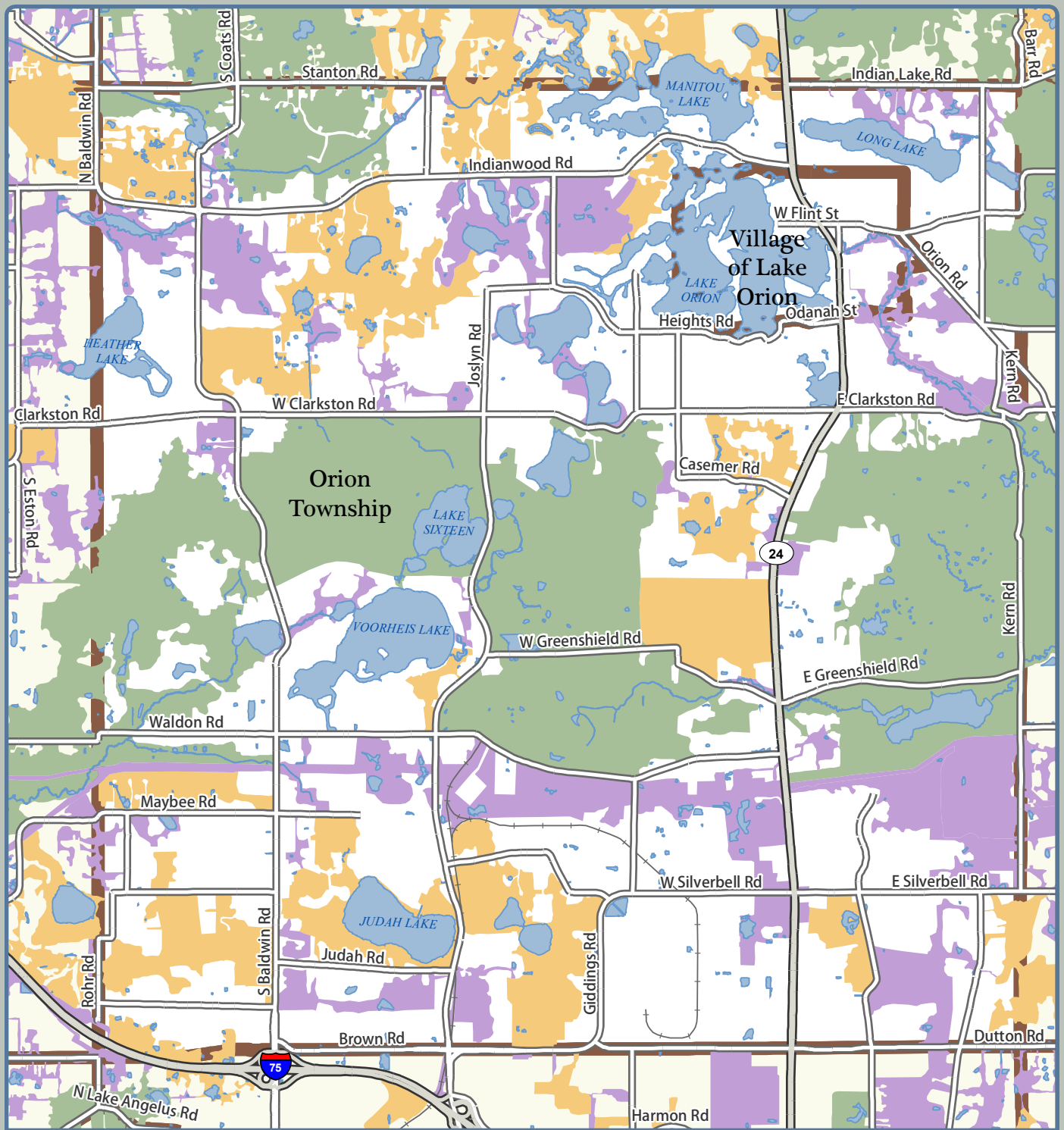
Green infrastructure provides a mechanism to identify and blend environmental and economic factors creating a multitude of social, economic, cultural and environmental benefits.

