



# Active Mobility Plan 2023

[WalkBike.Info/Novi](http://WalkBike.Info/Novi)



## Planning Commission Meeting

February 7, 2024

7:00 pm

# Acknowledgements

## Core Team:

- **Community Development**
  - Barb McBeth
  - Lindsay Bell
  - James Hill
- **City Technical Advisory Committee**
- **Walkable Novi Committee**
- **The Greenway Collaborative**
  - Carolyn Prudhomme
  - Norm Cox
- **Fishbeck**
  - TJ Likens

The successful development of the Active Mobility Plan would not have been possible without the dedication, expertise, and support of various individuals and staff leaders.

### City Council

- ▶ Justin Fischer, Mayor
- ▶ Laura Marie Casey, Mayor Pro-tem
- ▶ David Staudt, Council Member
- ▶ Brian Smith, Council Member
- ▶ Ericka Thomas, Council Member
- ▶ Matt Heintz, Council Member
- ▶ Priya Gurumurthy, Council Member

### Technical Advisory Committee

- ▶ Barbara McBeth, Community Development
- ▶ Lindsay Bell, Community Development
- ▶ James Hill, Community Development
- ▶ Jeff Muck, Parks, Recreation and Cultural Services
- ▶ Rebecca Runkel, Public Works
- ▶ Matt Wiktorowski, Public Works
- ▶ Erick Zinser, Public Safety/Police
- ▶ Dean Reid, Public Works

### Walkable Novi Committee

- ▶ Gary Becker, Planning Commission Member
- ▶ Laura Marie Casey, Council Member
- ▶ Jay Dooley, Parks, Recreation and Cultural Services Commission Member
- ▶ Justin Fischer, Council Member
- ▶ Edward Roney, Planning Commission Member
- ▶ Joe Tolkacz, Parks, Recreation and Cultural Services Commission Member

### Other Thanks

The City of Novi extends its gratitude to the citizens who actively participated in events and surveys. Additional appreciation is extended to the City of Novi staff for their guidance and support, notably:

- ▶ Victor Cardenas, City Manager
- ▶ Sheryl Walsh-Molloy and her team in Community Relations

### Consulting Partners

This plan was facilitated by The Greenway Collaborative and Fishbeck and is intended for planning purposes only

# Introduction and Benefits

- Update of the 2011 Non-Motorized Master Plan with a New Name - **Active Mobility**
- Integrating physical activity into everyday transportation provides a wealth of benefits not just to the individual but the community as a whole
- The plan addresses the many advances in non-motorized transportation and micromobility in the last 12 years
- The plan also works to improve motorized traffic safety and address traffic flow



## Improve Public Health

Encouraging walking and biking promotes physical activity, reducing the risk of chronic diseases and improving overall health.



## Environmental Sustainability

Promoting non-motorized transportation reduces greenhouse gas emissions, contributing to cleaner air and a healthier planet.



## Reduced Traffic Congestion

Fewer cars on the road can alleviate traffic congestion, leading to quicker and more efficient commutes for everyone.



## Economic Benefits

Non-motorized infrastructure can attract visitors, boost local businesses, and create jobs in construction and related industries.



## Quality of Life

Walking and biking improve the overall quality of life by reducing stress, enhancing mental well-being, and promoting an active lifestyle.



## Cost Savings

Less reliance on cars means lower transportation costs for individuals and reduced maintenance costs for municipalities.



## Accessibility

Non-motorized transportation options make communities more accessible to people of all abilities, including those who cannot drive.



## Community Building

Encouraging walking and biking fosters community interaction and a sense of belonging.



## Future Transportation

Non-motorized plans prepare communities for future transportation trends and can help reduce dependence on fossil fuels.



## Safety

Well-designed pedestrian and bike facilities enhance road safety for all users, reducing accidents and injuries.

Well-designed pedestrian and bicycle facilities enhance the safety for all roadway users

# Elements of the Plan

- Report
- Executive Summary
- Large Network Map

## Active Mobility Plan 2023

Draft: 01/17/24



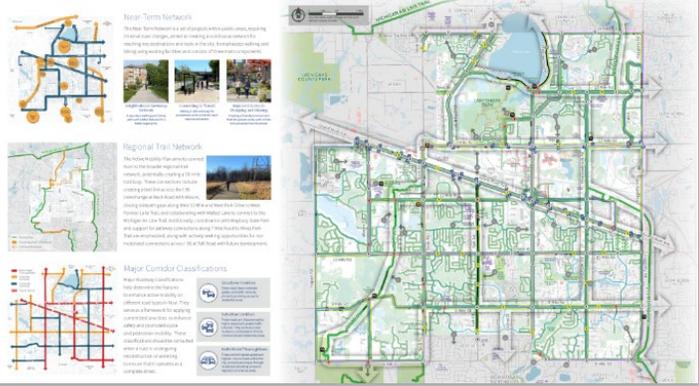
The cover of the Active Mobility Plan 2023 features the City of Novi logo in the top right corner. Below the title, it indicates the draft date as 01/17/24. At the bottom, there is a silhouette illustration of various active mobility users: a person with a cane, a person sitting on a bench with a dog, a person pushing a stroller, a person in a wheelchair, a person riding a bicycle, and a child on a scooter.

## Executive Summary



The Executive Summary page features the City of Novi logo in the top right corner.

## Active Mobility Network Map



The Active Mobility Network Map page features the City of Novi logo in the top right corner. The map itself is a detailed grid showing various active mobility routes and corridors, with different colors and line styles representing different types of infrastructure. It includes sections for 'Near-Term Networks', 'Regional Trail Network', and 'Major Corridor Classifications'.

# Report Structure

## Overview & Process

Introduces plan objectives and development process, emphasizing community and stakeholder involvement to ensure a comprehensive and inclusive plan.

## Existing Conditions

Provides a thorough assessment of current non-motorized conditions, including land use, traffic generators, and mobility patterns. Evaluates pedestrian and bicycle conditions, identifies improvement areas, coordination strategies, and potential safety enhancements.

## Facility Types & Guides

Simplifies non-motorized terminology using images and explanations and promotes safety and efficiency through readily available design guidelines for new facilities.

## Major Corridor Guides

Outlines the long-term vision for the major roadway network by showing how current best practices may be applied to prioritize safety and enhance bicycle and pedestrian mobility.

## Long-Term Network

Outlines the city's goals for the next two decades and beyond, including sidewalks, mid-block crosswalks, bike lanes, greenways, and local road routes.

## Near-Term Network

Includes three components: Neighborhood Greenway Network, Transit Connections, and Improved Access. It primarily focuses on leveraging existing facilities to create a city-wide network connecting key destinations.

## Specific Areas

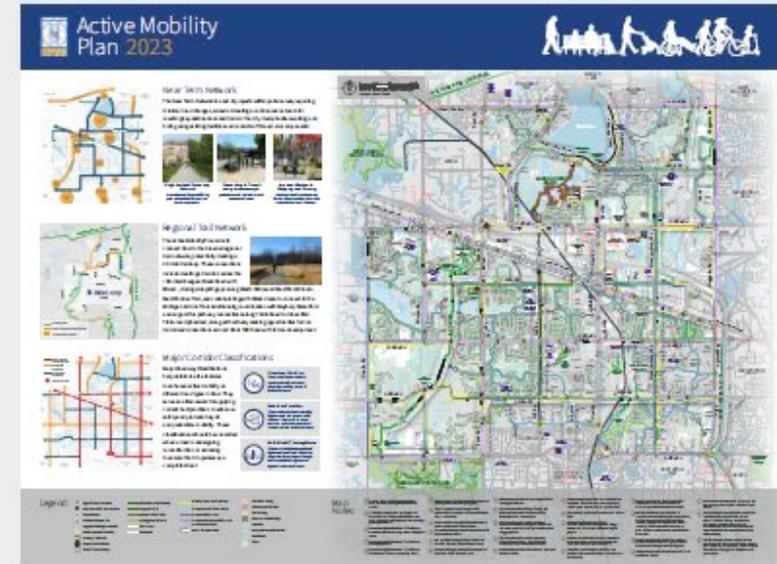
Highlights key areas that hold significant potential for transformation, emphasizing the creation of a vibrant and pedestrian-friendly community. These areas encompass East Lake Drive and South Lake Drive, City West, and Northville's Riverwalk Vision.

## Implementation

Addresses the diverse avenues of funding, construction and maintenance strategies that can be harnessed to support the implementation of the plan.

## Active Mobility Network Map

Supplemental to the Active Mobility Plan Report, the large format Network Map provides a comprehensive visual depiction of the plan's components.



## Appendix Materials

The project website, [walkbike.info/novi](http://walkbike.info/novi), hosts an extensive digital appendix containing a wealth of information regarding the development of the plan and its supporting materials.

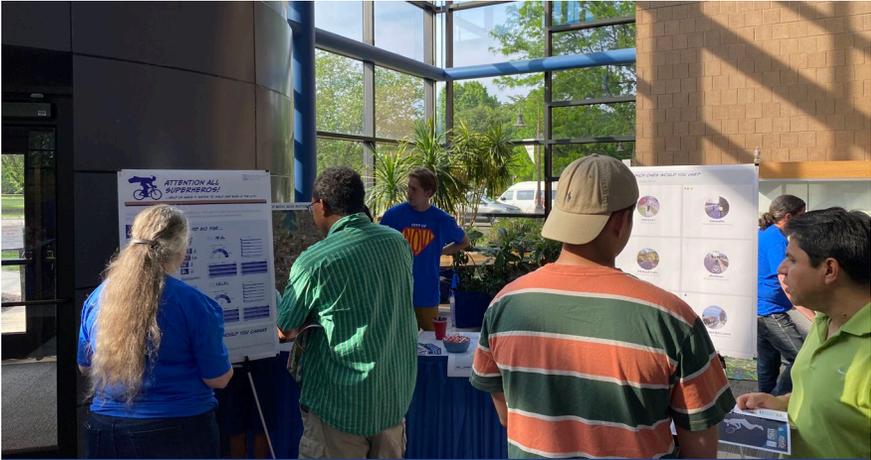
# Process & Input



Surveys & Crowdsourcing Maps



Community Open House & Focus Group Meetings

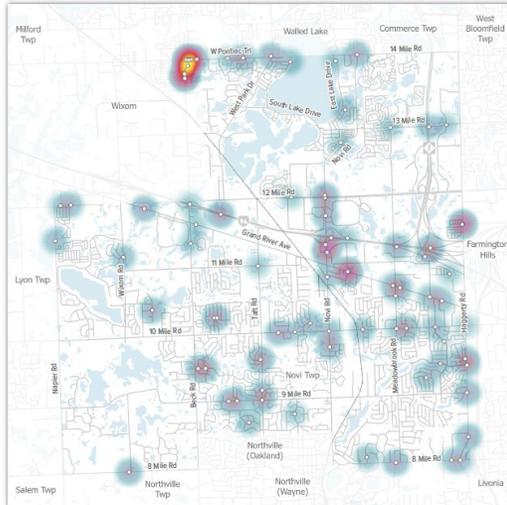
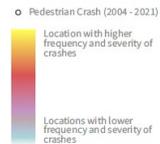


Local Events & Pop-up Displays

# Existing Conditions

## Pedestrian Crash Heat Map

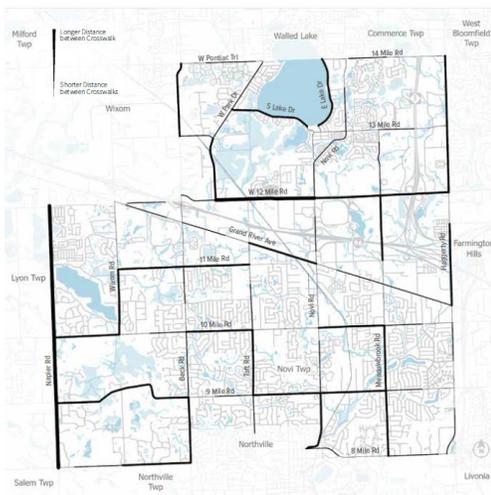
This heat map serves as a visual representation of pedestrian crash data spanning an 18-year period, highlighting specific locations where pedestrian accidents have occurred more frequently and with increased severity. The map offers valuable insights into areas where enhanced safety measures and infrastructure improvements may be warranted.



## Nonmotorized Network Deficiencies

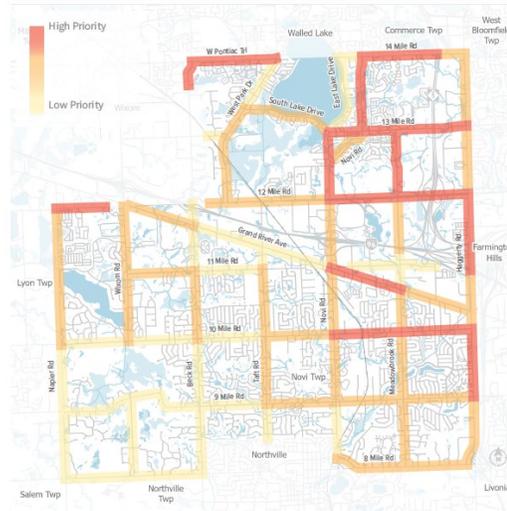
### Distance between Crosswalks

This map highlights major road corridors with long distances between signalized and midblock crosswalks. Crosswalk spacing is a key factor in directness of travel. Most pedestrian trips for personal business (like walking to the store) are about 1/2 mile long. Where there is demand to cross the road and crosswalk spacing is over 1/2-mile apart, midblock crossings are likely to occur. It is important to note that although there may be an existing pedestrian crossing or signalized intersection, they do not always provide an easy and safe way to get across the street. Many times additional improvements are needed at those locations to make them accessible to everyone.



