City of Northville Michigan







Non-motorized Plan 2023

WORKING DRAFT: 08/29/23

Executive Summary

2023 City of Northville Non-motorized Plan

This plan serves as an update to the 2013 non-motorized plan. Its primary purpose to improve conditions in the near-term for people who walk, bicycle, or travel using micromobility (small, low-speed, electric-powered devices). The recommendations focus on:

- Improving **SAFETY** for all modes of travel including motorized vehicles.
- Providing better non-motorized **ACCESS** to local and regional destinations.
- Outlining a realistic and **ACHIEVABLE** plan that works within the confines of the built system.
- Crafting a plan that reflects the **CONSENSUS** of the community.
- Creating an environment that **INSPIRES** residents to walk and bicycle more.

The recommendations have a foundation in an extensive **Inventory and Analysis** (Page 21) that identifies issues and opportunities within the existing road network. They **Coordinate** (Page 40) with existing community plans and proposed projects. And they are based on **Public Input** (Page 14) that identifies priority destinations and remedy's issues that are inhibiting people from walking or bicycling to those places. The following pages outline key elements of the plan.

Visit the project website to download the plan at WalkBike.info/Northville

2023 City of Northville Non-motorized Plan Recommendations

Pedestrian Routes: identify and infill critical gaps in the sidewalk and sidepath system, notably along Beck Road, Center Street, Taft Road, 8 Mile Road, 7 Mile Road, Novi Road, and Baseline Road and outside of the city to key destinations like Silver Springs Elementary School. The plan also addresses the quality of the pedestrian routes to encourage walking. Page | 62

Bikeways: create a robust network, incorporating off-road trails such as a sidepath along 7 Mile Road linking city and township destinations, as well as sidepaths along Novi Rd and Beck Roads that integrate with the City of Novi's system. Analysis of South Main Street, Griswold Street, and portions of 8 Mile Road identified excess traffic capacity, so the roads may be reconfigured to provide a more consistent and safe cross section for motorists while reallocating the unnecessary traffic lanes to create safe separated bicycle facilities. Page | 64

Crosswalk Treatments and Intersection Improvements: focus on improving safety and comfort of all users throughout the city. This includes special attention to Center Street, a location of numerous crashes. Many new mid-block crosswalks featuring elements such as crossing islands and beacons are proposed to tie isolated neighborhoods into the city fabric and ensure safe access to destinations. Page | 66

Riverwalk Vision: acknowledge that some portions of the riverwalk will take time to complete but provide immediate connections, family-friendly near-term alternative routes linking the key destinations along the riverfront. These links will continue to serve daily transportation needs after the riverwalk is constructed. Page | 68

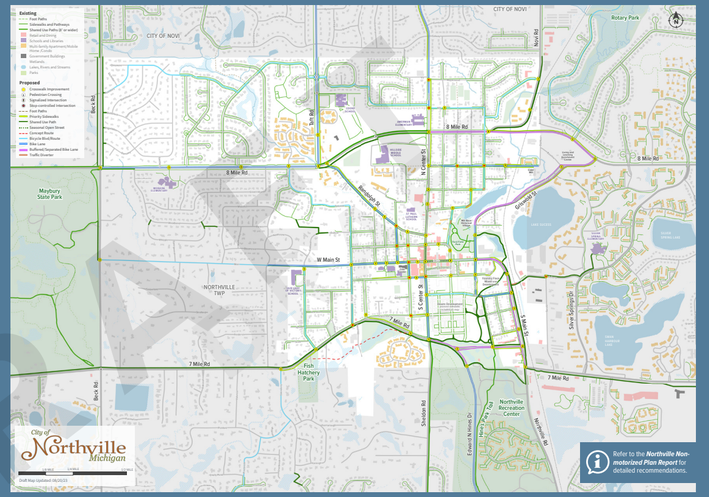
Regional Connections: help residents access destinations in the City of Novi and Northville Township such as Maybury State Park, ITC Trail, Legacy Park, Northville High School, Rotary Park, and Hines Park. Page | 72

Downtown Coordination: integrate the many changes in the downtown including the seasonal road closures, The Downs Development, Ford Field improvements, and evolving traffic patterns. Page | 40

Programs, Policies, and Metrics: provide support network for the proposed infrastructure changes. Page | 62

Specific Corridor Recommendations: provide detailed guidance for 15 primary road segments, accompanied by the analysis and public input that support them. These recommendations are designed to be incorporated into grant applications as well as guide the community whenever a road is upgraded. Page | 95

Near-term Network Map



- Supplemental to the Non-motorized Plan Report, the large format ***Near-term Network Map*** offers a visual representation of all the proposed routes.
- An overview of how everything comes together
- The underlying Geographic Information Systems (GIS) can be easily integrated into the city's existing data base

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Acknowledgments

The successful development of the Non-Motorized Plan would not have been possible without the dedication, expertise, and support of various individuals, staff leaders, and funders.

City Council

Brian Turnbull, Mayor

Barbara Moroski-Browne, Mayor Pro-Tem

Marilyn Price, City Council Member

Andrew Krenz, City Council Member

John Carter, City Council Member

Steering Committee Members

John Carter, Northville City Council Member

Debora Bilbrey-Honsowetz and Derek Smith, Northville Parks & Recreation

Susan Haifleigh and Kathy Spillane, Mobility Team Task Force Representative

Consulting Partners

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

Staff Project Leaders

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Mike Domaine, Northville Department of Public Works Director

Nate Geinzer, Project Manager for City of Northville

Funding

Provided by the Transportation Equity and Sustainable Infrastructure Grant from the SEMCOG Planning Assistance Program which is funded in the 2022-2023 Unified Work Program for Southeast Michigan

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The contents of this non-motorized plan reflect the view of The Greenway Collaborative, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of SEMCOG. This Non-motorized Plan does not constitute a standard, specification, or regulation.



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1

Overview and Process

- Introduction
- Process
- Community Engagement

The Northville Non-Motorized Plan is an inclusive and comprehensive initiative aimed at improving active transportation options within the community. The plan focuses on enhancing the safety, accessibility, and connectivity for people who walk, bike and roll. By prioritizing the needs of these users, the plan aims to create a more sustainable, healthy, and vibrant Northville.

The development of the plan involved a collaborative process that included data analysis, public input, and expert consultation. Through community engagement and careful analysis, the plan identifies key priorities, challenges, and opportunities for enhancing the non-motorized network.

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Introduction

The Northville Non-Motorized Plan builds upon the foundation set by its predecessor, the 2013 Non-Motorized Plan, with the aim of further advancing the community's non-motorized transportation options. This updated plan places a specific emphasis on near-term enhancements achievable within the existing right-of-way and curb structure of the road. By refining and updating strategies from the 2013 plan, this new approach ensures a more tailored response to the evolving needs of the community.

The document presents a comprehensive framework designed to enhance non-motorized transportation options, promote safe mobility, and encourage active lifestyles within the community. It outlines a strategic approach to improve pedestrian and bicycle infrastructure, align with existing policies, and incorporate input from various stakeholders. The plan's development process involved conducting a thorough inventory and analysis of land use, traffic patterns, and pedestrian and bicycle conditions. Throughout this process, community engagement played a vital role in ensuring that the plan accurately represents the aspirations and needs of the local residents.

Near-Term Network Map

Supplemental to the Non-motorized Plan Report, the large format Near-term Network Map offers a visual representation of all the proposed routes.

Document Organization

This document summarizes the findings of the planning process and is organized into four primary sections:

1. Overview and Process

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

2. Inventory and Analysis

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.

3. Non-motorized Infrastructure

Focuses on improving infrastructure, including various facility types and treatments. Highlights a near-term non-motorized network, the Riverwalk Vision, regional connections, and downtown coordination. Provides specific corridor recommendations for major roadways.

4. Policies, Programs, Metrics

Evaluates existing policies, programs, and metrics, assessing their alignment with the non-motorized transportation goals.

4. Specific Corridor Recommendations

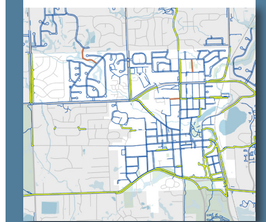
In-depth look at fifteen roadway corridors, laying the foundation for recommendations and their integration into future capital improvement projects.

Non-motorized Infrastructure Recommendations

The non-motorized infrastructure recommendations are organized into four segments, focusing on elements that can be implemented first and those that can be seized as opportunities arise. These segments include the Near-Term Network, Riverwalk Vision, Regional Connections and Downtown Coordination. Details on these recommendations are provided in the *Non-Motorized Infrastructure* section of this document.

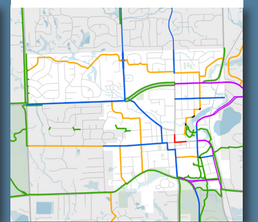
Near-Term Network:

Pedestrain Routes



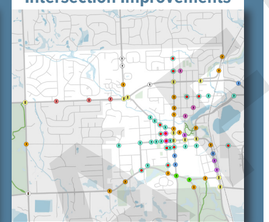
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Bikeways



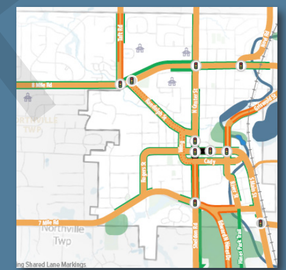
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Crosswalk Treatments and Intersection Improvements



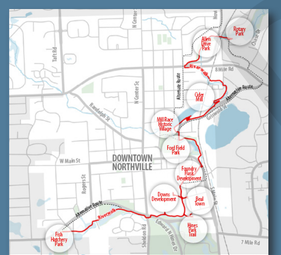
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Corridor Evaluations:



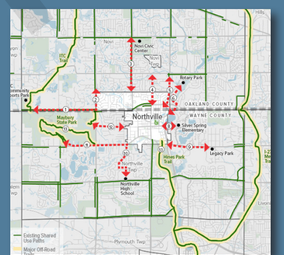
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Riverwalk Vision:



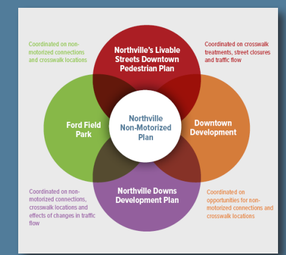
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Regional Connections:



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Downtown Corrdination:



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Purpose of the Non-motorized Plan

The creation of the Non-Motorized Plan stems from the City's recognition of the increasing demand for alternative forms of travel and the need to promote safe and comfortable transportation options within the community. This plan serves as a strategic framework that will guide the City's response to this growing demand while ensuring connectivity within both the City and with the larger regional transportation network.

A comprehensive non-motorized plan aims to provide residents and visitors with viable alternatives to traditional motorized transportation, promoting healthier lifestyles, reducing traffic congestion, and improving overall accessibility and quality of life within the City. The plan will serve as a blueprint for future developments, infrastructure enhancements, and policies that prioritize active transportation and foster a more sustainable and connected community.

Process

The plan was developed over a nine-month period in 2023. A Steering Committee consisting of City Staff and members of the Mobility Network Team was guided the process and the public was engaged throughout the process, through a community open house event and surveys. The Steering Committee completed a final review of the Plan prior to the Plan being recommended for adoption.

Steering Committee Members

- Nate Geinzer, Project Manager for City of Northville
- Wendy Wilmers Longpre, Northville Director of Strategic Planning and Special Projects
- Mike Domine, Northville Department of Public Works Director
- John Carter, Northville City Council Member
- Debora Bilbrey-Honsowetz and Derek Smith, Northville Parks & Recreation
- Susan Haifleigh and Kathy Spillane, Mobility Network Team
- Norm Cox & Carolyn Prudhomme, The Greenway Collaborative
- TJ Likens, Fishbeck

Timeline

Existing System and Plan Evaluation

Issues, Opportunities and Goals
- Community Open House
- Web Survey

Preliminary Plan

Community Feedback and Priorities
- Mobility Network Team
- Online Review

Plan Refinement and Adoption
- Planning Commission
- City Council

The plan was adopted TBD.

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Draft Northville Non-motorized Plan 2023

Community Engagement

A public engagement plan was developed to gain input from potential users as well as reach a broad cross section of the community. The follow pages outline the process and tools used to engage the community.



Community Open House

A joint community open house with the Ford Field Master Plan and the Downtown Traffic Safety Project was held on June 8, 2023. Many residents were in attendance and stations were set up around the room for participants to provide input.

Surveys

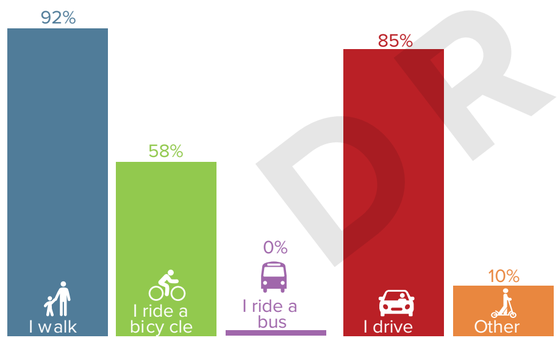
To gain input from as many stakeholders as possible, online and paper surveys were developed and distributed. The surveys were colorful, fun and easy to fill out. They were hosted on the project web page and focused on questions that would have a direct impact on the plan. Handouts and posters with the website link and QR code were distributed at the community open house and promoted on social media.



What We Heard and Learned During the Planning Process

Public input regarding the city's non-motorized plan brought forth a range of requests and concerns related to sidewalks, bike lanes, crosswalks, regional connection and overall safety. The main themes revolved around the need for improved pedestrian and bicycle infrastructure, enhanced safety measures, and better connectivity between key destinations around the city. The input reflected a strong desire for a more pedestrian and bicycle-friendly environment, with a focus on safety and accessibility.

The following pages summarize the public input. Please note that the terminology used in this section accurately represents the language employed in the survey and gathered from public input.



How Do You Get Around Northville?

Although Northville does not currently have a Bus System, it was included in the survey as a benchmark for comparison.

Improved Pedestrian and Bicycle Infrastructure

Community input called for more dedicated bike lanes, shared-use paths, and wider pathways to support safe biking and walking experiences throughout the city. Residents advocated for completing sidewalk gaps along major roads such as 7 Mile Road, 8 Mile Road, Center Street, Baseline Road, Northville Road and Griswold Street. The utilization of existing rights-of-way for bike and pedestrian connections between neighborhoods was also highlighted. The importance of sidewalk connections to parks, schools, and other destinations was also mentioned.

Enhanced Safety Measures

The community urged the implementation of stricter enforcement, regular maintenance, and facility improvements to ensure the safety of non-motorized transportation. Traffic control concerns included speeding, cut-through traffic, vehicles running stop signs, and vehicles not stopping for pedestrians at intersections.

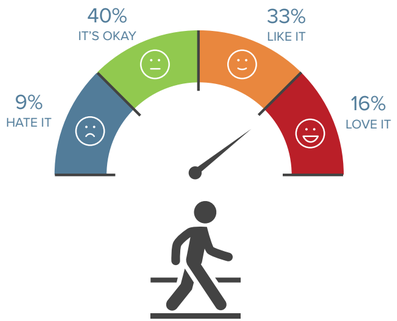
Additionally, there were safety concerns regarding vegetation intruding on sidewalks, upgrading crosswalks for safety and addressing issues related to street parking and visibility.

Connectivity Between Key Destinations

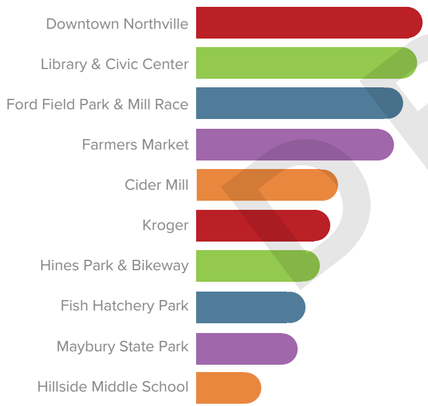
The community expressed a desire for better connections to popular parks and destinations, including Maybury State Park, Fish Hatchery Park, Legacy Park, Cider Mill, Guernsey Dairy, Northville High School, ITC Trail, Ford Field Park and Hines Park & Bikeway. Participants highlighted the importance of establishing routes that would facilitate easier access to these locations, enhancing the overall connectivity of the area and promoting safe active transportation options.

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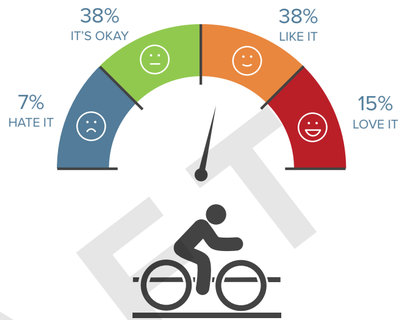
Rate your Satisfaction with Walking in Northville Right Now



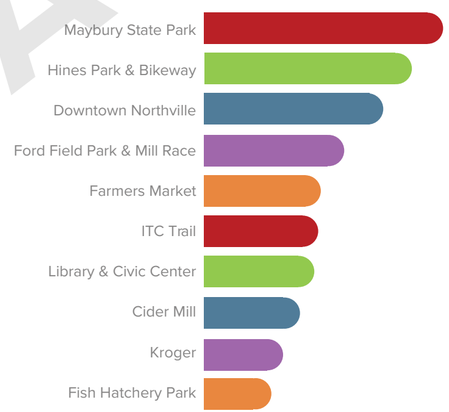
Top Destinations for Walking



Rate your Satisfaction with Riding in Northville Right Now



Top Destinations for Riding



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84%
Would use a sidewalk



97%
Would use a side path



24%
Would use sharrows



40%
Would use on-road bike lanes



90%
Would use off-road trails

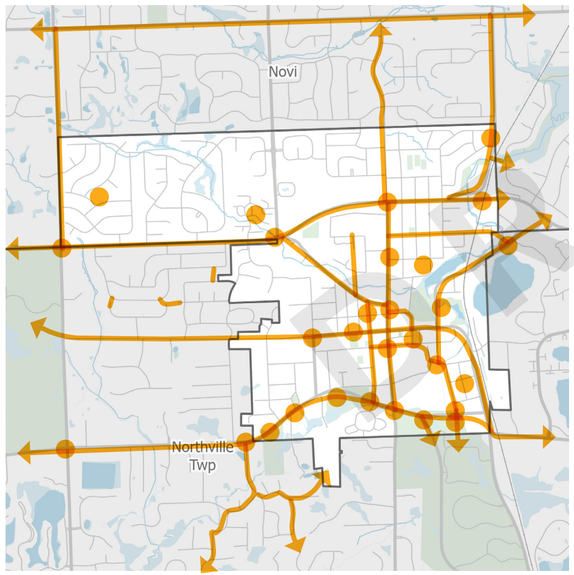


62%
Would use protected bike lanes



Specific Places

During the public input phase, comments from the community were diverse and covered a wide range of locations. While comments were distributed across the entire community, a majority of them focused on the major corridors. Additionally, there were numerous comments addressing the importance of establishing bike and pedestrian connections to destinations located outside the city boundary. This data provides valuable insights into the specific needs and preferences of individual places and should be referenced as specific area corridor plans are developed.



Regional Connections:

- Provide connections to Maybury State Park from Main Street and 7 Mile Road. Would like to see a bike/ped entrance to the park at the corner of Beck Road and 7 Mile Road.
- Provide connection to Legacy Park from Hines Park Trail.
- Connect to Northville High School
- Connect to ITC Trail.
- Would like to see a cross town bike connection to Hines Park Trail using Griswold Street.

Currently Walking and Bicycling Activity:

- A lot of walkers from the North Lexington Condominiums at corner of 8 Mile Road and Taft.
- A lot of bikers and runners use Edenderry to access high school.
- Lots of bicycles use Wing on Street.

Bikeways:

- Protected Bike Lane needed on S Center Street.
- Need to include bike lanes on Cady Street with new Downs Development.
- Improved bike facilities along Randolph need to have designated lanes in both directions.
- Would like to see a road diet on S Main Street with opportunity to add bike lanes.
- Need bikeway along 7 Mile Road.
- Protected bike lanes to Hines Drive.
- Protected bike lanes to Maybury.
- Improve bikeway connection to Maybury on 8 Mile Road. Overgrown vegetation and uneven sidewalk and driveways make it unsatisfactory.
- Intersections and roundabout must account for bike crossings.
- Replace sidewalks with wider pathways along Eight Mile Road and Randolph.
- Pavement conditions on roads are terrible for biking.
- Dunlap St could use designated bike lanes between Hutton & Center.

Sidewalk Gaps:

- Complete sidewalk along 8 Mile between Randolph St and Hillside Middle School.
- Complete sidewalk along 8 Mile over railroad between 8 Mile Road and Griswold.
- Improve sidewalk on Center Street between Kroger and 8 Mile, it is narrow and difficult to push stroller.
- Baseline should have sidewalks on both sides of street.
- Provide direct connection from Griswold Street to Baseline Road / Cider Mill.

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- Complete sidewalks along 8 Mile east, all the way to Meadowbrook Road.
- Add sidewalk connection north on Center Street all the way to 9 Mile Road.
- Sidewalk on 9 Mile between Novi Road and Taft Road
- Complete sidewalk gaps along Novi Road.
- Complete sidewalk gaps on Griswold Street.
- Would like to see existing undeveloped right-of-way formalized between adjacent neighborhoods for bicycle and pedestrian use.
- Use existing rights-of-way to extend bike/ped connection north of High Street to Hillside Middle School.
- Add bicycle and pedestrian connections along 7 Mile Road, with connections to Fish Hatchery Park, Edenderry, Legacy Park, Hines Park Trail and Maybury State Park.
- Would like to see a pedestrian connection from Fermanaugh to Cemetery.
- Need sidewalk on River St.
- Do not want to see sidewalk added to neighborhood at corner of 8 Mile Road and Beck Road.
- Sidewalk on Northville Road.
- Sidewalk on 7 Mile Road.

Safety Concerns:

- Signal at Beck and 8 Mile Road does not stop all lanes and is dangerous when crossing.
- Taft and 8 Mile a dangerous intersection to cross the road.
- Do not widen Beck Road.
- West bound Traffic back ups on 8 Mile Road at Beck Road all the way to Taft. This creates dangerous situation where drivers use center turn lane to by-pass traffic.
- Repair pot holes on 8 Mile Road
- Improve intersection at Taft and complete sidewalk gaps along 8 Mile between Randolph St and Hillside Middle School for students walking to school.
- Need a consistent road cross section on 8 Mile Road to improve safety.
- Improve pedestrian access to Guernsey Dairy. Students currently cross Novi Road that lacks sidewalks and crosswalks. Nearby residents jump the railroad to access the Dairy Store from the east.
- Baseline Road at Griswold St confusing, potential location for a roundabout.
- Speeding is an issue on Center Street and on Main Street near Library.
- Cars and bikes running stop signs, especially in downtown.
- A lot of cars, bikes and runners use Edenderry to access the High School. This road does not have sidewalks, Lacks a crosswalk and lacks sidewalk connection at 7 Mile Road. The intersection of Edenderry and 7 Mile is a safety concern.
- Concerns with safety and future traffic at intersection of S Center Street and 7 Mile Road. Conflicting opinions on putting a roundabout at this intersection.
- Difficult to cross 7 Mile at Wing/St Lawrence Estates due to recent traffic backups.
- Poor visibility where 7 Mile curves at Fairbrook.
- Crosswalk needed on 7 Mile at Fish Hatchery Park where sidewalk ends.
- Cars parking on sidewalk along Hutton Street.
- Heavy traffic on local roads.
- A lot of traffic at the intersection of W Main Street and S Rogers Street.
- Visibility is an issue at High Street and Main Street due to vegetation and parked cars.
- Upgrade crosswalk on N Center at Kroger to flashing beacon, no one stops.
- Mixed opinions on keeping Main Street closed to traffic. Concerns with ADA parking and access to business if streets stay closed.
- Concerns with near-misses and crashes with pedestrians and bicyclists at intersection in the downtown (Hutton at N Center and Wing St were specified).
- Concern with cut through traffic in Beal town neighborhood with Downs Development. Would like to see traffic restricted at Beal Street Bridge and make this a bike/ped connection only.
- Concern with existing crosswalk on 7 Mile to Hines Park Trail. Need to upgrade this crossing and provide sidewalk connection at River St. Needs a Rectangular Rapid Flash Beacon.
- Safety concerns for bicyclists at intersection of 7 Mile Road and Edward Hines Drive. It is confusing, vehicles run stop sign and it is difficult for bikes traveling north bound to get enough speed after stopping to avoid southbound free-flowing traffic making a left turn the intersection.
- Would like see crosswalk for subdivision at Redwood Blvd and Sheldon Road.
- Bike lane drops at 7 Mile Road between Sheldon Road and Edward Hines Drive. Concerns about how future traffic will effect this area.
- Provide safe access to the Cemetery from 7 Mile Road including a sidewalk and crosswalk.
- Less street parking for visibility.
- Concern with heavy traffic in neighborhood due to street closures. Too many aggressive, distracted and stressed-out drivers racing down side streets.
- Parked cars block signage on Center Street.
- Need marked crosswalk to Ford Field Park at the north entrance road on Hutton.
- Concerns with site lines for pedestrians due to parked cars. Maybe less on street parking or limit to one side of street.
- Make Griswold and Cady intersection a four-way stop.

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Inventory and Analysis

- Land Use, Traffic Generators, and Mobility Patterns
- Pedestrian Conditions
- Bicycle Conditions
- Coordination

The inventory and analysis process provides an assessment of the existing multi-modal environment and helps to identify what multimodal improvements are possible and appropriate. The analysis begins with a general system overview looking at how land use and demographics influence transportation choices and patterns. It then takes a more specific view of the pedestrian and bicycle environments.

The coordination section distills relevant details from task force and sustainability team reports. These studies represent a wealth of information and relevant public input. The document also outlines the work being done in concurrent planning efforts.

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Land Use, Traffic Generators and Mobility Patterns

The City of Northville, Michigan, is located in both Wayne and Oakland Counties, is approximately 2 square miles in size, and is home to around 6,000 residents. The City has a vibrant downtown core, dense urban grid and is known for its walkability. For many residents bounded by I-96, I-275, M-14 and Napier Road, Northville it is the defacto downtown.

Northville Twp surrounds the city to the south, east and west and the City of Novi is located along the northern border. Providing connections beyond the city's borders is important, as many of the schools, parks and local destinations are used by residents from all three communities.

Bicycle and pedestrian travel in the city generally follows the primary road system. The artificial barriers of multi-lane arterial roads tend to fragment the community from a non-motorized standpoint, presenting challenges for non-motorized travel. Additionally the LSRC Railroad and middle branch of the Rouge River parallel each other, creating a barrier along the east side of the city, cutting off connectivity to higher density residential neighborhoods and community schools in the Township and the City of Novi.

Schools often serve as social centers for neighborhoods. A number of schools are located near 8 Mile, a high speed and high volume road corridor. Crosswalks in this area should get additional attention to make sure families can safely walk to school.

In order to foster inclusive and accessible communities, it is crucial to prioritize the development of bicycle and pedestrian infrastructure, programs, and planning in areas with significant senior populations or individuals with limited mobility. By directing attention towards these specific areas, we can ensure that everyone, regardless of their physical or cognitive capabilities, can enjoy safe and convenient modes of transportation.

A notable organization dedicated to enhancing the quality of life for people with disabilities is the Living and Learning Enrichment Center, located on Griswold Street. As a local non-profit, they offer vital support programs, making it imperative to create an environment that accommodates the unique needs of all community members.

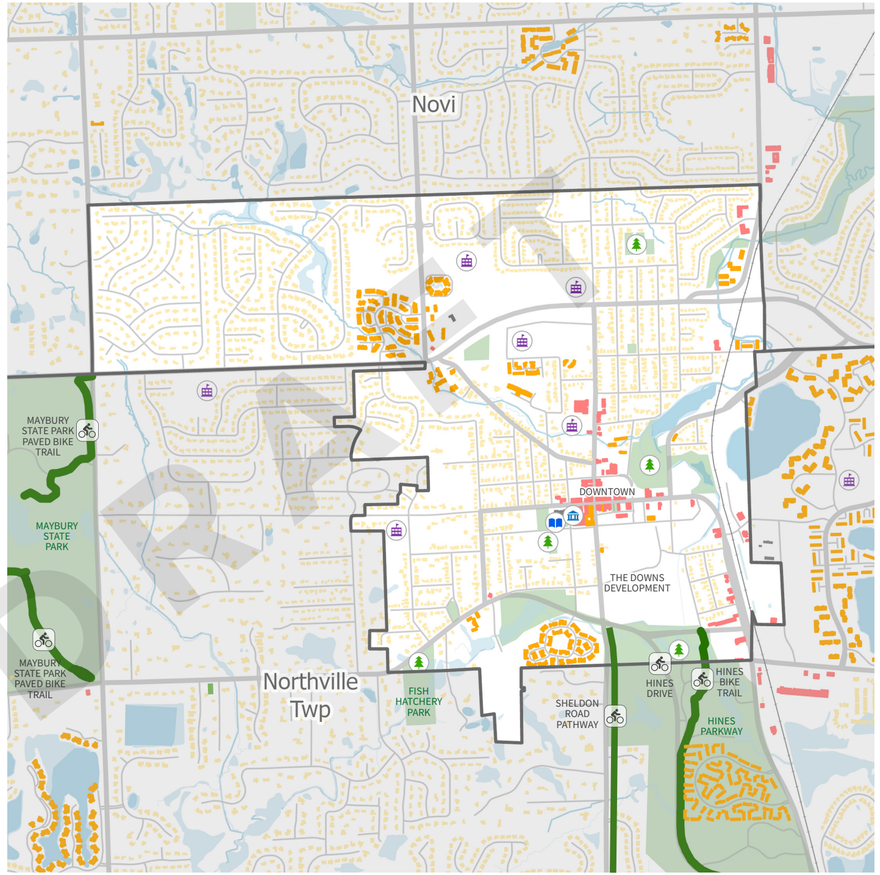
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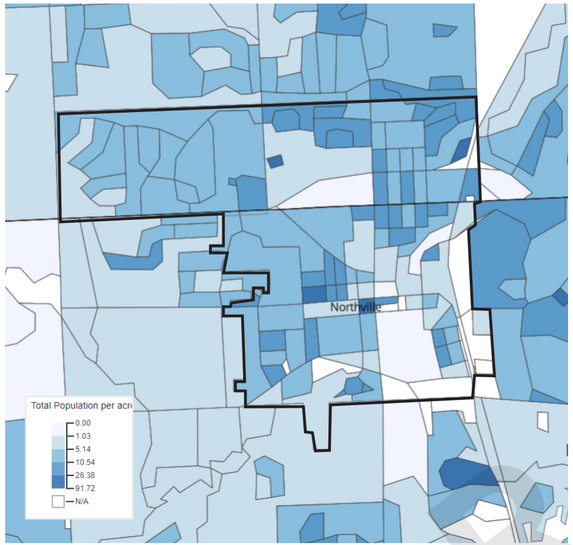
Key Destinations

The map highlights the key destinations for residents of the City as well as residential areas.

The close proximity of residential areas, places of work, shopping, dining, recreation areas, and civic destinations provide Northville with the underlying land use framework to make for a very walkable and bikeable community.