- Provides a sense of place and a unique identity
- Decreases cost of public infrastructure (i.e. stormwater management & water treatment systems)
- Increases both active and passive recreational opportunities
- Increases property values
- Helps preserve the unique quality of life
- Maintains the naturally functioning ecosystems
- Helps to attract new businesses and well qualified workers

Components of a Green Infrastructure Network



- **Hubs:** Hubs anchor the network and provide an origin or destination for wildlife. Hubs range in size from large conservation areas to smaller parks and preserves. Hubs provide habitat for native wildlife and help maintain natural ecological processes.
- **Sites:** Smaller ecological landscape features that can serve as a point of origin or destination or include less extensive ecological important areas.
- **Links:** The connections that hold the network together and enable it to function. Links facilitate movement from one hub to another.



- Road
- Municipal Boundary
- Lake or River
- Hub
- Site
- Link



Orion Township Green Infrastructure

Green infrastructure is the interconnected network of open spaces, natural areas, and waterways. This network supports native species, maintains natural ecological processes, sustains air and water resources and contributes to health and quality of life.

Our Roots Run Deep... Over Thirty Years of Natural Resource Identification & Preservation



connecting communities

Multi-Scale Approach

Using a multi-scale approach to green infrastructure planning helps to create a meaningful context from which to plan and implement a variety of conservation-related projects. Scale allows for the conservation of green infrastructure to encompass natural assets of different sizes, ranging from backyard rain gardens to intact forests. By taking local plans to the overall County Vision, we help support the integrity of the large resource networks and ensure opportunities for coordination between conservation efforts.

The County's Vision is intended to set only provide a basis for the overall conservation system of water, green and natural areas, but to encourage and support the integration of land management planning into the local project design.

Examples of various levels of scale and scale can be identified as:

- Project Scale** (single acre-ft.) Examples include: green building, rain gardens, and natural landscaping.
- Community Scale** (single city/township) Examples include: conservation developments, parks, and local zoning ordinances.
- Landscape Scale** (regional) Examples include: an interconnected network of open spaces, water areas, and waterways.

Green infrastructure actions should span multiple scales, but it's at the local level where most of the on-the-ground implementation takes place.

natural networks

Natural Area Advisory Group

Formed in 2004, the Oakland County Natural Area Advisory Group brings together a variety of organizations and individuals interested in advancing green infrastructure efforts throughout Oakland County.

The Natural Area Advisory Group also played a major role in developing the Green Infrastructure process and guiding the countywide planning effort.

Conservation advocates that focus on individual pieces of land without considering surrounding landscapes are limiting their potential success. Conservation efforts can be maximized by being proactive in the planning process and taking advantage of potential opportunities.

The Natural Area Advisory Group provides an excellent opportunity to highlight a multitude of potential land and conservation opportunities that reach far beyond the actual project site. Meetings and local authority are open to anyone interested in sharing, learning, and collaborating on viable conservation opportunities related to multi-scale green infrastructure efforts.

Vision

To become an informed, coordinated, collaborative body that adds value to preservation efforts that contribute to Oakland County's Green Infrastructure.

Mission

To collaborate, coordinate, and support initiatives that preserve natural lands and resources in order to enhance the quality of life for the residents of Oakland County.

Goals

1. Pursue establishing partnerships in both the public and private sectors.
2. Facilitate the development of a joint county conservation green infrastructure vision.
3. Explore funding mechanisms.

-regional focus-

Green infrastructure efforts around the State of Michigan:

- Wild Lake Conservation Resource District
- West Michigan Strategic Alliance
- Greening Greater to Southeast Michigan
- Southwest Michigan Collaborative
- Greening Red Michigan
- Greening, Learning & Growing Green Lakes
- Oakland County Green Infrastructure Vision
- Washtenaw County

Statewide Efforts

-landscape focus-

Regional Connections

Oakland County's collaborative partnership-based Green Infrastructure Vision:

- acts as the foundation for an integrated conservation network
- builds on individual community efforts
- promotes collaboration
- helps to sustain our cities, towns, and villages

County Vision

site focus-

Local Opportunities

Green infrastructure components in the urban landscape can include:

- Backyard Rain Garden
- Green Building
- Green Roofing
- Native Landscaping
- Restoration Opportunities

Urban Example

Green infrastructure components in the urban landscape can include:

- Backyard Rain Garden
- Green Building
- Green Roofing
- Native Landscaping
- Restoration Opportunities

Parcel Example

A community can create buffer requirements in the local zoning ordinance to help stabilize and protect their lands and water resources.