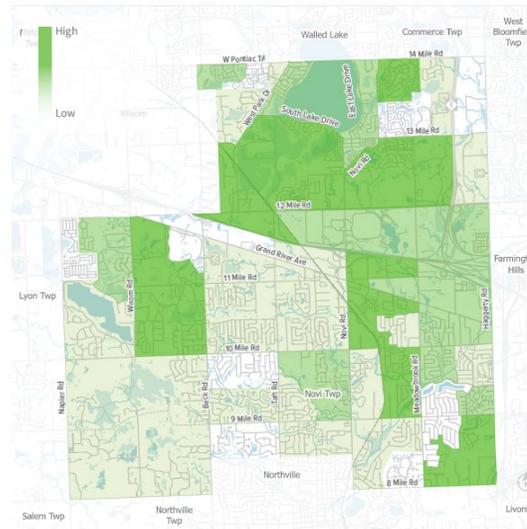
## Priority Corridors Composite Map

This summary map highlights priority corridors for non-motorized improvements based on equity, demand, and safety. The highest-priority corridors for these improvements are concentrated in the northeastern part of the city. The corridors that stand out as needing the most attention include sections of W Pontiac Trail, 14 Mile Road, Novi Road, 13 Mile Road, Meadowbrook Road, 12 Mile Road, Haggerty, and Grand River.



## Latent Demand Composite Map

Latent demand areas estimate the potential demand for bicycle and pedestrian travel. Other factors may promote or inhibit actual non-motorized travel levels. The composite analysis is a useful tool to contrast with facility deficiencies, potential facilities and to prioritize improvements. This map uses census blocks to illustrate latent demand for non-motorized travel areas and includes the following data sets:



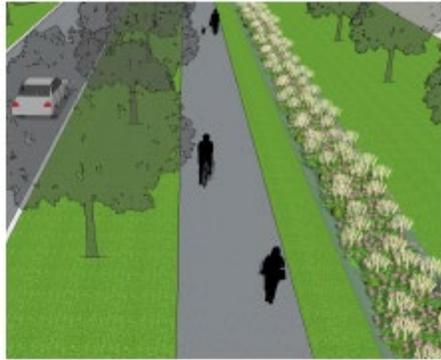
- ▶ **Traffic and Mobility:** Studying where people travel, traffic patterns and key destinations.
- ▶ **Community Demographic:** Examining diverse populations, low-income households, commuting habits, and equity.
- ▶ **Facilities and Improvements:** Assessing current paths, sidewalks, and planned enhancements.
- ▶ **Safety:** Looking into bicycle and pedestrian crashes and identifying high-risk areas.
- ▶ **Policy and Program Evaluation:** Reviewing existing non-motorized initiatives.
- ▶ **Deficiencies:** Highlighting areas with travel gaps and dependency on non-motorized transport.
- ▶ **Corridor Prioritization:** Identifying priority areas for improvements based on equity, demand, and safety.

# Facility Types & Treatments



## Sidewalks

Dedicated space intended for use by pedestrians. They are separated from a roadway by a curb or unpaved buffer space and typically constructed of concrete. Sidewalks should be set back from the roadway at least five feet from the back of curb. A preferred sidewalk width of six feet or more allows for a more spacious walking environment. Additionally, integrating street parking or bike lanes along sidewalks provides a barrier between pedestrians and moving vehicles, creating a safer and more enjoyable pedestrian experience. Street trees in the buffer further contribute to the aesthetics and shade, enhancing the overall sidewalk environment.



## Shared Use Paths

Pathways that are physically separated from the roadway and are shared by people who walk and bike going both directions. These are wider than standard sidewalks (at least 10' wide with 2' clear zone on each side) and typically constructed of asphalt or carefully jointed concrete for smooth bicycling. When located adjacent to a roadway the facility may be referred to as a sidepath.

For pathways seeking federal funding, adherence to the American Association of State Highway and Transportation Officials (AASHTO) guidelines is crucial to ensure eligibility and compliance with established safety standards.



## High Visibility Crosswalk

High visibility marked crosswalks indicate optimal or preferred locations for pedestrians to cross a road and help designate right-of-way for motorists to yield to pedestrians. High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks. They should be considered at all mid-block pedestrian crossings and uncontrolled intersections.

This is a **FHWA Proven Safety Countermeasure**. For more information visit <https://highways.dot.gov/safety/proven-safety-countermeasures>

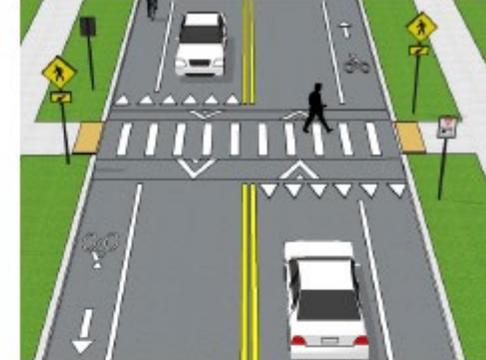


## Crossing Islands

Pedestrians only need to cross one direction of traffic at a time which is much safer and allows for more opportunities as they only are looking for a gap in traffic from one direction. The island provides a strong visual indicator to motorists of the crosswalk. Often used in conjunction with rectangular rapid flash beacons.

Crossing islands should be employed whenever pedestrians need to cross more than two lanes of traffic, when the speed limit exceeds 35 mph, or when the gaps in traffic are insufficient.

This is a **FHWA Proven Safety Countermeasure**.



## Raised Crosswalk

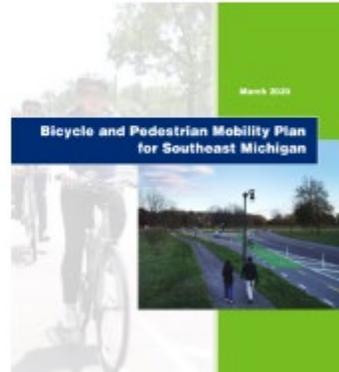
Also known as a speed table, is a traffic calming measure designed to improve pedestrian safety at intersections and mid-block crossings by raising the entire roadway surface to the level of the sidewalk while maintaining a smooth transition for vehicles. It provides the visual and physical cue to drivers to reduce their speed and expect pedestrians.

Raised crosswalks should be exclusively employed on streets with speed limits of 25 mph or less. In the case of three and four-way intersections, it's possible to raise the entire intersection for enhanced pedestrian safety.

# Design Guidelines & Resources

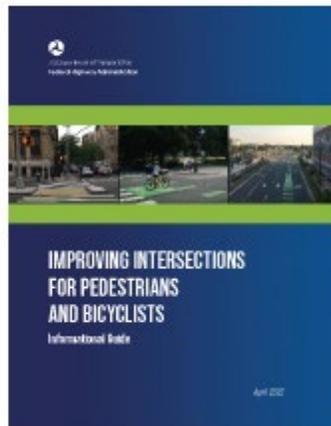
## Regional Resources

- **The Southeast Michigan Council of Governments (SEMCOG)** offers a range of resources and support for bicycle and pedestrian mobility including maps, educational materials, bicycle and pedestrian count programs, funding opportunities and grants, bicycle and pedestrian data and tools to assist users in planning trips and finding amenities. Coordinating planning efforts with SEMCOG is important in obtaining funding for plan implementation.
- **Website:** [www.semco.org](http://www.semco.org)



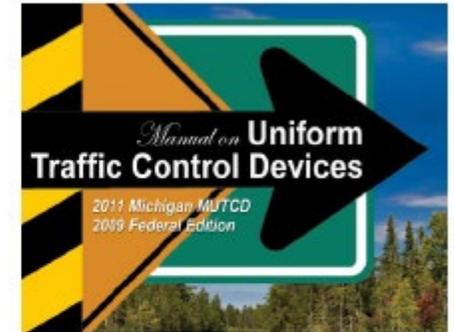
## Federal and National Resources

- **Federal Highway Administration (FHWA)** publish manuals, guidelines, and research studies on non-motorized transportation best practices, providing valuable resources for city planners and engineers. They also support non-motorized planning in cities through funding, technical guidance, resources.
- **Website:** [www.fhwa.dot.gov](http://www.fhwa.dot.gov)
- **National Association of City Transportation Officials (NACTO)** publications provide a vital resource for practitioners, policy-makers, academics, and advocates alike.



## State Resources

- **Michigan Department of Transportation (MDOT)** is vital for non-motorized planning in Michigan, allocating funds, implementing policies, and collaborating with communities. They collect data, conduct outreach, and integrate non-motorized plans into statewide transportation for safer pedestrian and bicycle infrastructure.
- **Website:** [www.michigan.gov/mdot](http://www.michigan.gov/mdot)
- **Michigan Trails and Greenways Alliance (MTGA)** promotes walking, biking, and trails in Michigan, collaborating, providing resources, and supporting trail advocacy.
- **Website:** [www.michigantrails.org](http://www.michigantrails.org)
- **League of Michigan Bicyclists (LMB)** provide educational materials, mini-grants and host tours, races and advocacy events that support bicycle travel.
- **Website:** [www.lmb.org](http://www.lmb.org)



# Major Corridor Classifications



## Crosstown Corridors

These roads have moderate speeds and traffic volumes, primarily providing access to residential areas.



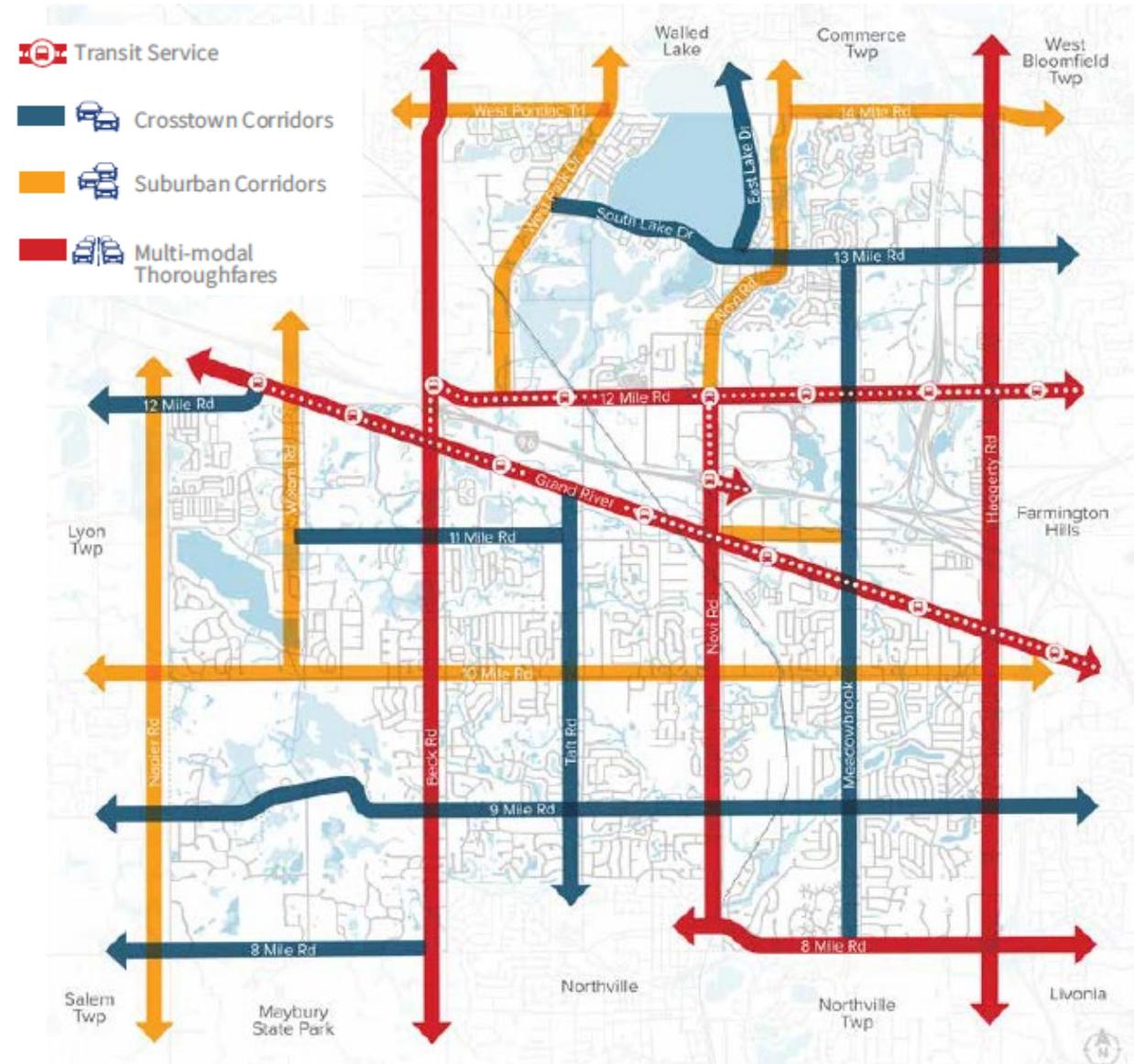
## Suburban Corridors

These roads are characterized by higher-speed and greater traffic volumes. They serve as access routes to a combination of local commercial and residential areas.