- Civic Center
- Park
- Library
- School
- Shopping/Dining
- Single Family Residential
- Multi-family Residential and Condominiums
- Bikeways

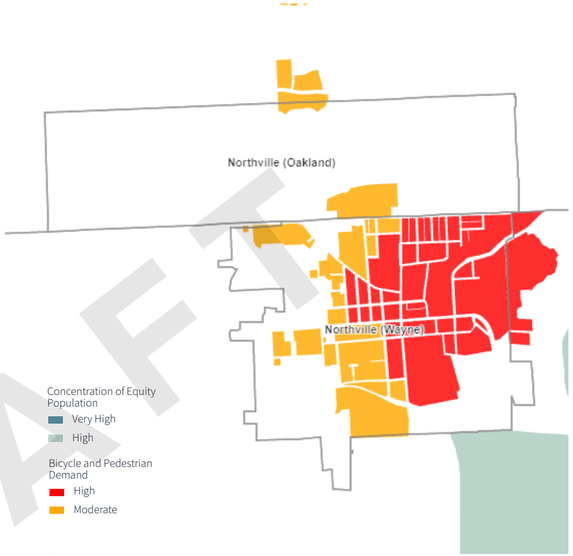




Population Density

Source: SEMCOG - 2020 Census Results

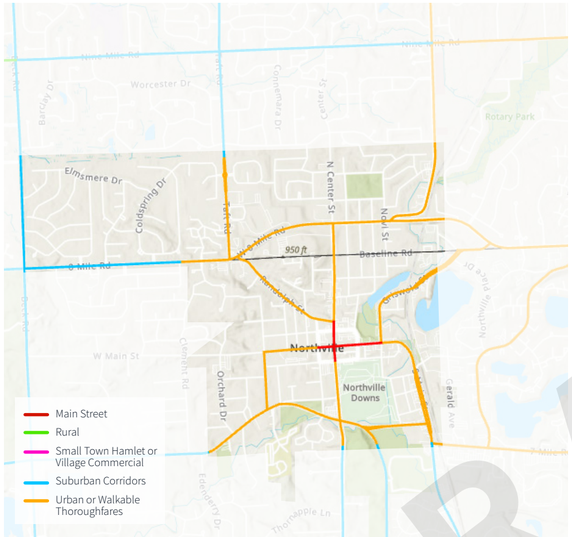
Generally speaking, higher population densities correlate with a greater percentage of people walking, bicycling, and taking transit. With higher density populations, comes a closer proximity of stores, restaurants, schools, transit stops, and civic amenities. Higher population densities also mean more people out walking and bicycling. This both normalizes these activities as well as providing a safety in numbers which encourages an even greater percentage of the population to walk and bicycle. The Downs development will introduce a relatively high density development that will increase non-motorized trips in the southeast quadrant of the community.



Equity and Demand Analysis

Source: SEMCOG

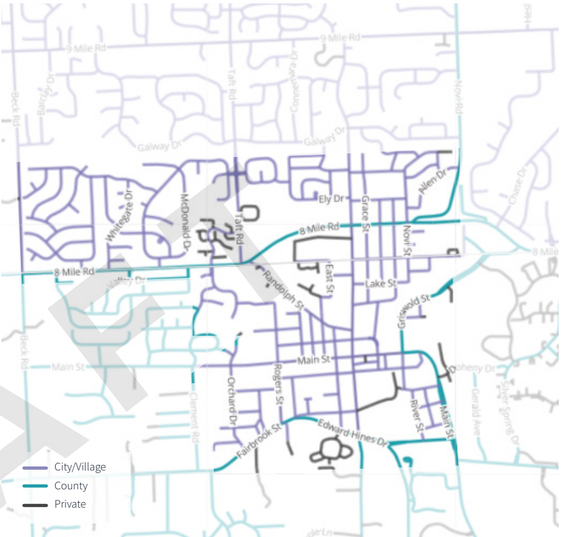
Concentration of equity populations and bicycle and pedestrian demand areas are indicators for non-motorized travel. While it is important for everyone to have access to non-motorized facilities, these areas should be targeted for bicycle and pedestrian infrastructure, programs and planning.



Land Use Context

Source: SEMCOG

Land use context of a roadway corridor can help determine modal priorities. A road's surrounding land use context helps inform the types of infrastructure that is appropriate, especially when a corridor changes contexts from one end of the city to the other.



Jurisdiction

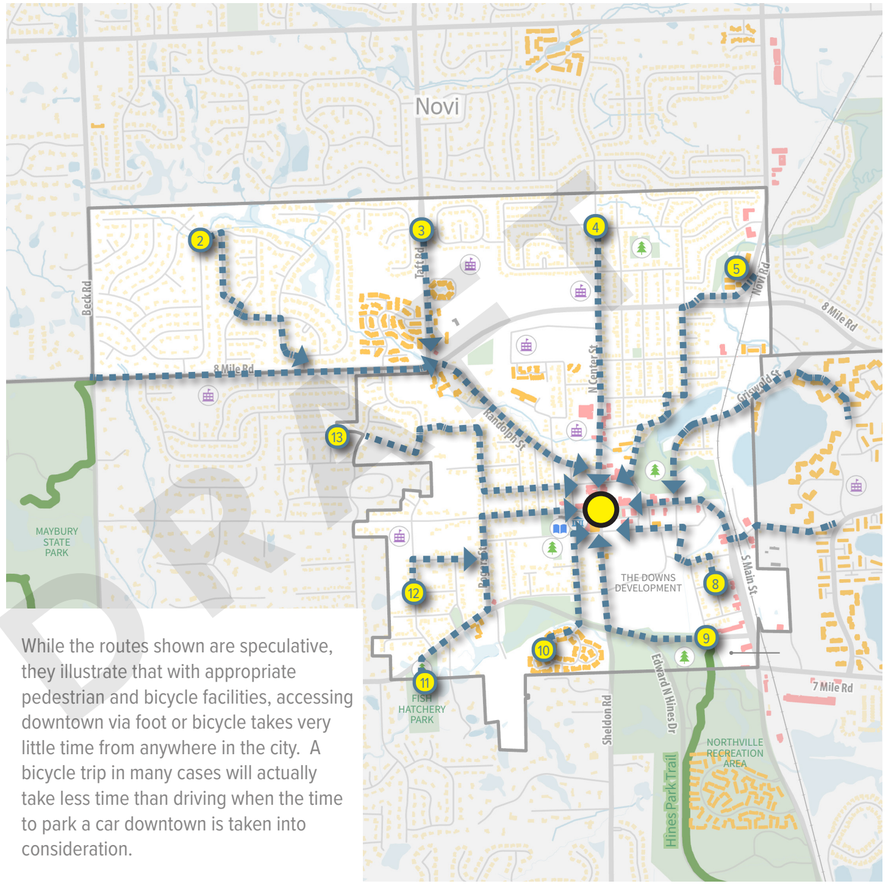
Source: SEMCOG

Coordination with Wayne County Road Commission will be required for non-motorized improvements on 7 Mile Road, Edward Hines Drive, 8 Mile Road (east of Taft), Griswold Street, Main Street. Coordination with the Road Commission for Oakland County will be required for Novi Road and 8 Mile Road (west of Taft). The character and facilities of these roadways has a tremendous impact on the walkability and bikeability of the city as a whole.

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Distance, Routes, and Times to Downtown

1. **Maybury State Park** 1.7 Miles
   33 min. walk 7 min. bike ride
2. **Elmsmere@Chigwidden** 1.7 Miles
   34 min. walk 9 min. bike ride
3. **Taft @ Galway** 1.1 Miles
   22 min. walk 6 min. bike ride
4. **Center @ Ely** 0.8 Miles
   16 min. walk 5 min. bike ride
5. **Tree Tops Apartments** 1.1 Miles
   23 min. walk 7 min. bike ride
6. **Park Place Apartments** 1.4 Miles
   29 min. walk 9 min. bike ride
7. **Silver Springs Dr** 0.8 Miles
   16 min. walk 5 min. bike ride
8. **Beal Town** 0.7 Miles
   13 min. walk 4 min. bike ride
9. **Hines Park Trail** 0.7 Miles
   14 min. walk 4 min. bike ride
10. **St. Lawrence Est** 0.6 Miles
    12 min. walk 5 min, bike ride
11. **Fish Hatchery Park** 0.9 Miles
    18 min. walk 5 min. bike ride
12. **Orchard @ Grandview** 0.8 Miles
    15 min. walk 4 min. bike ride
13. **Clement @ Pathway** 1.0 Miles
    19 min. walk 5min. bike ride



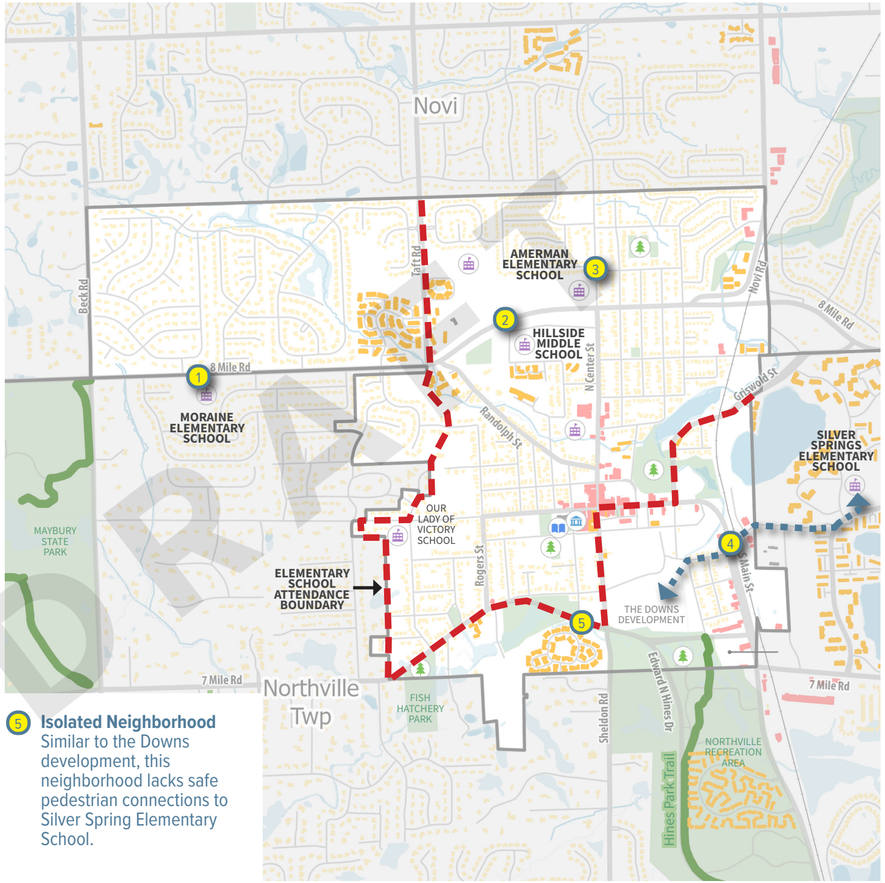
While the routes shown are speculative, they illustrate that with appropriate pedestrian and bicycle facilities, accessing downtown via foot or bicycle takes very little time from anywhere in the city. A bicycle trip in many cases will actually take less time than driving when the time to park a car downtown is taken into consideration.

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School Access

Most elementary age children in Northville are within a one mile walking distance of school. The exceptions are at the very south end of town. All middle school children are within 1 1/2 mile walking distance from school. While the distance may be reasonable, there remain barriers to walking, some of them significant.

1. **Obsolete Pedestrian Overpass**
   The stairs make the overpass inaccessible and the mesh flooring is unsettling for many people.
2. **Poor Connections to Pedestrian Overpass**
   The north side of the bridge dumps the users into a parking lot with poor connections to the pathway and athletic field. The south side of the bridge does not have a direct connection to a school entry.
3. **Oddly Configured Crosswalk**
   The offset intersection of Ely Dr and Hill St at N Center St results in only the north bound traffic having a stop sign at the crosswalk.
4. **No Pedestrian Link to Silver Springs Elementary Schoo**l
   The lack of any accommodations in the Doheny Dr RR underpass and on the approaches eliminate walking as an option for Northville residents.



5. **Isolated Neighborhood**
   Similar to the Downs development, this neighborhood lacks safe pedestrian connections to Silver Spring Elementary School.

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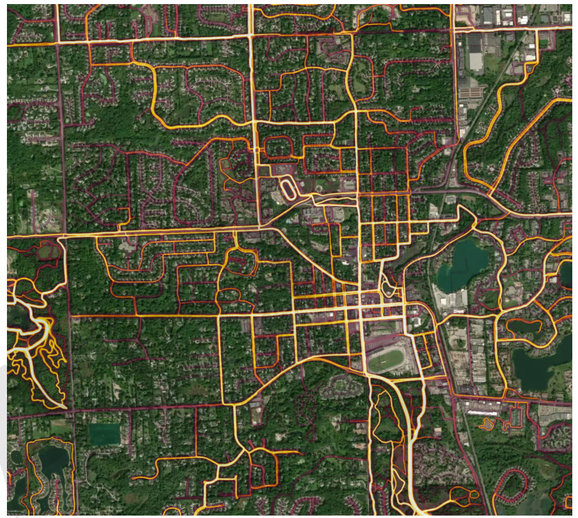
Pedestrian Conditions

The City of Northville has about 40 miles of existing sidewalks and pathways. Pedestrian travel in the city generally follows the primary road system with a partially complete sidewalk system along the major roadways. Most neighborhoods have sidewalks, however there are a few neighborhoods that lack sidewalk connection all together.

The quality of the pedestrian experience on these sidewalks varies greatly throughout the City. Most of the sidewalks have a buffer, such as a row of trees or parked cars, between the sidewalk and roadway. This type of buffer has been shown to have a significant impact on the quality of the walking experience. This buffer not only provides a sense of separation from traffic but also enhances safety and comfort for pedestrians. Additionally, seasonal street closures in the downtown have increased traffic in surrounding neighborhood areas, further affecting the pedestrian experience.

Crosswalks are an important infrastructure element when it comes to determining how walkable a community is. In general, pedestrians will not detour more than 10% of their total trip distance. Opportunities to cross busy roads, such as 7 Mile Road, 8 Mile Road, Center Street, S Main Street, Wing Street and Griswold Street are limited, leading to poor pedestrian connectivity between neighborhoods and destinations that are located on opposite sides of the roadway. There are a number of proven safety countermeasures that may be employed to make pedestrian crossings safer.

There are a number of situations, especially along 8 Mile Rd, where residential roads align with each other on opposite sides of the 8 Mile without a crosswalk.



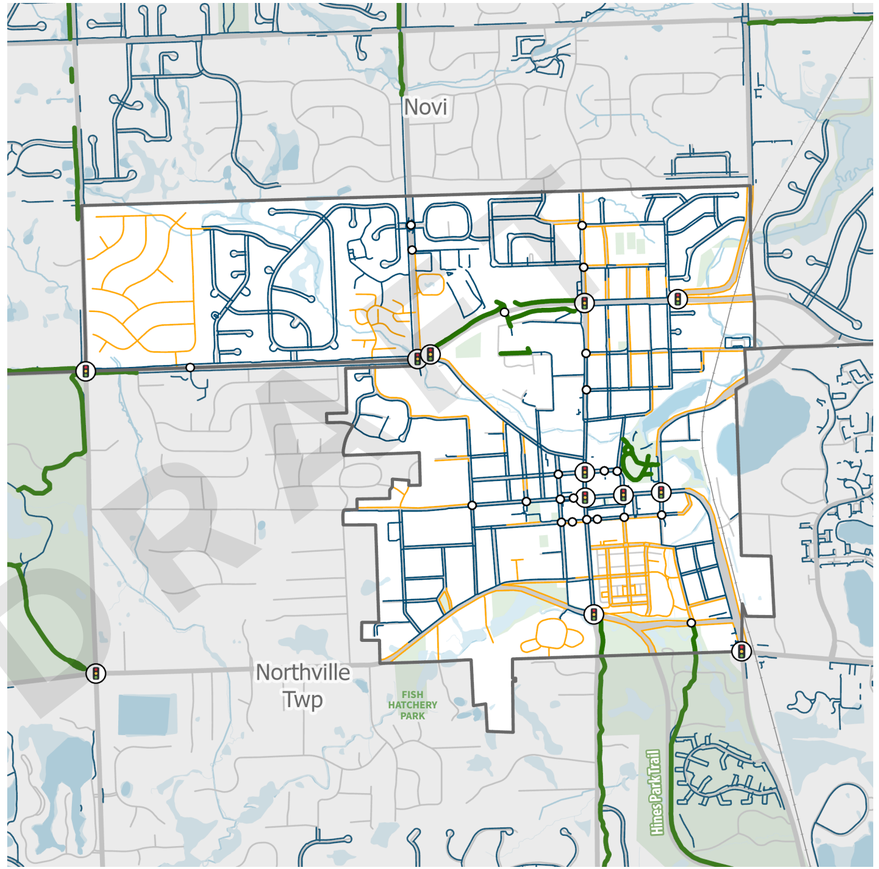
Strava Pedestrian Heat Map

Source: Strava

This map is an aggregate view of walking and running trips recorded on the Strava app where the wider lighter lines indicate more trips. Because it only shows trips that are recorded by a single application it is not truly representational of all pedestrian trips and leans heavily towards recreational trips. But experience has shown this is a reasonable facsimile of the relative use by pedestrians on roadways and trails.

Northville's Existing Pedestrian Network

Note: Sidewalks in the Downs Development were not built at the time of this plan and are shown as "Sidewalk Gaps" for reference. The gaps represent key connections that need to be included as the site is developed.



- 8' wide+ Shared Use Paths
- Sidewalks
- Sidewalk Gaps
- Signalized Intersections
- Existing Crosswalks

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Pedestrian Crashes

An analysis of pedestrian crash data spanning 18 years in the City of Northville was conducted to gain comprehensive insights into pedestrian safety trends and challenges. This section highlights key findings drawn from this data, which are instrumental in guiding efforts to enhance pedestrian safety measures within the city.

In Northville the majority of vehicles crashes involved pedestrians being hit within crosswalks by motorists. Most of the motorists were turning prior to the crash. These incidents were not the result of poor lighting conditions. Of the crashes that did not take place at an intersection, two involved motorists hitting workers in the roadway. Of the reports that did address driver distraction, distraction did not appear to be a factor. This leaves one to conclude that the drivers of the motor vehicles had poor situational awareness and were not looking for pedestrians in marked crosswalks. Remedies for these types of crashes will need to focus on counteracting the behavior of motorists and raising the awareness that pedestrians are to be expected in these locations.

23 pedestrian crashes since 2004

1.3 average number of crashes per year

1 fatalities in 18 years

82% Resulted in Injury
7% lower than state average

39% Between 3pm and 6pm
33% higher than state average

9% speed limit 40 mph or greater

Speed is a central factor in traffic deaths. As speed limits and speeds increase, so do fatalities. When struck by a vehicle at 40 MPH, a pedestrian has a 20% survival rate.

8% Suspected Serious Injury
10% lower than state average

17% Hit and Run
10% lower than state average

82% Daylight
30% higher than state average

69% at an intersection
29% higher than state average

Economic and Societal Impact of Pedestrian Crashes in Northville - 2004 to 2021

$2.4 Million
Economic Cost: Productivity, medical, emergency and costs to employers

$11.4 Million
Comprehensive Cost: Economic costs plus quality of life valuations (Amount society is willing to pay to avoid the crash)

An assessment of the Economic and Societal Impact of Pedestrian Crashes in Northville involved deriving calculations tailored to the local context. This process was informed by the US Department of Transportation publication titled "The Economic and Societal Impact of Motor Vehicle Crashes, 2009, December 2022."

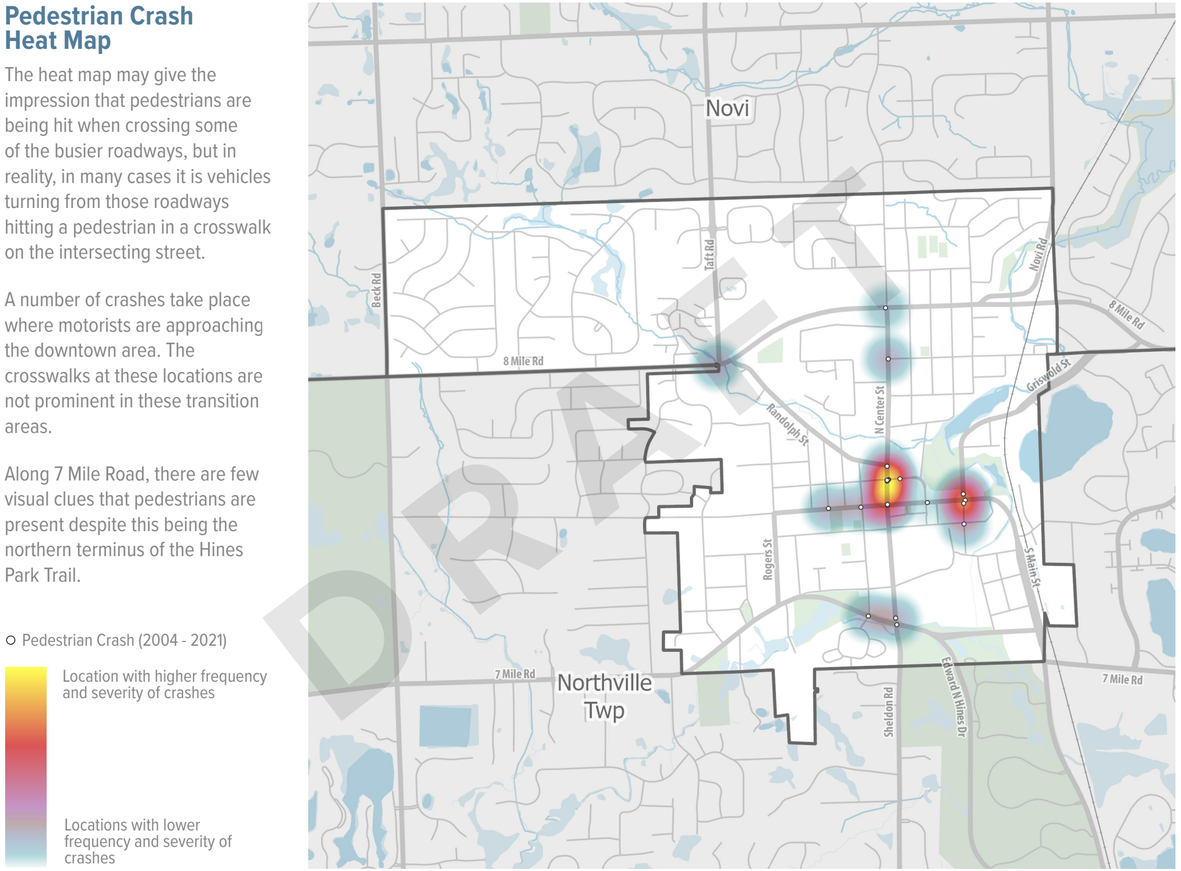
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Pedestrian Crash Heat Map

The heat map may give the impression that pedestrians are being hit when crossing some of the busier roadways, but in reality, in many cases it is vehicles turning from those roadways hitting a pedestrian in a crosswalk on the intersecting street.

A number of crashes take place where motorists are approaching the downtown area. The crosswalks at these locations are not prominent in these transition areas.

Along 7 Mile Road, there are few visual clues that pedestrians are present despite this being the northern terminus of the Hines Park Trail.



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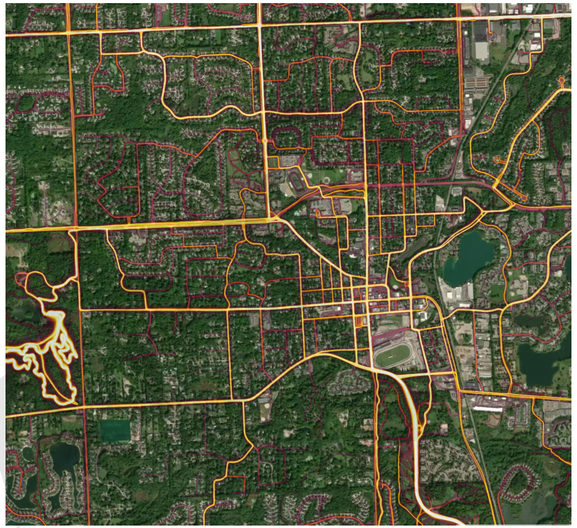
Bicycle Conditions

In general, bicycle travel in the city generally follows the roadway network with a few marked bike lanes and shared lane markings implemented since the 2013 plan.

The existing bicycle network is fragmented and geared towards more experienced bicyclists who are comfortable bicycling on primary roads with bike lanes and/or paved shoulders. With a system comprised of bike lanes, shared lane markings, side paths, and a few off-road trails limited consideration has been given to the transition between these different type of facilities.

A number of regional trail corridors exist around the City of Northville including the Hines Park Trail and Hines Drive Parkway, I-275 Metro Trail, Novi ITC Trail and Shared Use Paths in Maybury State Park. There is opportunity to improve and strengthen non-motorized connections between these regional destinations.

While there have been some initial steps towards wayfinding with The Link that connects Hines Park Trail and Hines Drive Parkway to Maybury State Park, there is significant room for improvement. There has been interest expressed by surrounding communities to establish a regional trail wayfinding system. The wayfinding system could also be expanded to show preferred routes around the city to key destinations and just how close in time and distance they are.

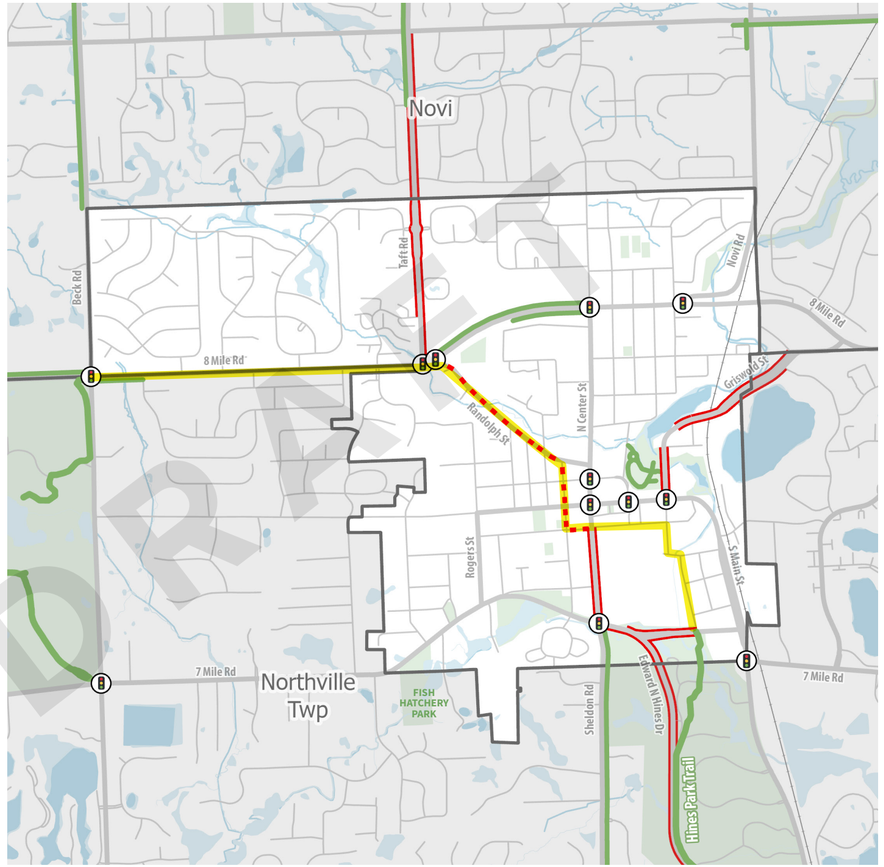


Strava Bicycle Heat Map

Source: Strava

This map is an aggregate view of bicycle trips recorded on the Strava app where the wider lighter lines indicate more trips. Because it only shows trips that are recorded by a single application it is not truly representational of all bicycle trips and leans heavy towards recreational trips. But experience has shown this is a reasonable facsimile of the relative use by bicycles on roadways and trails.

Northville's Existing Bicycle Network



- 8' wide+ Shared Use Paths
- Bike Lanes
- Shared Lane Markings
- Signalized Intersections
- Signed Bike Route "The Link"

Bicycle Crashes

An analysis of bicycle crash data spanning 18 years in the City of Northville was conducted to gain comprehensive insights into bicycle safety trends and challenges. This section highlights key findings drawn from this data, which are instrumental in guiding efforts to enhance bicycle safety measures within the city.

Most of the crashes were the result of motorists failing to yield to bicyclists. As with the pedestrian crashes this did not seem to be the result of poor lighting conditions, but rather poor situational awareness of the motorists. Motorists hit bicyclists in crosswalks and in a couple cases sideswiped the bicyclists. Many of the crashes involved motorists turning into and out of driveways or side streets. Remedies for these types of crashes will need to focus on counteracting the behavior of motorists.

29 bicycle crashes since 2004

1.6 average number of crashes per year

0 fatalities in 18 years

79% Resulted in Injury

<1% Suspected Serious Injury
8% lower than state average

7% speed limit 40 mph or greater
20% lower than state average

Speed is a central factor in traffic deaths. As speed limits and speeds increase, so do fatalities.

65% at an intersection

10% Hit and Run
8% lower than state average

51% Between 3pm and 6pm
20% higher than state average

86% Daylight

Economic and Societal Impact of Bicycle Crashes in Northville - 2004 to 2021

$1 Million

Economic Cost: Productivity, medical, emergency and costs to employers

$5 Million

Comprehensive Cost: Economic costs plus quality of life valuations (Amount society is willing to pay to avoid the crash)

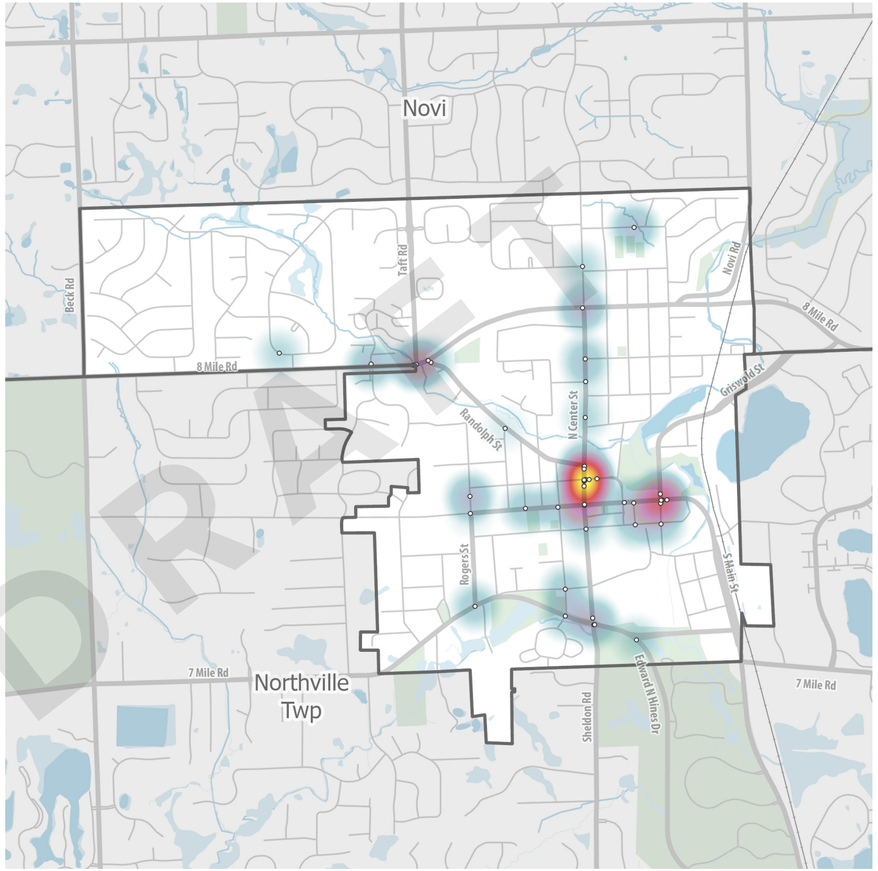
An assessment of the Economic and Societal Impact of Bicycle Crashes in Northville involved deriving calculations tailored to the local context. This process was informed by the US Department of Transportation publication titled "The Economic and Societal Impact of Motor Vehicle Crashes, 2009, December 2022."