- Homeowners built in the 1960s did not include a vegetative buffer at the water's edge.
- Homeowners built in the 2000s incorporated a vegetative buffer.

built from the bottom up
based on science

Green Infrastructure Vision

Oakland County, Michigan
Preserving Our Natural Legacy

Green infrastructure is an interconnected network of open spaces, natural areas, and waterways. The term focuses on the conservation values, the services provided by natural ecosystems, and integrating them into the built environment. Our Green Infrastructure Vision has the same goals and vision as our other natural resource plans. It is a vision of a healthy, resilient, and sustainable future for Oakland County. It is a vision of a future where we can enjoy the benefits of a healthy, resilient, and sustainable future for Oakland County. It is a vision of a future where we can enjoy the benefits of a healthy, resilient, and sustainable future for Oakland County.

Oakland County is blessed with an abundance of healthy and unique natural resources. This natural advantage contributes to the environmental and economic quality of life for our residents and businesses. Our Green Infrastructure Vision was created to recognize and maintain this natural advantage. This vision provides a road map for the future and creates opportunities for people to connect to the land through trails, parks, and waterways. Through planning, we can help develop the best of public, infrastructure and public services such as stormwater management and water treatment systems. The collective strength and ability to work together on these complex planning issues help ensure Oakland County's healthy property and sustainable status in a world-class business region.

Sharon Peterson, Oakland County Executive

Prepared by:

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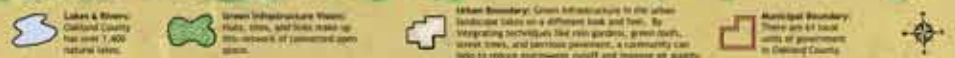
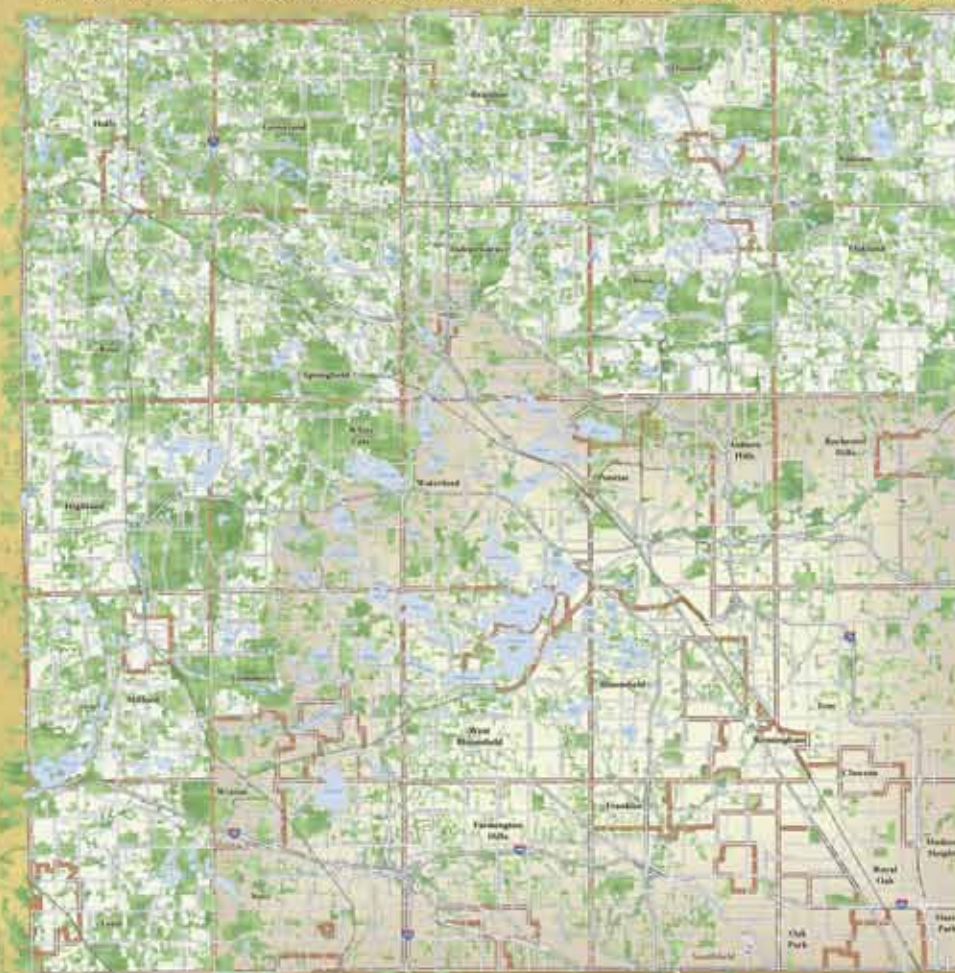