## Multi-Modal Thoroughfares

These are the highest-speed and highest-volume roads within the city, primarily serving as through routes and providing access to regional commercial areas.





# Long-Term Network

## LONG-TERM NETWORK



## FIVE MAIN COMPONENTS

-  Sidewalks and Sidepaths
-  Mid-block Crosswalks
-  Bike Lanes
-  Greenways
-  Local Road Routes

# Sidewalks & Sidepaths



Ideally, all roads should feature sidewalks on both sides of the street. As work is conducted within the road rights-of-way, or as development on adjacent parcels occurs, opportunities to close gaps in the sidewalk network should be actively pursued. Sidewalks along major collector and arterial roads should maintain a minimum width of 6', incorporating a buffer zone and vertical elements such as trees between the sidewalk and the road. Furthermore, on one side of the corridor, the sidewalk should be expanded to a minimum width of 10' to accommodate shared uses, particularly in areas where on-road bike lanes are absent. The following map identifies key locations where gaps exist and should be addressed.

**Sidewalks**   
pathways less than 8' wide



To ensure a more user-friendly and accommodating experience for all, bicycle and pedestrian facilities should be separated. In areas with higher bicycle use or where separated bicycle facilities are not provided, a sidepath should be included.

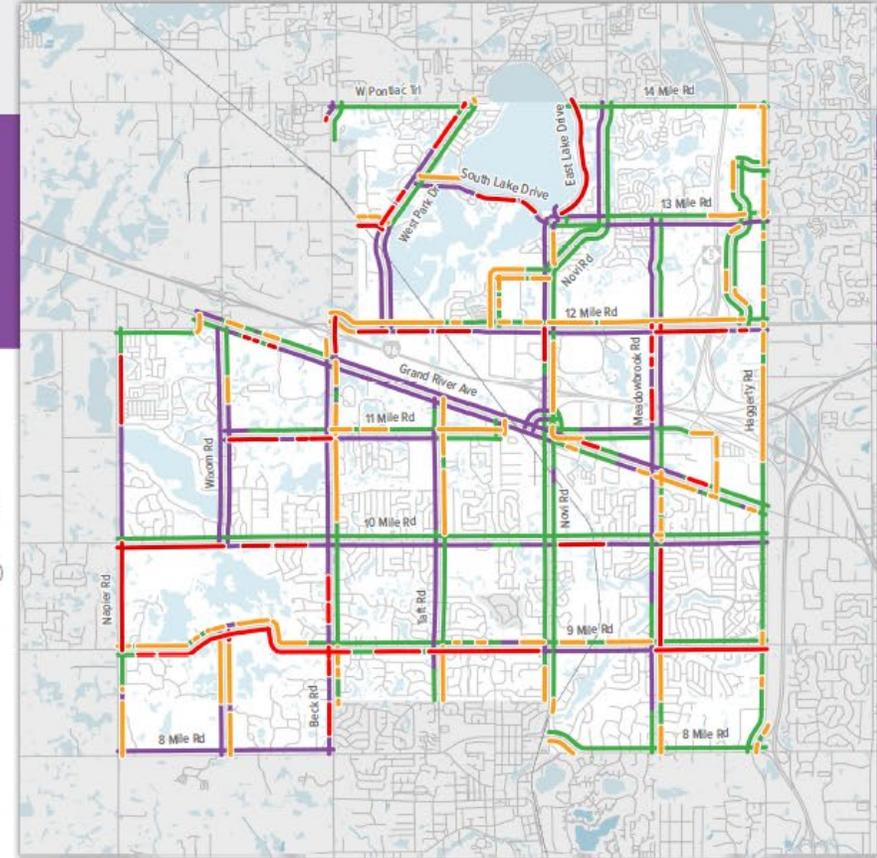
**Sidepaths**   
pathways 8' wide or greater



The standard for shared use paths has evolved, and it's becoming increasingly recognized that 8-foot-wide pathways are no longer sufficient for accommodating both bicycles and pedestrians comfortably and safely. To ensure a more user-friendly and accommodating experience for all, it is recommended that 10-foot-wide pathways be provided for routes shared by both bicycles and pedestrians.

## Sidewalk and Sidepath Map

-  Existing Sidewalks (< 8' wide)
-  Proposed Sidewalk (< 8' wide)
-  Existing Sidepaths (≥ 8' wide)
-  Proposed Sidepath (≥ 10' wide)



# Mid-block Crosswalks



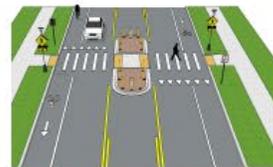
This map showcases proposed locations for crosswalk treatments at mid-block locations and identifies treatments designed to address potential hazards and elevate the overall pedestrian experience. Many of these treatments can be implemented within the existing cross-section of roadway and should actively be pursued to improve bicycle and pedestrian safety. The crosswalk measures shown are based on a master plan level assessment of anticipated speeds, number of lanes, and presence of a crossing island. Each crosswalk requires a separate engineering study and may necessitate a higher or lesser order of treatment based on a more detailed assessment.



High Visibility Crosswalk



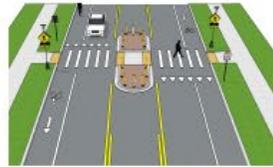
Crossing Island



Speed Table



Rectangular Rapid Flash Beacon



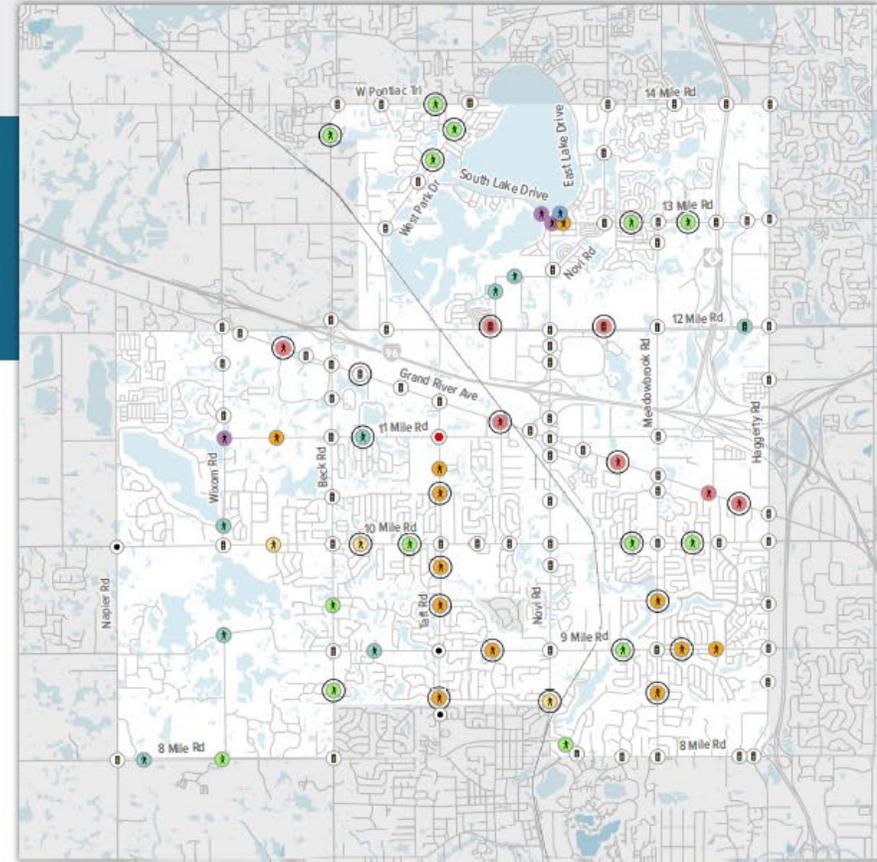
Rectangular Rapid Flash Beacon with Island



Pedestrian Hybrid Beacon with Island

## Mid-block Crosswalk Map

- Signalized Intersection
- Stop-controlled Intersection
- Roundabout
- Mid-block Crosswalk
- Pedestrian Hybrid Beacon with Island
- Pedestrian Hybrid Beacon
- High Visibility Crosswalk
- Crossing Island
- Rectangular Rapid Flash Beacon
- Rectangular Rapid Flash Beacon with Island
- Speed Table
- New Crosswalk Location



# Bike Lanes



This map identifies the appropriate on-road bicycle facilities based on the Major Corridors Classifications outlined in this plan. To ensure the safety of bicyclists, physical buffers between bike lanes and motor vehicle lanes are recommended. As roadway speeds and volumes increase, it becomes increasingly important to provide these buffers to enhance bicycle safety and comfort. Additionally, the growing popularity of micromobility devices necessitates their consideration in future bike lane design.

## Bike Lane



Where space permits, a painted buffer zone should be incorporated between the bike lane and the motor vehicle lane for added safety and separation from vehicles. Flexible posts may also be included as to increase bicyclists comfort.

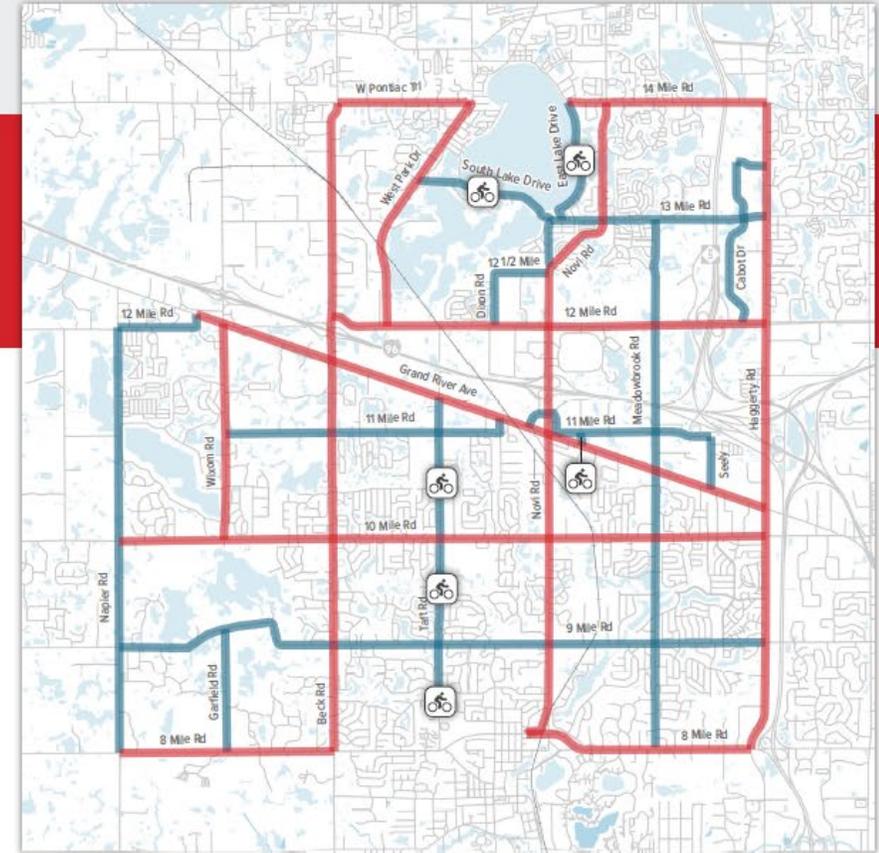
## Separated Bike Lane or Sidepath



In areas with high pedestrian traffic, separated facilities for bicycles should be provided.

## Bike Lane Map

- Bike Lane
- Separated Bike Lane or Sidepath
- Existing Bike Lanes





# Local Road Routes



The proposed connections focus on creating family-friendly routes that connect neighborhoods to each other and to local destinations such as schools, parks and trails. This network prioritizes the utilization of low-stress bike routes that traverse neighborhood roads while also emphasizing the creation of crucial sidewalk and pathway connections within subdivisions. These measures enhance mobility and strengthen connectivity to nearby destinations and trails, fostering a more accessible and cohesive urban environment. The following pages outline policies, programs and infrastructure recommendations to support this network.

## Map Notes:

- 1 Provide direct pathway connections between adjacent neighborhoods and school.
- 2 Trail ends abruptly into parking lots at Deerfield Elementary and Wildlife Wood Park. Continue trail so it links into the City's pathway network.
- 3 Connect neighborhood to ITC Trail from Woodworth Drive through community open space.
- 4 Connect neighborhood to ITC Trail from Sandpiper Court.
- 5 Connect neighborhood to ITC Trail from Cheltenham Drive or Heartwood Street
- 6 Connect adjacent neighborhood between Galway Drive and Coldspring Drive.
- 7 Explore options for a direct pathway connection to the anticipated City West district from W 11 Mile Road.
- 8 Connect adjacent neighborhood between Arcadia Drive and Cider Mill Road.
- 9 Formalize pathway connection between Taft Road and Kerri Court.
- 10 Add pathway through city owned parcel between Thatcher Drive and Novi Road.
- 11 Extend existing pathway all the way to Taft Road from Ella Mae Power Park.
- 12 Add pathway between Fountainpark Drive and Highland Drive.
- 13 Explore optional pathway through city owned parcel between Chattman St/ Balcombe Dr to Malott Drive.
- 14 Explore options for a direct pathway connection between neighborhoods and the commercial area at Eight Mile Road and Haggerty Road.
- 15 Explore options for a direct pathway connection to Twelve Mile Road from Sandstone Drive and Steinbeck Glen.
- 16 Add pathway between Sandstone Drive and Steinbeck Glen.
- 17 Add pathway connection to Lakeshore Park Mountain Bike Trails from 12 Mile Road and improve access from 12 1/2 Mile Road.
- 18 Extend sidewalk from 12 Mile Road to Wixom Road.