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Bicycle Crash Heat Map

The bike crash locations are very similar to the pedestrian crash locations with the approaches to the downtown area having high concentrations of crashes.

When the crash locations are compared to where bicycle facilities exist, relatively few crashes exist where there are bike lanes. And those that do are at intersections where there is no specific accommodations for bicyclists.



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Regional Connections

Northville is fortunate to be surrounded by excellent trail options, such as the Hines Park Trail and Hines Drive parkway, Novi's ITC Trail, and Maybury State Park's trails. Nevertheless, the connections to these trails lack clarity and often do not instill a sense of safety and comfort for the majority of bicyclists. By fostering partnerships aimed at bolstering regional connections, the community can elevate the overall quality of the trail experience and inspire increased usage.



The statewide trail system consists of the Great Lake-to-Lake Trail and the Iron Belle Trail. Northville has the opportunity to connect to both of these systems via the Hines Park Trail.

1 Maybury State Park

Maybury State Park features a variety of hiking, biking, cross-country and equestrian trails. There is an existing pathway connection into the park at 8 Mile Road and a future connection is under development on 7 Mile Road. Coordination with Northville Twp is key to providing a non-motorized connection along 7 Mile Road.

2 Novi ITC Trail

ITC trail is located in the City of Novi. There is the opportunity for a 30 mile regional trail loop through Novi if links are completed to the Michigan Airline Trail, Maybury State Park and Hines Park Trail through Northville.

3 Legacy Park

This new park is located about a mile east of the City, on 7 Mile Road and is developing into a destination for mountain bikers and hikers. Non-motorized connection should be provided to this park so users have the option to walk or bike to the park instead of driving.

4 Connecting the Rouge

This regional planning effort seeks to connect the trails along Hines Drive to the Lower Rouge and downriver portions of the Rouge River Gateway Trail. When complete, this connection will provide trail link all the way to the Detroit River.

5 I-275 Metro Trail

Provides a north-south connection following I-275 corridor east of the City. Hines Park Trail is currently the main link to this trail system. With the development of Legacy Park, there may be opportunities to expand connections through the Township for a more direct route. There may also be some opportunities to improve wayfinding and access to the trail.

6 Hines Park Trail and Hines Drive Parkway

Provides a north-south connection along the Edward Hines Drive corridor terminating at Seven Mile at the southeastern side of the City. This connection is the City's main link to the regional trail network.

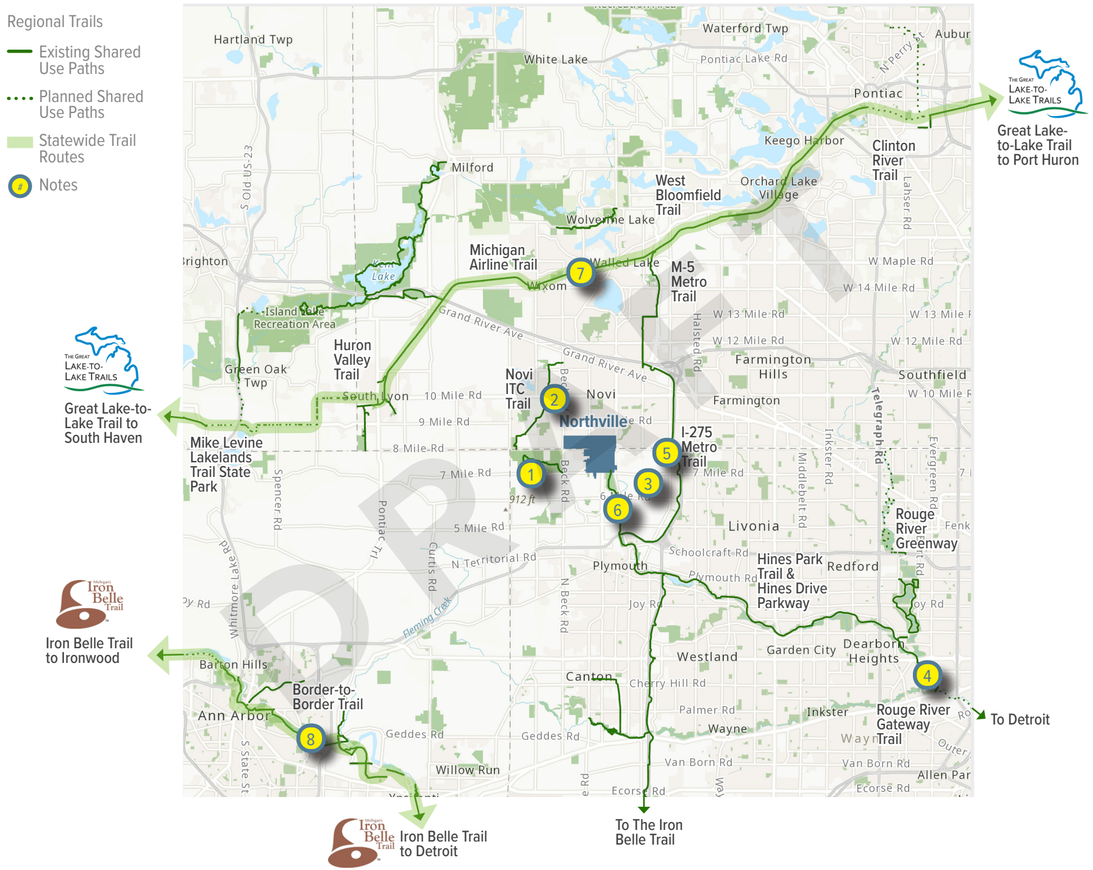
7 Great Lake-to-Lake Trail

This 275-mile bike route crosses southern Michigan from South Haven to Port Huron. There may be opportunities to coordinate with Novi on expanding the ITC Trail north to make a connection to the Michigan Airline Trail along the Great Lake-to-Lake Trail Route.

8 Iron Belle Trail

When complete, this 2,000 mile loop trail will connect the western tip of the Upper Peninsula to Belle Isle in Detroit. Hines Park Trail provides the main connection to access this trail.

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Community Connections

Northville Township

Located on the eastern, southern, and western perimeters of the Northville, Northville Township has a close-knit bond with the City of Northville. The Township and the City share school districts and a recreation department. In the eyes of numerous residents, Northville Township serves as a natural extension of the City, fostering a sense of unity and interconnectedness.

At present, Northville Township has a mix of sidewalks and wide pathways along the major roads with some gaps in connectivity. The Northville Township 2022 Pathway Plan aims to address these gaps and includes key connections that will benefit the City of Northville. Establishment of shared use paths along Seven Mile Road will link the City with prominent destinations such as Maybury State Park and Legacy Park.

City of Novi

Situated along the northern edge of Northville, the City of Novi forms a significant part of the region's landscape. These neighboring municipalities have a close relationship, as they share school districts and are both situated adjacent to the scenic Maybury State Park. Novi's ITC Trail is a popular route frequented by bicyclists and pedestrians, showcasing the city's commitment to non-motorized transportation.

Furthermore, Novi serves as a bustling regional shopping hub, drawing visitors from far and wide, while Northville takes on the role of a de facto downtown, exuding charm and character. Novi is currently in the process of updating its non-motorized plan and effective coordination is essential to ensure a cohesive and accessible network for residents who walk and bike.

Wayne County

South of 8 MIle Road Northville falls under the jurisdiction of Wayne County. Notably, certain arterial roads in Northville, such as segments of 8 Mile Road, 7 Mile Road, S Main Street, and Griswold, are under Wayne County's purview. These roads play a crucial role in the transportation network of the region.

Moreover, the Hines Park Trail and Parkway are Wayne County facilities and serve as vital non-motorized links offering a pivotal connection between the City of Northville and other trails and communities within Wayne County. Recognizing the significance of these connections, the Connecting the Rouge Framework Plan focuses on linking the trails along Hines Drive to the Lower Rouge and downriver portions of the Rouge River Greenway. The City of Northville has the opportunity to capitalize on this connection as a premier trail town along the route.

Oakland County

To the north of 8 Mile Road, Northville falls under the jurisdiction of Oakland County, bringing its own distinct administrative framework. Novi Road is a significant thoroughfare and operates under the authority of the Oakland County Road Commission.

It is also important to recognize that several communities in Oakland County are engaged in the Beck Road Improvement Project. This project aims to enhance the corridor to support growth in the region by adding vehicle lanes and non-motorized improvements. At this time, the Northville is not actively pursuing this project for it's half-mile section of Beck Road.

Looking beyond the immediate vicinity, the I-275 Trail, located just 2 miles east of the Northville, emerges as a prominent regional trail. This trail serves as a direct connection to the Great Lake-to-Lake Trail, spanning across the state and offering non-motorized access to the region.

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Distance to Nearby Destinations

I-275 Metro Trail
3 miles 15 min. bike ride

ITC Trail
3.6 miles 20 min. bike ride

Maybury State Park
1.7 miles 7 min. bike ride

Legacy Park
2 miles 10 min. bike ride

Northville Community Park
3.5 miles 20 min. bike ride

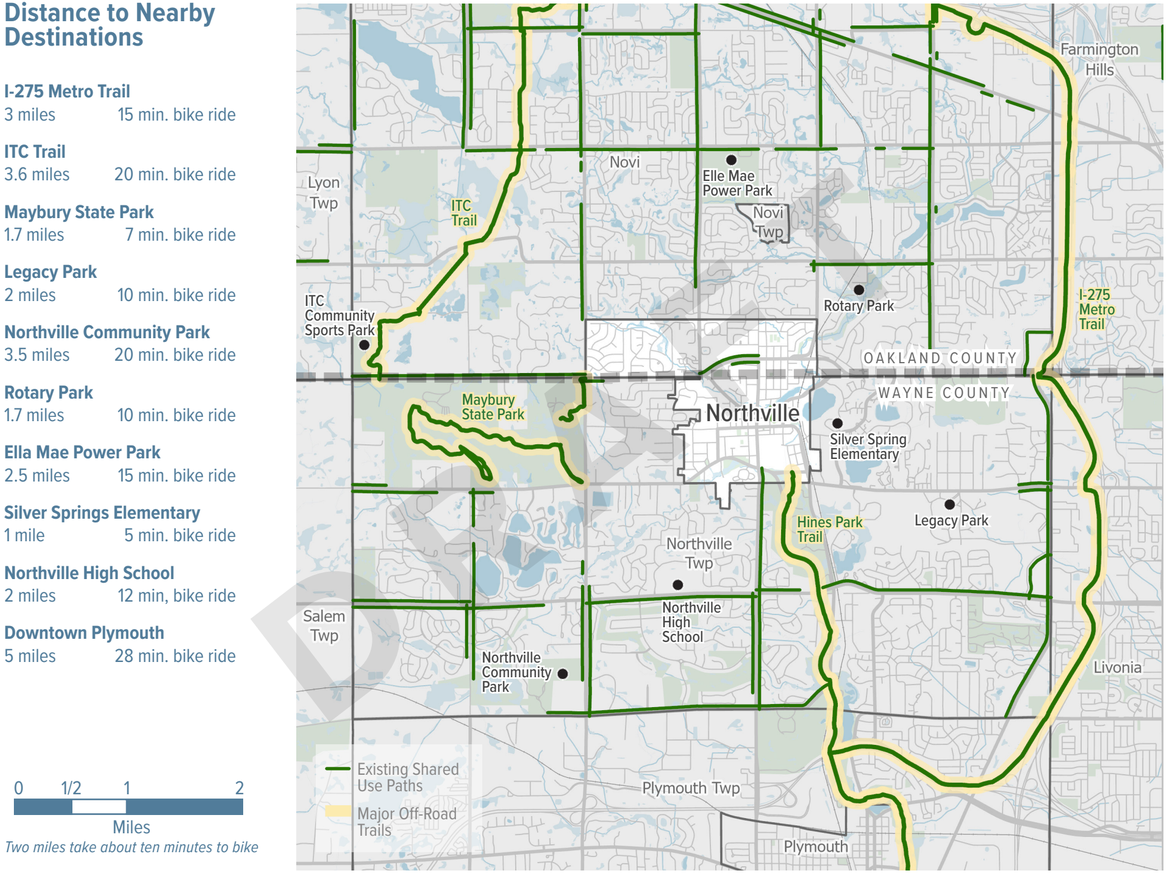
Rotary Park
1.7 miles 10 min. bike ride

Ella Mae Power Park
2.5 miles 15 min. bike ride

Silver Springs Elementary
1 mile 5 min. bike ride

Northville High School
2 miles 12 min, bike ride

Downtown Plymouth
5 miles 28 min. bike ride



Two miles take about ten minutes to bike

Coordination

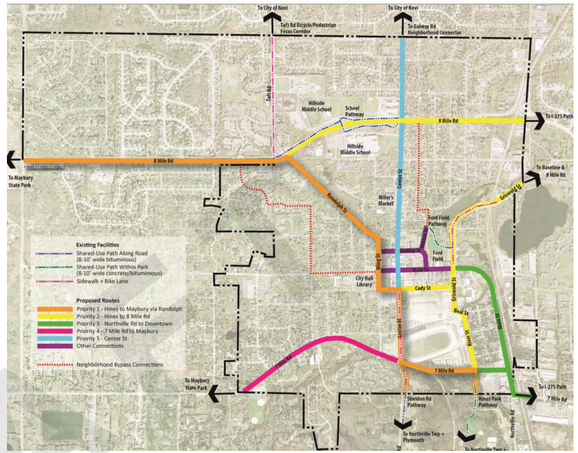
This plan seeks to not only to review and update the 2013 Non-motorized Master Plan but also review and incorporate ideas that have been developed through various studies including the following:

Task Force & Sustainability Team Reports:

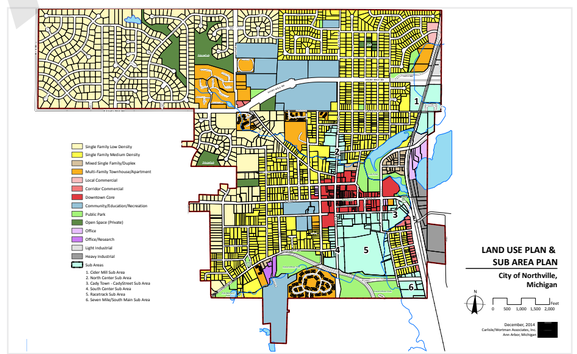
- River Framework Plan Report
- Mobility Network Studies
- Ford Field Report
- Farmers' Market Report

Concurrent Planning Efforts

- Northville's Livable Streets Downtown Pedestrian Plan
- Northville Downs Development Plan
- Novi Active Mobility Plan
- Ford Field Park Master Plan
- Foundry Flask Mixed-Use Development
- Northville Community Parks & Recreation Plan



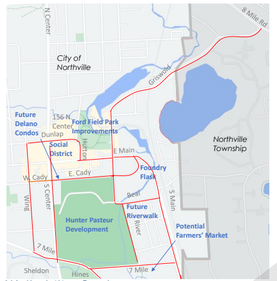
2013 City of Northville Non-motorized Plan



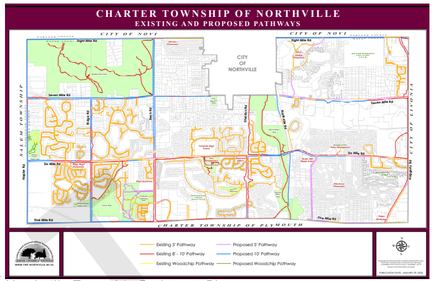
Northville Master Plan



Mobility Task Force Network Report



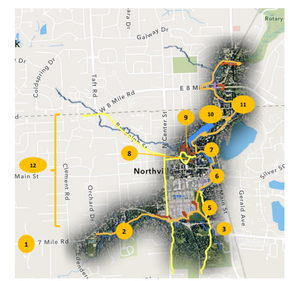
Walkability Study



Northville Township Pathways Plan



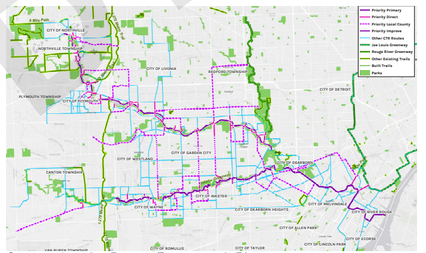
Northville Livable Streets Downtown Pedestrian Plan



River Framework Report



Northville Downs Development Plan



Connecting the Rouge Framework Plan



Walkability for Northville: Northville Downs, Street Connectivity, Mobility

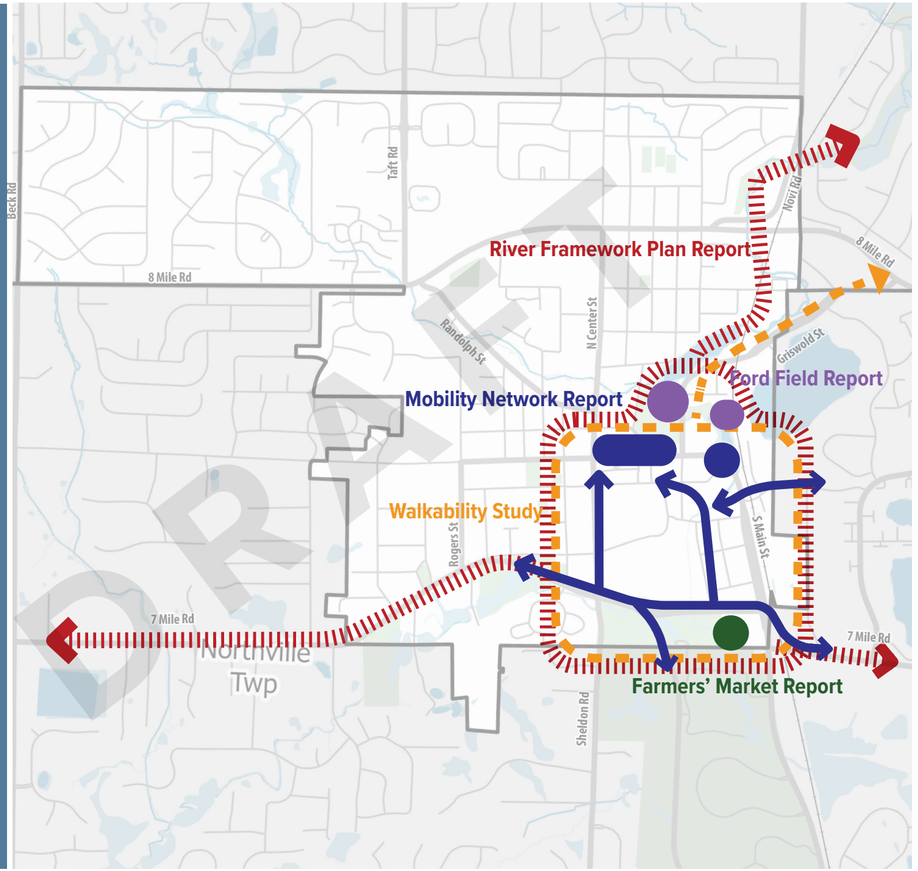
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Task Force and Sustainability Team Reports

City Council formed three task forces in 2020 to evaluate Ford Field, the Farmers' Market and Rouge River Restoration. As of early 2022, the River Restoration Task Force remains and has absorbed the roles of the other two task forces, adding sub-teams to explore various needs.

The Sustainability Team was formed in early 2020. They developed a sustainability plan to be a resource that provides research, support and guidance to city officials and departments as well as the community.

The following page highlights non-motorized recommendations produced by these efforts.



Mobility Network Study

Action Sites:

- Seven Mile Corridor - add shoulders, roundabouts, and crosswalks, improve intersections, and integration of bicycle and pedestrian routes
- South Center Improvements - walk and bike connections, slower speeds, on-street parking, walkability, shared use pathway, shared bike lane
- Old Core Improvements - evaluate parking and traffic on Cady Street, Hutton and Church Streets, Mary Alexander Court, Cady realignment
- River St Neighborhood Parkway - regional trail alignment with the new Downs Project, sidewalks, parking along River and Beal St
- Doheny Safe School Passageway - under railroad

Farmers' Market Report

Update: The McDonald Ford land site for Farmers' Market has been withdrawn. Future site to be determined.

- Create multi-use community facility
- Strengthen bike and pedestrian access to this site, and improve cross-corridor connections on Seven Mile
- Connections to city, township and Hines Park

Walkability Study

- A focus on improving the pedestrian and cyclist experience for the Master Plan Subareas as well as proposed development sites.
- Detailed streetscape recommendations are outlined for E. Cady Street, Griswold Street, Beal Street, S Main Street, 7 Mile Road, Wing Street, W Cady St, and S Center St.

Ford Field Report

- Strengthen bike and pedestrian access to this site and improve cross-corridor connections on **Griswold St**
- Connections to **city, township and Hines park**

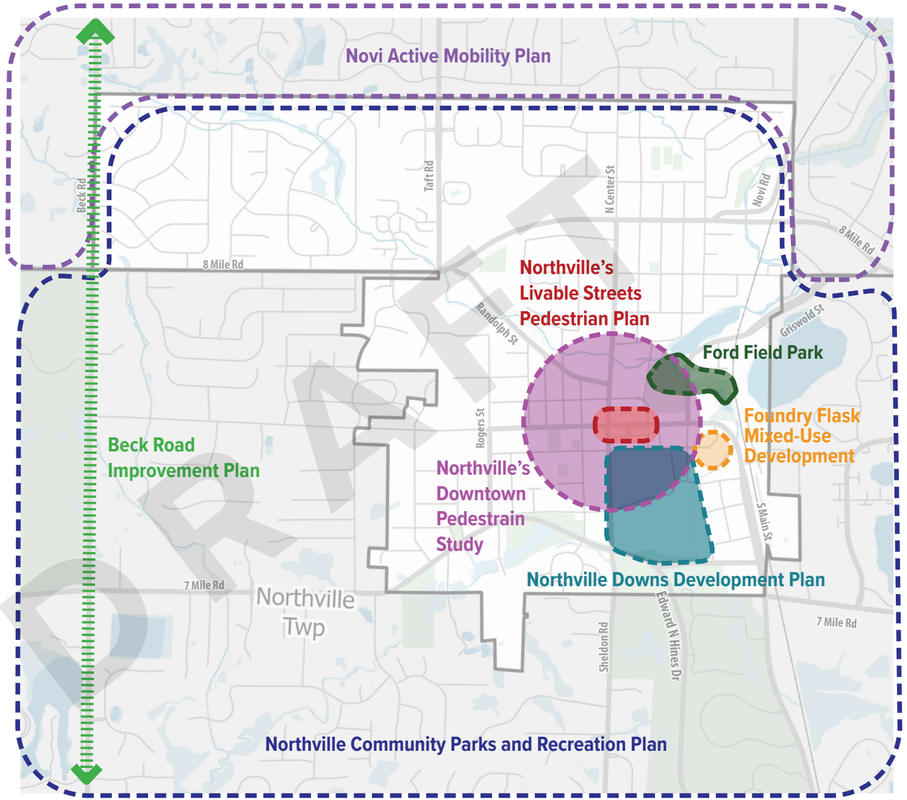
River Framework Plan Report

- Establish Northville as a **"hub" for local, regional, and state shared trails** to Northville Twp's Legacy Park, Hines Park, Fish Hatchery Park, Maybury State Park, and Novi's Rotary Park.
- Expand community access and recreation with a network of parks, trails and pathways call "**The Riverwalk**".
- Enable an aesthetically beautiful network of **linked non-motorized pathways** and trails to improve access to the river and connect The City to nearby **regional recreation** areas.
- Provide passive and **low-impact recreational** opportunities for users of all ages and mobilities through context sensitive design to ensure safe and enjoyable access.
- Incorporate outdoor **interpretive signs** and viewing areas for students and lifelong learners.
- Research and pursue **funding opportunities** to finance desired improvements and long-term **maintenance** of "The Riverwalk".
- Create "The Riverwalk" **marketing and branding** campaign.
- Provide **wayfinding tools** to help visitors navigate The Riverwalk and connect to community assets and the historic downtown district.
- Seven Mile (Maybury to Fish Hatchery Park): 10-foot wide path proposed
- Johnson Creek (Fish Hatchery Park to Center): riverwalk proposed
- Seven Mile (Center to Legacy Park): shared Use path on south side of road proposed
- Foundry Flask Mixed-use Development: easement for riverwalk proposed
- DTE Substation: Easement for riverwalk proposed
- Ford Field East: 10-ft wide riverwalk proposed
- Ford Field West: Barrier free gateway
- Mill Pond to Rotary Park: riverwalk proposed, construct a ten-foot asphalt riverwalk and foot bridge along the lower dam mill pond next to the former Ford Valve Plant connecting Ford Field West and the Foundry Flask site.

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Concurrent Planning Efforts

Northville, Michigan is currently undergoing significant planning and development efforts, and collaboration with other planning initiatives is crucial to the success of this plan. All of these planning efforts demonstrate Northville's commitment to maintaining its community's character while also supporting growth and development.



Northville's Livable Streets Pedestrian Plan

- A pedestrian plan for Downtown Northville led by Grissim Metz Andriese Associates in response to street closures on portions of E Main Street and N Center St. This plan addresses the streetscape and placemaking features of the downtown.

Northville Downs Development Plan

- Hunter Pasteur Northville, LLC is proposing to redevelop the Northville Downs race track and surrounding properties into a mixed-use development with single-family homes, town homes, high-end apartments, luxury condominiums, commercial space, and public space in the form of two public parks and pocket parks throughout the site.
- Preliminary Site Plan Approval 2022

Foundry Flask Mixed-Use Development

- 456 E. Cady, LLC (Foundry Flask and Equipment site) requesting a Special Land Use permit, along with Site Plan approval for mixed-use development (residential and commercial) at this location. The special land use permit would allow upper floor residential uses on-premises zoned PR-1, Performance Regulated Industrial District No. 2, and CSO, Cady Street Overly District.
- Includes site plans and traffic study. Phase I of the street closure evaluation includes intersections and Phase II includes traffic calming.
- Working with Planning Commission since 2021.

Ford Field Park Master Plan

- A park master plan led by Wade-Trim
- Project began in Spring of 2023

Northville's Downtown Pedestrain Study

- Includes a traffic study by Fleis & Vanderbrink to evaluate street closures and its impact on surrounding streets, walkability, and new vehicle traffic patterns. Phase I includes intersection evaluation and Phase II includes traffic calming.

Novi Active Mobility Plan

- As an update to the 2011 Non-motorized Master Plan, the Active Mobility Plan will identify community priorities to ensure that safe and convenient routes are available for people who walk and bike.
- This project begin at the end of 2022.

Northville Community Parks and Recreation Plan

- The 2019 Northville Parks and Recreation Plan is currently being updated
- Include parks in both Northville and Northville Twp.
- Project kicked-off concurrent with Non-motorized Plan.

Beck Road Improvements Plan

- The goal of the project is to enhance the Beck Road corridor to support growth in the region
- Wixom and Novi are actively pursuing this project
- Proposed improvements may include adding vehicle lanes, landscaped medians, walking and biking paths, and improved ADA accessibility

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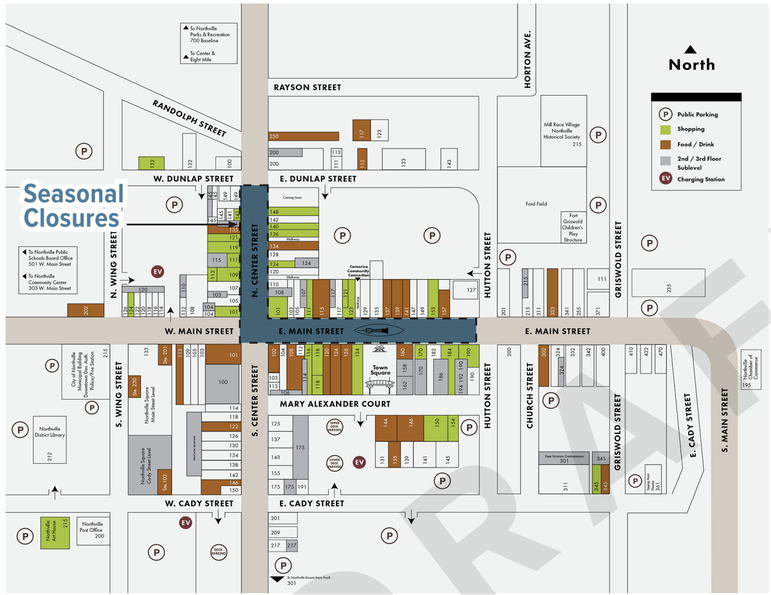


Seasonal Closures

In response to the COVID-19 pandemic in 2020, the City implemented temporary street closures in the downtown area as a measure to mitigate the spread of the virus and promote social distancing. These street closures have become a part of an ongoing strategy to create safer spaces for pedestrians. As part of this initiative, portions of E Main Street, and N Center Street are closed during the summer months, allowing people to enjoy outdoor activities and local businesses to expand their operations onto the sidewalks and parking zone.

Effective coordination between the seasonal street closures and non-motorized transportation options involves developing comprehensive plans that prioritize the needs of pedestrians and bicyclists, creating alternative routes and bike lanes, and providing clear signage and information to guide individuals navigating through the affected areas.

Syncronizing non-motorized transportation with the seasonal street closures will foster a more sustainable and inclusive urban environment that encourages active mobility and enhances the overall well-being of its residents and visitors.



Northville Downtown Development Authority Walking Map

Road closures on N Center St and E Main St begin on May 1st and end on November 1st. During this period, a clear zone will be established down the middle of the streets primarily intended for fire and emergency access but may also be used for bicycles and pedestrian travel, as long as it does not impede emergency access. This measure ensures the safety and convenience of both emergency responders and non-motorized travelers within the designated area.

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3

Non-motorized Infrastructure

- Facility Types & Treatments
- Non-motorized Network
- Corridor Evaluation

In recent years, there has been a growing recognition of the critical role that non-motorized transportation plays in creating sustainable, inclusive, and vibrant communities. As the Northville continues to evolve the need for efficient, safe, and accessible non-motorized infrastructure becomes increasingly apparent. This chapter delves into a comprehensive set of recommendations for non-motorized infrastructure, with a focus on Facility Types & Treatments, Non-Motorized Network Recommendations, and Corridor Evaluations.

The Facility Types and Treatments explore a diverse array of different facility and innovative treatments, including bike lanes, intersection enhancements, and crosswalk treatments.

The Non-motorized Network focuses on the planning and development of infrastructure recommendations for a comprehensive network.

The Corridor Evaluation section introduces fifteen roadway corridors that stage for integrating recommendations into future capital improvement.

Together, the Non-Motorized Infrastructure Recommendations presents a roadmap for urban planners, policymakers, and transportation professionals to develop sustainable and people-centric transportation systems.

Note: Supplemental to this document, the large **Near-term Network Map** offers a visual representation of all the proposed near-term routes.