Green Infrastructure Vision

Oakland County, Michigan



Mark A. Benedict and Edward T. McMahon, of the Conservation Fund, defined the term green infrastructure as: "An interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations."



experience green infrastructure first hand



Nature Walk
Oakland Township



Fishing the Clinton River
City of Bloomhills



Nature Exploration
East Township



Kayaking the Rouge River
City of Pontiac



Native Plant Garden
City of Pontiac



Scenic Overlook
Oakland Township



Rain Garden
City of Bloomhills



Edis Barn
Springfield Township



Edis Barn
Springfield Township

green infrastructure spans across urban, suburban, and rural landscapes



Natural Areas
East Township



Lakes, Rivers, & Streams
East Township



Recreational Opportunities
East Township



Trail Connections
City of Bloomhills



Natural Landscapes
City of Farmington Hills



Green Roofs
Oakland Township



Conservation Development
Oakland Township



Schoolyard Habitats
Oakland Township



Street Trees
City of Pontiac

What is Green Infrastructure?

The building blocks for Green Infrastructure are parks, trails, and trees. The following definitions were used throughout the Oakland County Green Infrastructure community work session and planning process.

Hub These large, contiguous areas are the foundation of the network and contain a large amount of open habitat for plants and animals. Hubs act as origins and destinations for a wide variety of living things, are typically greater than 250 acres in size, and include at least one Priority One Natural Natural Area.

Link These areas are smaller than hubs but are still important components to the network. They are an essential component to the network. These areas include smaller wetland complexes, small woodlands, and other open space.

Site These areas are smaller than hubs but are still important components to the network. They are an essential component to the network. These areas include smaller wetland complexes, small woodlands, and other open space.

Link The linear connection between hubs and sites are a vital component to the functionality of the entire network. Without linkages, the hubs and sites, in essence, become fragmented islands within the landscape.

Not all Green Infrastructure projects have the same goals and each project may include a variety of land uses containing a mixture of ecological values. Using the Vision and about these projects to protect and encourage environmental stewardship that crosses political boundaries.

The County's Role



land use planning. The County provides Green Infrastructure capacity building assistance for local governments, businesses, work groups, and individual citizens in both urban and rural areas.

Your Role While the Green Infrastructure planning effort, an interdepartmental effort, has the opportunity to create and implement their unique piece of the shared vision, no one is more familiar with your community than you. As a resident, business, non-profit organization, or elected official, you are in a unique position to lead in taking ownership about the need for locally based Green Infrastructure. You have the ability to influence and advocate proactive conservation that fosters sustainable environmental, social, and economic health within your community. Use the County's Green Infrastructure Vision to help craft the discussion, gain consensus, and place your projects within a larger planning context.

What are the benefits?



Using a comprehensive, integrated approach to Green Infrastructure creates a multitude of environmental, social, and economic benefits that foster healthy and sustainable communities. When considering associated Green Infrastructure benefits, it's important to keep in mind that even seemingly small projects, when taken together, have a meaningful impact. By highlighting the connection between the environmental, social, and economic benefits associated with Green Infrastructure, we support a strong sense of place and create the basis for innovative solutions that support all stakeholders.

Natural Assets = Higher Property Values

In 2007, Michigan State University's Land Policy Institute conducted a study that focused on the value of Green Infrastructure in Michigan. Results of the study indicate that, specifically to Oakland County, Green Infrastructure provides a significant and measurable benefit to residential property values.

These findings highlight the property value implications of Green Infrastructure assets and the increased tax benefits that local governments derive due to these assets.

- Water Resources**
Property within 50 feet of a body of water has a 21.7% property value increase.
- Scenic Views**
Property within a half mile of a scenic view has a 4.3% property value increase.
- Natural Amenities**
Property within 50 feet of a recreation area has a 3.1% property value increase.