Low-stress bicycle routes following neighborhood roads, identified on bicycle maps and reinforced with pavement markings.

These routes should be clearly identified on bicycle maps for easy reference. To further enhance safety and navigation, wayfinding signs should be strategically placed at neighborhood entrances along major road corridors, indicating the distance, direction and time to nearby destinations. Additionally, pavement markings can be employed on local roads to reinforce the designated bicycle route through the neighborhood.

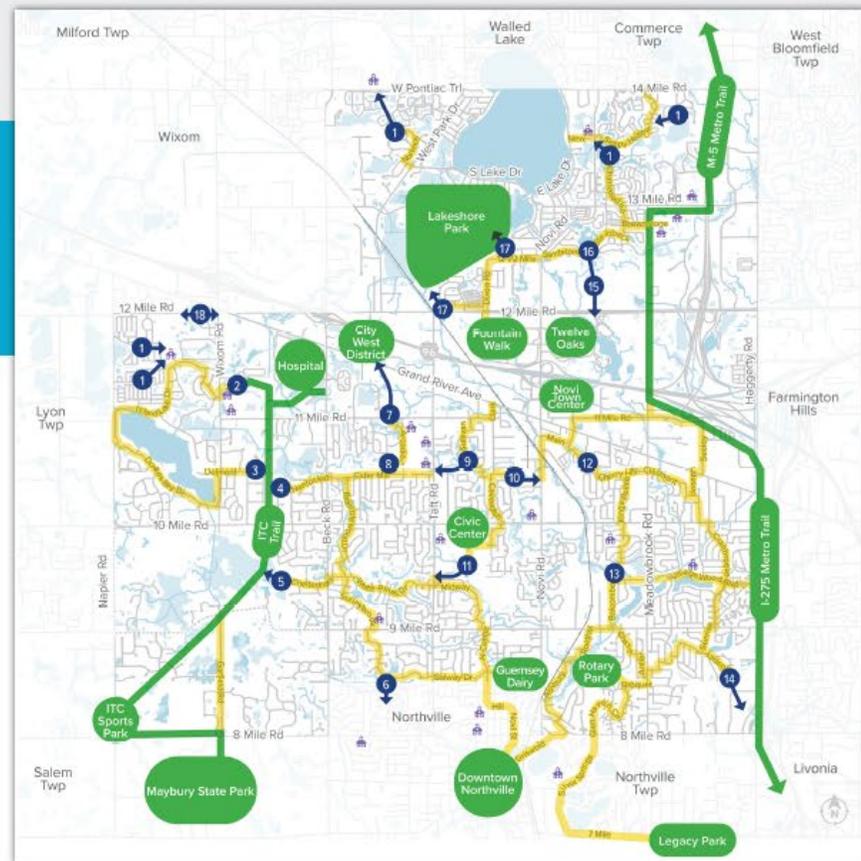


Ensure new developments provide pedestrian and bicycle links to adjacent neighborhoods and local destinations.

To promote a pedestrian and bicycle-friendly urban environment in new developments, non-motorized transportation should be integrated into urban planning by enforcing design standards and prioritizing accessibility. Encourage connectivity planning, offer incentives for exceeding infrastructure requirements, and promote mixed-use development within walking or biking distance. Engage the community for input, establish regular maintenance, collaborate with local agencies, and conduct education and outreach programs to foster active transportation as a sustainable lifestyle choice.

## Local Road Routes Map

- Local Road Bike Routes  
*Examples of low-stress bicycle route following neighborhood roads.*
- Opportunity for Short Pathway Links  
*Short pathway links that connect neighborhoods away from major road corridor. Surface may vary and easements may be required. See map notes for details.*
- Destinations and Existing Regional Trails
- Schools
- Map Notes



Provide safe routes for walking and biking to schools from nearby neighborhoods

To establish safe routes to schools in neighborhoods without sidewalks, start by working closely with subdivision to understand their needs. Conduct safety assessments, develop a comprehensive plan, and seek funding sources for necessary infrastructure improvements, like sidewalks and crosswalks. While working on long-term solutions, consider temporary measures like speed limits and traffic calming. Prioritize high-traffic areas and engage in educational initiatives. Maintain open communication with the community throughout the process and establish regular maintenance plans. Continuously evaluate the program's effectiveness and make adjustments as needed to ensure students can safely walk and bike to school.

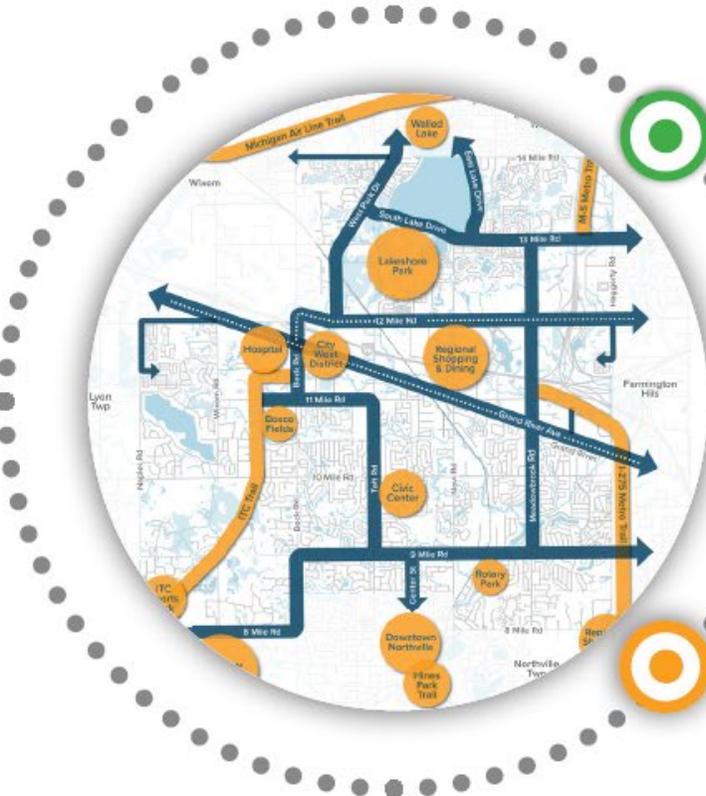


Build short pathway links that connect neighborhoods away from major road corridors (surfaces may vary and easements may be required).

These pathways should be designed with flexibility, acknowledging that surface conditions may vary, and in some cases, securing easements may be necessary to facilitate these connections. These short pathways not only promote safe and convenient pedestrian and bicycle travel but also foster a sense of community, as they enable residents to easily access neighboring areas, local amenities, and recreational spaces. Investing in these linkages will enhance mobility, promote active lifestyles, and strengthen the overall connectivity of the city.

# Near-Term Network

## NEAR-TERM NETWORK



## THREE MAIN COMPONENTS



**Neighborhood Greenway Network**  
A continuous non-motorized network with amenities to enhance the overall experience for people who walk and bike



**Connecting to Transit**  
Proactively addressing the needs of non-motorized users to provide safe and convenient access to transit



**Improved Access to Shopping and Dining**  
A welcoming environment that facilitates easy access for bicyclists and pedestrians to reach businesses directly from the street

# Neighborhood Greenway Network



The Neighborhood Greenway Network is a continuous non-motorized network with amenities to enhance the overall experience for people who walk and bike.

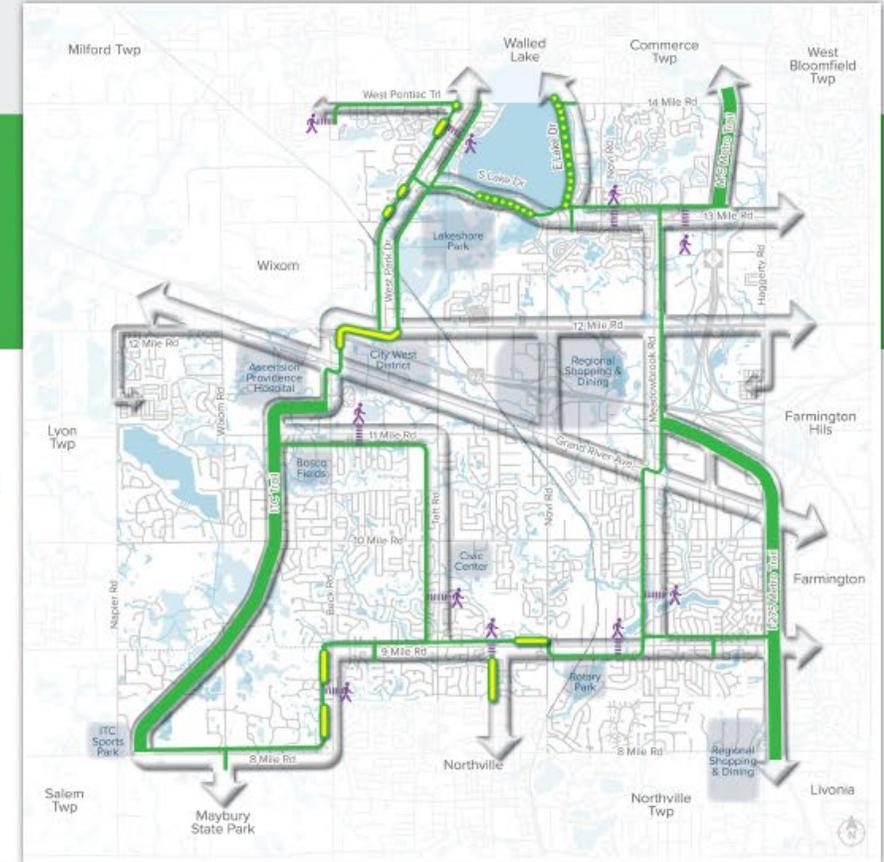
The Neighborhood Greenway Network prioritizes the implementation of modest yet highly impactful interventions, including the completion of key sidewalk gaps and crosswalks. These small-scale enhancements play a pivotal role in establishing a continuous route across the city, providing a framework for linking neighborhoods to essential destinations.

A near-term priority involves establishing a connection across the Beck Road overpass, a critical undertaking given the limited opportunities to cross the expressway. This connection assumes even greater significance in light of the anticipated City West district and forthcoming transit routes along Grand River Avenue and 12 Mile Road. Notably, the existing bridge deck provides ample width to facilitate a retrofit for a pathway connection.

East Lake Drive and South Lake Drive are well-traveled non-motorized routes along the lakeshore, connecting to two major parks and downtown Walled Lake. While there is a desire to upgrade the current facilities, a corridor study is necessary to address traffic patterns and safety concerns. Please see the *Specific Area* section for more details on East Lake Drive and South Lake Drive.

## Neighborhood Greenway Map

- Existing Sidewalks/Pathways
- Off-Road Trails
- Pathway/Sidewalk Gap
- Corridor Study required before upgrading facilities
- Proposed Mid-block Crosswalk
- Near-Term Network



# Supporting Policies, Programs, and Metrics

## Create safe and inviting routes both on and off-road



### Attractive and sustainable landscapes in the buffer zone

Planting trees in the buffer zone between the sidewalk and road enhances pedestrian comfort by offering shade and creating a vertical barrier between motor vehicles and pedestrians. The tree canopy also reduces the heat island effect of built up areas and holds rain water helping to mitigate the impact of heavy rain events. The integration of rain gardens in the buffer offer another sustainable and cost effective solution for the managing stormwater runoff. Together, street trees and rain gardens provide an attractive and varying landscape with many benefits.



### Community art and interpretive signage

Integrating community art and informative signage along the routes adds cultural and educational value to the network. It helps celebrate local culture, history, and natural features, making the routes not just transportation corridors but also destinations in themselves. Art and interpretive exhibits can be permanent, temporary, or even seasonal.



### Links to parks and public buildings with water and restrooms

Seamless connections to parks and public buildings with water fountains and restroom facilities are essential for user convenience. These amenities encourage longer journeys, as users don't have to worry about basic necessities during their trips. The addition of bicycle repair stands and orientation maps make these rest areas even more helpful.



### Periodic rest areas with benches

Establishing rest areas is essential for user comfort along a pathway. Benches and tables offer places for users to rest, take breaks, enjoy the scenery, and socialize with others. These rest stops are often located in shaded areas to provide protection from the sun. Placing trash and recycling receptacles nearby is important to promote trail cleanliness and discourage littering. These amenities contribute to a positive user experience and encourage people to utilize the non-motorized network.



### Pedestrian scale lighting

Proper lighting is crucial for both safety and encouraging use. Lighting helps users feel more secure and promotes use at all times of day and night and during every season. While the installation of lighting is desirable, it can be a significant investment. Solar-powered lights should be considered in areas with ample direct sunlight to minimize both installation and operational expenses.

Evaluate the existing lighting levels on sidewalks along major roadways and existing crosswalk locations and develop a prioritization system to upgrade lighting for deficient locations. Special emphasis should be placed on providing lighting at unsignalized crosswalks to make sure that pedestrians crossing the street are visible to motorists.