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Facility Types & Treatments

Efficient and safe non-motorized networks include a variety of facilities designed to accommodate individuals of all ages and abilities. From sidewalk and trails, acting as the bedrock of a low-stress network, to the thoughtful integration of non-motorized facilities at intersections and along busy corridors, each element plays a crucial role in promoting active transportation. Providing safe and comfortable facilities while making seamless transitions between them is the cornerstone of a non-motorized network's success.

Intersections

Minimize potential for conflicts with turning vehicles. Carefully thought out transitions between different types of facilities is critical.

Examples: Green Paint at Conflict Zones, Bicycle Signals



Greenways

The foundation of a low stress network that works for all ages and abilities. Bicycles and pedestrians are separated in high use areas.

Examples: Paved trails, shared use paths natural surface and fines trails



Residential Streets

Some streets may be designated as neighborhood greenways, combining traffic calming with bike routes and sidewalks.

Examples: Signed bike routes, shared lane markings, marked crosswalks



Moderate Volume/Speed Roadways

Pedestrians cross one lane at a time. Marking conflict areas and providing a buffer between vehicles and bikes.

Examples: Buffered bike lanes, rectangular rapid flash beacons, crossing islands



Busy Roadways

Physical barriers, even minimal ones provide a sense of protection. A bike trail adjacent to a walkway can provide greater separation from street traffic.

Example: Separated bike lanes, Pedestrian Hybrid Beacons



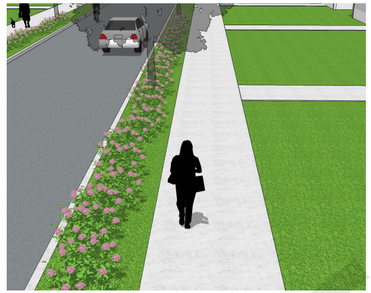


Numerous design guidelines are readily available, offering comprehensive details on implementing new facilities and incorporating best practices in non-motorized network development.

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Facilities for Non-motorized Transportation

There are a number of terms and types of multi-modal transportation facilities discussed in this Plan. A few are highlighted here. Several of these facilities can transition over time from relatively inexpensive and easy changes that are made with paint in the near-term, to more expensive and complex changes that could be accomplished in concert with a more significant infrastructure project such as when a road is being completely rebuilt. When these improvements are done in coordination with one another, a variety of corridor types can be created that offer multi-modal options and improved safety for all users.



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 zoen 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 side path.

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.

- In general, sidewalks should be installed by developers when constructing or reconstructing buildings or homes and by local city, county or state agencies during a roadway improvement project. Sidewalks should be a minimum of five feet wide. Six feet is preferred along collector roadways and eight feet is preferred along arterial roadways.



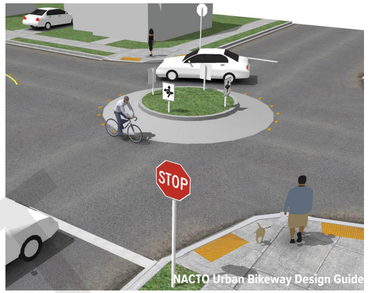
Unpaved Trails & Foot Paths

Unpaved trails have a natural or a crushed fines surface and are usually more recreational in nature than a paved pathway. They can be designed for specific activities like hiking or mountain biking.



Signed Bike Routes

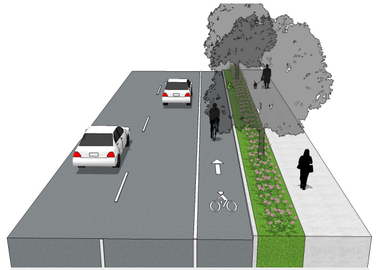
Local roads that provide low-stress connections to neighborhood destinations for people who walk and bike. These routes utilize clear and easily recognizable signage to direct cyclists onto roads that are considered safer and more accommodating for bike travel. Signed bike routes typically do not have dedicated cycling infrastructure but speeds and volumes are low enough for bicyclists and motorists to safely share the road. Crosswalk improvements may be needed where these routes cross major roadways.



Bicycle Boulevards

A signed bike route that prioritizes bicycle travel by providing a range of amenities and design elements that make cycling safer, more comfortable, and efficient. Traffic calming features such as traffic diverters and traffic circles are incorporated to reduce traffic speeds and volumes. Stormwater management facilities, (like rain gardens) may also be incorporate to contribute to a sustainable design solution.

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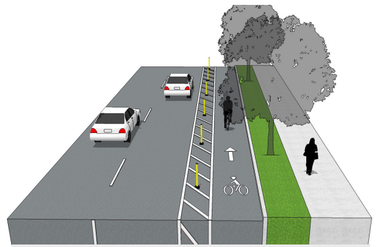


Minimal

Basic Bike Lanes

Used on lower speed and volume roads where space is limited. An exclusive space for bicyclists located adjacent to vehicular travel lanes. They assist in facilitating predictable behavior and movements between bicyclists and motorists. Key cost variables include the number of intersections and changes to existing lane configuration.

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

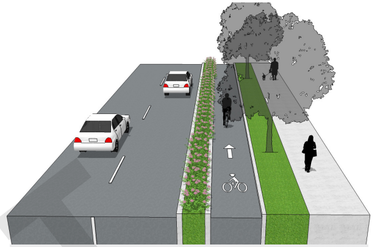


Enhanced

Buffered Bike Lanes

Often implemented with a road re-striping or resurfacing project. Basic bike lane paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Provides greater distance between motor vehicles and bicyclists and appeals to a wider cross-section of bicycle users.

Separation may be enhanced with the addition of delineator posts. These may be placed every 30' - 40' along the entire distance or used more sparingly at intersections. Key cost variable includes the spacing of the delineation posts.



Optimal

Separated Bike Lanes

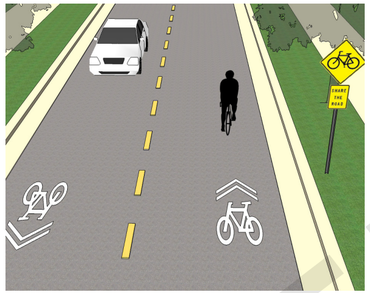
Typically implemented as part of a road reconstruction project but can also be accomplished through the temporary use of planters, movable curbs or barriers. The lane can be at the street level, sidewalk level or somewhere in-between. May be combined with a parking lane or other barrier between the separated bike lane and the motor vehicle travel lane. Dedicates and protects space for bicyclists in order to improve perceived comfort and safety. Intersections must be carefully designed to minimize conflicts with motorized vehicles due to reduced visibility of the lanes. Key cost variable includes curb construction and drainage.

Bike Lanes, also known as Micromobility Lanes, are portions of the road that have been designated through striping, signage, and pavement markings for the use of bicyclists, e-bikes, scooters, etc. Many times the lanes can be added to existing roads through lane narrowing or reducing number of vehicular travel lanes without effecting the existing curb. They typically run in the same direction as vehicular traffic. Described here are basic bike/micromobility lanes, buffered bike/micromobility lanes and separated bike/micromobility lanes.



Traffic Diverters

Traffic diverters are traffic management devices strategically placed on roadways to limit through traffic for motor vehicles while still enabling local access and passage for bicycles and pedestrians. They are designed to prioritize non-motorized modes of transportation and create safer, more bike-friendly and pedestrian-friendly streets. Traffic diverters come in various forms, such as concrete barriers, bollards, planters, or temporary installations like traffic cones. Traffic Diverters may limit all motor vehicle traffic, limit traffic to one-way, or allow two-way traffic via a one lane passage.



Shared Lane Markings

The shared lane marking is a pavement marking used to indicated to motorists that bicycles belong in a roadway to direct bicyclists to a safest position in the roadway (e.g. outside of the door swing of a parked car). It is not a facility type and should not be considered a substitute for bike lanes, cycle tracks, or other separation treatments where these types of facilities are otherwise warranted or space permits. Shared Lane Markings have been shown to have little effect on behaviors of roadway users.

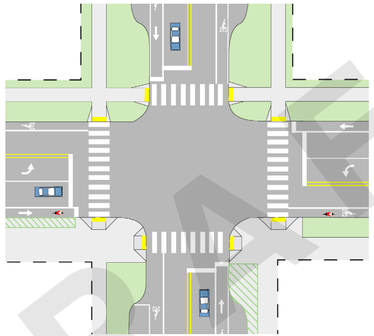
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Road Crossing Treatments to Enhance Safety and Accessibility

While safely moving various modes through and along corridors is important, getting vulnerable modes, including pedestrians and bicyclists, safely across corridors is essential. The examples here illustrate various ways to get people across corridors. Specific design treatments vary based on distance, speeds, volumes, etc.

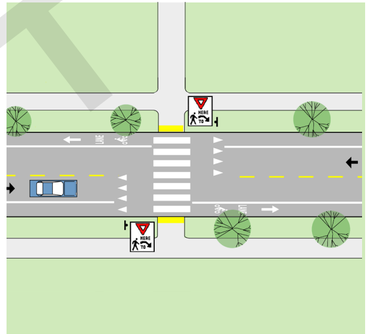
These treatments can be combined with each other and/or with corridor upgrades. For example, a raised crosswalk can be combined with a pedestrian crossing island and/or a rectangular rapid flash beacon. The associated cost would generally be the sum of the parts. However, some savings would be realized in the overlap in design, construction, and other “soft” costs.

Road crossings are pivotal points where pedestrians interact with vehicular traffic, and their design significantly impacts the overall pedestrian experience. One fundamental distinction in road crossings lies between mid-block crosswalks and crosswalks at intersections. While mid-block crosswalks focus on providing efficient and direct access, crosswalks at intersections demand careful coordination between pedestrian and vehicular movements. Their treatment and design considerations differ, as each poses unique challenges and prospects for enhancing pedestrian safety and accessibility.



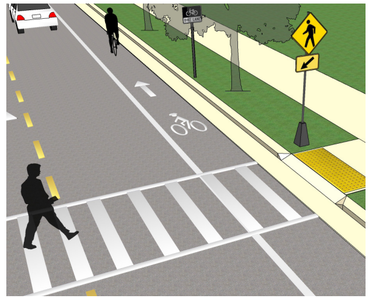
Crosswalks at Intersections

Crosswalks at intersections are integrated into the junctions of roads, enabling pedestrians to traverse roadways while interacting with turning and oncoming vehicles. By employing strategies such as leading pedestrian intervals, advanced stop lines, and clear signage, crosswalks at intersections can create harmonious interactions between pedestrians and vehicles.



Mid-block Crosswalks

Strategically positioned between intersections, these road crossings offer pedestrians more convenient access to destinations and shorten walking distances. To enhance safety various design elements are employed, such as marked crosswalks, pedestrian-activated signals, and traffic calming measures. Crossings within roundabouts are often managed similarly to mid-block crossings due to the consistent flow of traffic.



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.

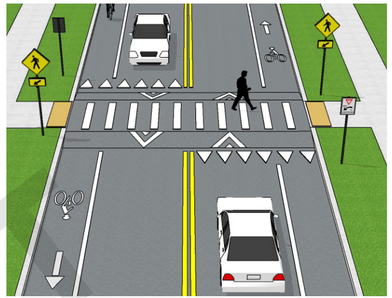
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Crossing Islands

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.

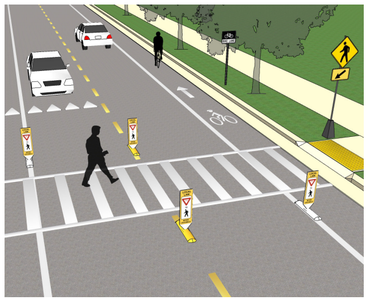
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Raised Crosswalk

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.

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Gateway Treatment

The gateway treatment consists of multiple R1-6 signs installed at roadway edges and between travel lanes. R1-6 signs have yellow-green reflective material and read “Yield To (or Stop For) Pedestrians Within Crosswalk.” Signs can be installed either on the curb, crossing island, or gutter pan, and on the roadway center line or lane markings. On multilane roads, flexible delineators with reflective markings may be installed on the lane markings. The effect is to make R1-6 yield signs more visible to motorists and to visually narrow the lane with the signage.



Traffic Calming

Neighborhood traffic circles lower speeds at minor intersection crossings and are ideal treatments for uncontrolled intersections. They have been shown to increase safety at intersections by reducing traffic speeds and requiring motorists to move with caution through conflict areas.

Medians create a pinch point for traffic in the center of the roadway and can reduce pedestrian crossing distances at intersections.

Curb extensions, also known as bump-outs, extend the sidewalk into the roadway and increase pedestrian safety by reducing crossing distances, enhancing pedestrian viability, and encouraging cautious driver behavior.

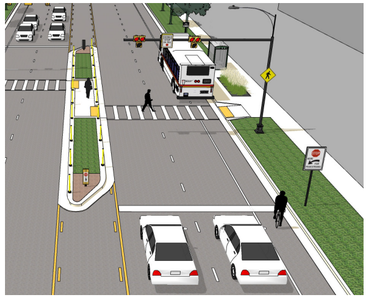


Rectangular Rapid Flash Beacons

A high-visibility strobe lights placed below a crosswalk are activated by pedestrians to alert motorists that a pedestrian is about to or is in the process of crossing the roadway. These are typcially used at mid-block crossing locations and are most effective on roads with speeds 35 mph or less. It is often used in conjunction with crossing islands on roads with more than two lanes.

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

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Pedestrian Hybrid Beacons

a device that brings motor vehicles to a complete stop to help pedestrians safely cross busy and higher speed roadways mid-block. Motorized traffic is permitted to proceed through the intersection after stopping if a pedestrian or bicycle has cleared the crosswalk when the beacon enters a flashing red phase.

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



Signalized Intersection Enhancement

No Right Turn on Red is a traffic regulation that prohibits vehicles from making right turns on red signals at specific intersections. This enhances pedestrian and bicyclist safety by minimizing conflicts with turning vehicles and improving intersection safety.

Leading Pedestrian Signals give pedestrians a head start at intersections before vehicles can turn, enhancing safety by reducing conflicts between pedestrians and turning vehicles, particularly at intersections with high turning volumes. This is a FHWA Proven Safety Countermeasures

Protected Left Turn Phase is a signal feature that allows left-turning vehicles, including bicycles, to safely make turns without conflicting with oncoming traffic, thus eliminating conflicts between left-turning vehicles and pedestrians in the crosswalk.



Bicycle Conflict Zones

Bike Boxes are painted areas at intersections where cyclists can safely stop in front of vehicles during red signals. They enhance safety by reducing collisions with turning vehicles and giving cyclists a head start when signals turn green.

Colored Bike Lanes highlight potential conflict zones with vehicles green pavement markings. They draw attention to areas where interactions between bikes and vehicles are common, such as pocket bike lanes, bus stops, and traffic merging points. These visual cues increase awareness and safety for both bicyclists and motorists.

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Non-motorized Network

For non-motorized transportation to truly thrive, it is essential to establish a cohesive network that seamlessly integrates with existing transportation systems. This section focuses on the planning and development of a comprehensive non-motorized network, where every element works in synergy to connect key destinations, neighborhoods, and activity centers.

The non-motorized recommendations are organized into 4 sections:

- Near-Term Network
- Riverwalk Vision
- Regional Connections
- Downtown Integration

The formulation of these recommendations was the result of comprehensive data analysis and community input gathered prior to plan adoption.

The division of recommendations into these four key areas allows the city to address both immediate and long-term needs, fostering a non-motorized plan that caters to the diverse transportation demands of the city.

Near-Term Network — Projects the community should plan on implementing over the next decade

Riverwalk Vision — A conceptual vision of what the community aspires to achieve

Regional Connections — Key corridors and routes that play a pivotal role in connecting Northville to the regional framework

Downtown Integration — Integrating non-motorized improvements with planned developments in the Downtown

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Near-term Network

The Near-Term Network 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.

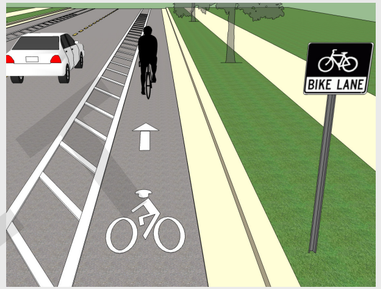
These Near-Term recommendations should be reviewed and consulted whenever there is road work (repaving, restriping or reconstruction) work being planned within the City. Many of these recommendations could be implemented with only striping/paint modifications to the existing road cross-section.

This is the focus for the foreseeable future.

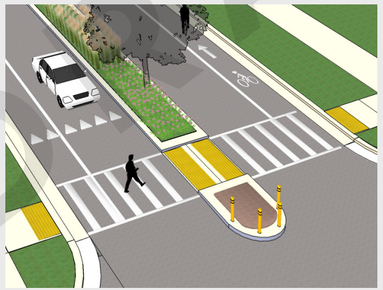
The Near-Term Network is organized into three sections:



Pedestrian Routes



Bikeways



Crosswalk Treatments & Intersection Improvements

Refer to the ***Specific Corridor Recommendations*** section for details regarding arterial and collector roads.

Supplemental to this document, the large ***Near-term Network Map*** offers a visual representation of all the proposed routes.

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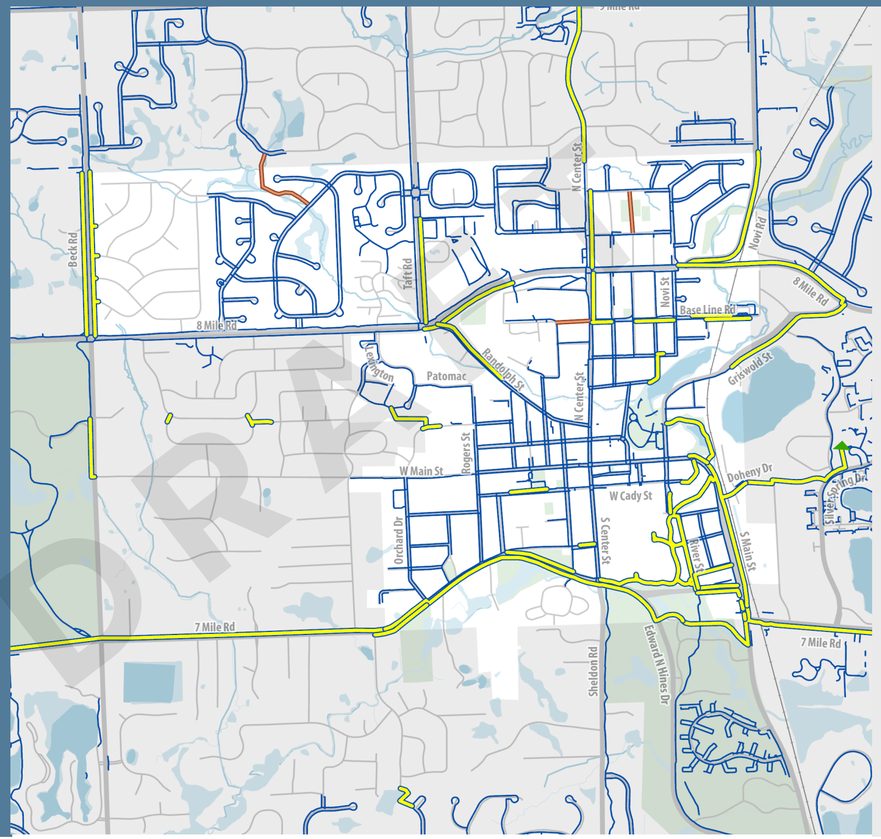
Near-Term Network

Pedestrian Routes

Walking is an essential mode of transportation for many, whether it's strolling along scenic streets, running errands, or simply enjoying a leisurely evening walk. While Northville already boasts an impressive network of sidewalks, there are areas where the pedestrian infrastructure could be strengthened to ensure safety and convenience of everyone.

Sidewalks should be viewed not solely for the benefit of those immediately adjacent to the walkway. They benefit the community as a whole and should be treated as essential public infrastructure just as roadways are. Thus, decisions to construct or not construct sidewalks should be viewed in this context.

The following map identifies key locations where gaps exist and should be addressed in the near-term. These locations are highlighted in yellow as Prioirty Gaps on the map.



Map Legend



Sidewalks

Existing

Priority Gaps

Note: Some sidewalk gaps may also be addressed by Shared-Use Paths.



Foot Paths

Not all walkways need to be paved. A natural surfaced path may be more appropriate based on environmental considerations, the desired experience, easement restrictions, or construction feasibility. .

Pedestrian Scaled Lighting

Lighting extends the number of hours most people would feel comfortable walking, especially during the shorter fall and winter days. Lighting also improves the ability to see potential hazards and enhance the sense of security for trail users. While the installation of lighting is desirable, it can be a significant investment. Addiitonally, solar-powered lights should be considered in areas with ample direct sunlight.



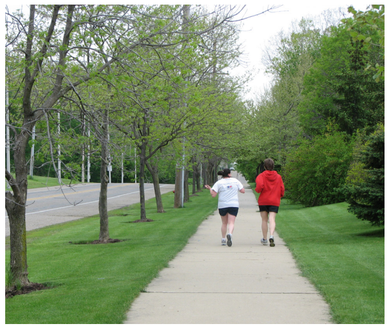
Resting Areas with Benches

Benches and tables provide places for users to rest along the trail. Often times these are placed in shaded areas to protect users from the sun. Trash/recycling receptacles should be placed nearby to encourage users to keep the trail clean and discourage litter.



Attractive Landscapes

Trees planted between the sidewalk and road increase comfort by providing shade and a vertical buffer from the roadway. Furthermore, consider integrating rain gardens alongside the sidewalks to provide a sustainable solution to manage stormwater runoff.



Refer to the ***Corridor Evaluations*** Sections for specific recommendations on arterial and collector roads.

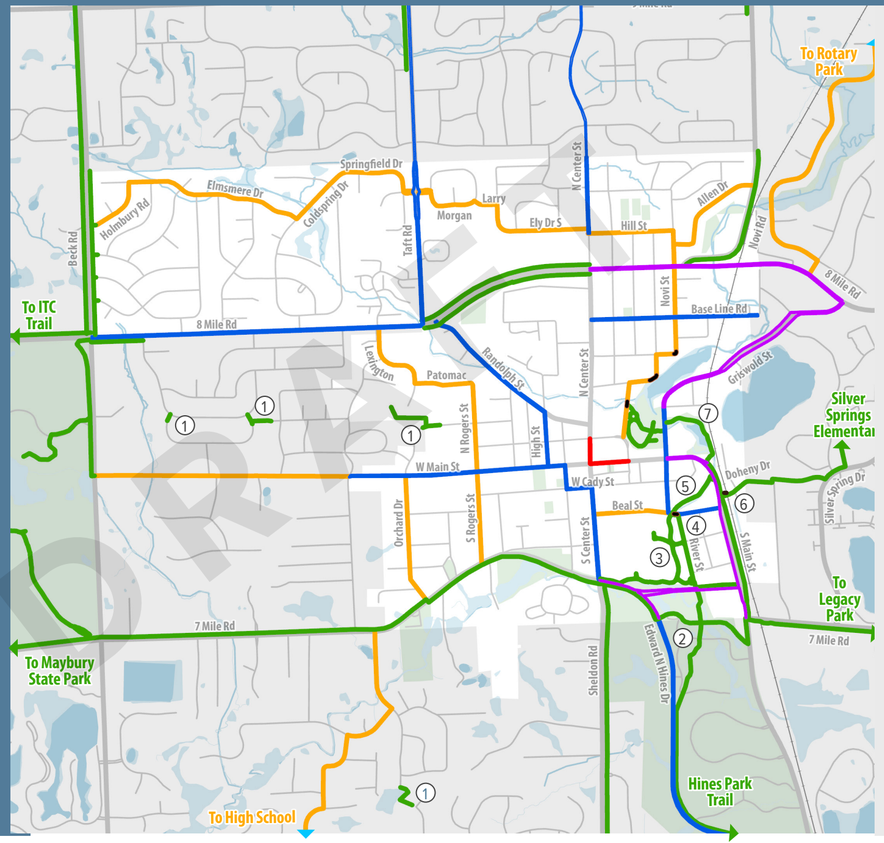
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Near-Term Network

Bikeways

This map identifies key areas where on-road bikeways and shared use pathways can significantly enhance connectivity and accessibility. The primary focus is on bridging gaps and creating a seamless network. The proposed routes link neighborhoods, parks, commercial areas and other significant destinations.

Many of these recommendations focus on near-term improvements that can be built with-in the existing rights-of-way and curb structure of the road.



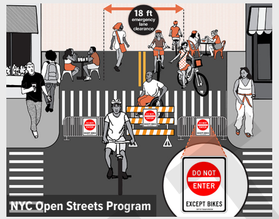
Map Legend



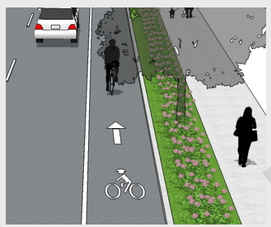
Signed Bike Route



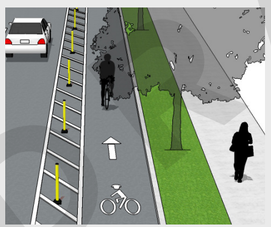
Shared Use Path



Seasonal Open Streets Concept



Basic Bike Lane



Buffered/Separated Bike Lane



Traffic Diverters

Diverters may be full closures for motorized traffic, permit only one-way, or reduce road to one-lane for both directions.

Refer to the ***Corridor Evaluations*** Sections for specific recommendations on arterial and collector roads.

Map Notes:

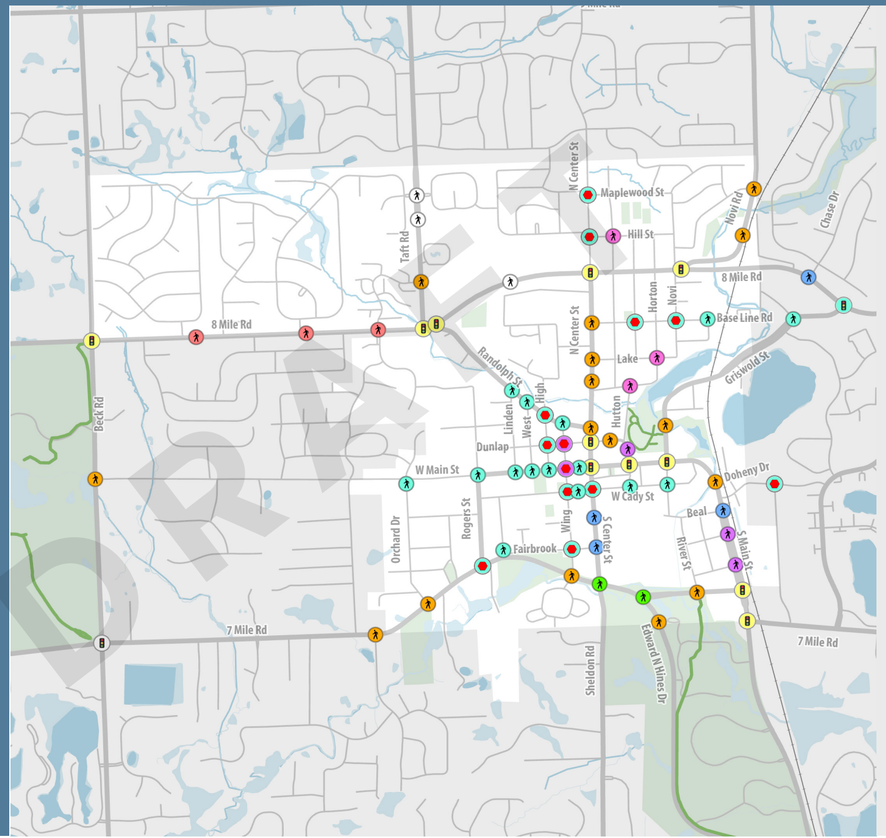
1. Add pathway connection through existing public rights-of-ways
2. New pathway through Hines Park
3. Pathways planned as part of Downs Development
4. Traffic Diverter on Beal Street Bridge to eliminate cut-through traffic in Beal Town.
5. Opportunity for pathway with easement from the Foundry Flask Development
6. In the near-term, explore converting Doheny Drive to one way to accommodate a pathway on the north side of the road under the bridge
7. Pathway connection planned as part of Ford Field Park Plan

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Near-Term Network

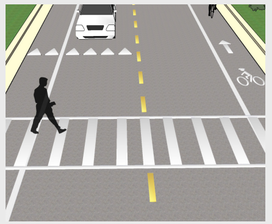
Crosswalk Treatments & Intersection Improvements

This map showcases proposed locations for crosswalk treatments and intersection improvements. It is a direct response to concerns about pedestrian safety at various crossings and intersections within the city. By identifying key locations through analysis and community feedback, this map outlines the proposed treatments that will mitigate potential hazards and enhance the overall pedestrian experience.

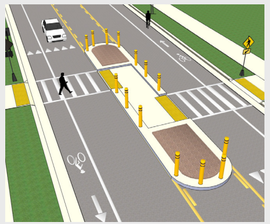


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Map Legend



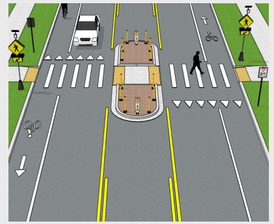
High Visibility Crosswalk



Crossing Island



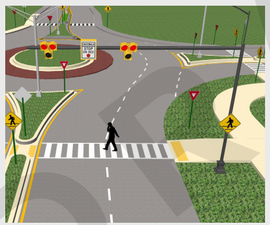
Rectangular Rapid Flash Beacon



Rectangular Rapid Flash Beacon with Island



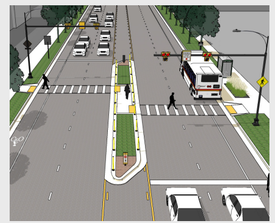
Signalized Intersection



Roundabout with Pedestrian Hybrid Beacon



Traffic Calming Circle



Pedestrian Hybrid Beacon with Island

Pedestrian Crossing

Signalized Intersection

Stop-controlled Intersection

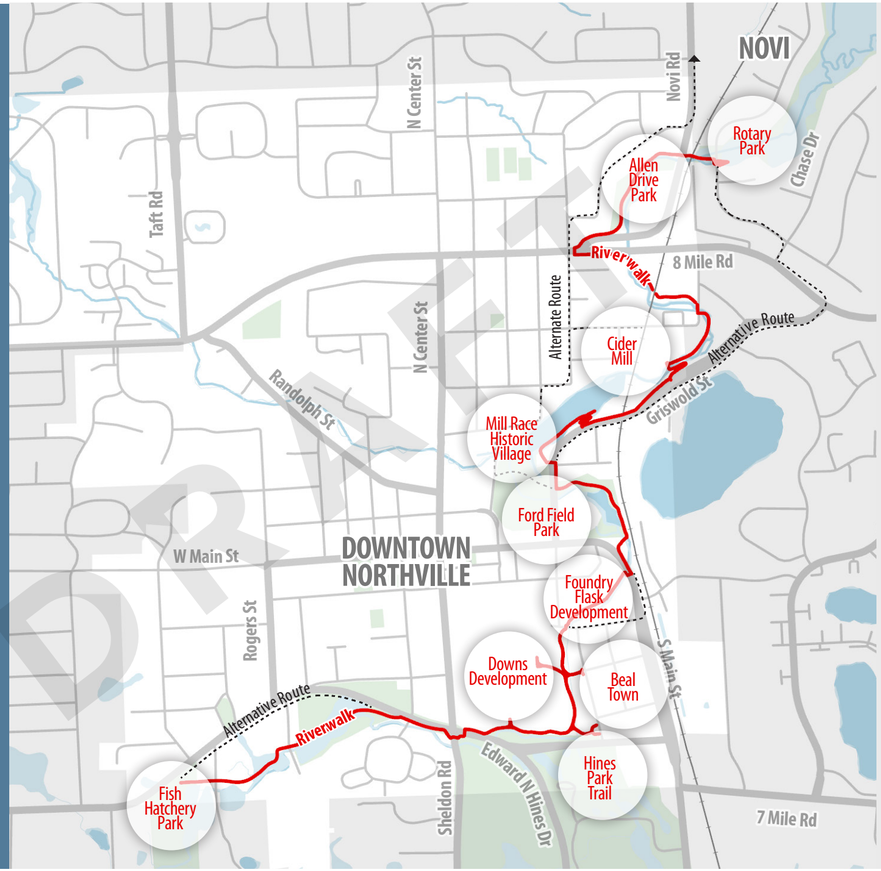
Refer to the ***Corridor Evaluations*** Sections for specific recommendations on arterial and collector roads.