The Land Policy Institute (www.landi.org) also documented various other opportunities to improve property values at the state and local level.

Environmental Benefits

- Provides habitat and biodiversity
- Reduces air, noise, and water pollution
- safeguards natural and historic assets
- Manages stormwater
- Helps mitigate the effects of climate change

Social Benefits

- Helps to build a sense of place
- Provides outdoor learning environments
- Creates recreational opportunities
- Improves health and wellness

Economic Benefits

- Supports business attraction
- Helps to increase and maintain property values
- Promotes free services (water filtration, groundwater recharging, stormwater control)
- Improves local and regional tourism

OTHER RECOMMENDATIONS

- Remove benches, trash receptacles and other obstacles from multi-use pathways and install a minimum of 3 feet from the edge of the pathway. Consider adding a concrete pad below benches with additional space to accommodate a wheelchair or stroller.



- Reinstall picnic table bench seats (90° from existing location) to accommodate a wheelchair or stroller.

- Work with utility company to adjust guy-wires to allow for a 8' minimum overhead clearance on pathways and install appropriate plastic covers to protect trail users.



Compliant example

- Work with private property owners and local businesses to remove landscaping and trees that obstruct or block the clear zone at sidewalk/driveway crossings.



- Inspect and replace sections of concrete sidewalk that are in poor condition.

- Install ADA compliant curb ramps and detectable warning strips at hazardous vehicular areas.



Compliant example

- Work with MDOT and explore the potential of relocating the guardrail along M-24 closer to the curb to create a barrier between the road and the sidewalk. Also consider creating a vegetated median from Broadway north to Flint Street that will act as traffic calming and install a pedestrian refuge island.



Example from Dixie Highway in Waterford



- Work with Village Officials and Parks & Recreation staff to consider adding equestrian amenities at Meek's Park such as a water trough and horse picket lines.

- Enhance existing Paint Creek Trail information kiosk at the south end of the Village to welcome trail users and provide wayfinding sign to amenities, shopping and restaurants in the Downtown and along M-24.



- Work with DPW and Village Police to modify existing Traffic Control Orders along Anderson and Elizabeth Streets to reduce the number of stop signs. Cyclists and motorists share many of the same rights and responsibilities while traveling on a roadway-especially obeying traffic signals and signs. With the current configuration, a cyclist will need to stop 6 times along the proposed trail extension route. Another consideration might be to enact a law in the Village similar to the Idaho Stop, which allows cyclists to treat a stop sign as a yield sign and a red light as a stop sign.



- Work with local business owners to create a trail user incentive program such as bring in your bike helmet and receive free shipping or special discounts on items.

- Enhance and promote the Paint Creek through the Village. This is Southeast Michigan's premier coldwater trout stream. Reducing stormwater runoff, streambank stabilization and increasing tree canopy along the creek's edge will help to improve water quality.



FUNDING OPPORTUNITIES

There are a number of grant opportunities that exist for non-motorized transportation and outdoor recreation enhancements. The Village of Lake Orion may qualify for grants from the following sources:

- **Transportation Alternatives Program Grant**

The Transportation Alternatives Program (TAP) is a competitive grant program that funds projects such as multi-use paths, streetscapes, and historic preservation of transportation facilities that enhance Michigan's intermodal transportation system and provide safe alternative transportation options. The Michigan Department of Transportation and Southeast Michigan Council of Governments each have access to federal transportation funds to support place-based economic development by offering transportation choices, promoting walkability and improving quality of life. A minimum 20% local match is required for proposed projects and applications are accepted on an on-going basis online. www.michigan.gov/mdot or www.semcog.org/TAPCall.aspx

- **Michigan Natural Resources Trust Fund**

The Michigan Department of Natural Resources oversees funds from the sale of oil, gas and mineral leases and royalties from their extraction on state lands. These funds are then granted back to qualifying agencies to acquire and develop lands for public recreation or for protection of land for its environmental importance or scenic beauty. A minimum 25% local match is required in addition to an updated 5-Year Parks & Recreation Master Plan. Online grant applications are due April 1st each year. www.michigan.gov/dnr