### Enhanced year-round maintenance

Establish a robust maintenance plan for year-round upkeep, including snow removal during the winter months. Consistent maintenance ensures that the routes remain safe and inviting in all seasons.

Please refer to the *Implementation* section for specifics.

### Pet Waste Management

Provide pet waste bags, trash receptacles, and signage reminding pet owners that they are responsible for cleaning up after their pet.

# Supporting Policies, Programs, and Metrics

## Support the Community Greenway



### Provide uniform wayfinding system that integrates with regional trail network and bike routes

A uniform wayfinding system is essential for user navigation and satisfaction. Consistent signage and directions ensure that users can easily find their way through the network and connect with other regional trails and bike routes.

In collaboration with adjacent communities, implement a wayfinding system for the area that includes uniform signage, information kiosks, maps, and online resources.



### Promote the network through events, group rides, maps and by supporting local bike clubs

Active promotion through events, group rides, maps, and support for local bike clubs is crucial for raising awareness and encouraging usage. The outreach strategy should include hosting events like bike races, family rides, and nature walks to celebrate the network. Scheduled group rides on different routes can encourage users and create a sense of community. Creating user-friendly maps for both online and print will highlight the network's features. Collaborating with local businesses for map distribution and partnering with bike clubs for events and safety workshops would be beneficial. Additionally, offering educational programs in schools and community centers, maintaining a strong online presence, and actively gathering user feedback for network improvements based on their suggestions are all key components of this strategy.



### Evaluate use through automatic counters and satisfaction through yearly surveys

Install permanent automatic counters for pedestrians, bicyclists, and micromobility vehicles along significant new facilities. Implement a program where temporary traffic counters are regularly moved to key destinations within the city on a predefined schedule. Ensure coordination with state and regional counting initiatives. Before constructing new facilities, establish baseline counts.

Introduce an annual resident survey to gauge community utilization and satisfaction with the multi-modal transportation system. This survey can inform adjustments and refine community priorities as needed.

## Sidepath Design Best Practices



### Establish a grant program to improve safety at neighborhood entrances

Create a grant program aimed at improving safety at neighborhood entrances along the non-motorized routes. Encourage neighborhoods to incorporate enhanced safety measures in these critical areas. This program can be based on or an extension of the City's current Entryway Grant Program that focuses on landscaping.

Reference *MDOT Sidepath Reference Sheet* for more information on sidepath safety issues and design best practices.



### Upgrade existing facilities to current best practices

Upgrade existing facilities to align with current best practices in non-motorized transportation to assure consistency across the roadway system. Assess near-term routes for safety, accessibility, and compliance with modern standards. Enhance safety with better crosswalks, signals, and signs. Add modern amenities like energy-efficient lighting, bike racks, benches, and wayfinding systems for user convenience. Phase upgrades to minimize disruptions, focusing on busy areas and key intersections. Stay flexible to adapt to evolving best practices and technologies, periodically reviewing facilities to ensure they meet high standards.

Please refer to the *Facility Types and Guides* section for more information on design guidelines and resources for best practices and the *Implementation* section for more information on processes.



### Sponsor and adopt-a-greenway or trail amenity

Engage the community in the funding and care of greenway segments and amenities such as rain gardens and parklets through sponsorships and adoption programs. These public-private partnerships provide a means for local clubs and business to direct meaningful volunteer hours as well as a way for Novi based businesses to give back to the community. Appropriate recognition signage should be provided.

# Supporting Policies, Programs, and Metrics

## Focus on a continuous, near-term route



### Establish high quality non-motorized link through the Beck Road overpass

Prioritizing the creation of a high-quality link through the Beck Road overpass demonstrates a commitment to safety and accessibility. Given the limited opportunities to cross the expressway, this connection serves as a vital link, particularly in light of the new transit developments along Grand River and 12 Mile Road. The existing bridge deck is sufficiently wide to accommodate a retrofit for a spacious pathway connection. An aesthetically pleasing overpass not only encourages usage but also fosters connectivity between different sections of the network. Ensuring that this connection is safe, accessible, and visually appealing is paramount. This improvement will require additional engineering studies and changes to signalization to assure the proper treatments are being implemented.



### Address the critical gaps in sidepath network to provide continuous off-road trail and sidepath system

Identifying and addressing critical gaps in the sidepath network is essential for creating a user-friendly non-motorized system. The near-term network identifies priority gaps in the network that should be addressed first.

### Provide warning and detour signs for dead end pathways

To address existing gaps in the system install signage at key decision points, like intersections, to alert users to gaps and prevent them from inadvertently following a route that abruptly ends without any safe means to cross the road to another facility. This proactive approach improves safety and navigation throughout the network.



### Integrate major off-road trails into the network, such as the ITC Trail and the I-275 Metro Trail

To seamlessly integrate major off-road trails like the ITC Trail and the I-275 Metro Trail into the non-motorized network, it's vital to assess potential connection points and establish guidelines for safety and usability. Collaborate closely with trail managers, implement clear wayfinding signage, prioritize safety measures at intersections, and conduct outreach campaigns to inform the community. Enhance trailheads with user-friendly amenities and determine if additional trail access points are needed. Regularly monitor trail usage and satisfaction levels to ensure a successful and well-integrated network that promotes active and sustainable transportation.



# Connecting to Transit



Addressing the needs of non-motorized users to provide safe and convenient access to transit.

In 2023, SMART introduced enhanced transit in Oakland County, offering local service along key routes such as Grand River, 12 Mile, and Novi Road. This section outlines strategies designed to address gaps in the pedestrian network and create a support system, ensuring the creation of safe and convenient access to the newly established transit stops.

## Novi's New Transit Service:



SMART 740



SMART 305



SMART 805



### Provide direct access to major destinations along the route

Engage in partnerships with local businesses to provide pathways that guide transit users to their establishments, focusing on attractive, pedestrian-friendly routes. Ensure these pathways meet accessibility standards, accommodating all individuals with features like ramps and clear signage. Highlight the economic benefits of this connection, including more visitors, increased business, and potential job opportunities, to gain support from stakeholders and foster a thriving local economy.



### Coordinate crosswalks with transit stops

To ensure a safe and efficient connection between transit stops and pedestrian crosswalks, it is recommended to strategically place crosswalks adjacent to transit stops, ensuring they align with passenger traffic patterns. Enhanced safety features, including crossing islands, aesthetically pleasing landscaping, bike parking and shading structures. These improvements serve not only to enhance safety but also to promote the utilization of public transportation by creating a more appealing and enjoyable experience for pedestrians. Locations offering more amenities, especially shelters, typically have a larger draw area, enticing individuals to walk a bit farther to access transit stops.

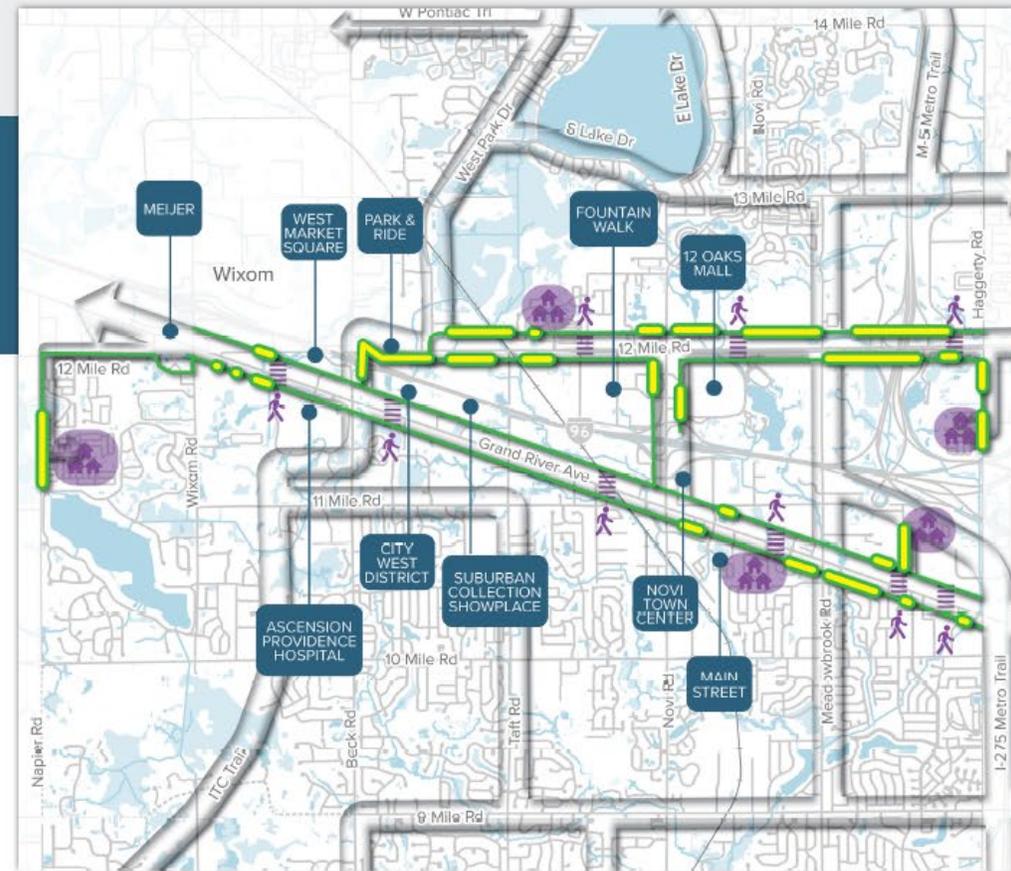


### Incorporate streetscape amenities to create an inviting and pedestrian-friendly environment at transit locations

This involves including elements like adequate lighting, comfortable seating, aesthetically pleasing landscaping, bike parking and shading structures. These improvements serve not only to enhance safety but also to promote the utilization of public transportation by creating a more appealing and enjoyable experience for pedestrians. Locations offering more amenities, especially shelters, typically have a larger draw area, enticing individuals to walk a bit farther to access transit stops.

## Connecting to Transit Map

- Existing Sidewalks/ Pathways
- Pathway/ Sidewalk Gap
- ||||| Proposed Crosswalk
- Connect Isolated Neighborhoods to Transit
- Near-Term Network



## Establish mobility hubs, a place where people can connect to multiple modes of transportation.

Establish mobility hubs at transit stops that include:

- Wayfinding kiosks
- Short and secured long-term bike parking
- Bike repair stations
- E-bike charging
- Security cameras and emergency call boxes

Establish transit-friendly business program

- For business near stops
- Provide real-time bus information display boards
- Focus on cafés, convenience stores, and lodging



# Improved Access for Shopping & Dining

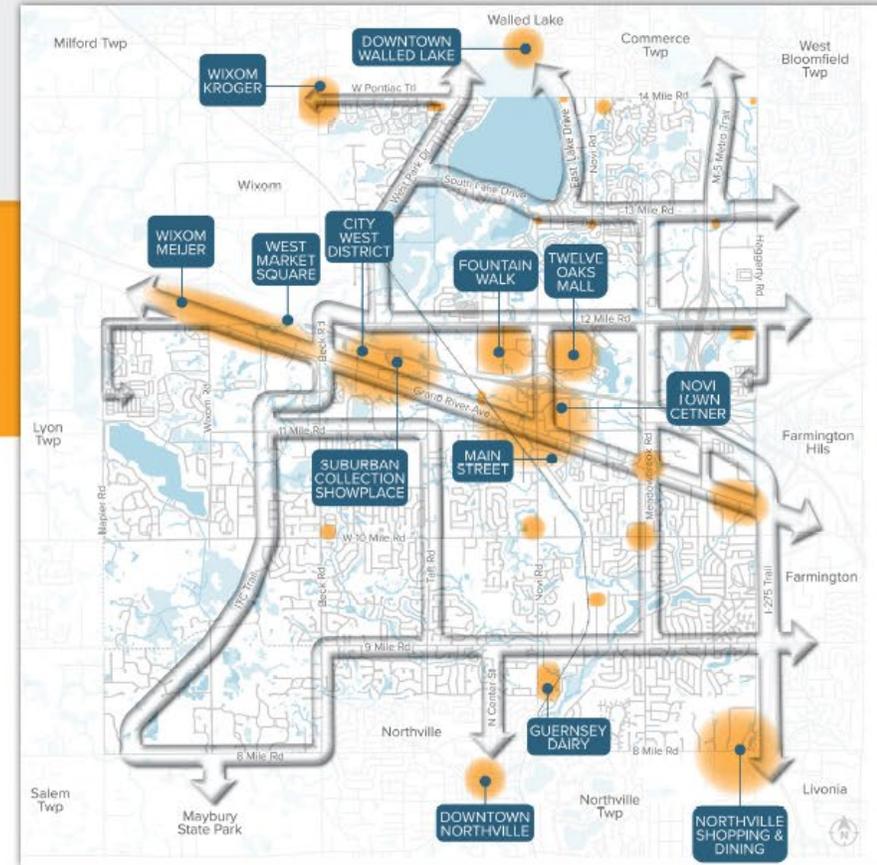


A welcoming environment that facilitates easy access for bicyclists and pedestrians to reach businesses directly from the street.