Riverwalk Vision

The Riverwalk exemplifies Northville's aspirations for the future. It connects parks and destinations across the City while tracing segments of the Rouge River.

Embracing this long-term vision will require dedication, commitment, and adaptability from all stakeholders. It is a challenging route constrained by available rights-of-way, cost-intensive infrastructure, environmental and political constraints and coordination with external organizations.

While the City of Northville Middle Rouge River Restoration Task Force has made significant strides in developing the framework, it is essential to recognize that further further planning, engineering, deliberation, and cooperation will be required to turn this vision into a reality.



Next Steps

A riverwalk has the potential to be a transformative asset for the City of Northville, becoming a defining feature that enriches the lives of its residents and visitors alike. However, embarking on this ambitious mission presents a set of challenges. In this section, we outline the key obstacles to implementing the Riverwalk Vision, highlighting critical factors that require careful consideration and strategic planning to make this vision a reality.

Environmental Impact and Conservation

- The construction of a pathway along a river and through wetland areas requires consideration of potential environmental impacts, such as habitat disruption, soil erosion, and disturbance to sensitive plant and animal species. Wetland protection mandates adherence to regulations ensuring ecosystem preservation.

Design and Accessibility

- Designing universally accessible pathways, especially in uneven terrain, poses challenges, particularly with steep slopes. Trail accessibility must adhere to ADA guidelines, crucial during design and construction, especially for federally funded facilities.

Flooding and Trail Maintenance

- Pathways located near rivers and wetlands are susceptible to flooding and fluctuating water levels. Ensuring resilience against these conditions is pivotal for long-term sustainability. Maintenance and environmental preservation require ongoing dedication and resources.

Infrastructure and Engineering

- Creating pathways in ecologically sensitive zones often demands specialized materials and engineering for stable foundations and erosion control. Securing funds and necessary permits from environmental agencies and local governments is crucial for construction.

Land Acquisition and Rights-of Way

- Securing the necessary land and rights-of-way to build the pathway can be an expensive and time-consuming process, especially when dealing with private properties and obtaining easements.

Feasibility

- Staying adaptable during the project's life cycle is vital. Route feasibility may change due to complexities. Exploring alternative routes, such as utilizing existing rights-of-way, could be essential for progress toward the Riverwalk Vision. Opportunities for alternative routes utilizing existing rights-of-way are noted on the map.

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One of the more challenging segments will be constructing the Riverwalk north of the Historic Village. This segment faces numerous obstacles beyond obtaining easements that are likely to prove exceptionally challenging. The original concept of a paved trail paralleling the river is in all likelihood not feasible.

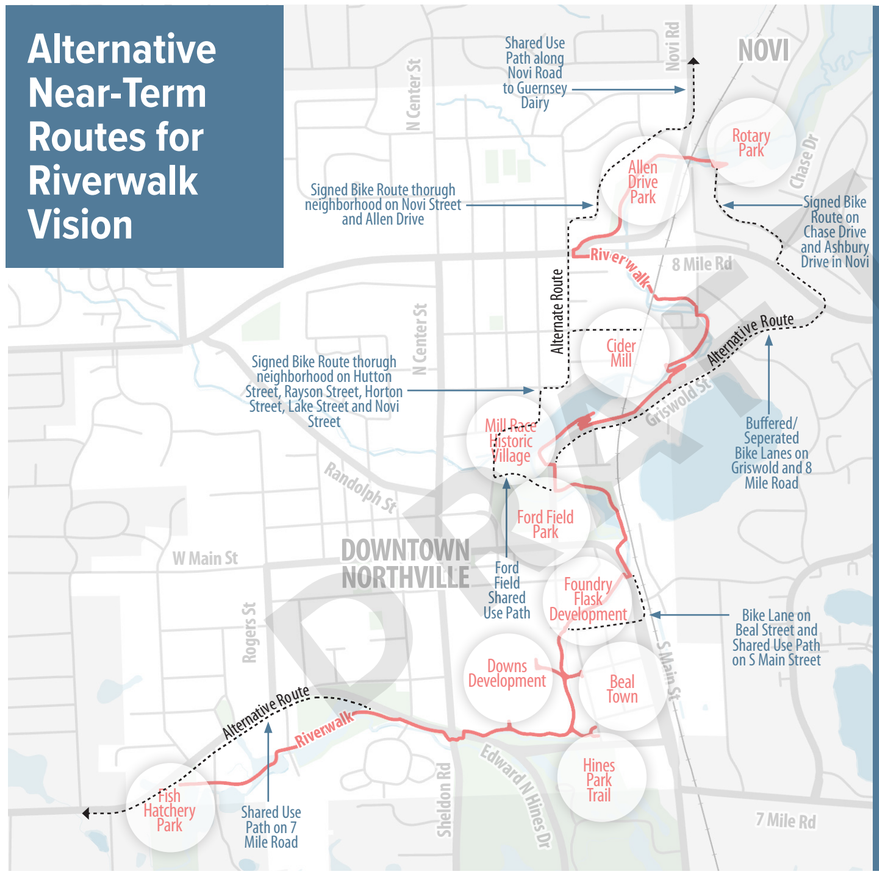
First, the river culverts are not of sufficient size to accommodate a pathway and the necessary water flow. Second, crossing over the railroad requires extensive ramps. Third, getting under the railroad has significant permitting challenges. Lastly, the steep banks in areas are prone to erosion that could be exacerbated by trail construction. T

For this reason, the plan focuses on near-term attractive links that strive to meet the intent of the connection. Where possible, foot paths and overlooks may be used to provide access to the waterfront.



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Alternative Near-Term Routes for Riverwalk Vision



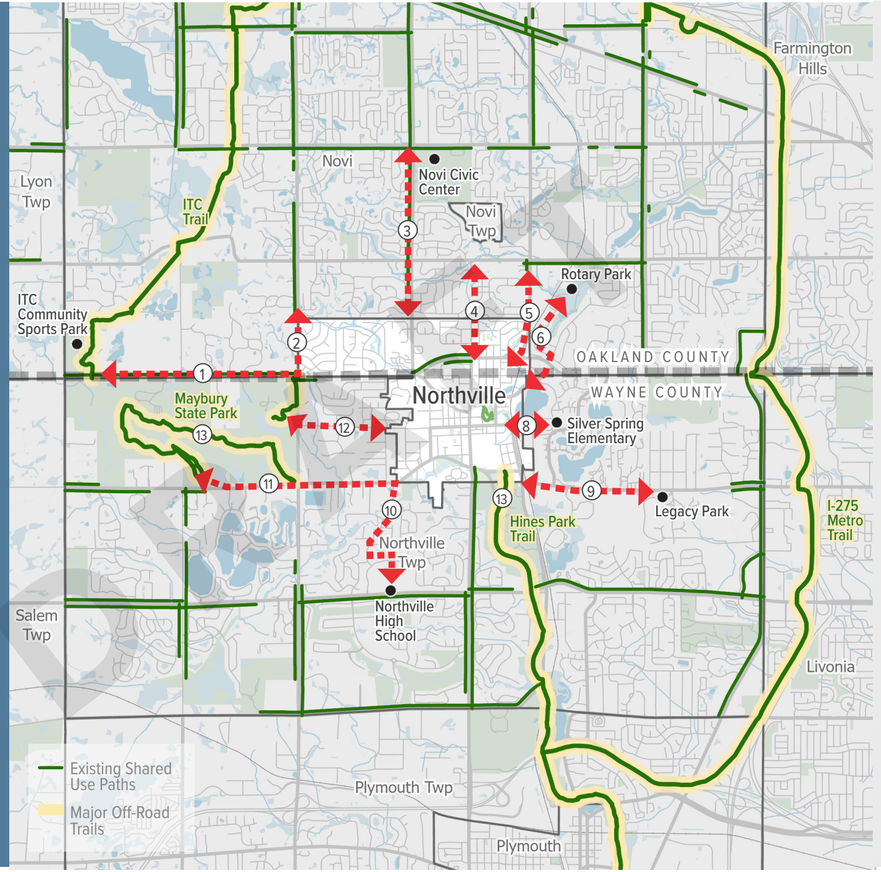
Given that portions of the Riverwalk Vision will take a number of years to be implemented, alternative near-term routes have been identified. These routes also serve a purpose in addressing everyday non-motorized mobility.

Designed with a focus on providing a low-stress and family-friendly experience, these alternative routes could be guided by wayfinding to connect completed Riverwalk segments. Enhancements such as periodic landscaped rest areas, informative signage, river access points, pedestrian-scaled lighting, and more, will make these routes feel like a genuine extension of the Riverwalk, rather than a temporary solution.

Regional Connections

The Non-motorized Plan is an integral part of the broader regional network. This map identifies key corridors and routes that play pivotal roles in connecting Northville to the regional framework.

The plan looks beyond the confines of the city to create a network that links to adjacent cities, parks and destinations. Whether it's establishing shared use paths that stretch across borders or creating designated bikeways that traverse neighboring communities, this plan is committed to improving mobility and accessibility for all residents and visitors.



Coordination Beyond City Limits

The top destinations outside the city for bicyclists as identified in the survey are: Maybury State Park, Hines Park & Bikeway, and the ITC Trail. Beyond the survey, public engagement also showed a strong desire to get to Northville High School and Legacy Park in Northville Township. The Mobility Network Team has called for links to Silver Spring Elementary School in Northville Township, as well as Rotary Park in Novi.

The proposed non-motorized network will provide links to the edge of the city. Many of the extensions of these routes are already in the planning stage with the surrounding communities. Routes that need special attention include the proposed bicycle route to Northville High School, proposed sidewalk connection to Amerman Elementary and the proposed Shared-Use Path to Silver Spring Elementary School. These would be good projects to consider as part of a Safe Routes 2 School effort.

City of Novi

1. Provide connection on 8 Mile Road connect ITC Community Sports Park and Maybury State Park
2. Provide connections to Maybury State Park from Beck Road
3. Provide connections to Novi Civic Center along Taft Road
4. Connect neighborhoods in Novi to Amerman Elementary
5. Connect to shopping and dining on Novi Road
6. Provide a connection to Rotary Park from Northville

Wayne County Parks

7. Coordinate on strengthening connections to the Hines Park Trail and HInes Drive parkway

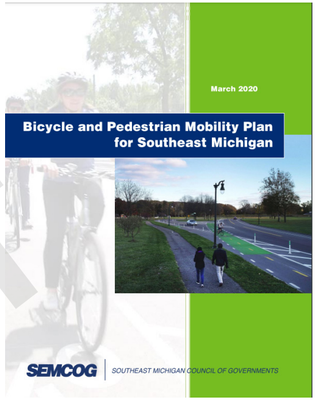
Northville Township

8. Provide a direct connection along Doheny Drive to Silver Spring Elementary
9. Provide a connection to Legacy Park along 7 Mile Road
10. Provide connection to Northville High School from 7 Mile Road at Edenderry St
11. Provide connection to Maybury State Park along 7 Mile Road
12. Provide a connection to Maybury State Park from Main Street

Maybury State Park

13. Work with the State Park System to explore new non-motorized entrances in to park from Beck Road

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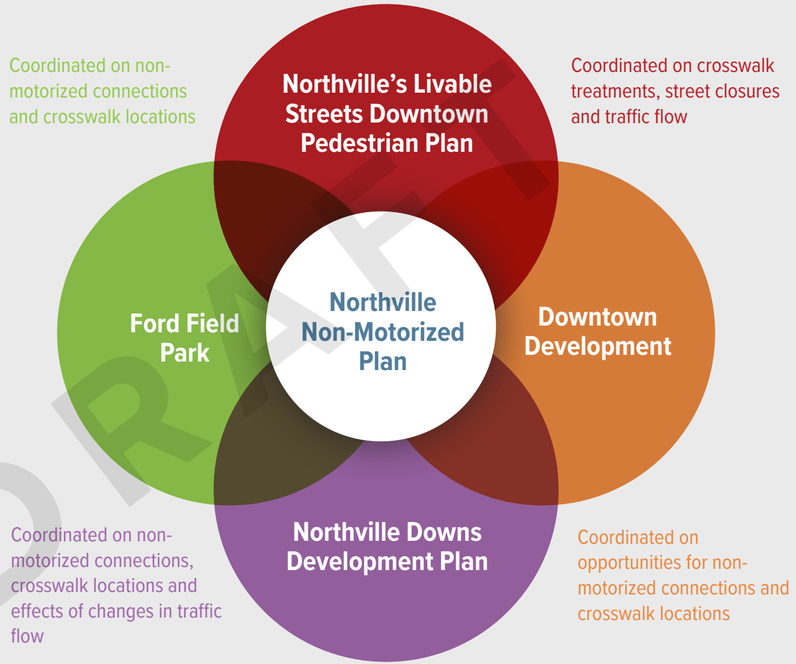


To ensure the integration of the non-motorized plan, regional coordination should be established with Wayne County Roads, Oakland County Road Commission and the Southeast Michigan Council of Governments (SEMCOG). Collaborating with these regional authorities will be instrumental in aligning non-motorized initiatives with upcoming Capital Improvement Projects (CIP) and integrating the plan into the broader regional non-motorized network.

Downtown Integration

The section illustrates how the Non-Motorized Plan's proposals interface with the planned developments and initiatves in the Downtown.

By capitalizing on the potential for shared benefits, a coordinated approach between the Non-Motorized Plan and downtown developments will act as a catalyst for progress.



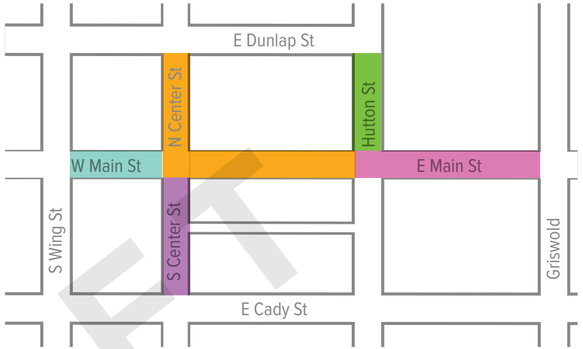
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Addressing Bicycle Network Gaps in the Downtown

While pedestrian linkages to the downtown are solid, the proposed near-term bicycle network does not satisfactorily integrate with the downtown. This is due to the physical constraints of the existing roadway preventing easy near-term solutions. The results are critical one-block gaps in the system connecting to the seasonal street closures. The increased traffic flow from the seasonal street closures on these gaps compounds the issue. There are potential solutions to address this "last block" issue. They include:

- **West Main Street from Wing Street to Center Street** - on the north side of the street, eliminate on-street parking and remove curb extensions to provide a Two-Way Cycle Track.
- **East Main Street from Hutton Street to Griswold Street** - on the north side of the street, eliminate on-street parking and remove curb extensions to provide a Two-Way Cycle Track.
- **Hutton Street from Dunlap Street to Main Street** - on the westside of the street, eliminate on-street parking and remove curb extensions to provide a Two-Way Cycle Track. The traffic signal at Hutton and Main would need to integrate a bicycle specific phase.
- **Center Street from Main Street to Cady Street -** on the east side of the street, eliminate on-street parking, remove the curb extensions, and narrow the sidewalk to provide a separated Two-Way Cycle Track.

Of these four potential solutions, Hutton Street and East Main Street would provide the greatest safety improvements as well as be the least disruptive. In the near-term, Shared-Lane Markings may be used but they will not provide any safety improvements. Many cyclists will be likely to use the sidewalks in these blocks.



Main Street Seasonal Closure with Open Streets Concept

To effectively integrate the non-motorized plan with the seasonal closure of Main Street and Center Street, the city should embrace an open street concept that places emphasis on accommodating bicycles and pedestrians along the corridor. During seasonal closures the city will maintain full driving lanes as a clear zone for emergency vehicles and bicycles will be allowed in this zone. This zone can be demarcated using effective signage, pavement markings, and traffic barriers, thereby creating distinct and secure spaces for bicyclists and pedestrians, making the area safe and inviting for their use.

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Corridor Evaluation

Fifteen specific road corridors were evaluated to better understand the issues and opportunities associated with them. Evaluating these corridors is significant for identifying the specific needs of each area and determining the best course of action to ensure the safety and accessibility of pedestrian and bicycle infrastructure in Northville. By integrating these improvements with roadway and utility construction projects, Northville can improve its transportation system while minimizing costs and disruptions to the community.

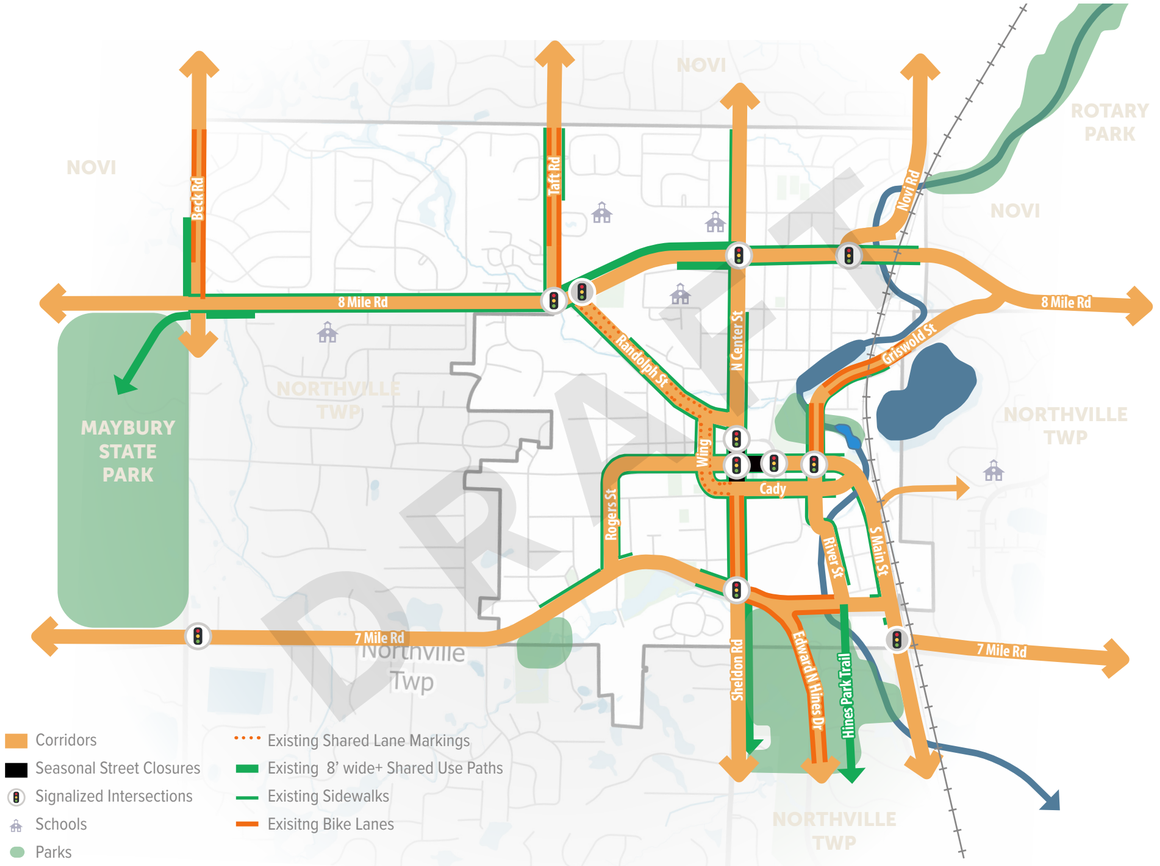
The following information was prepared for each corridor and can be found in the *Specific Corridor Recommendation* section at the end of this document:

- **Existing Conditions Map**
  Displays existing facilities, crash locations, and includes observations
- **2013 Non-motorized Plan**
  Indicates items from the 2013 plan that have not yet been addressed
- **Existing Conditions Summary**
  Documents conditions for sidewalks, crosswalks, shared use pathways, in-road bicycle facilities, and roadways.
- **Community Input**
  Summarizes input to-date on issues and ideas that have been expressed for the corridor
- **Additional Observations**
  Summarizes some of the initial observations that may lead to specific recommendations
- **Recommendations**
  Outlines proposed pedestrian treatments, bicycle treatments, mid-block crossings locations and signalized intersection improvements

Specific Corridor Recommendations:

- 8 Mile Road (Oakland County)
- 8 Mile Road (Wayne County)
- 7 Mile Road (West of Center St)
- 7 Mile Road (East of Center St)
- Randolph Street
- Center Street (North of Main)
- Center Street/Sheldon Road (South of Main)
- Main Street (East of Center)
- Main St / Rogers St (West of Center)
- Griswold Street
- River Street
- Wing St / Cady St
- Beck Road
- Taft Road
- Novi Road

See the Specific Corridor Recommendations Sections for Details



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4

Program, Policy, Metric

- Assessing Progress on Policies, Programs and Metrics
- Recommended Programs
- Recommended Policies
- Recommended Metrics

As cities strive to create more livable and resilient environments, it is increasingly evident that promoting non-motorized travel requires a holistic approach encompassing well-designed programs, robust policies, and meaningful metrics. In this chapter, we seeks to equip urban planners, policymakers, and advocates with a toolbox of options to advance non-motorized transportation through programs, policy, and metric recommendations. This is not an exhaustive list, but rather focuses on the policies, programs and metrics that should be addressed in the City of Northville over the next five to ten years.

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Assessing Progress on Policies, Programs, and Metrics

The 2013 Non-motorized Plan did not include a specific section focusing on the policies, programs, and metrics. It did though address many of these issues though the Vision, Goals, and Objectives. The following is a summary of the progress on these items:

Review and Modify Sidewalk and Street Standards

- **Zoning** - sidewalks are required along all street frontages, where possible to be positioned 5' back of the curb with trees every 40' in the buffer, fences must be set 1' back from the sidewalk, and the first floor of buildings oriented towards, and compatible with sidewalks. Outdoor pedestrian plaza and seating is encouraged
- **Sidewalk Construction** - permits are required with the city contributing 1/3 of the cost and the property owner contibuting 2/3
- **Sidewalk Maintenance** - sidewalk reconstruction cost: 100% by the property owner in most circumstances
- **Sidewalk Snow Removal** - to be removed by property owner 24 hours after snow or ice has fallen. Onwer recieves a notice for first offence, if not remedied in 24 hours city takes action and bills property owner
- **Crosswalks** - curb bump outs, crosswalks, pedestrian crossing islands, or other safety barriers are encouraged to enhance pedestrian safety

New Complete Streets Ordinance

Not implemented - the bare bones Complete Streets Resolution passed prior to the 2013 plan is still in place

Incorporate Bike Parking Requirements into Zoning

Not implemented - zoning indicates that bike racks shall be considered at appropriate locations

Develop a Uniform Signage and Wayfinding System

Not implemented

Identify and Designate Pedestrian and Bicycle Routes and Create a Map

Link Route between Hines Park Trail and Maybury State Park implemented. No other routes implemented. Map not available.

Develop a Safety and Education Plan

Not implemented although SEMCOG has developed a safety and education plan that members may use.

Coordinate with Parks on a Bicycle Educations Plan

Not implemented at this time.

Support and Encourage Participation in Safe Routes to Schools Program

Unsure of status at this time.

Work with Police to Raise Awareness of Plan and Encourage Enforcement of Laws

Unsure of status at this time.

Make Bicycle and Walking Resources Available on City's Website

Not implemented

Apply to the Promoting Active Communities Program

This program has changed since the 2013 plan. It no longer gives community awards but has online resources that communities can use to help plan.

Apply to Become a Bicycle Friendly Community

Not implemented. Substantial progress should be made prior to applying.

Convene a Standing Non-motorized Transportation Advisory Committee

Not implemented, although numerous task forces have undertaken extensive planning efforts and provided input on development projects.

Coordination with Adjacent Communities

Currently coordinating with Novi and Wayne County, have discussed establishing a regional trails group.

Monitor and Evaluate the Effectiveness of Non-motorized Facilities

Not implemented

Consult the Non-motorized Plan with All Transportation Projects

The plan has been consulted by the city for its roadway projects but its recommendations have not been followed for the most part by the Road Commission for Oakland County or the Wayne County Road Commission.

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Recommendations

Programs

Changing firmly established transportation patterns does not happen overnight. Programs introduce people to new facilities and new ways to travel.

With all of the programs, one overarching theme should prevail - seeing all users of the roadway as fellow human beings deserving respect and consideration.

No single program has the ability to change the culture. But all of the programs working in concert can create a drumbeat of change.



Grand Opening Events and Outreach

Use the completion of a new project as an opportunity to introduce the public to the new facilities in a controlled environment of a special event and raise awareness on how to safely use something that they may not be familiar with. Also use temporary banners to help people understand how to interact with new on-street bicycle facilities.

Motorist Education Paired with Enforcement

As new and unfamiliar facilities are constructed, there will be confusion on issues such as who yields to whom. When first constructed, police should use discretion with penalties and provide violators with education materials that provides information on why they were stopped and what the penalty would normally be. After an introductory period, focused enforcement should be employed as needed.



Continue to Use SEMCOG's WalkBikeDrive Safe Program

Southeast Michigan Council of Governments has created a program with tip cards, posters, videos, story templates, and media kits in multiple languages. These ready to use materials can be integrated into the City's education efforts.

Local Web Resources

Create web resources that address pedestrian and bicycle issues and provide a dashboard that track progress on local and regional goals. The website should provide an interactive experience where users can explore existing and proposed facilities, comment on things they would like to see in future plans, and report maintenance issues.



Bike Parking

Establish a program to install additional permanent and seasonal bike parking in commercial districts. Create a bulk rack purchase, technical assistance and cost-sharing program to assist other businesses install bike parking. Require bike parking to be included as part of all new developments.

Flexible Event Parking

To handle parking for large events in a downtown area without sacrificing opportunities for bike lanes where on-street parking would otherwise be considered requires a flexible and multi-faceted approach. Explore options such as utilizing off-site parking and shuttles, implementing temporary parking solutions during events and creating flexible street designs for temporary event closures. Walking and biking should also be encouraged by providing crossing guards and bike parking at the event.



Bicycle Facility Maintenance

As the city establishes more bike lanes and especially buffered/separated bike lanes all-season maintenance becomes paramount. Bike lanes require more frequent street sweeping due to debris being blown in the bike line by motor vehicles. Separated facilities require compact equipment. For snow removal small tractors with narrow brushes will be required.

Safe Routes to School Program

Establish school programs with a focus on Walking School Buses and Bike Trains that promote safe active transportation to schools. Use the school based programs to also reach out to parents to teach key safety issues.



Develop a Uniform Signage and Wayfinding System

In corroboration with the Northville Township, the City of Novi, Farmington Hills, and The City of Farmington, implement a wayfinding system for the area that includes uniform signage, information kiosks, maps, and online resources.

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Recommendations

Policies

Multimodal transportation does not fall under the domain of one person, one department or even one agency. The recommended policies will set the stage for implementation of the proposed physical improvements, programs, and metrics.

The following is not an exhaustive list, but rather focuses on the policies that should be addressed over the next five to ten years.

The most critical policy is the Complete Streets + Vision Zero Ordinance, a first draft of which is included in this section. This ordinance will direct the staff to undertake action on the other policies mentioned in this section.



Multimodal Transportation Board

Establish a new citizen board or commission to review transportation project designs and transportation funding decisions to provide public oversight in the implementation of the Complete Streets and Vision Zero Ordinance, the New Mechanism for Transportation Funding and tracking of metrics.

Best Practice Training

Multimodal transportation planning is a rapidly advancing field with new guidelines and research constantly being introduced. City staff and Multimodal Transportation Board members should be encouraged to attend conferences, join organizations, and attend training sessions to keep up-to-date with best practices.



Speed Management

Implement speed management measures on streets where the 85-percentile speed exceeds the posted speed limit on residential streets, school zones or where the majority of residents and business owners make a request to the City. For road reconstruction projects determine the desired speed and then design the road such that traffic naturally flows at the desired speed.

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Sidewalk and Crosswalk Lighting

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.



Continue Regional Trail Coordination

Northville should actively engage in ongoing partnerships with adjacent communities to create a comprehensive regional trail network. The focus should be on establishing regional connections and a unified wayfinding system to prominent destinations such as the ITC Trail, Maybury State Park, Legacy Park, Hines Park and I-275 Trail. Also continue to improve the existing bike routes to the Hines Park Trail.



Micromobility

Given the increasing diversity of micromobiitiy devices; the capability of some e-bikes to operate across various classes with the flick of a switch, and the difficulty in distinguishing e-bikes from conventional bicycles, it becomes essential to establish regulations based on mass, speed and emissions. This policy would stipulate that all bike lanes and shared use pathways maintain a speed limit of 15 mph and a impose a vehicle weight limit of 100 pounds. Addionally, the policy would mandate that all vehicles adhere to emission-free standards. On shared use paths, it should be mandatory for all micromobility devices to yeild the right of way to pedestrains.

- ***Shared Micromobility in the U.S.: 2019****—a report by the National Association of City Transportation Officials—and other research studies on shared micromobility call for more attention to the need for a connected network of facilities dedicated to serving micromobility.*

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Downtown Intersections

Given that most right-on-red turns in the downtown cannot be completed without blocking the crosswalk to see if there is a gap in oncoming traffic, restricting such turns would help to reduce motor vehicle crashes involving pedestrians in crosswalks. Moreover, this measure would help in keeping crosswalks free of motor vehicles during the pedestrian walk phase. A traffic study evaluating all sight lines should be conducted, and right-on-red turns should be prohibited where deemed appropriate.



Prioritize Bicycle and Pedestrian Safety

Adopt a comprehensive approach that accommodates all modes of transportation rather than focusing solely on a single-mode. Evaluate reallocating space currently dedicated to on-street parking to prioritize bicycle and pedestrian safety.



Non-motorized Funding Mechanism

To address the growing demand for a bicycle and pedestrian-friendly community, the City should establish a sustainable funding mechanism by combining a special millage, bonding, and general fund allocation. The special millage would be a dedicated tax for non-motorized initiatives, while bonding would provide upfront capital for infrastructure development. Additionally, allocating funds from the general fund will ensure ongoing support. Clear objectives, performance metrics, and a dedicated oversight committee will ensure effective implementation and accountability. The following pages outlines funding opportunities.

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Non-motorized Funding Opportunities

To be eligible for non-motorized grants, most projects must align with AASHTO guidelines, ensuring safety and design standards. Wealthier communities, like Northville, are often expected to provide an overmatch 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 livability.

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, inlcuding 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, Milages, 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 may 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.