- **Michigan Recreation Passport Grant**

The Michigan Department of Natural Resources oversees funds from the sale of the Recreation Passport which replaces the resident Motor Vehicle Permit for state park entrance. A portion of the revenues are then granted back to qualifying agencies for development projects. The program is focused on renovating and improving existing parks, but the development of new parks is eligible. www.michigan.gov/dnr

- **Community Development Block Grant Funds**

Community Development Block Grant funds are provided to communities from the U.S. Department of Housing and Urban Development for a range of eligible activities that benefit low and moderate income citizens and/or promote community and economic development. As long as projects meet eligibility criteria funds could be used for non-motorized trail projects like sidewalk improvements. www.hud.gov

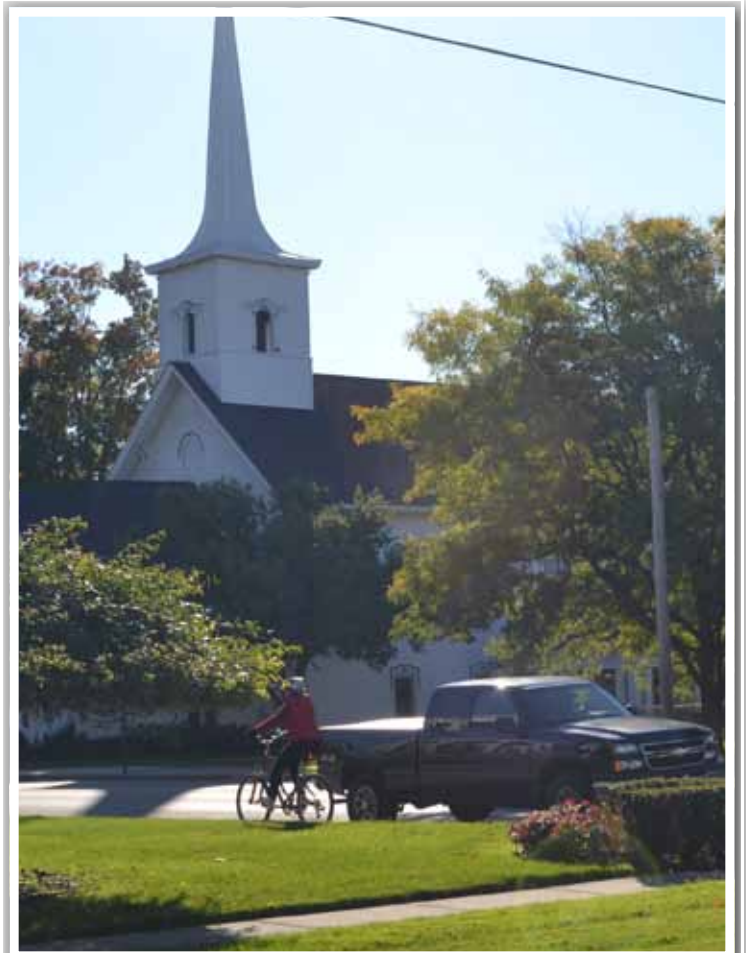
- **Four County Community Foundation Grant Funds**

Grant applications through the Four County Community Foundation Grant are accepted throughout the year and will fund a variety of community related projects for non-profits, public schools and governmental agencies. www.4ccf.org

CONCLUSION

The Village of Lake Orion has done an excellent job preserving the small town character and historic roots from which it was built on. With some refinement of some key features and promotional materials, the Downtown can continue to grow and improve services and amenities to visitors and residents alike. Expansion of the Paint Creek Trail and proper wayfinding signage through the Village will also provide an improved user experience, a safe route to the Downtown and close another gap with connecting to the Polly Ann Trail.

The Governor's Showcase Trail will also expand the reaches of promoting non-motorized recreation and transportation in and around the state of Michigan. Exposing trail users to unique trails, special places and connecting downtowns are only a few benefits that this cross-state trail has to offer. The Lake Orion DDA should evaluate the existing services and amenities related to trails and cultural tourism and strive to expand missing business types.



Maintaining a strong downtown will ensure continued economic development potential, sustain property values and provide the opportunity for an improved quality of life for area residents. The small town charm, abundant natural resources and preservation of historic features continue to attract new businesses and out of town visitors. The proposed trail extension and wayfinding opportunities will help improve the overall experience and awareness of the special places that Lake Orion has to offer.