Novi has long been known for its regional shopping opportunities, but until recently, the landscape has been predominantly car-centric. The city boasts a wide range of retail destinations and dining establishments, making it an attractive hub for shoppers from across the region. However, the arrival of new transit routes to the area is poised to usher in a significant shift. With the potential for increased pedestrian traffic, there's a growing recognition of the need to transform Novi into a more welcoming environment that facilitates easy access for bicyclists and pedestrians to reach businesses directly from the street. This transformation is not only essential for the convenience and enjoyment of both visitors and residents but also aligns with the broader goal of creating a sustainable and vibrant urban landscape that embraces diverse modes of transportation.

See the *City West* section for specific details on the integration of non-motorized solutions into this new and evolving district.

## Improved Access for Shopping and Dining Map



# Capital Improvement Projects

## UNDER CONSTRUCTION/RECENTLY BUILT

- 1 Construct the missing sections of sidewalk near the Knightsbridge Gate (segment 178) and along the fronts of the City's future Northwest Neighborhood Park (segment 45). **COMPLETE**
- 2 Bike lanes would be added along Taft Road as recommended by the non-motorized master plan to improve non-motorized connectivity. A roundabout would replace the current four-way stop at the intersection of Taft and 9 Mile Roads. **COMPLETE**
- 3 Construction of 1,750 feet of 6-foot-wide sidewalk and ADA improvements along the north side of 9 Mile Road from Novi Road to CSX Railroad.
- 4 Water main project on 11 Mile and Meadowbrook
- 5 Water main project on Meadowbrook
- 6 Construction of 5,300 feet of pathway on south side of 10 Mile from Haggerty to Meadowbrook. **COMPLETE**

## PLANNED BIKE/PED IMPROVEMENTS

- 1 An 8-foot asphalt pathway (Segment 52a) will be added to the south side of 11 Mile Road between Wixom Road and the ITC Trail.
- 2 Construction of a 10-foot wide asphalt pathway and 14-foot wide boardwalk to serve as a connection between the ITC Trail and Bosco Fields.
- 3 ADA improvements will be included at intersections, and sidewalk will be added to the gap on the east side of Wixom Road, between the Novi Middle School driveway and Target.
- 4 Sidewalk on the north side of 11 Mile Rd between Beck Road and East Mandalay Circle
- 5 Construction of a 6-foot sidewalk on both the north and south side of Village Wood Road
- 6 This sidewalk would connect the existing path in Village Wood Lake Park to the east side of Meadowbrook Road, with a crossing over Meadowbrook Road at Chattman Drive. An 8-foot concrete sidewalk would be used from the park to the existing 5-foot sidewalk on the south side of the Meadowbrook Road bridge. A 5-foot sidewalk would be used north of the bridge to the Chattman Drive crossing. Some boardwalk would be needed over the wetlands adjacent to Village Wood Lake Park.
- 7 ADA improvements at intersections on Novi Road
- 8 The adjacent sidewalk ramps will also be upgraded to current ADA standards with 13 Mile Road rehabilitation
- 9 An 8-foot concrete sidewalk on the east side of Napier Road would connect the sidewalk along the north side of the ITC Community Sports Park entrance drive to the Villa Barr Art Park at 22600 Napier Road.
- 10 The Napier Road Connector portion of the ITC Corridor Trail would connect the southern end of the existing trail west across the northern edge of the park to Napier Road.
- 11 Widen Beck Road as 5-lane road or 4-lane boulevard. Estimate includes intersection and traffic signal modernization of Beck and 10 Mile Roads. ADA ramp upgrades and pathway gaps included.

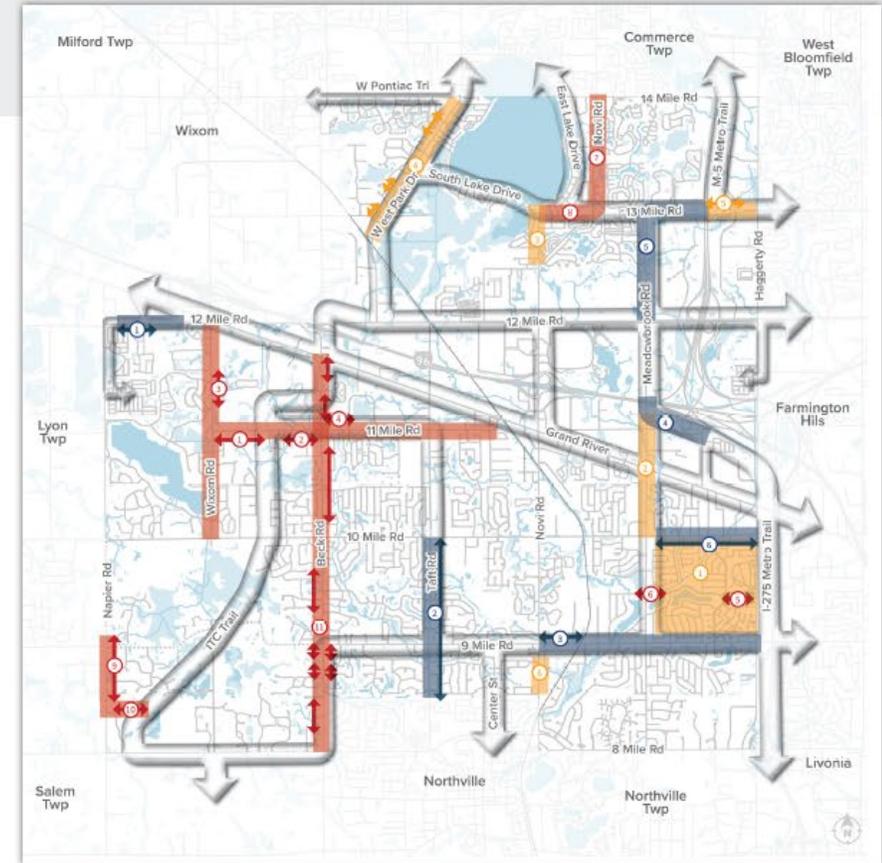
## OTHER PROJECTS AND OPPORTUNITIES

- 1 Option to add sidewalks to neighborhoods when ditches are enclosed
- 2 Road rehabilitation on Meadowbrook
- 3 Any bicycle or pedestrian improvements included with road rehabilitation on Old Novi Road
- 4 Road rehabilitation and signal modernization on West Park Dr - Option to complete sidewalk gaps on west side of road or provide mid-block crosswalks at apartment complexes to access existing sidewalks along corridor
- 5 13 Mile Road rehabilitation - Option to complete sidewalk gaps on north side of corridor
- 6 According to SECMOG TIP and RTP, Oakland County plans to rehab Novi Road from 8 Mile Rd to 9 Mile Rd in 2025. No sidewalks are planned as part of the project. Option to reconfigure lanes to a consistent 3-lane road and add crossing island near Galway Drive

## Coordination with Capital Improvement Projects

Integrating non-motorized improvements with upcoming construction projects present a compelling opportunity to realize both economic and community benefits. The preceding page outlines upcoming capital improvement projects that included non-motorized elements.

-  Under Construction/Recently Built
-  Planned Bike/Ped Improvements
-  Other Projects and Opportunities
-  Near-Term Network



Based on Novi's Capital Improvement Program - Adopted by City Council on May 8, 2023

# Near-Term Infrastructure Projects

The Near-Term Plan illustrates projects that can generally be implemented without changing the curb lines and are, for the most part, within the public right-of-way or public lands. Inventory and analysis, along with public input, helped identify the near-term infrastructure projects. These projects focus on completing key gaps in the sidewalk and pathway network, identifying priority crosswalk locations, and featuring a new expressway crossing at Beck Road.

The selection of priority projects was influenced by their capacity to provide access to transit, shopping and dining districts, and their role in connecting residential neighborhoods with essential destinations. Equity, demand, and safety considerations were pivotal factors in the selection process. For further insights into the inventory and analysis process that guided the project selection, as well as the Priority Corridors Composite Map that steered the decision-making process, please refer to the Existing Condition Section.

The prioritization of these projects represents a notable shift in the city's approach to near-term sidewalk and pathway initiatives, effectively supplanting the previous biannual report system. Furthermore, this revised approach incorporates crosswalk enhancements, which play a crucial role in bridging gaps within the sidewalk and pathway network and may offer a more cost-effective near-term solution while addressing more challenging segments is deferred.

While these represent near-term priorities, bicycle and pedestrian improvements should also be incorporated whenever roadways are reconstructed or widened. In such cases, it is advisable to reference the *Major Corridor Guidelines* section.

The following pages list the specific near-term infrastructure projects outlined in the plan.

 **3.1**  
Miles of Sidewalk

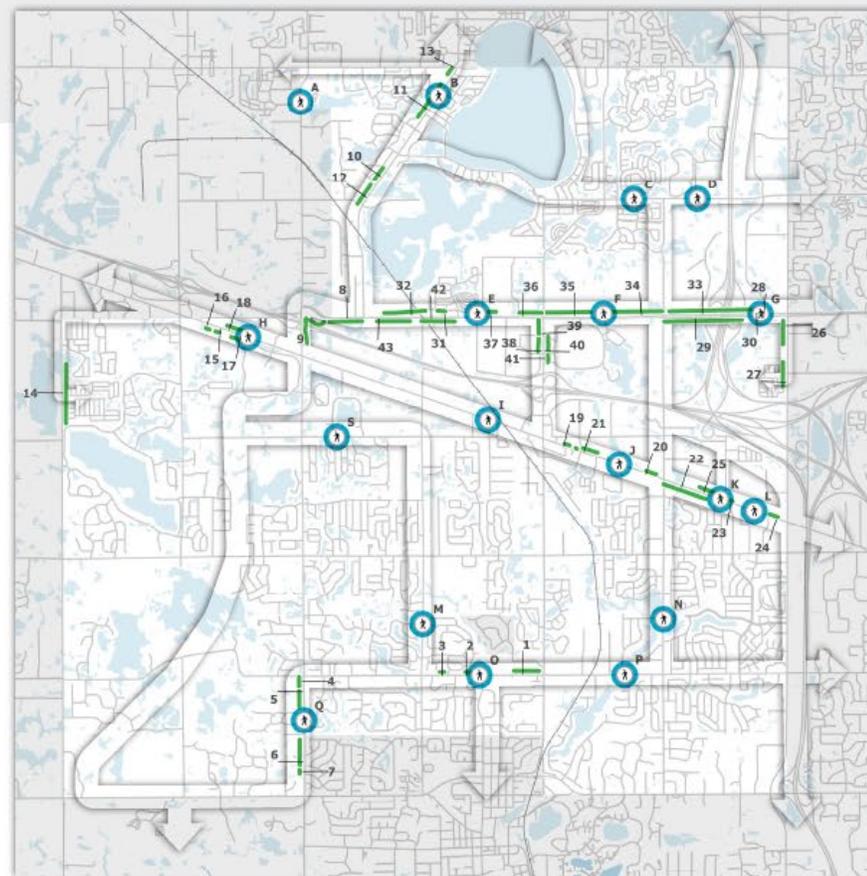
 **5.3**  
Miles of Shared Use Pathways

 **17**  
Crosswalk Improvements

## Near-term Infrastructure Projects

The following map uses the Map ID to reference projects listed in the spreadsheet.

-  Locations for Crosswalk Improvements
-  Sidewalks and Pathways
-  Near-Term Network



# Specific Areas

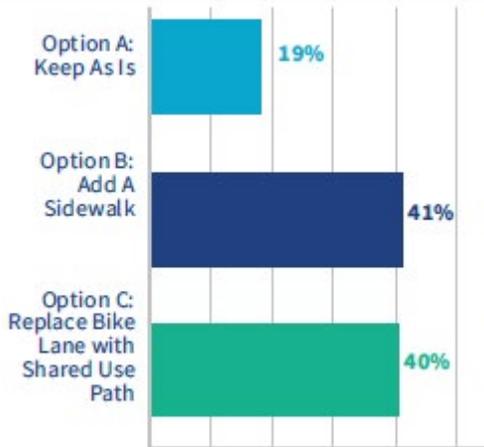
## East Lake Drive & South Lake Drive

East Lake Drive and South Lake Drive, tracing the southern and eastern shores of Walled Lake, serve as crucial routes for both bicyclists and pedestrians. East Lake Drive features two lanes with bike lanes in both directions, while South Lake Drive consists of two lanes with a segment of pathway connected by a narrow one-way bike lane. Neither road consistently provides sidewalks for pedestrians, leading to pedestrians walking in the bike lane and on the roadway. Also, many pedestrians and bicyclists travel in groups that spill out into the motor vehicle lanes from narrow bike lanes. Both roadways experience significant non-motorized use. Major challenges include a highly variable right-of-way and many physical constraints.

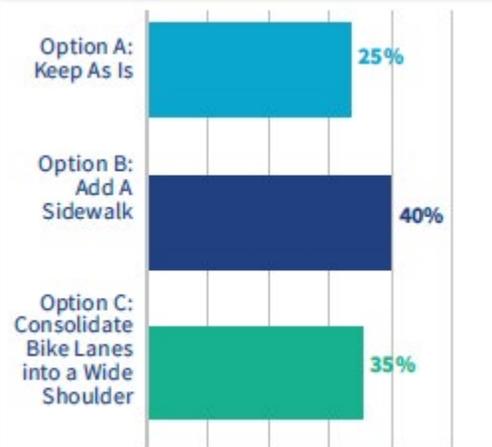
It is important to recognize the contrasting perceptions of what these corridors represent. From a planning perspective, these roads are classified as Major Collectors, which ties adherence to specific standards to eligibility for Surface Transportation Program funds. Conversely, residents view these corridors as local residential roads and seek measures to reduce speeds and traffic volumes. South Lake Drive is also a key route for emergency vehicles traveling from the fire station on 13 Mile Road to areas along West Park Drive.