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Complete Streets + Vision Zero Ordinance

Adopt policy that places human life paramount and establishes that safe, comfortable, convenient, and accessible transportation for all users is a priority for the City. Then establish the necessary inter-departmental coordination, roles and responsibilities, and performance measures to implement the policy.

- ***Complete Streets*** *refers to a transportation design approach that aims to create roadways that are safe and accessible for all users, including pedestrians, cyclists, motorists, and public transit users.*
- ***Vision Zero*** *is a road safety initiative with the ultimate goal of eliminating all traffic-related fatalities and severe injuries. The initiative prioritizes safety over speed and encourages the development of strategies that prevent crashes and protect vulnerable road users.*

Example Resolution

City of Northville Complete Streets Resolution

DRAFT - July 25, 2023

The City of Northville should draft and adopt a complete streets resolution that directs staff to move forward on implementing key policy changes. Below is draft language that may be used in creating the complete streets resolution.

1. Whereas, safe, comfortable, convenient and accessible transportation for all users is a priority of The City of Northville;
2. Whereas, the City of Northville does not consider any traffic fatalities or serious injuries are acceptable and considers most traffic fatalities and serious injuries are preventable
3. Whereas, the City of Northville considers that all users of the roadway should be accommodated not only in new construction but also in reconstruction, resurfacing, restoration, rehabilitation and preventative maintenance projects to the fullest degree possible based on the scope of work.
4. Whereas, the City of Northville encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes of travel.
5. Whereas, the City of Northville desires that flexibility in the design of the roadway be employed and that the design integrates current best practices, as well as allowing for innovative design approaches to be implemented and evaluated.
6. Whereas, the City of Northville places human life and health paramount in the decision-making process and concerns regarding motorized vehicle level of service, congestion, mobility, etc. are secondary concerns.
7. Whereas, the City of Northville believes that traffic safety solutions must be addressed holistically and take into consideration social issues and human behavior.
8. Whereas, the City of Northville understands that the people using roadways in the City of Northville will make mistakes and the City's transportation system should be designed such that when mistakes happen they do not result in fatalities or serious injuries.
9. Whereas, the City of Northville's Department of Public Works and Police Department in cooperation with the Michigan Department of Transportation and the Wayne County Road Division share responsibility with users of the roadway system in creating a transportation system that is safe for all users of the roadway and these providers and regulators must do their utmost to guarantee the safety of all citizens; cooperate with road users; and be ready to change as necessary to achieve safety.
10. Whereas, the City of Northville desires to set a framework for responsibility and exceptions to assure that Complete Streets are implemented.

Now, therefore, be it resolved, by The City Council of Northville

1. That the City of Northville adopts the Complete Streets Resolution attached hereto as Exhibit A, and made part of this Resolution.
2. That the next substantive revision of the Comprehensive Master Plan shall incorporate Complete Streets policies and principles and Multimodal Transportation Plan consistent with the Resolution.

Exhibit A

A - Definitions

1. "Complete Street" means a street or roadway that allows safe and convenient travel by all of the following categories of users: pedestrians, bicyclists, e-bicyclists, scooters, micro mobility vehicles, people with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, and families.
2. "Transportation Project" means any development, project, program, or practice that affects the transportation network or occurs in the public right-of-way, including any construction, reconstruction, retrofit, signalization operations, resurfacing, restriping, rehabilitation, maintenance (excluding routine maintenance that does not change the roadway geometry or operations, such as mowing, sweeping, and spot repair), operations, alteration, and repair of any public street or roadway within the City boundaries (including alleys, bridges, frontage roads, and other elements of the transportation system).

B - Complete Streets Requirements

The City of Northville shall work toward developing an integrated and connected multimodal transportation system of Complete Streets that serves all neighborhoods. Toward this end:

1. Every Transportation Project, and phase of that project (including planning, scoping, funding, design, approval, implementation, and maintenance), by the City of Northville shall provide for Complete Streets for all categories of users identified in Section A(1) of this Policy.

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2. The all City departments shall routinely work in coordination with each other, any designated Complete Street Coordinator, and any relevant advisory committees, to create Complete Streets and to ensure consistency with The City of Northville Complete Streets Plan
3. Wherever possible, Transportation Projects shall strive to create a network of continuous bicycle- and pedestrian-friendly routes, including routes that connect with transit and allow for convenient access to work, home, commercial areas, and schools.
4. The City of Northville shall coordinate with adjacent jurisdictions and any other relevant public agencies, including Wayne County Road Commission, Oakland County Road Commission and the Michigan Department of Transportation to ensure that, wherever possible, the network of continuous bicycle- and pedestrian-friendly routes identified in Section B(3) extends beyond the City's boundaries into adjacent jurisdictions.
5. The City of Northville shall rely upon the current editions of street design standards and guidelines that promote and support Complete Streets including the following:
    a. FHWA: Achieving Multimodal Networks
    b. FHWA: Separated Bike Lane Planning and Design Guides
    c. FHWA: Bikeway Selection Guide
    d. NACTO: Global Street Design Guide
    e. NACTO: Urban Street Design Guide
    f. NACTO: Urban Bikeway Design Guide
6. All Complete Streets shall reflect the context and character of the surrounding built and natural environments, and enhance the appearance of such. At the planning stage, the City shall work with local residents, business operators, neighboring jurisdictions, school districts, students, property owners, and other stakeholders who will be directly affected by a Complete Streets project to address any concerns regarding context and character.

C - Lead Department

The Planning Department shall be the lead in the implementation of this Policy. The Senior Planner shall act as the Complete Streets Coordinator.

D - Implementation

The following steps shall be taken within the 18 months of the effective date of this Policy:

1. All street design standards used in the planning, designing, and implementing phases of Transportation Projects shall be reviewed to ensure that they reflect the best available design guidelines for effectively implementing Complete Streets.
2. Amend the City's Master Plan to include the Northville Multimodal Transportation Plan
3. Evaluate the City's parking requirements to determine if they are excessive and may be lowered based on parking of other modes of travel and access to transit.
4. All City departments shall incorporate this Policy into relevant internal manuals, checklists, rules, and procedures.
5. The Planning Department shall assess whether any municipal and zoning codes, land use plans, or other relevant documents, including the Capital Improvement, conflict with this Policy, and shall submit a report, along with a proposal for addressing any conflicts, to the Mayor's office.
6. The Planning Department shall provide training on Complete Streets and the implementation of this Policy to all relevant staff and develop a plan for providing such training for new hires.
7. The Planning Department shall identify an existing process or develop a new process that allows for public participation (including participation by bicycle, pedestrian, and Complete Streets advisory committees) in decisions concerning the design, planning, and use of streets and roadways covered by this Policy.

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Draft Northville Non-motorized Plan 2023

Recommendations

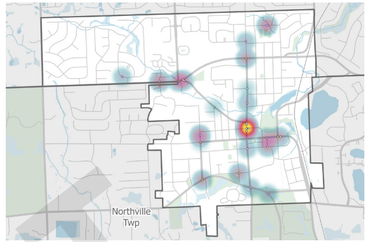
Metrics

Multimodal transportation planning is an iterative process that requires revisiting the policies, physical improvements, and programs on a regular basis and adjusting plans accordingly. Effective ways to measure the progress are necessary as the community decides how to invest in its transportation network. The recommended metrics are a combination of hard numbers, community sentiment and benchmarking against peer cities.



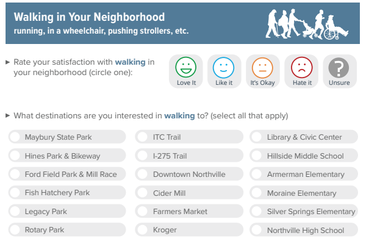
Traffic Count Program

Establish permanent automatic counters for pedestrians, bicyclists, and micromobility vehicles along major new facilities. Set up a program where temporary traffic counters are rotated around the city to key destinations on a set schedule. Coordinate these efforts with state and regional count efforts. Establish baseline counts prior to the creation of new facilities.



Crash Rates

A yearly evaluation of pedestrian and bicycle crashes will help identify how well new facilities are working and what changes should be made. It will be impossible to tell if a facility is more or less safe without a traffic count program that allows an evaluation of rates.



Community Surveys

Set up a yearly resident survey that measures community use of, and satisfaction with, the multimodal transportation system. This survey may be used to make mid-course corrections and refine community priorities.



		Existing	Strategic Plan	Near Term Plan
Greenway		2.36	0.50	8.65
Shared Use Path		7.98	5.73	13.03
Green Express Route		0.00	Corridor Study	2.75
2-way Separated Bike Lanes		0.00	0.36	0.81
Bike Lanes		0.24	18.88	23.46
Buffered Bike Lanes		0.00	10.00	19.08
Separated Bike Lanes		0.00	0.00	6.68
Sidewalk		600.24	1.00	1.10
	Along Major Roads	153.83	1.00	1.10
	Along Local Roads	446.41		
Signed Bike Route		0.00	7.12	37.18
Corridor Study		0.00	5.56	0.00
Green Way		0.00	8.16	0.00

Community Dashboard

Create and update a website or printed reports that track progress on implementing the non-motorized plan. This would include statistics such as mileage of new infrastructure, the number of new and improved pedestrian crossings, crash rates, reduction in carbon emissions and number of people participating in programs.

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5

Specific Corridor Recommendations

- 8 Mile Road (Oakland County)
- 8 Mile Road (Wayne County)
- 7 Mile Road (West of Center St)
- 7 Mile Road (East of Center St)
- Randolph Street
- Center Street (North of Main)
- Center Street/Sheldon Road (South of Main)
- Main Street (East of Center)
- Main St / Rogers St (West of Center)
- Griswold Street
- River Street
- Wing St / Cady St
- Beck Road
- Taft Road
- Novi Road

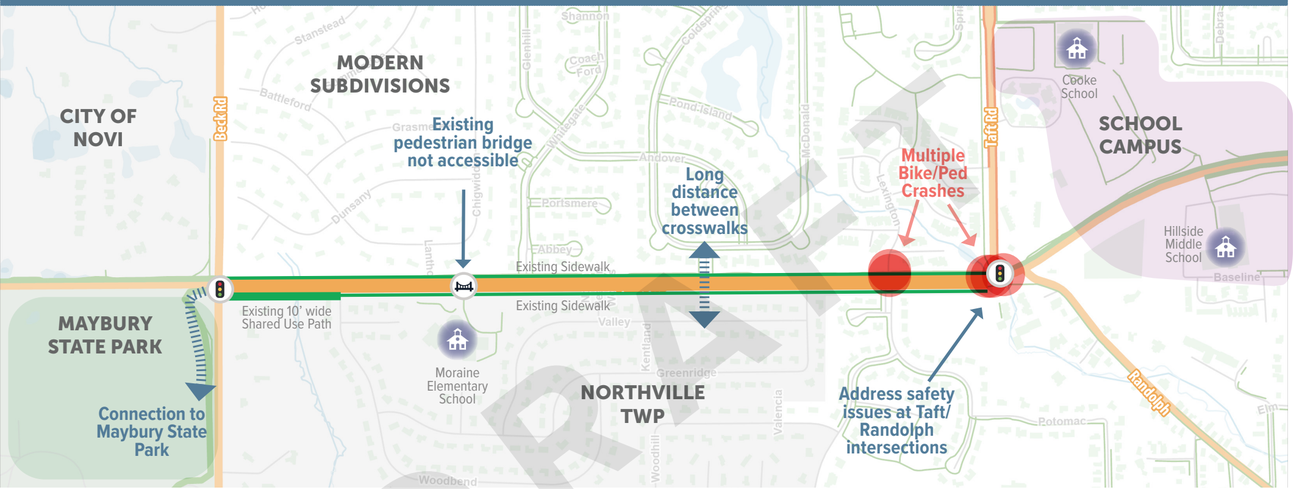
The Specific Corridor Recommendations take an in-depth look at fifteen roadway corridors, laying the foundation for recommendations and their integration into future capital improvement projects. This section has been designed for easy extraction, allowing its pages to be included in grant applications and used to guide future corridor development.

The following information was prepared for each corridor:

- **Existing Conditions Map:** Displays existing facilities, crash locations, and includes observations
- **2013 Non-motorized Plan:** Indicates items from the 2013 plan that have not yet been addressed
- **Existing Conditions Summary:** Documents conditions for sidewalks, crosswalks, shared use pathways, in-road bicycle facilities, and roadways.
- **Community Input:** Summarizes input to-date on issues and ideas that have been expressed for the corridor
- **Additional Observations:** Summarizes some of the initial observations that may lead to specific recommendations
- **Recommendations:** Outlines proposed pedestrian treatments, bicycle treatments, mid-block crossings locations and signalized intersection improvements

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8 MILE ROAD
Beck Road to Taft Rd (Oakland County Section)

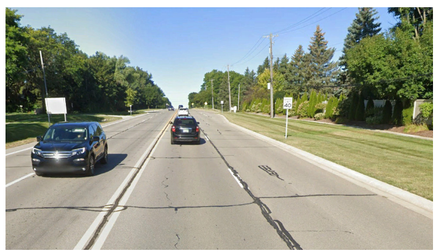


2013 Non-motorized Plan

Outstanding tasks from previous plan:

- Shared use path south side of 8 Mile between Beck and Randolph
- Paved shoulder





EXISTING CONDITIONS:

- Existing Sidewalk on both sides of 8 Mile from Beck to Randolph St

- Existing Signalized crosswalk at Beck Road, Taft Road,
- No crosswalk at signalized intersection at Randolph
- Existing Pedestrian Bridge with stairs at Moraine Elementary
- Multiple bicycle and pedestrian crashes occurred at the intersections of Taft Road

- Existing shared use path between Beck Road and Woodbend Dr

- No existing in-road bicycle facilities
- There is an intermittent paved shoulder

- Oakland County Jurisdiction
- South side of Road in Northville Twp
- The land use along this corridor primarily consists of neighborhoods and an elementary school campus
- Beck to Coldspring: 3-lane, 13,000 AADT
- Coldspring to Randolph: 4-lane, 13,000 AADT
- Posted speed 40 MPH
- School Zone 30 MPH and an elementary school campus.

COMMUNITY INPUT

- A non-motroized connection to Maybury Park via 7 Mile Road is a priorty of the Mobility Team.
- A lot of walkers from the North Lexington Condominiums at corner of 8 Mile Road and Taft.
- Improve bikeway connection to Maybury on 8 Mile Road. Overgrown vegetation and uneven sidewalk and driveways make it unsatisfactory.
- Replace sidewalks with wider pathways along Eight Mile Road and Randolph.
- Signal at Beck and 8 Mile Road does not stop all lanes and is dangerous when crossing
- Taft and 8 Mile a dangerous intersection to cross the road.
- West bound Traffic back ups on 8 Mile Road at Beck Road all the way to Taft. This creates dangerous situation where drivers use center turn lane to by-pass traffic.
- Improve intersection at Taft and complete sidewalk gaps along 8 Mile between Randolph St and Hillside Middle School for students walking to school.
- Need a consistent road cross section on 8 Mile Road to improve safety.

ADDITIONAL OBSERVATIONS

- The intermittent paved shoulder creates a dangerous situation where a bicyclists may start out on the shoulder only to have it drop or be replaced by a turn lane

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Add trees in buffer between sidewalk and roadway to improve pedestrian quality of service.



Provide High Visibility Crosswalks across all intersecting local roads and major driveways and remove vegetation blocking sight lines.



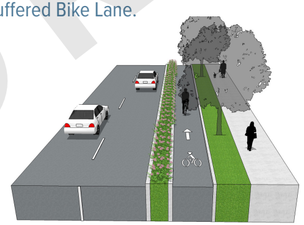
Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.

BICYCLE TREATMENTS

Near-term: Establish Bike Lane and use Color Bike Lane (skip dash lane markings with green pavement marking) at intersections and turn lanes. Establish Buffered Bike Lanes where road reconfiguration permits.



Long-term: Widen roadway to provide a Separated Bike Lane or at a minimum a buffered Bike Lane.



Long-term: Widen the sidewalk on the north side to 10' to establish a Shared-Use Path

MID-BLOCK CROSSING TREATMENTS

Replace the existing Pedestrian Bridge at Moraine Elementary School with a Pedestrian Hybrid Beacon with an extended Crossing Island.



Add a Pedestrian Hybrid Beacon with an extended Crossing Island between Coldspring Dr and Greenridge Dr.

INTERSECTION TREATMENTS

Provide High Visibility Crosswalks at all intersections.

Provide Leading Pedestrian Intervals at Beck Rd and Taft Rd signalized intersections.

Provide transition from Side Path on north side of Eight Mile to Bike Lanes at Taft Road.

Provide protected left-turn phase at Beck Road to minimize conflict with pedestrians in crosswalk.



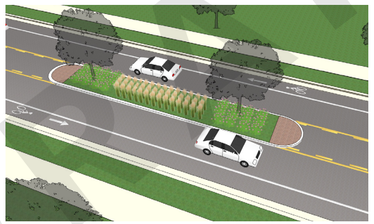
Provide Bike Boxes for left turning bicycles at Taft Road.

ROADWAY

Near-term: Reconfigure existing roadway to two through lanes with an intermittent center turn lane via a 4 to 3 lane conversion of the portion of road near Taft Rd.

Near-term: narrow roadway where center turn lanes are not needed to establish Buffered Bike Lanes.

Concurrent with implementing Near-term recommendations, reduce Posed Speed to 35 mph and School Zone speed to 25 MPH.



Long-term: Replace the center turn lane with planted medians where turn lane is not necessary.

NOTES

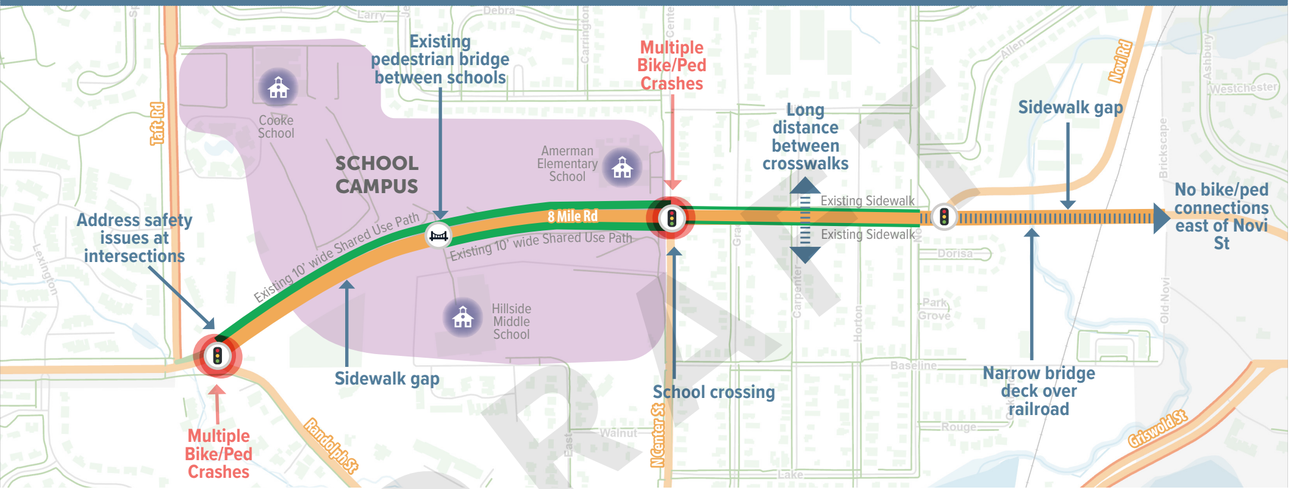
If all Recommended Pedestrian, Bicycle, and Roadway treatments are implemented, and speeds have been reduced, substituting Rectangular Flash Beacons for a Hybrid Pedestrian Beacons may be evaluated.



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8 MILE ROAD

Randolph St to Northville Twp (Wayne County Section)



2013 Non-motorized Plan

Incomplete:

- Proposed crosswalk and intersection improvements at Randolf and 8 Mile Rd
- Paved shoulder





Existing Conditions

- Sidewalk gap on both sides east of Novi St
- Sidewalk gap on south side west of Randolph St

- Existing Signalized crosswalk at Center St
- Crosswalk missing at signalized intersections at Randolph St and Novi Road
- Existing Pedestrian Bridge with ramps between schools
- Bicycle and pedestrian crashes occurred at the intersections of Randolf St and Center St

- Existing shared use path on north side between Taft Road and Center St and on south side between pedestrian bridge and Center St

- No existing in-road bicycle facilities

- Wayne County Jurisdiction
- South side of Road in Northville Twp
- The land use along this corridor primarily consists of residential house with school campus.
- Randolph to N Center: 2-lane, 19,000 AADT
- N Center to Brickscape: 4-lane, 19,000 AADT
- Posted speed 40 MPH
- School Zone 30 MPH

Community Input

- Complete sidewalk gaps along 8 Mile between Randolph St and Hillside Middle School, over the railroad and to the east all the way to Meadowbrook Road.
- Replace sidewalks with wider pathways.
- Repair pot holes on 8 Mile Road pavement conditions on roads are terrible for biking.
- Taft and 8 Mile a dangerous intersection to cross the road. Improve the intersection at Taft and complete sidewalk gaps along 8 Mile between Randolph St and Hillside Middle School for students walking to school.
- Need a consistent road cross section on 8 Mile Road to improve safety.

Additional Observations:

- The 4 lane configuration of 8 Mile Rd at Center Street makes for poor viability for left turning vehicles at an intersection that serves two schools
- Pedestrians and bicyclists traveling on the south side of 8 Mile, must cross 8 Mile Road twice between Randolph and the Hillside Middle School
- The road geometry and edge conditions encourage high travel speeds
- N Center to Brickscape should be evaluated for a 4 to 3 lane conversion to increase safety
- There are no vertical elements in the buffer between the path and roadway by Amerman Elementary School making for a low quality of service pathway

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide a sidewalk on the north side between Novi Rd to Griswold (coordinate with the Township) between the back of curb and the guard rail. This will be buffered from the roadway by the Buffered/ Separated Bike Lane.



Provide High Visibility Crosswalks across all intersecting local roads and major driveways and remove vegetation blocking sight lines.

Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.

SHARED BIKE AND PED TREATMENTS

Construct Shared-Use Path on south side between Randolph St and Hillside Middle School to provide a continuous path on the south side.

Add trees in buffer between Shared-Use Paths and roadway where it does not currently exist.



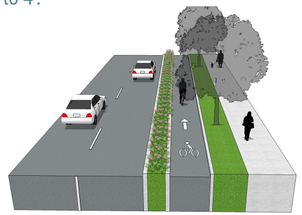
Add four landscaped rest areas with benches (two on each side) to encourage walking.

BICYCLE TREATMENTS

For two lane segment, narrow travel lanes to 11' and provide 4' wide paved shoulders.

For the short four lane segments between Randolph and Center near those intersecting streets, provide Buffered/ Separated Bike Lanes via 4 to 3 lane conversion with transitions to the Shared-Use Paths where road narrows to two lanes.

For four lane segment west of Center Street, provide Buffered/Separated Bike Lanes. Where the road widens near the bridge increase the buffer/barrier from 2' to 4'.



INTERSECTION TREATMENTS

High visibility crosswalks at Randolph and Center Street signalized intersections.



Leading pedestrian intervals at Randolph and Center Streets.

Provide crosswalk at Randolph St on west side.

MID-BLOCK CROSSING TREATMENTS

Rectangular Rapid Flash Beacon with a Crossing Island on the east side of Chase Drive.

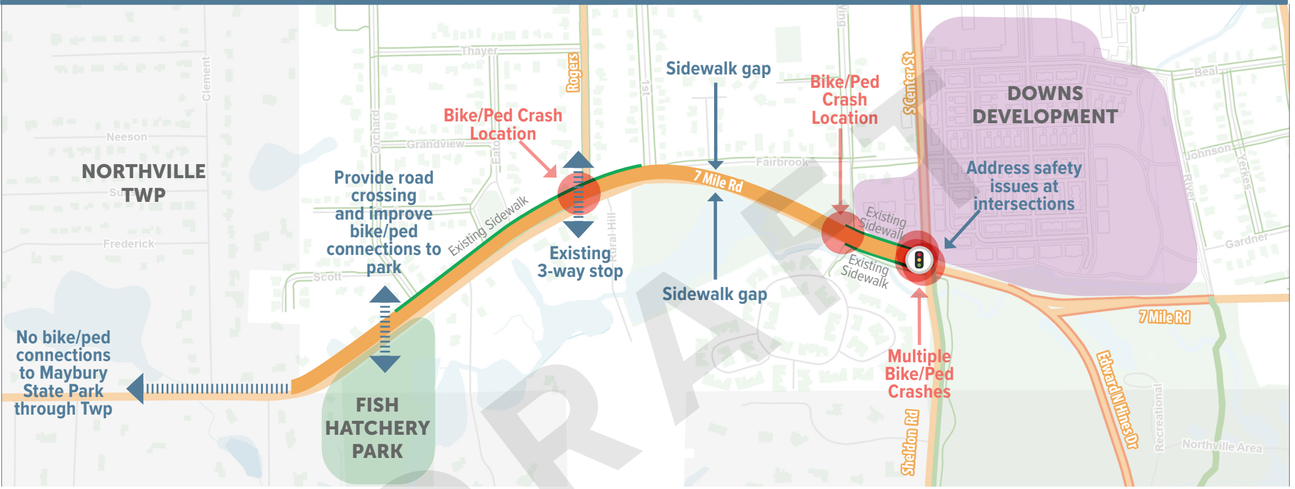


NOTES

Proximity to schools and high crash locations warrant higher order pedestrian and bicycle treatments.

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7 MILE ROAD
Northville Twp to S Center Street/Sheldon Rd

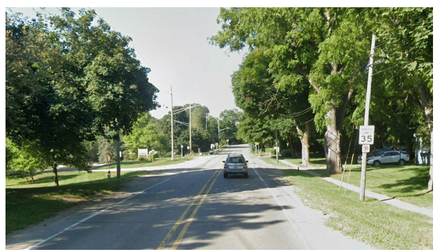


2013 Non-motorized Plan

Incomplete:

- Sidewalk /shared use path and paved shoulder
- Crosswalk and intersection improvements at Center St, First St, Rogers St, Orchard Dr and Fish Hatchery Park





Existing Conditions

- Sidewalk gaps on north and south side of road
- Existing Signalized crosswalk at Center St
- No crosswalk at Rogers (3-way stop)
- Missing crosswalk where sidewalk ends at Fish Hatchery Park
- No existing shared use pathway
- No existing in-road bicycle facilities
- Wayne County Jurisdiction
- The land use along this corridor primarily consists of neighborhoods, residences fronting directly on the street, and natural areas.
- Rogers to S Center: 2-lane, 7,200 AADT
- Beck to Rogers: 2- lane, 9,300 AADT
- Posted speed 35 MPH

Community Input

- Northville Twp and the City of Northville are looking to pursue a grant to fund shared-use path on the south side of 7 Mile between Fish Hatchery Park and Main St. / Northville Rd.
- Northville Twp plans to construct a shared use pathway on the south side of 7 Mile between Edenerry St to Fish Hatchery Park.
- A lot of cars, bikes and runners use Edenderry to access the High School. This road does not have sidewalks, Lacks a crosswalk and lacks sidewalk connection at 7 Mile Road. The intersection of Edenderry and 7 Mile is a safety concern.
- Northville Twp's Trails Master Plan calls for a shared use pathway on the south side of 7 Mile from Edenderry St to Maybury State Park.
- Connect Main Street and 7 Mile Road to Maybury State Park.
- Create bike/ped entrance at Beck Road and 7 Mile Road for park access.
- Improve bikeway on 7 Mile Road with protected bike lanes to Maybury.
- Establish bike/ped connections along 7 Mile Road to Fish Hatchery Park, Edenderry, Legacy Park, Hines Park Trail, and Maybury State Park.
- Install sidewalks on 7 Mile Road for pedestrian safety and accessibility.
- Evaluate safety options at S Center Street and 7 Mile intersection, possibly a roundabout.
- Improve traffic and pedestrian safety at 7 Mile, Wing Street, and St Lawrence Estates intersection.
- Enhance visibility and safety on curved 7 Mile Road section near Fairbrook.
- Install crosswalk at Fish Hatchery Park where 7 Mile Road sidewalk ends.
- Provide safe Cemetery access from 7 Mile Road - add sidewalk and crosswalk.

Additional Observations:

- Safety concerns for pedestrians due to sidewalk gaps and lack of road crossings.

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide Sidewalk on north side between Fairbrook Street and Wing Street.

Consolidate access for gas station at Rodgers Street and 7 Mile Road by eliminating entrance closest to the corner.

Provide High Visibility Crosswalks across all intersecting local roads and major driveways and remove vegetation blocking sight lines.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.

SHARED BIKE AND PED TREATMENTS

Provide Shared-Use Path on north side from western city limits to Orchard Drive and south side from Orchard Dr to Center Street.

Work with private land owners to see if easements may be obtained to construct the proposed River Trail from Fish Hatchery Park to St. Lawrence Blvd.

INTERSECTION TREATMENTS

Provide High Visibility Crosswalks at Rodgers Street all-way stop.

Provide High Visibility Crosswalks with Hybrid Pedestrian Beacons at proposed roundabout at Center Street. Providing a single lane for both entering and existing traffic is preferable to enhance pedestrian safety.

MID-BLOCK CROSSING TREATMENTS

Provide High Visibility Crosswalks with Rectangular Rapid Flash Beacons at Edendery Street, Orchard Drive, and Wing Street.



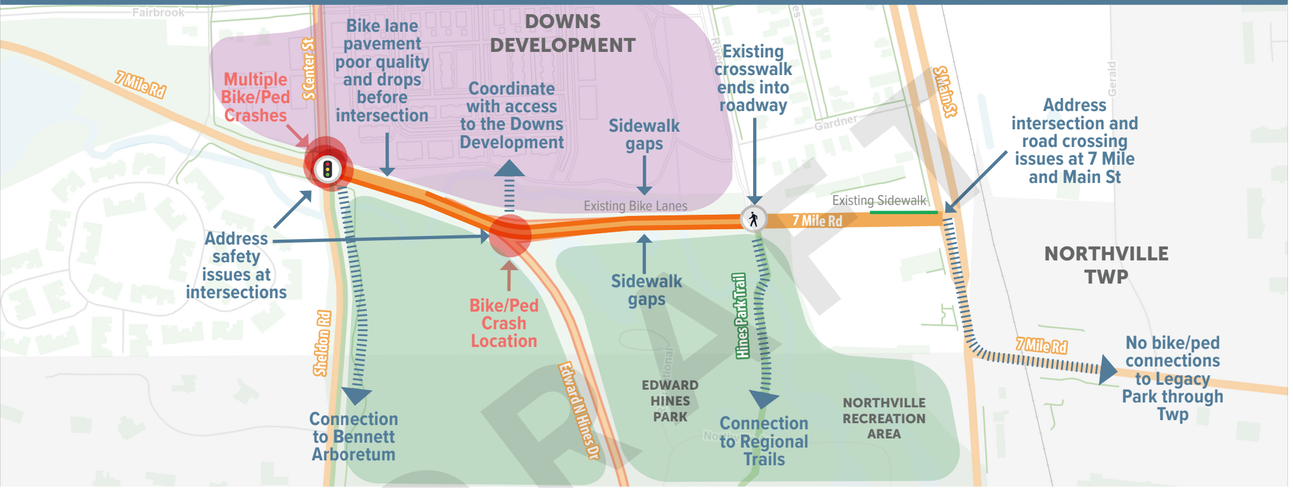
NOTES

Proposed Shared-Use Path may be constructed on either north or south side based on further planning, but either a Sidewalk or Shared-Use Path should be constructed on either side of the road.

DRAFT

7 MILE ROAD

S Center Street/Sheldon Road to Northville Twp



2013 Non-motorized Plan

Incomplete:

- Bike lane between Center St and River St
- Sidewalk on north side between Center St and River St
- Crosswalk and intersection improvements at Main St, River St and Center St





Existing Conditions

- Sidewalk gaps on north and south side of road
- Short existing segment between Main St and River St

- Existing Signalized crosswalk at Center St
- Existing marked crosswalk at Hines Park Trail

- No existing shared use pathway

- Existing bike lanes between River St and S Center St (stop shy of intersection at Center Street)

- Wayne County Jurisdiction
- The land use along this corridor primarily consists of natural areas with some residential.
- Edward Hines Dr to S Main St: 2-lane, 7,500 AADT
- S Center to Edward Hines Dr: 2-lane, 3,100 AADT
- Posted speed 35 MPH

Community Input

- The Mobility Network Team identified this is one of the top “Action Sites” of concern (S1)
- The Mobility Network Team proposed a roundabout for the intersection at Hines Drive along with near-term improvements to the geometry for bicycle and pedestrian and safety in the interim. They also proposed an additional entrance to the Downs development at this location.
- Northville Twp and the City of Northville are looking to pursue a grant to fund shared-use path on the south side of 7 Mile between Fish Hatchery Park and Main St. / Northville Rd.
- Need bikeway and protected bike lanes along 7 Mile Road.
- Ensure intersections and roundabout accommodate bike crossings.
- Establish bicycle and pedestrian connections to Fish Hatchery Park, Edenderry, Legacy Park, Hines Park Trail, and Maybury State Park on 7 Mile Road.
- Install sidewalks on 7 Mile Road.
- Safety concerns at S Center Street and 7 Mile Road intersection, conflicting roundabout options.
- Upgrade existing crosswalk on 7 Mile to Hines Park Trail with a Rectangular Rapid Flash Beacon.
- Safety concerns at 7 Mile Road and Edward Hines Drive intersection for bicyclists due to vehicle confusion and traffic flow.
- Monitor the impact of future traffic on bike lane drop between Sheldon Road and Edward Hines Drive.
- Overgrown vegetation in bike lane.

Additional Observations:

- This section of road has a tremendous amount of north-south bicycle and pedestrian traffic but poor bicycle and nonexistent pedestrian connections going east-west
- The rural character of the roadway and intersection designs do not reflect the amount of non-motorized travel of this area
- Bicycle and pedestrian travel will increase with the new Downs Development
- The Downs development will bring increased traffic and turning movements at intersections

DRAFT

RECOMMENDATIONS:

SHARED BIKE AND PED TREATMENTS

Shared-Use Path on north side from Center Street to River Street through Downs Development via development agreement.

Shared-Use Path on north side from River Street to Main Street via lane narrowing and access control.



Provide High Visibility Crosswalks across all intersecting local roads and major driveways and remove vegetation blocking sight lines.

Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.

BICYCLE TREATMENTS

Provide Buffered/Separated Bike Lanes from Center Street to Main Street via lane narrowing and lane elimination afforded by proposed roundabout at Center Street.

Evaluate use of Bike Boxes in design of of proposed signal at Main Street.



Near-term: Provide bike lane crossing with green conflict zone pavement marking and green bike lane with Bike Box at Hines Drive.

Long-term: Replace existing Hines Drive intersection with a roundabout.

INTERSECTION TREATMENTS

Provide High Visibility Crosswalk with Leading Pedestrian Interval at proposed Traffic Signal at Main Street.

Provide High Visibility Crosswalks with Hybrid Pedestrian Beacons at proposed roundabout at Center Street. Providing a single lane for both entering and existing traffic is preferable to enhance pedestrian safety.

MID-BLOCK CROSSINGS TREATMENTS

Provide High Visibility Crosswalk with Rectangular Rapid Flash Beacons at Hines Park Trail crossing. Evaluate the need for Crossing Island based on increased traffic from The Downs development and available usable gaps.

Depending on future development on south side between Hines Park Trail and Main Street, a crossing may be warranted.



COORDINATION

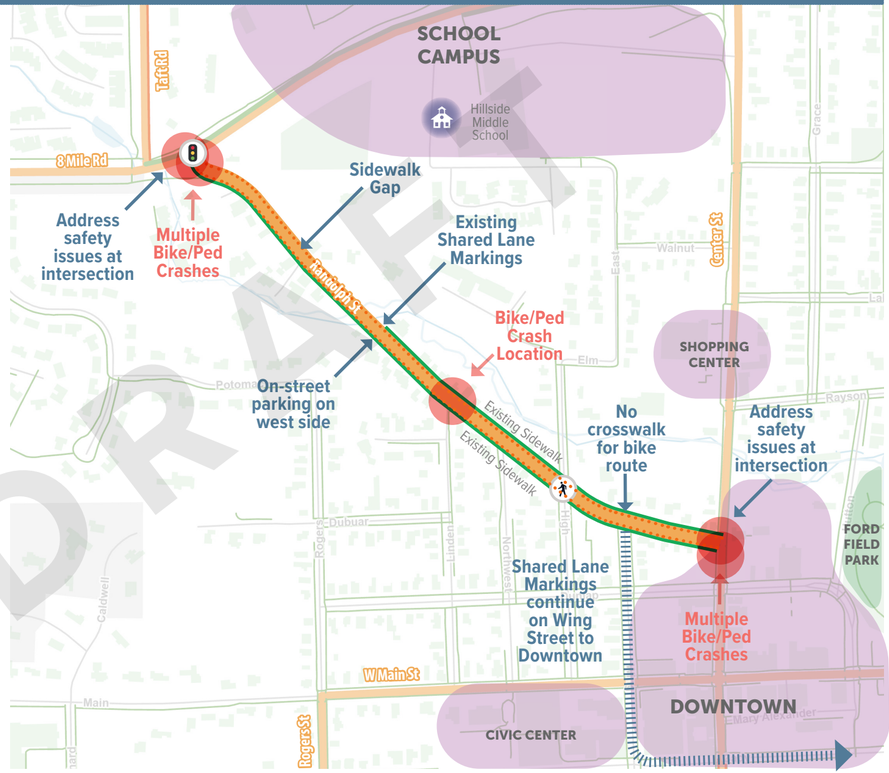
This corridor is on the brink of significant transformation and changes need to accommodate future growth. Effective coordination among various planning endeavors will be important. This includes close collaboration with initiatives like the Downs Development, the Connecting the Rouge Initiative, and forthcoming developments near 7 Mile and S Main Street.

DRAFT

RANDOLPH STREET
8 Mile Road to N Center Street







2013 Non-motorized Plan

Incomplete:

- Northbound bike lane
- Sidewalk on east side
- Crosswalk and intersection improvements at 8 Mile Rd and Center St

Existing Conditions

- Complete sidewalk on south side of Randolph
- Long sidewalk gap on north side of Randolph near 8 Mile

- Marked crosswalk at 4-way stop at High St
- No crosswalks at 8 Mile or Center St
- No crosswalk for bike route at Wing St

- No existing shared use pathway

- Shared lane marking in both directions

- City Jurisdiction
- The land use along this corridor is primarily residential
- On-street parking on south side that is under utilized
- 2-lane road, 3,700 AADT, about 30’ wide
- Posted speed 25 MPH

Community Input

- This is part of the recently established “Link” between Hines Park Trail and Maybury State Park.
- On-street parking heavily utilized during events in the downtown area.
- Improve bike facilities along Randolph need to have designated lanes in both directions.
- Replace sidewalks with wider pathways.
- Less street parking for visibility.

Additional Observations:

- This corridor provides a key connection for non-motorized travel between the subdivision along 8 Mile Road and Taft Road to the downtown
- Evaluate feasibility and implications of replacing on-street parking with bicycle lanes to provide a higher quality bicycle corridor and additional buffer area for pedestrians

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide Sidewalk on north side between 8 Mile Road to just west of Linden Street

Provide trees between sidewalk and street where they don't currently exist.

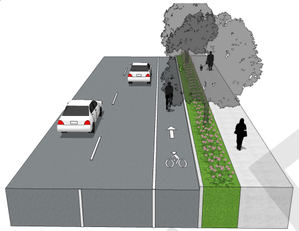


Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.



BICYCLE TREATMENTS

Provide Bike Lane from 8 Mile Road to High Street.

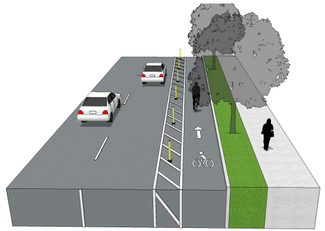


INTERSECTION TREATMENTS

At 8 Mile, remove center island and provide designated left-turn lane with protected left-turn phase.

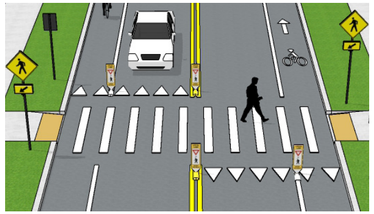
Provide High Visibility Crosswalks at High Street all-way stop.

Provide flexible lane delineators between bike lanes and travel lanes at High Street



MID-BLOCK CROSSING TREATMENTS

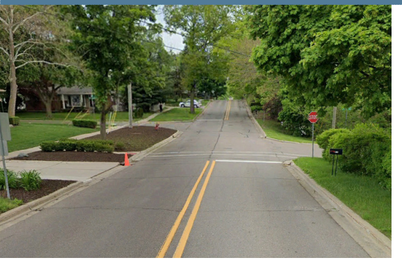
Provide High Visibility Crosswalks with Advance Yield Here to Pedestrian Signs/ Yield Bars and Seasonal In-Street Yield to Pedestrian Signs.



Provide flexible lane delineators between bike lanes and travel lanes at crosswalk approach.

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N CENTER STREET
Main Street to City of Novi

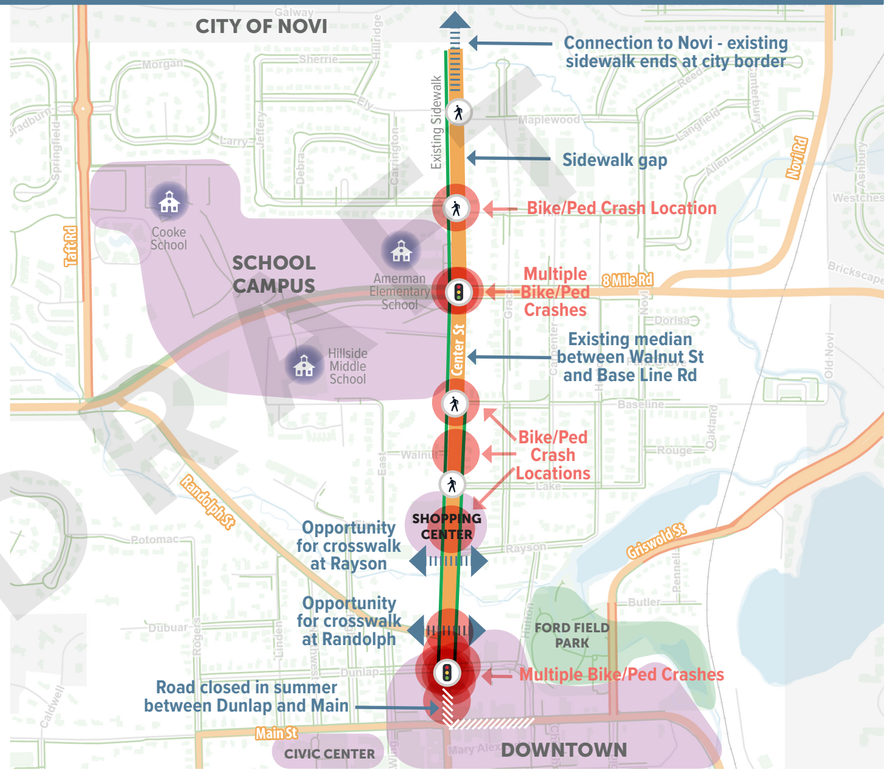




2013 Non-motorized Plan

Incomplete:

- Sidewalk
- Bike lanes
- Crosswalk and intersection improvements at Randolph St and 8 Mile Road



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Existing Conditions

- Complete sidewalk on west side of Center
- Sidewalk gap on east side of Center north of Baseline

- Marked mid-block crosswalks at school and grocery store
- Four-way stop and signalized intersection include crosswalks
- Majority of bike/ped crashes occurred at intersections

- No existing shared use pathway

- No designated bicycle facilities

- City Jurisdiction
- The land use along this corridor is primarily residential with schools and a small shopping center
- Dunlap St to 8 Mile: 3-lane road, 36' between curbs, 9,000 to 10,000 AADT
- North of 8 Mile: 2-lane residential road
- N Center between E Dunlap St and W Main St closed to vehicular traffic during the summer
- Landscaped median between Walnut St and Baseline Rd
- Posted Speed 35 MPH
- School Zone 25 MPH

Community Input

- Safety concerns with the existing crosswalks have been expressed by residents and lead to a recent traffic control order to upgrade one of the crosswalks
- School drop-offs cause creates congestion during morning and afternoon pick-ups and drop-off times.
- Improve sidewalk on Center Street between Kroger and 8 Mile, it is narrow and difficult to push stroller.
- Add sidewalk connection north on Center Street all the way to 9 Mile Road.
- Speeding is an issue on Center Street and on Main Street near Library.
- Cars and bikes running stop signs, especially in downtown.
- Upgrade crosswalk on N Center at Kroger to flashing beacon, no one stops.
- Concerns with near-misses and crashes with pedestrians and bicyclists at intersection in the downtown (Dutton at N Center and Wing St were specified).

Additional Observations:

- This residential road is the busiest gateway to downtown Northville
- The lack of a sidewalk for half the length of the road puts additional pressure on the crosswalks
- This is the highest crash concentration corridor in the city with many vehicles hitting bicyclists and pedestrians in existing crosswalks on the side streets
- Amerman Elementary School and Hillside Middle School are accessed from Center Street near Eight Mile Rd

DRAFT

RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide a sidewalk on east side from Maplewood to Baseline.

Provide High Visibility Crosswalks across all intersecting local roads and major driveways.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side, especially near commercial and school zones.



BICYCLE TREATMENTS

Provide Bike Lanes from city limits to Hill Street via lane narrowing.

Provide alternative route to downtown south of Hill Street via Bike Boulevard.



INTERSECTION TREATMENTS

At North Ely Drive / Maplewood Street and South Ely Drive / Hill Street all-way stop crosswalks, provide a narrow median with Stop for Pedestrians Signs at the noses of the islands with stop bars. Provide Turning Vehicles Must Yield to Pedestrian signs. Provide High Visibility Crosswalk markings and clear vegetation from sight lines.

At 8 Mile Road, provide High Visibility Crosswalks, Leading Pedestrian Intervals, and Protected Left-turn Phase. Provide Turning Vehicles Must Yield to Pedestrian signs.

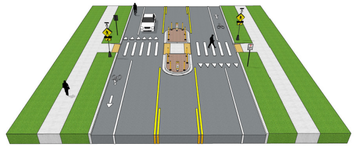
At Dunlap Street, provide High Visibility Crosswalks and prohibit all right-on-red turns. Provide Turning Vehicles Must Yield to Pedestrian signs.

At Main Street, paint concrete band of brick crosswalk white and prohibit all right-on-red turns. Provide Turning Vehicles Must Yield to Pedestrian signs.

MID-BLOCK CROSSING TREATMENTS

At the existing crosswalk on the south side of Baseline, extend the median into the crosswalk, provide High Visibility Crosswalks and add Rectangular Rapid Flash Beacons.

At the existing crosswalk on the south side of Lake Street, add Rectangular Rapid Flash Beacons and Crossing Island.



Provide High Visibility Crosswalk with Rectangular Rapid Flash Beacons and Crossing Island between Rayson Street and entrance to Kroger.

Provide High Visibility Crosswalk with Rectangular Rapid Flash Beacons and Crossing Island on northside of Randolph Street intersection. Provide Turning Vehicles Must Yield to Pedestrians Sign on south side of Randolph Street.

NOTES

Proximity to Schools and High Crash Locations warrant higher order treatments, especially at crosswalks and intersections.

LONG TERM

The existing roadway configuration of North Center Street combined with narrow and irregular ROW limits what can be done in the near-term. As the crash history illustrates, this corridor warrants a more detailed study that maps out how to transition from the existing conditions to a true mulit-modal corridor.

DRAFT

S CENTER STREET/SHELDON ROAD
Main Street to Northville Twp





2013 Non-motorized Plan

Incomplete:

- Crosswalk and intersection improvements at 7 Mile Rd and Cady St



DRAFT

Existing Conditions

- Sidewalk gap on west side south of 7 Mile

- Four-way stop and signalized intersection include crosswalks
- Majority of bike/ped crashes occurred at intersections

- Existing shared use path on east side of road south of 7 Mile connecting to Bennett Arboretum in Northville Twp

- Existing bike lanes between 7 Mile Road and Cady St

- City Jurisdiction
- Cady to Main St: 2-lane road with on-street parking, 9,000 to 10,000 AADT
- Cady to 7 Mile/Sheldon Rd: 2-lane road, 9,000 to 10,000 AADT
- N Center between E Dunlap St and W Main St closed to vehicular traffic
- South of Main Street, Center Street transitions from a downtown streetscape to mixed-use and residential.
- Posted Speed 35 MPH

Community Input

- The Mobility Network Team identified this is one of the top “Action Sites” of concern (S7).
- The Mobility Action Team calls for the replacing the bike lanes with on-street parallel parking and providing a shared use path along the east side of Center Street in the Downs development.
- Protected Bike Lane needed on S Center Street.
- Speeding is an issue on S Center Street.
- Cars and bikes running stop signs, especially in downtown.
- Concerns with safety and future traffic at intersection of S Center Street and 7 Mile Road. Conflicting options on putting a roundabout at this intersection.
- Less street parking for visibility, parked cars block signage on S Center Street.

Additional Observations:

- With the Downs development and the proposed shared use path along 7 Mile Rd, there will be increased motor vehicle, bicycle, and pedestrian traffic on Center Street. To accommodate this change in dynamic, bicycle facilities should be upgraded from basic bike lane to a separated facility.
- The Downs and Foundry Flask development will bring increased traffic and turning movements at intersections.

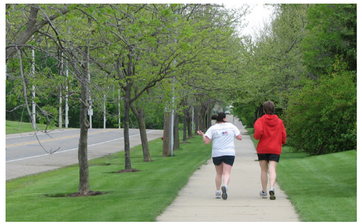
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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Complete Sidewalk on east side of Center as part of The Downs development agreement.

Provide trees between sidewalk and street where they don't currently exist.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.



SHARED BIKE AND PED TREATMENTS

During seasonal street closure between Dunlap Street and Main Street, maintain a clear zone down middle of the street for emergency vehicles. Mark edge of clear zone with solid white temporary lane marking tape. Provide temporary pavement decals indicating a shared pedestrian and bicycle zone with a 5 MPH speed limit and bicycles yielding to pedestrians.

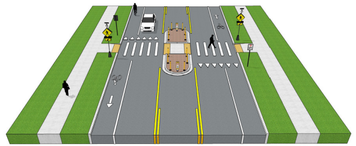
BICYCLE TREATMENTS

Maintain existing Bike Lane.



MID-BLOCK CROSSING TREATMENTS

High Visibility Crosswalks with Rectangular Rapid Flash Beacons and Crossing Islands at Beal Street and Fairbrook Street. Place flexible delineator posts between motor vehicle lane and bike lanes.



INTERSECTION TREATMENTS

At Main Street, paint concrete band of brick crosswalk white and prohibit all right-on-red turns.

At Mary Alexander Ct, provide High Visibility Crosswalk on south side and remove on-street parking from intersection

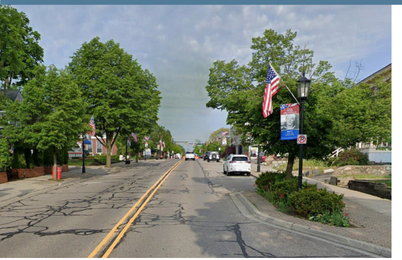
At Cady Street, realign intersection, provide High Visibility Crosswalks.

Provide High Visibility Crosswalks with Hybrid Pedestrian Beacons at proposed roundabout at 7 Mile Road. Providing a single lane for both entering and existing traffic is preferable to enhance pedestrian safety.

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E / S MAIN STREET

Center Street to 7 Mile Road / Northville Road

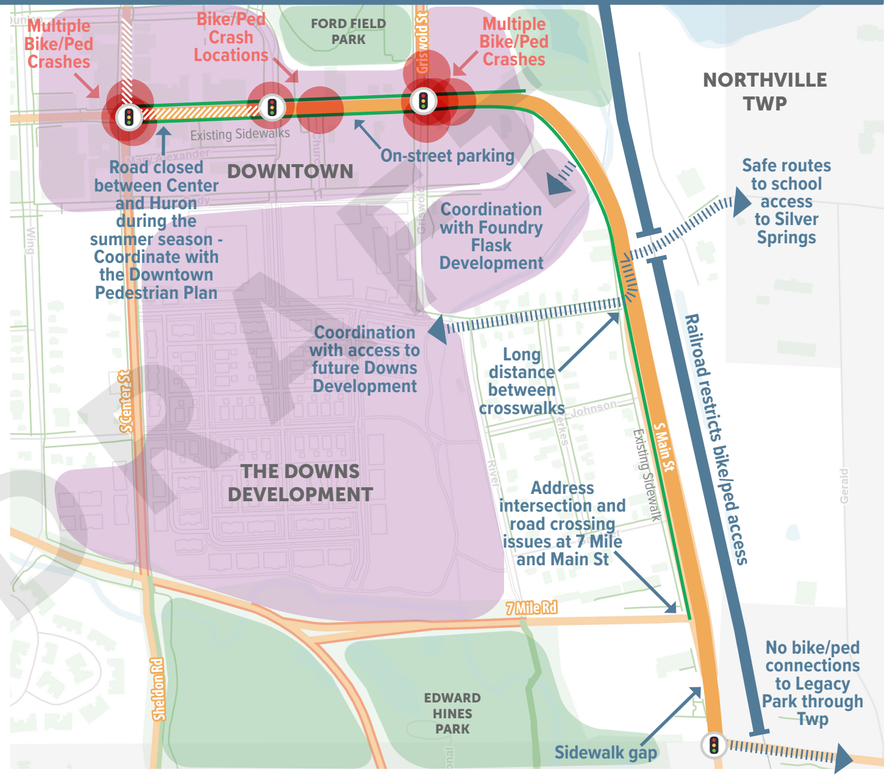




2013 Non-motorized Plan

Incomplete:

- Sidewalk south of 7 Mile
- Bike Lanes
- Crosswalk and intersection improvements at Doheny Drive and 7 Mile (both locations)



Existing Conditions

- Majority of buildings have sidewalk access
- Sidewalk gap on east side, between road and railroad
- Sidewalk gap on west side south of 7 Mile

- Signalized intersection include crosswalks except at 7 Mile Road
- Opportunities for mid-bock crosswalks at 7 Mile and Main and Doheny Dr
- Majority of bike/ped crashes occurred at intersections in the downtown

- No existing shared use paths

- No existing bike lanes
- Opportunity to add bike lanes though road diet

- Wayne County jurisdiction east of Griswold
- City Jurisdiction west of Griswold
- Hutton to Griswold: 2- lane road with on-street parking, 6,300 AADT, 25 MPH
- Griswold to 7 Mile: 4-lane boulevard, 35 MPH, 7,000 - 9,000 AADT
- Main St between Center St and Hutton closed to vehicular traffic during the summer season

Community Input

- The Mobility Network Team identified the realignment of the Cady Street intersection to make it more perpendicular to Main St via a land swap as an action site of top concern
- The Mobility Network Team identified the Doheny Safe School Passageway under the Railroad as one of the top action sites of concern (S7) proposing a new pedestrian railroad underpass near Doheny Dr
- Would like to see a road diet on S Main Street with opportunity to add bike lanes.
- Sidewalk on Northville Road (South of Town).
- Cars and bikes running stop signs, especially in downtown.
- Mixed opinions on keeping Main Street closed to traffic. Concerns with ADA parking and access to business if streets stay closed.

Additional Observations:

- Evaluate options to reconfigure existing underpass to provide safe pedestrian and bicycle access.
- Evaluate road diet from Griswold to 7 Mile Rd.
- The Downs and Foundry Flask development will bring increased traffic and turning movements at Beal St and Cady St intersections.

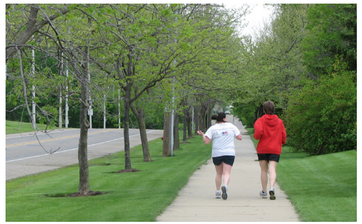
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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Extend sidewalk on north side from Water Wheel Centre to proposed path entering Ford Field Park.

Provide trees between sidewalk and street where they don't currently exist.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.



SHARED BIKE AND PED TREATMENTS

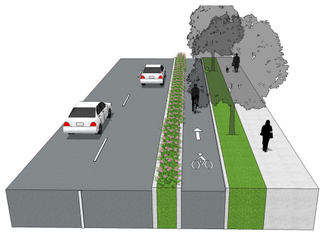
During seasonal street closure: between Center Street and Hutton Street, maintain a clear zone down middle of the street for emergency vehicles. Mark edge of clear zone with solid white temporary lane marking tape. Provide temporary pavement decals indicating a shared pedestrian and bicycle zone with a 5 MPH speed limit and bicycles yielding to pedestrians.

Provide a Shared-Use Path on the east side from the proposed path entering Ford Field Park to 7 Mile Road via a 4 to 2 lane conversion near river bridge, a 4 to 3 lane conversion from Doheny Drive to river bridge, and a 4 to 2 lane conversion on the boulevard section from Doheny Drive to 7 Mile Road.

BICYCLE TREATMENTS

Provide a Buffered/Separated Bike Lane southbound from Griswold Street to 7 Mile Road via a 4 to 3 conversion Griswold to river bridge, a 4 to 2 lane conversion near the river bridge, and a 4 to 2 lane conversion on the boulevard section from Doheny Drive to 7 Mile Road.

Provide a Buffered/Separated Bike Lane north and east bound from Proposed Shared-Use Path entering Ford Field Park to Griswold via a 4 to 3 lane conversion.



MID-BLOCK CROSSING TREATMENTS

Provide High Visibility Crosswalks at Johnson and Gardner.

The precise location, configuration, and selection of beacons for the proposed Mid-Block Crosswalk, which will connect the proposed River Walk in East Ford Field to the proposed River Walk through the Foundry Flask Mixed-use Development, can not be determined at this time. The final placement should be established through a study that considers the intended road reconfiguration to two lanes, the resulting impact on speed and sight-distance, and any potential alterations to the Cady Street intersection with Main Street. Nonetheless, the alignment of the Proposed River Trail on both sides of Main Street holds utmost importance. Pedestrians and bicyclists are unlikely to divert their path to a marked crosswalk if their destination on the opposite side of the roadway is directly ahead of them.

INTERSECTION TREATMENTS

Provide High Visibility Crosswalks with Leading Pedestrian Phase at proposed signal at West 7 Mile Road.

Provide High Visibility Crosswalks with Leading Pedestrian Phases at existing signal at 7 Mile Road.



RAILROAD UNDERPASS

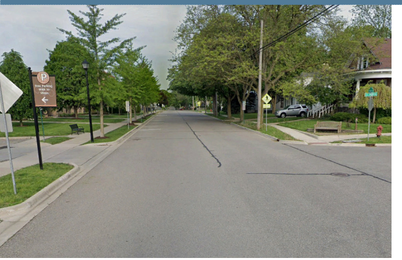
Near-term: Reduce Doheny Drive to one lane for motor vehicles allocating the other lane to a Shared Use Path. Concurrent with this change, construct Shared-Use Path to Silver Springs Elementary School. The one-lane tunnel may be configured as two-way (yield to the vehicle in the tunnel) or one-way based on a traffic and safety study. A signalized solution is not recommended as this may cause back-ups onto Main Street.

While this near-term configuration will cause some motor vehicles to take a longer route, providing safe passage to pedestrians and bicyclists is the paramount concern.

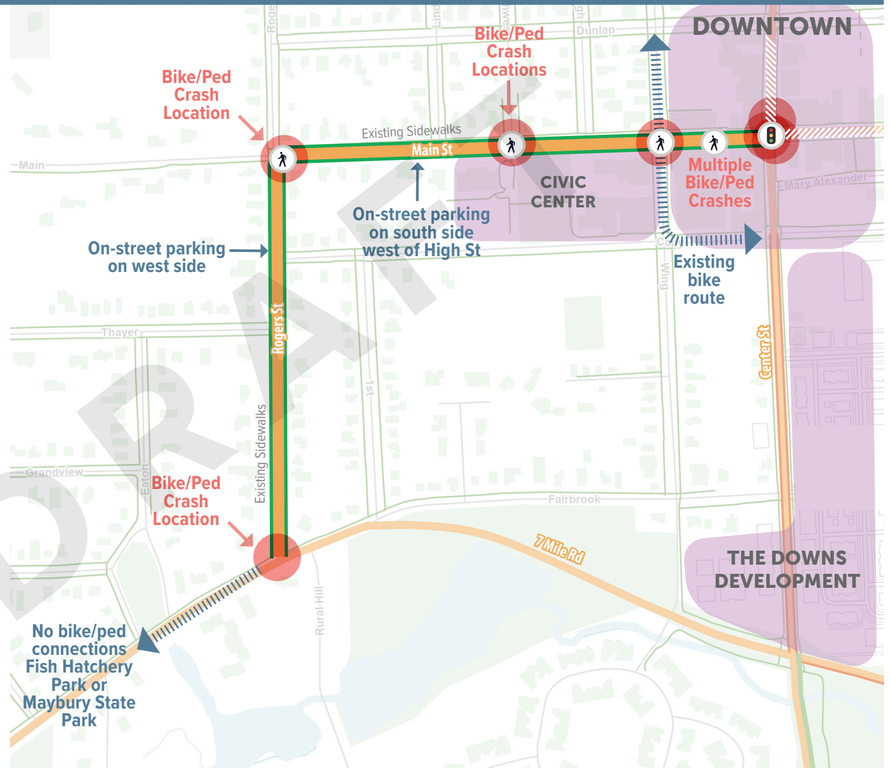
Long-term: provide separate non-motorized underpass adjacent to the Doheny Drive.

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W MAIN STREET / ROGERS STREET
7 Mile Road to Center Street







2013 Non-motorized Plan

Incomplete:

- Proposed crosswalk and intersection improvement at Roger's and 7 Mile Rd
- Share Lane Marking on Main from Wing St to Center Street
- Neighborhood by-pass on Main St

DRAFT

Existing Conditions

- Existing sidewalks on both sides of the road

- Marked mid-block crosswalk at West St, and between Wing and Center Street
- Bike/ped crashes occurred at crosswalk locations

- No existing shared use path

- No existing on-road bicycle facilities

- City Jurisdiction
- Land use transitions to residential west of the downtown and civic center
- Main Street: 2-lane road, 2,900 AADT
- Rogers: 2-lane road, 2,900 AADT
- Posted Speed 25 MPH

Community Input

- The closure of Main St east of Center St brought more traffic onto Wing St.
- Speeding is an issue on Main Street near Library.
- Cars and bikes running stop signs, especially in downtown.
- A lot of traffic at the intersection of E Main Street and S Rogers Street.
- Visibility is an issue at High Street and Main Street due to vegetation and parked cars.
- Mixed opinions on keeping Main Street closed to traffic. Concerns with ADA parking and access to business if streets stay closed.
- Less on-street parking to improve visibility.