Solving the details of this corridor are beyond the scope of this project. A comprehensive traffic study is recommended to thoroughly examine this corridor and include more focused public

### Preliminary Plan Feedback for South Lake Drive



### Preliminary Plan Feedback for East Lake Drive



### Preliminary Plan Existing Conditions Map

- 66' Right-of-way
- 35' Right-of-way
- 50' Right-of-way
- Existing Sidewalks and Pathways



# City West

The anticipated City West district, located southeast of the I-96 and Beck Road intersection along Grand River Avenue, holds immense potential as a vibrant, mixed-use urban area. The City West Design Guide, introduced in 2023, emphasizes the creation of a high-density, walkable environment with a strong focus on pedestrian-friendly spaces, building orientation, and outdoor amenities, all aligned with design guidelines. To fully realize this vision, the seamless integration of bicycle and pedestrian infrastructure is imperative. This integration becomes particularly crucial as it supports the implementation of new transit routes along Grand River Avenue and ensures convenient access for all residents and visitors.

In light of the area's layout, frequent pedestrian road crossings will be essential to provide safe non-motorized access to the site. To address this, the incorporation of pedestrian hybrid beacons with crossing islands at mid-block locations emerge as key safety measures. While pedestrian bridges are an option, it's important to acknowledge that they pose challenges, including a large footprint to accommodate ADA ramps and that many individuals will be hesitant to use the ramps and will still cross at street level. If the developer desires a pedestrian bridge over the Grand River, a more successful approach involves integrating a covered pedestrian bridge with the buildings, making them more accessible and appealing to users, as was done in the Somerset Collection Mall in Troy.

## City West Design Guide Recommendations

### Pedestrian Circulation:

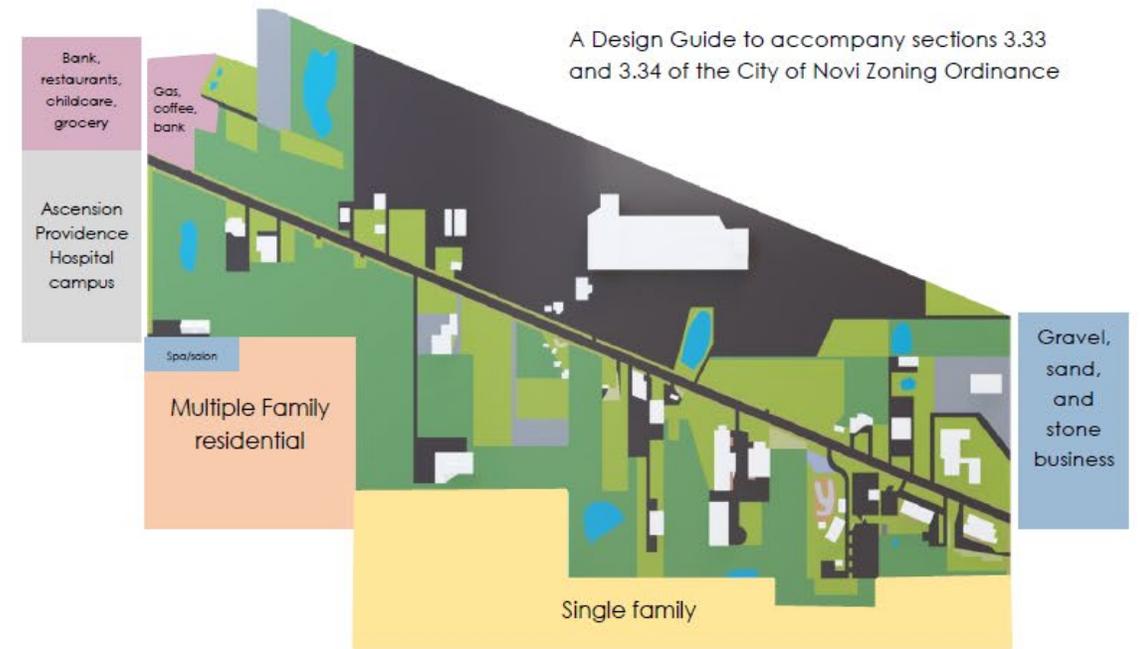
- ▶ Create pedestrian-friendly spaces with outdoor amenities.
- ▶ Place parking to the side or rear of buildings.
- ▶ Consolidate driveways on major streets.
- ▶ Allow on-street parking on secondary streets.
- ▶ Align buildings parallel to pedestrian streets.
- ▶ Use attractive colors and materials for entrance doors.
- ▶ Add plazas, seating, lighting, and other amenities.
- ▶ Use clear signage for pedestrian routes.

### Bicycle Amenities:

- ▶ Provide bicycle parking meeting or exceeding standards.
- ▶ Consider adding bicycle fix-it stations.

## City West Design Guide

A Design Guide to accompany sections 3.33 and 3.34 of the City of Novi Zoning Ordinance



# Northville's Riverwalk Vision

Northville's Riverwalk Vision is a long-term project aimed at connecting parks and destinations within the community by tracing segments along the Middle Rouge River. One of the primary objectives is to establish a connection between the City of Northville and Rotary Park in Novi. However, this route presents several challenges, including issues related to available rights-of-way, infrastructure costs, environmental considerations, and the necessity for coordination with external organizations.

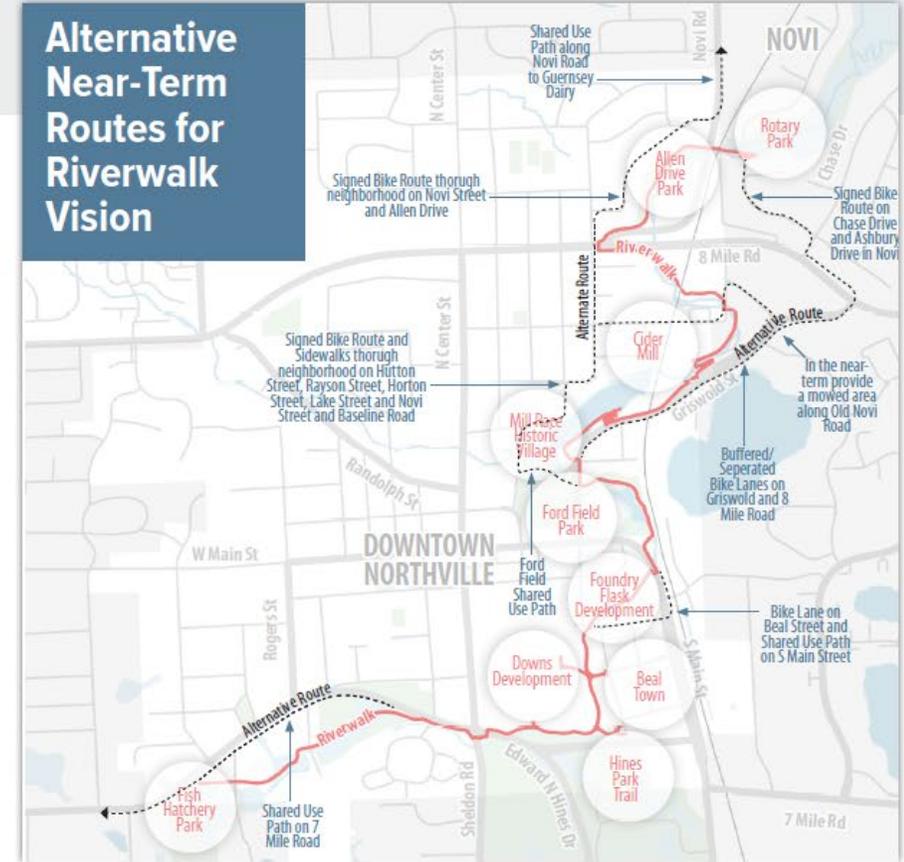
Recognizing that some parts of the Riverwalk Vision will take several years to implement, alternative near-term routes have been identified in the Northville Non-motorized Plan 2023 Update. These routes also fulfill the purpose of addressing everyday non-motorized mobility.

Successful realization of the Riverwalk Vision will require collaboration with multiple entities, including the Oakland County Road Commission, Wayne County Road Commission, City of Northville, City of Novi, and Northville Township. Coordinating actions and planning on Griswold Road, Old Novi Road, Baseline Road and 8 Mile Road is essential due to the complexity of transportation issues involving these various jurisdictions.



While there is a strong desire for a pedestrian connection along Old Novi Road to the Cider Mill Area, the challenging terrain, including steep grades, tight curves, and truck traffic, currently limits viable options. Additionally, the Living and Learning Enrichment Center offers an opportunity for non-motorized access. In the short term, it is recommended to establish a cleared/mowed area alongside the road to facilitate access. A long-term bike-ped connection between Old Novi Road, Baseline Road and Griswold Road should be actively pursued.

Refer to the **Northville Non-motorized Plan 2023 Update** for details on the Riverwalk Vision and specific corridor recommendations for Griswold Street and 8 Mile Road.



# Implementation and Funding Strategies

## Implementation Framework

Whenever any improvement is made to a roadway for motorized traffic, it is an opportunity to economically implement active mobility improvements. Guidelines for resurfacing, restoration, and rehabilitation projects recommend addressing safety concerns as part of the project even if it is outside of the scope of primary purpose of the improvement such as resurfacing the roadway. Given the 20-to-25-year life-span of a typical roadway reconstruction project, this is the only way to create a complete street network.

On many road segments in Novi, the most basic pedestrian and bicycle facilities and safety measures are absent. To improve or expand facilities for motorized traffic while neglecting the safety of active mobility users is unconscionable and flies in the face of complete streets policy. In general, Novi has done a good job of integrating elements such as sidewalks and sidepaths into roadway projects but there is room for improvement. The following is a measured approach to incrementally implementing the major road guidelines as part of roadway projects. This will require close coordination with the Road Commission for Oakland County, Wayne County Road Commission and MODT.

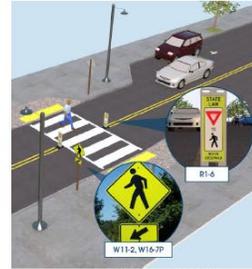


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### Pavement Marking

Depending on the nature of the pavement markings (paint vs. thermoplastic) these improvements are made at least once a year or at least every three years. Often pavement marking is simply a repeat of what is currently in existence. But standards have changed over time and there are markings that should be reconfigured or upgraded. For example, there are places where the bike lane is to the right of a designated right-turn lane. The first step would be to evaluate all current pavement markings to see if they comply with current best practices. Then based on that evaluation the following improvements should be incorporated into all pavement marking projects:

- ▶ **Bike Lanes and Paved Shoulders.** Place bike lanes appropriately, using pocket bike lanes between through and designated right-turn lanes. Narrow travel lanes to 11' wide to maximize the width of paved shoulders / bike lanes. Use dashed bicycle intersection crossings with green paint as per the guidelines. Add Bike Boxes and Two-Stage Turn Queue Box at intersections.
- ▶ **Crosswalks.** Upgrade parallel line marked crosswalks to high-visibility ladder style crosswalks with 1' bars and 2' spacing.



Source: FHWA Crosswalk Visibility Enhancements

## Funding Strategies

To be eligible for non-motorized grants, most projects must align with AASHTO guidelines, ensuring safety and design standards. Wealthier communities, like Novi, are often expected to provide an over match in funding due to their higher socioeconomic status and lower percentage of at-risk populations. This entails a more substantial contribution to projects.

### MDOT Transportation Alternatives Program (MDOT TAP):

- Funds projects that improve pedestrian and bicycle facilities like sidewalks, bike lanes, and trails. It also supports streetscape enhancements, historic preservation, safe routes to school, and other initiatives promoting active transportation and community liability. Local agency safety funds may also be available through MDOT, MDOT local safety funds may also be available.

### SEMCOG Transportation Alternatives Program (SEMCOG TAP):

- Finances projects that enhance pedestrian and bicycle infrastructure, trails, streetscape improvements, and safe routes to school initiatives. While similar to the MDOT TAP, the SEMCOG TAP is more regionally focused and aligns with local priorities, fostering community-driven improvements that cater to the unique needs of the Southeast Michigan area.

### Safe Routes 2 School (SR2S):

- Focuses specifically on improving the safety and accessibility of routes that students take to school. Funding can be used for projects that enhance sidewalks, crosswalks, bike lanes, traffic calming measures, and educational initiatives to encourage walking and biking to school.

### Michigan Resources Trust Fund (Trust Fund):

- Supports projects that enhance outdoor recreation and natural resources, including recreation trails, trail amenities and property acquisition. Funding from this source contributes to improving pedestrian and cyclist access to natural areas and recreational facilities.

### Act 51 Sec. 10k:

- Funding focuses on projects that enhance pedestrian and bicycle safety within transportation corridors, including planning, education and construction. This funding opportunity supports improvements like crosswalk upgrades, sidewalk enhancements, and traffic calming measures that prioritize non-motorized safety.