Additional Observations:

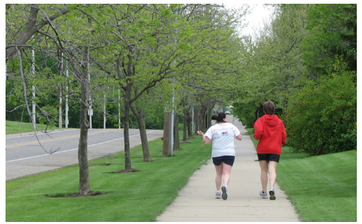
- The multiple entrances to the gas station at the corner of Rogers and 7 Mile Rd in combination with the offset intersection of Rogers St and Rural Hill St at 7 Mile make for a challenging intersection.
- When Main St is closed east of Center Street there is a growing conflict at the four-way stop of bicyclists and pedestrians going strait east-west and vehicles turning.
- When Main St is closed, the intersection of Wing St and Main St have many more potential conflicts between pedestrians and motorists and the intersection should be evaluated for crosswalk improvements.

DRAFT

RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide trees between sidewalk and street where they don't currently exist.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.

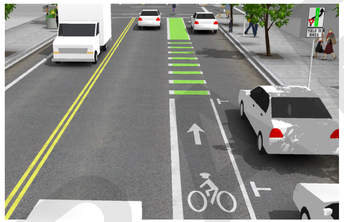


Consolidate access for gas station at Rodgers Street and 7 Mile Road by eliminating entrance closest to the corner.

BICYCLE TREATMENTS

Provide Bike Lane on West Main Street from Clement Road to Wing Street via removal of on-street parking.

Provide Color Bike Lane (skip dash lane markings with green pavement marking) across drop-offs in front of Northville Manor and the Community Center.



Designate Bike Boulevard on Rogers Street from Main Street to 7 Mile Road.

INTERSECTION TREATMENTS

Provide High Visibility Crosswalks on Main Street at Wing Street all-way stop.

Provide seasonal In-Street Yield to Pedestrian Signs on Main Street at existing high visibility crosswalk at alley.

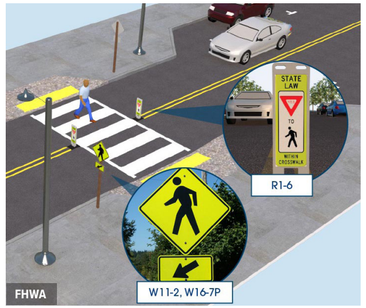


Paint concrete boarder of brick crosswalk at Main Street Intersection and prohibit all right-on-red turns.

Provide High Visibility Crosswalks on Rogers Street at 7 Mile all-way stop.

MID-BLOCK CROSSING TREATMENTS

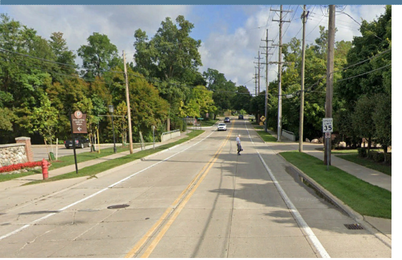
Provide High Visibility Crosswalks with seasonal In-Street Yield to Pedestrian Signs on both sides of Linden, West, and High Streets.



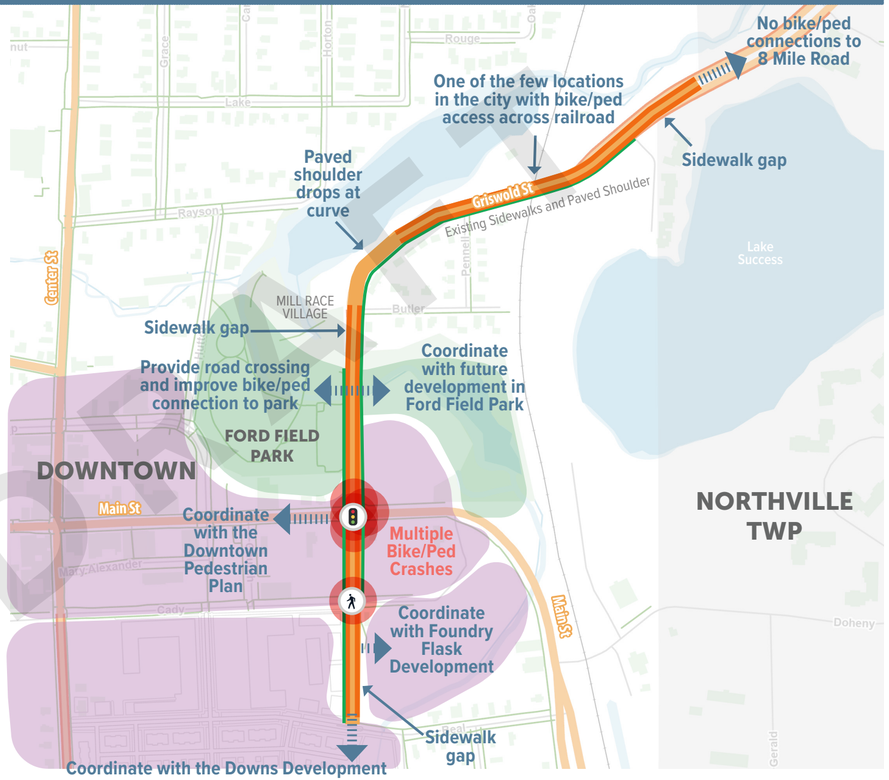
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Draft Northville Non-motorized Plan 2023

GRISWOLD STREET
Beal Street to Northville Twp







2013 Non-motorized Plan

Incomplete:

- Sidewalk gaps
- Bike lane consists of paved shoulders that drop at curve

Existing Conditions

- Sidewalk gap north of Ford Field Park on west side (all the way to 8 Mile)
- Sidewalk gap north of Lake Shore Lane on east side (all the way to 8 Mile)
- Sidewalk gap south of E Cady St on east side (all the way to Beal)

- Four-way stops and signalized intersection include crosswalks at Main and Cady
- Opportunity for crosswalk at Beal St with new developments

- No existing shared use path

- Paved shoulder north of Main Street (dropped in a few areas and at the curve)

- Wayne County jurisdiction
- This corridor passes through the east side of the downtown, Ford Field Park and Mill Race Village, with some residential neighborhoods.
- Beal to Main: 2-lane road with on-street parking
- North of Main : 2-lane road, 6,100 AADT (median north/east of railroad)
- Posted Speed 25 MPH

Community Input

- Griswold Street serves as a route for cyclists heading south from Novi to access Hines Park Trail.
- Would like to see a cross town bike connection to Hines Park Trail using Griswold Street.
- Provide direct connection from Griswold Street to Baseline Road / Cider Mill.
- Complete sidewalk gaps on Griswold Street.
- Baseline Road at Griswold St confusing, potential location for a roundabout.

Additional Observations:

- The intersection with Main St is one of the highest crash locations in the city.
- For south-bound motorists, the character of the roadway changes dramatically at Butler St just before Ford Field Park.

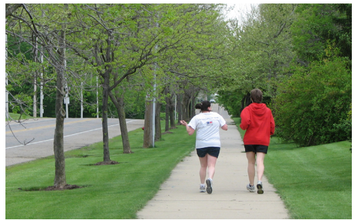
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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide Sidewalk on east side from Northville Place Drive to 8 Mile Road (coordinate with Township).

Provide trees between sidewalk and street where they don't currently exist.



BICYCLE TREATMENTS

Maintain Bike Lanes from Main Street to Butler extending all the way to the intersections.

Provide Bike Box for left turn onto Main Street.



Provide Buffered/Separated Bike Lanes from Butler Street to 8 Mile via lane narrowing (coordinate with the Township).

INTERSECTION TREATMENTS

Provide High Visibility Crosswalk with Leading Pedestrian Interval at Main Street and address accessibility issues.



MID-BLOCK CROSSING TREATMENTS

Provide High visibility Crosswalk with Rectangular Rapid Flash Beacon where river trail crosses between West and East Ford Field Park.

Provide High Visibility Crosswalk with Rectangular Rapid Flash Beacon at Baseline Road from proposed sidewalk to Living and Learning Enrichment Center (coordinate with LLEC and Township).



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Draft Northville Non-motorized Plan 2023

RIVER STREET
8 Mile Road to City of Novi

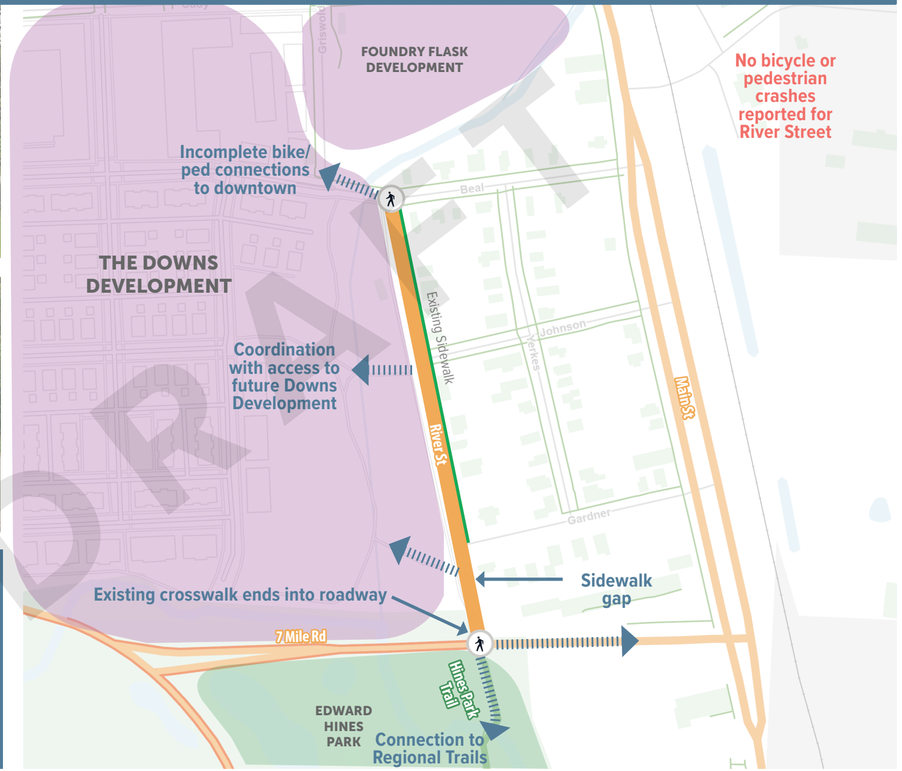




2013 Non-motorized Plan

Incomplete:

- Sidewalk gap
- Bike lanes
- Crosswalk at 7 Mile Roads dumps into the street



Existing Conditions

- No sidewalk on west side
- Sidewalk gap on east side between Gardner and W Seven Mile

- Marked crosswalk at 8 Mile Road to Hines Park Trail
- Crossing ramps at Beal

- No shared use paths

- No on-road bicycle facilities

- City/Village Jurisdiction
- 2-lane road, 20’ wide, no curbs
- Residential area

Community Input

- The Mobility Network Team identified this as one of the top “Action Sites” of concern (S7)
- The Mobility Network Team recommends on-street parallel parking and a shared-use pathway west of the trees.
- Need sidewalk on River St.
- Concern with cut through traffic in Beal town neighborhood with Downs Development. Would like to see traffic restricted at Beal Street Bridge (just north of River Street) and make this a bike/ped connection only.

Additional Observations:

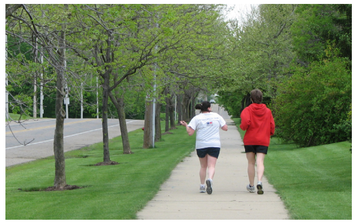
- With the potential for increased traffic from the Downs development traffic calming measures may be warranted .
- Evaluate if intersection and mid-block crosswalks should be enhanced given the projected increase in traffic volumes from the down development.

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide Sidewalk on east side from Gardner to 7 Mile Road.



SHARED BIKE AND PED TREATMENTS

Shared-Use Pathway on west side as per The Downs development agreement.



BICYCLE TREATMENTS

Bike Boulevard



Alternative: Shared Lane Marking (a lower order treatment)

Alterantive: Bike Lane (a higher order treatment)

INTERSECTION TREATMENTS

High Visibility Crosswalk at 7 Mile Road.



NOTES

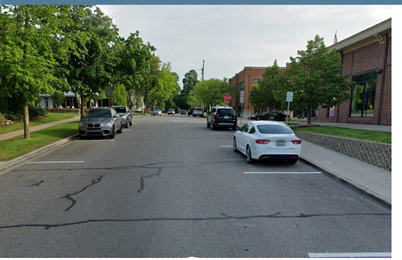
Explore options to provide Traffic Diverter (full, one-lane, or one-way) at Beal Street bridge over the river to reduce traffic from The Downs development to Main Street.



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Draft Northville Non-motorized Plan 2023

WING ST / CADY ST
Randolph to S Main Street

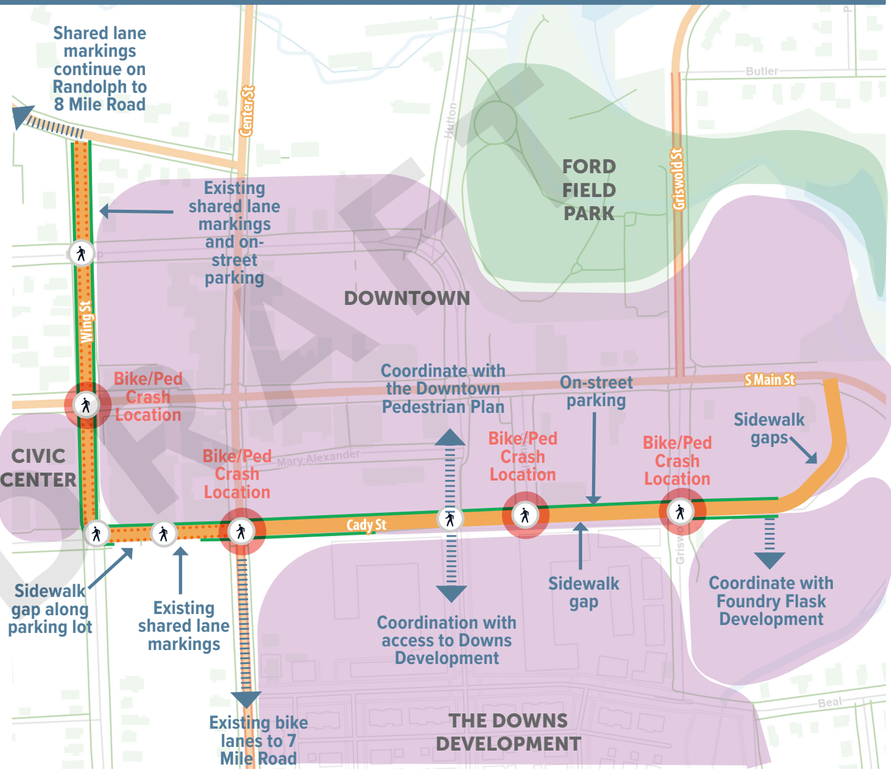




2013 Non-motorized Plan

Incomplete:

- Crosswalk and intersection improvements at Center St and Cady St



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Existing Conditions

- Complete sidewalks on north side of street
- Sidewalk gap on south of street between Wing St and Central St and west of Central St

- Four-way stops with marked crosswalk at Dunlap, Main, Cady/Wing and Center
- Mid-block crossing at Cady between Wing St and S Center St to parking lot
- Bike/ped crashes occurred at intersections

- No shared use paths

- Shared lane markings on Wing and Cady west of Central St

- City/Village Jurisdiction
- Wing: 2-lane road with on-street parking
- Cady St: 2-lane road with on-street parking
- Downtown streetscape transition to some residential areas

Community Input

- The Mobility Network Team recommends realignment of the Cady St Main St intersection to improve safety and traffic flow.
- The Mobility Network Team recommends that Cady Street should be evaluated for traffic capacity, parking, and pedestrian interface
- The Mobility Network Team notes motorists are not seeing pedestrians in the crosswalks.
- Conflicts with pedestrians crossing mid-block at post office stairway.
- Bicycle facilities must be considered carefully due to the need for traffic calming and a balanced approached to provide access to all users.
- Lots of bicycles use Wing Street.
- Need to include bike lanes on Cady Street with new Downs Development.
- Cars and bikes running stop signs, especially in downtown.
- Concerns with near-misses and crashes with pedestrians and bicyclists at intersection in the downtown (Dutton at N Center and Wing St were specified).
- Less street parking for visibility.

Additional Observations:

- The additional traffic on Wing St when Center St is closed may warrant traffic calming measures on Cady St and Wing Street all the way to 7 Mile Road.
- The additional traffic on Wing St and Cady St when Center St is closed along with the crash history may warrant upgrading the crosswalks to improve traffic safety.
- Increase pedestrian travel across Cady St created by the Downs and Foundry Flask developments may warrant upgraded crosswalks and traffic calming.
- The parking lot between S Center and Wing St presents challenges for bicyclists and pedestrians. The sidewalk on the south side abruptly end making it difficult and unsafe for pedestrians to navigate the area. Furthermore, bicycles face additional stress due to vehicles pulling into and out of parking aisles.

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RECOMMENDATIONS:

BICYCLE TREATMENTS

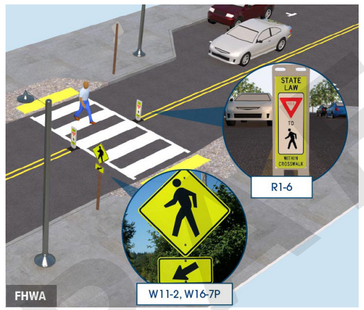
Provide Bike Lane on Wing Street from Main Street to Cady via removal of on-street parking.

Provide Bike Lane on Cady Street from Wing Street to Center Street via removal of on-street parking and removal of curb extensions on north side of Cady Street.



MID-BLOCK CROSSING TREATMENTS

Provide High Visibility Crosswalk with pedestrian lighting at existing crosswalk on Cady Street and maintain use of seasonal In-street Yield to Pedestrian Signs.



INTERSECTION TREATMENTS

Provide High Visibility Crosswalks at all existing and proposed all-way stop crosswalks throughout The Downs development.

Provide High Visibility Crosswalks at Cady Street and Center Street and eliminate right-on-red turns.



WING STREET SOUTH OF CADY

Wing Street, located to the south of Cady Street, experiences heightened traffic flow when Center Street is closed in the downtown area. Implementing specific bicycle treatments could assist in managing this increased cut-through traffic. One approach is to remove on-street parking and establish Bike Lanes, which could help narrow the 32-foot wide roadway. However, these lanes, approximately 7 feet and 6 inches wide including the gutter, might frequently be obstructed by parked vehicles.

An alternative solution involves placing a diverter just north of Wing Court. The diverter could be designed as a complete blockage, a one-way passage, or a one-lane option. Depending on the chosen configuration, this approach would discourage or even eliminate cut-through traffic, rendering the street more appealing for bicyclists.

It's important to note that these options are not imperative for the proposed non-motorized network. Additionally, the inclusion of these alternatives would not negate the necessity for bike lanes on Center Street, which is situated one block eastward.

NOTES

Removal of curb extension on north side of West Cady at Center Street will help with road alignment.

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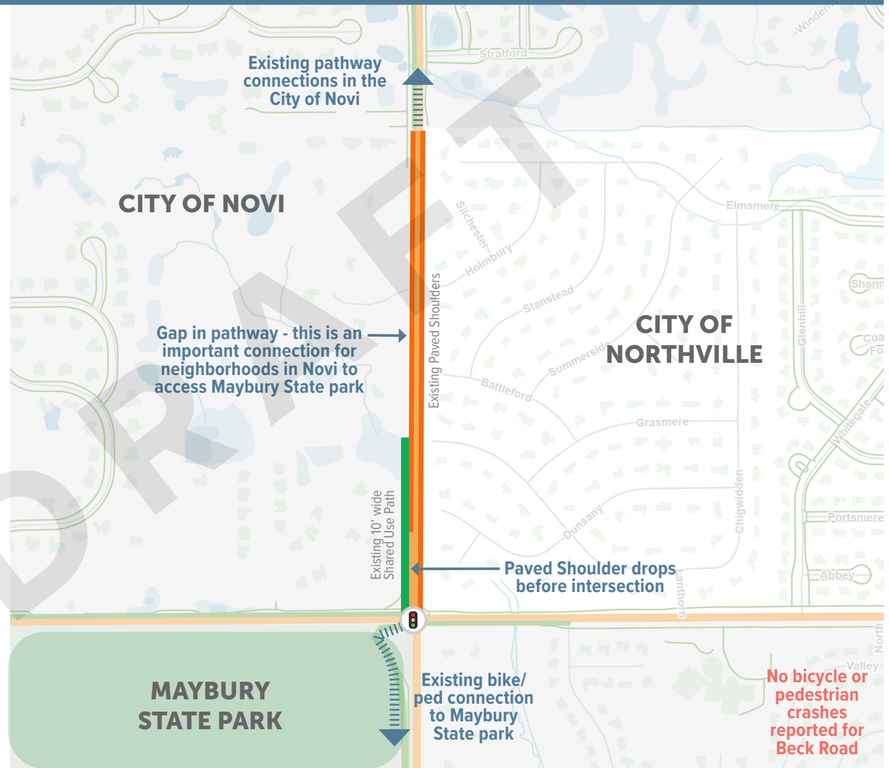
BECK ROAD
8 Mile Road to City of Novi





2013 Non-motorized Plan

- No recommendations



Existing Conditions

- Existing segment of 8’ wide pathway on west side (City of Novi)
- No pathway/sidewalk on east side

- Signalized intersection include crosswalks at 8 Mile Rd

- Existing segment of 8’ wide pathway on west side (City of Novi)

- Existing Paved shoulder that drops for turn-lane at 8 Mile Road

- City/Village Jurisdiction
- Residential area
- 2-lane road, 18,800 AADT
- 40 MPH speed limit

Community Input

- Signal at Beck and 8 Mile Road does not stop all lanes and is dangerous when crossing.
- Do not widen Beck Road.

Additional Observations:

- The City of Northville is bounded by a short segment of Beck Road.
- This segment of road feels rural with very little fronting on the roadway.
- Beck Road Improvement Project, “Beck to the Future” may impact future character of this corridor.

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RECOMMENDATIONS:

SHARED BIKE AND PED TREATMENTS

Provide Shared-Use Path on east side from 8 Mile Road to city limits with spur paths connecting to dead end roads in neighborhood to the east.



Provide a landscaped rest area with a bench spaced about 1/3 mile.



INTERSECTION TREATMENTS

Provide High Visibility Crosswalks with Leading Pedestrian Intervals.

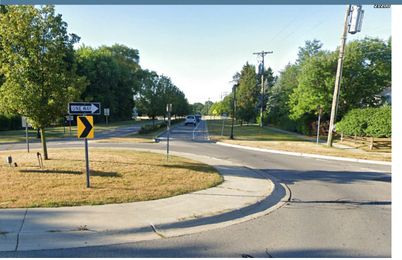


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TAFT ROAD
8 Mile Road to City of Novi

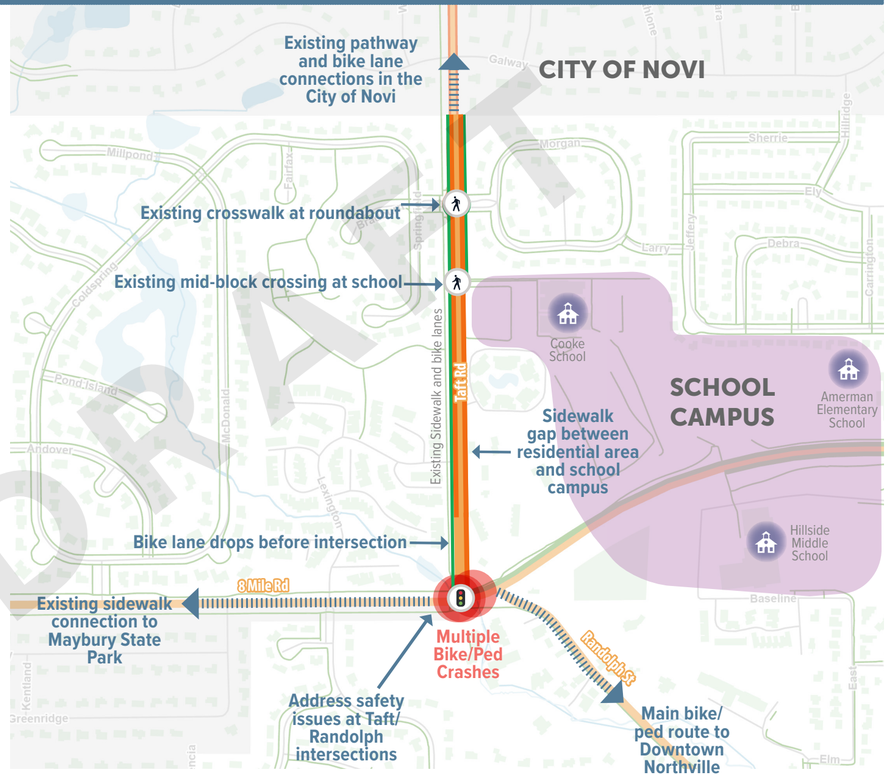




2013 Non-motorized Plan

Incomplete:

- South bound bike lane dropped at for 8 Mile right-turn lane
- Sidewalk gaps on east side



Existing Conditions

- Continuous sidewalk on west side
- Short segment of sidewalk between Cooke School and Morgan Blvd

- Crosswalk at Morgan Blvd Roundabout
- Mid-block crossing island at Cooke School

- No shared use paths

- Marked bike lanes (south bound bike lane dropped for 8 Mile right-turn lane)

- City/Village Jurisdiction
- Primarily residential area with access to school campus
- 2-lane road, 6,900 AADT
- Posted Speed 25 MPH

Community Input

- A lot of walkers from the North Lexington Condominiums at corner of 8 Mile Road and Taft.
- Taft and 8 Mile a dangerous intersection to cross the road.
- Improve intersection at Taft and complete sidewalk gaps along 8 Mile between Randolph St and Hillside Middle School for students walking to school.

Additional Observations:

- This is one of the main points of entry for people walking or bicycling from Novi to downtown Northville.
- The offset of Taft Rd and Randolph St at 8 Mile Rd in combination with the multiple entrances for the gas station make this a challenging intersection for all users as indicated by the number of crashes.

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RECOMMENDATIONS:

PEDESTRIAN TREATMENTS

Provide Sidewalk on east side from school to 8 Mile Road.

Consolidate access to gas station at corner of 8 Mile by eliminating the two entrances closest to 8 Mile Road.

Provide trees between sidewalk and street where they don't currently exist.

Provide a landscaped rest area with a bench spaced about 1/3 mile apart on each side.



BICYCLE TREATMENTS

Maintain existing Bike Lanes.

Provide Combined Bike Lane / Turn Lane with Colored Bike Lane (skip dash) where designated right-turn lane exists.



INTERSECTION TREATMENTS

Provide High Visibility Crosswalks on both sides of intersection with Leading Pedestrian Interval and Protected Left-turn Phase.



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NOVI ROAD
8 Mile Road to City of Novi

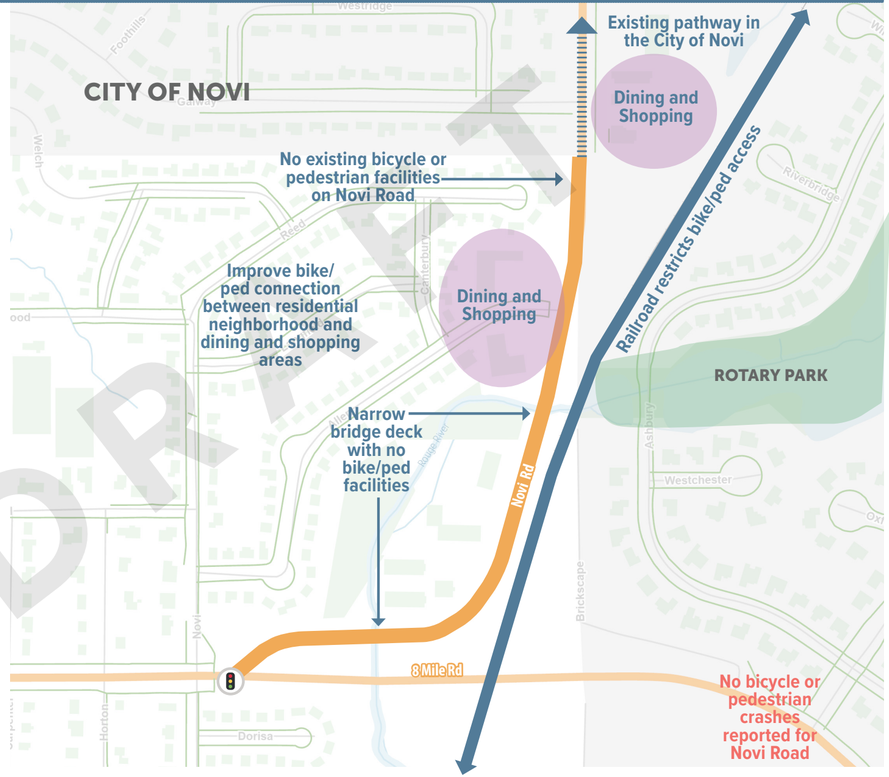




2013 Non-motorized Plan

Incomplete:

- South bound bike lane dropped at for 8 Mile right-turn lane
- Sidewalk gaps on east side



Existing Conditions

- No sidewalks
- Signalized intersection with crosswalk at 8 Mile Road
- No shared use paths
- No on-road bicycle facilities
- Oakland County Jurisdiction
- 2-lane road, 13,300 AADT
- Narrow bridge deck
- Curves
- Residential area with some dining and shopping
- Posted Speed 40 MPH

Community Input

- Complete sidewalk gaps along Novi Road.
- Improve pedestrian access to Guernsey Dairy. Students currently cross Novi Road that lacks sidewalks and crosswalks. Nearby residents jump the railroad to access the Dairy Store from the east.

Additional Observations:

- There is no bicycle or pedestrian access to Tree Tops Apartments or Guernsey Farms Dairy.

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RECOMMENDATIONS:

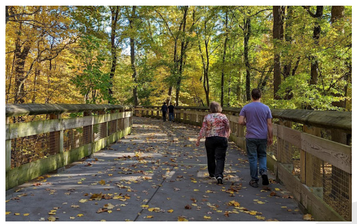
SHARED BIKE AND PED TREATMENTS

Provide Shared-Use Path on west side via new construction.

Provide short segment of sidewalk from Tree Tops entrance to proposed crosswalk.

Near-term: narrow the pathway to the existing walkway at bridge and provide barrier between walkway and roadway.

Long-term: provide pedestrian bridge over the river.



Provide a landscaped rest area with a bench spaced about 1/3 mile apart.

MID-BLOCK CROSSING TREATMENTS

High Visibility Crosswalk with Rectangular Rapid Flash Beacons at Allen Street and just north of the Tree Tops entrance.



INTERSECTION TREATMENTS

Near-term: High Visibility Crosswalks at 8 Mile Road with Leading Pedestrian Interval.



Long-term: bring Novi Road perpendicular to 8 Mile Road and remove free-flow north-bound lane or evaluate feasibility of roundabout.

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