### Ralph C. Wilson, Jr. Foundation:

- Provides funding to enhance parks and trails, creating vibrant spaces for community engagement. This includes investments in pedestrian and bicycle infrastructure, trail development, and amenities that promote active lifestyles and accessible outdoor spaces.

### General Fund, Mileages, TIFA/DDA:

- General funds, special assessments, tax increment financing authorities (TIFA), and Downtown Development Authorities (DDA) can be used to fund a wide range of non-motorized elements. These funding sources can be used to support initiatives like sidewalk improvements, bike lane installations, streetscape enhancements, and other pedestrian-friendly amenities.

### Foundations & Business:

- Foundations and businesses contribute to non-motorized projects by providing grants and sponsorships for infrastructure development, community engagement, and safety initiatives. These funds can support a variety of non-motorized elements, but typically have specific criteria and special purpose funds can be created.

# Recommended Maintenance Resources & Regiments

## Maintenance

Maintenance of non-motorized facilities is crucial to ensure the safety, accessibility, and aesthetics of public spaces. Scheduled preventative maintenance is generally more cost effective as well as easier to budget for than relying on reactionary maintenance. The City should establish a detailed maintenance plan that specifies standards, schedules, and quality control based on best practices.

To better address unscheduled maintenance needs that arise from storms, vandalism, crashes, etc., The city should expand awareness of the request assistance text program by including information about the program on signs along key non-motorized facilities.

The following pages outline key yearly and proactive maintenance tasks to be performed on and along non-motorized facilities and associated amenities.

### Trail Maintenance Resources

#### Michigan Recreation and Parks Association Hard Surface Trail Maintenance Manual

This Michigan specific document for trail managers is designed to help develop a detailed plan and budget for ongoing and long-term trail management.



#### Indiana Local Technical Assistance Program Best Practices in Trail Maintenance

This manual, prepared for the Ohio River Greenway, includes information on prioritizing maintenance needs and quick reference for commonly encountered maintenance needs.



## Seasonal Scheduled Maintenance

### Spring

#### Sidewalks and Shared Use Pathways:

- Sweep pathways of all debris accumulated over the winter
- Collect trash & recyclables weekly

#### Boardwalks:

- Sweep boardwalk of all debris accumulated over the winter
- Inspect railings and repair any winter damage

#### Mid-Block Crossings

- Sweep Crossing Islands of all debris accumulated over the winter

#### Roadways:

- Scrape excess soil and vegetation from shoulders and bike lanes
- Sweep paved shoulders and bike lanes monthly
- Update painted pavement markings

#### Amenities:

- Clear debris from seating/rest areas
- Turn out water faucets and repair any damage
- Clear out trash and debris from planting beds and rain gardens
- Mulch planting beds and plant annuals
- Refill pet waste bags every other week
- Inspect path and intersection lighting
- Replace pump gaskets and replace any missing tools in bike repair stands
- Mow grass every two weeks

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### Summer

#### Sidewalks and Shared Use Pathways:

- Remove encroaching soil and grass/vegetation from the trail surface
- Trim overhead and adjacent vegetation
- Sweep pathways monthly

#### Boardwalks:

- Trim encroaching overhead and adjacent vegetation

#### Mid-Block Crossings

- Inspect and maintain/replace signage and delineator posts as necessary

#### Roadways:

- Sweep paved shoulders and bike lanes monthly

#### Amenities:

- Mow as
- Weed planting beds and rain gardens
- Refill pet waste bags every other week
- Collect trash & recyclables weekly
- Replace any missing tools in bike repair stands
- Mow grass every two to three weeks as necessary

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### Fall

#### Sidewalks and Shared Use Pathways:

- Clear pathway of fallen leaves mid-fall and end of season

#### Boardwalks:

- Clear boardwalks of fallen leaves mid-season and end of season

#### Mid-Block Crossings

- Clear mid-block crossings of debris

#### Roadways:

- Sweep paved shoulders and bike lanes monthly

#### Amenities:

- Weed planting beds and rain gardens
- Plant annuals
- Shut off water faucets and blow out water lines
- Refill pet waste bags every other week
- Collect trash & recyclables weekly
- Replace pump gaskets and replace any missing tools in bike repair stands
- Mow grass every two weeks

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### Winter

#### Sidewalks and Shared Use Pathways:

- Clear snow accumulations over 1/2" from all paved off-road trails, sidepaths, and sidewalks along primary roads
- Salt/sand as necessary for ice control
- Collect trash & recyclables every two weeks or as necessary

#### Boardwalks:

- Clear all snow accumulations over 1/2"
- Sand as necessary for Ice Control (avoid salt over wetland areas and waterway crossing if possible)

#### Mid-Block Crossings

- Clear all snow accumulations over 1/2"
- Salt/Sand as necessary for Ice Control

#### Roadways:

- Clear bike lanes and paved shoulders of all snow accumulations over 1/2"
- Salt/Sand as necessary for Ice Control

#### Amenities:

- Update wayfinding signs as necessary based on new construction
- Refill pet waste bags every other week
- Clear snow from all Bus Stops

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## Proactive Scheduled Maintenance

### Every Two Years

Address 1/2 of the City Each Year

#### Sidewalks and Shared Use Pathways:

- Clean out culverts and ditches
- Repair potholes and broken pavement
- Crack seal pathways
- Update thermoplastic pavement markings

#### Boardwalks and Bridges:

- Inspect and repair any loose wood decking
- Clean wood decking of mold/mildew to assure good traction
- Inspect gaps at abutment and adjust trail grade as necessary
- Conduct structural engineering inspection and perform any necessary critical repairs

#### Mid-Block Crossings

- Inspect all signs, signals, and delineator posts and repair or replace as necessary

#### Roadways:

- Crack seal bike lanes

#### Amenities:

- Inspect and repair site furnishings as necessary

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### Every Five Years

Address 1/5 of the City Each Year

#### Sidewalks and Shared Use Pathways:

- Inspect and rate surface condition
- Inspect for positive drainage of surface
- Repair surface defects
- Grind uneven concrete joints
- Sealcoat asphalt pathways

#### Boardwalks and Bridges:

- Inspect and repair wood decking and railings
- Sealcoat boardwalk decking and railings

#### Mid-Block Crossings

- Inspect and repair curbs and walkways

#### Roadways:

- Sealcoat asphalt paved shoulders and bike lanes

#### Amenities:

- Inspect and replace plantings as necessary
- Inspect and repair kiosks and interpretive signage as necessary

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### Every Ten Years

Address 1/10 of the City Each Year

#### Sidewalks and Shared Use Pathways:

- Perform an ADA assessment and address any critical issues
- Resurface asphalt pathways

#### Boardwalks and Bridges:

- Inspect and repair concrete decking
- Repaint all metal elements

#### Mid-Block Crossings

- Replace signs as necessary to meet reflectivity standards
- Upgrade beacons as necessary to meeting current standards

#### Roadways:

- Resurface asphalt shoulders and bike lanes

#### Amenities:

- Inspect and replace site furnishings as necessary
- Inspect and replace bike repair stations as necessary

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### Every Twenty to Twenty Five Years

#### Sidewalks and Shared Use Pathways:

- Reconstruct asphalt pathways

#### Boardwalks and Bridges:

- Reconstruct boardwalks and bridges, repairing or replacing abutments and pilings as necessary

#### Mid-Block Crossings

- Reconstruct mid-block crossing curbs and pavement

#### Roadways:

- Reconstruct intersections

#### Amenities:

- Replace kiosks and interpretive signage

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### Winter Maintenance Resource

#### Toole Design Resource Guide on Winter Maintenance

Information on approaches to snow and ice removal on non-motorized facilities that address environmental concerns, equipment, transit, and ADA requirements.



### Maintenance Cost Resource

#### Rails-to-Trails Conservancy's Yearly Routine Rail-Trail Maintenance Costs Per Mile

This document, typically updated yearly, provides costs per mile based on six trails in different contexts from around the country.

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# Draft Review

- The draft report was posted for public review and we received input online for two weeks in January
- Went through each comment with staff to identify how best to respond
  - We were able to address most comments with minor amendments
  - Will be adding a new two-page spread to the Implementation Section regarding Project Communication to make sure residents are kept up-to-date with progress on active mobility projects

Novi Active Mobility Draft Plan Review - Comments and Responses				
Updated: February 7, 2024				
The draft plan was posted online for review between January 10th and February 4th. This spreadsheet documents public comments submitted during that period. Follow-up responses and plan amendments are noted directly below the comments.				
Timestamp	How satisfied are you with the the active mobility plan recommendations? Please rate on a scale of 1 to 5, with 1 being "Not Satisfied at All" and 5 being "Extremely Satisfied"	Are there any specific items that need to be addressed? Please reference the page number below.	What is your top priority? Please tell us what item you would like to see funded and built first.	Tell us anything else you feel is important.
1/19/2024 14:11:49	4	Please Reconsider the path over the highway at Beck Road. This does not seem like the best place for a bike crossing.  <i>Response: Alternatives to Beck Road were considered during the planning process, and it was determined that Beck Road is the most feasible option. As noted on page 83, Tuff Road would be an ideal location for a crossing and should be considered in future planning. The ability to use existing infrastructure makes the Beck Road connection more cost-effective than building something brand new.</i>	Finish Sidewalks that are not paved or connected to the major roadways. Like ten-mile road on the south side of the road between Meadowbrook and Novi road.  <i>Response: The composite analysis did not identify this segment as a top priority. Part of this sidewalk segment will likely be completed by a private developer.</i>	continue to listen to the residents as you move forward.
1/19/2024 14:26:42	1	1. While the Novi Citizens rank maintenance of and snow removal on these walkways as top priorities (Infographics Summary - un-numbered page 4) I see nothing regarding these items in the Executive Summary.  <i>Response: Recommendations for enhanced year-round maintenance are included on page 105 of the report. Additionally, the maintenance section on pages 148 to 151 outlines winter maintenance practices. The maintenance section is referenced on Page 5 of the Executive Summary.</i>	Proper maintenance and snow removal of the current system first.	2. The executive summary contains no cost impacts to the City budget. How are you going to pay for these changes, now and in the future (maintenance & snow removal). 3. How does this impact normal traffic flow?  <i>Response: Cost impacts to the City budget are not included in the scope of this project. Page 11 of the report outlines the intention of this plan, emphasizing that it is a visionary document, and detailed studies are required for implementation. Investment decisions will come at a later date, as projects advance to implementation. Additionally, pages 144-145 of the report highlight potential funding opportunities.</i>
1/19/2024 15:14:36	5	I have no specific items for more attention.	We enjoy walking for exercise and outdoor time. Generally, we have our dog with us. Being able to pick different rou	One thing that would be desirable is to have "doggie bag" stations along the paths and sidewalks. There are occasions I find dog waste along the sidewalks. It might motivate the dog walkers to pick up deposits if a dog bag were available, along with a sign to encourage their use.  <i>Response: We don't foresee any significant impact on motor vehicles. A comprehensive approach to transportation planning focuses on moving people, not just vehicles, and the goal of this plan is to provide safe transportation for all modes.</i>
1/19/2024 15:22:28	3	It wasn't clear as to what the plan is for South Lake & East Lake Drive with respect to walking/biking lanes, street lights, road condition improvements and police presence for speedy & distracted drivers.  <i>Response: Page 130 notes that resolving the details of this corridor is beyond the scope of this project, and it recommends conducting a comprehensive traffic study.</i>	Wide & safe sidewalks, street lights along South Lake Dr, East Lake Drive and near Pavilion Shore Park area. It's Novi's nicest park area and roads need improvement as well as adding safety (ie, street lights, sidewalks, etc. The amount of pedestrians that walk, run & bike around the Lake seems to be growing exponentially so safety needs to accompany that as well.	Creating a more walkable environment from the Novi Parks to the shopping & restaurants. Street lighting & wide sidewalks would promote more physical activity (ie walking to shop & restaurants) Proper street lighting is the key to creating a sense of safety.  <i>Response: Improved access for shopping and dining addresses some of these concerns. Lighting is addressed throughout the plan and is specifically noted under Major Corridor Guidelines, Neighborhood Greenway Network, Connecting to Transit, Implementation, and Maintenance Sections.</i>
1/19/2024 17:48:25	5		Connection of Cheltenham Drive to the ITC corridor. If that connection is not feasible, a connection from Heartwood Drive to ITC would be a viable option provided the Edinstonrough and Cheltenham subdivisions are connected by a very short trail (~40-50 feet) from Donnington Court to Inverness Court. That would allow both subdivisions safe access to the ITC trail.  <i>Response: #5 on the Large Map addresses Cheltenham Drive to ITC corridor.</i>	I would love to see the proposed connection from the existing ITC corridor trail to the AirLine train in Wixom happen very soon as well.

A detailed listing of the responses to public input will be posted on [WalkBike.Info/Novi](https://www.walkbike.info/novi) along with any other changes that are the result of this meeting tonight

# Requested Action

- Identify any plan elements that you feel need to be addressed prior to presentation to City Council
- Recommendation for City Council approval with final amendments to be worked out with city staff.
  - Amendments will be based on the *Novi Active Mobility Draft Plan Review – Comments and Responses* dated 2-7-2024
  - Any additional direction from Planning Commission

## Active Mobility Plan 2023

Draft: 1/8/2024



Any Questions?

Thank You!