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Figure 1. Mt. Healthy City Park Walking Path

# **EXECUTIVE SUMMARY**





# **EXECUTIVE SUMMARY**

## INTRODUCTION

The city of Mt. Healthy, Hamilton County Public Health, and Hamilton County Planning and Development collaborated on the development of the Mt. Healthy Active Transportation Plan (ATP) with support from Toole Design. The Ohio Department of Transportation (ODOT) and the Ohio Department of Health (ODH) funded the planning process. This chapter describes the planning process, defines active transportation, provides an overview of proposed projects, and highlights priority projects.

# WHAT IS ACTIVE TRANSPORTATION AND WHY IS IT IMPORTANT?

"Active Transportation" is an umbrella term for all the ways people can get around without using a motorized vehicle – walking or biking, using mobility assistance devices (such as wheelchairs and scooters), skating or skateboarding, and more. In short, active transportation is human-powered travel. Active Transportation represents fundamental transportation modes for many Ohioans to access transit, work, school, retail stores, or any number of destinations in urban, suburban, and rural settings. Active transportation can provide many community benefits beyond personal mobility, such as improved public health, economic development, greater quality of life, and enhanced environmental quality.

Active transportation planning involves community engagement specific to the needs of people who walk and bicycle and outlines the vision, goals, and strategies needed to support safe, convenient, and accessible active transportation options. It is important and beneficial to meet the needs of people walking and biking by planning for and directing investments in infrastructure and programs that support active transportation options.

# **Benefits of Active Transportation**

#### **Physical Health**

Increased opportunities for recreation and destination-oriented trips using active modes of travel are key to increasing daily physical activity and reducing the risk of developing preventable, chronic diseases.

#### Mental Health

Physical activity reduces depression, can improve the quality of sleep, and has been shown to improve cognitive function for older adults.<sup>1</sup> Active transportation can also improve social conditions in communities, which contributes to positive mental well-being among residents.

#### **Economic Development**

There is broad consensus across the country, and in Ohio, that investing in active transportation produces a positive return on investment for host communities. This is especially true when it comes to trails, which serve as major regional attractions for recreational riders.

#### **Quality of Life**

Comfortable and accessible options for bicycling and walking provide a host of quality-of-life benefits. They increase the number of travel options for everyone and can lead to greater independence for older residents, young people, and others who cannot or choose not to drive. Providing a high-quality active transportation network is especially important for the mobility of community members who do not have full access to a vehicle.

#### **Environmental Quality**

Shifting to bicycling and walking trips and concentrating development in dense walkable and bikeable communities can reduce transportation-based emissions and sprawling land use that impacts the natural environment.<sup>2</sup>

- 1. U.S. Department of Health and Human Services. 2008 PHYSICAL ACTIVITY GUIDELINES FOR AMERICANS. Washington, DC: U.S. Dept of Health and Human Services; 2008. http://health.gov/paguidelines/pdf/paguide.pdf
- 2. Federal Highway Administration, National Bicycling and Walking Study, "Case Study No. 15 The Environmental Benefits Of Bicycling And Walking," 1993 http://safety.fhwa.dot.gov/ped\_bike/docs/ case15.pdf

# PROJECT TIMELINE

The Active Transportation Plan (ATP) was created under the leadership of a steering committee which ensured that it represented the variety of interests and stakeholders in Mt. Healthy. The process of developing the ATP began with an assessment of existing conditions and a review of other relevant plans and studies. Public input and technical analysis provided a foundation for proposed projects and prioritization of those recommendations. The final chapter includes guidance for implementation (see Figure 2 for a project timeline). This document summarizes the findings of the planning process and is organized into the following sections:

- » Executive Summary
- » Vision and Goals
- » Community Engagement
- » Existing Conditions
- » Proposed Projects and Programs
- » Priority Projects
- » Implementation Plan

Vision and Goals	Community Engagement	Existing Conditions	Proposed Projects and Programs	Priority Projects	Implementation Plan
August 2022: Steering Committee established in Mt. Healthy  May 2023: Vision and goals for the Active Transportation Plan finalized	May 2023: Tikkun Farm Free Market Event Community Mapping Activity  March 2024: Mt. Healthy WeTHRIVE! team mapping exercise	April - August 2023: Initial existing infrastructure inventory  May - June 2024: Existing inventory walk audit and mapping	March 2024: Toole Design project recommendations  June 2024: Identification of demonstration project locations and material  July 2024: Demonstration Project application submission	April - June 2024: Developed and conducted project prioritization ranking activity with steering committee	October 2024: Present Active Transportation Plan to Mt. Healthy Council  Plan adoption by council  Determine funding sources for selected maintenance, monitoring, and implementation strategies

Figure 2. Project Timeline

## VISION AND GOALS

#### VISION

Walking and bicycling in Mt. Healthy will be a safe, convenient, accessible, and sustainable transportation option for everyone.



#### **EQUITY**

Ensure the system accommodates users of all ages, abilities, transportation methods, and incomes.



#### UTILIZATION

Increase walking and biking usage, and opportunities for public transportation connections.



#### CONNECTIVITY

Promote comfortable and continuous facilities that connect people to major destinations.



#### SAFETY

Reduce bicyclist and pedestrian injuries and fatalities.



#### **CLIMATE SUSTAINABILITY**

Ensure the system positively impacts the social and environmental health of the community.



#### **PRESERVATION**

Ensure critical existing infrastructure is in a state of good repair and does not disrupt the natural landscape.

Figure 3. City of Mt. Healthy ATP Vision and Goals

## **ENGAGEMENT EFFORTS**

#### KEY TAKEAWAYS

The Mt. Healthy Steering Committee collected community input through several strategies including conducting a mapping activity at the Tikkun Farms Free Market Event, at WeTHRIVE! community team meetings, and with student volunteers at Tikkun Farms. Early engagement identified key barriers to walking and biking, which defined areas of focus for the planning process. These focus areas included improving internal and external walkability and bike-ability to Mt. Healthy High School, Mt. Healthy City Pool, public parks, Tikkun Farms, and local businesses, as well as enhancing connections to surrounding communities all while ensuring pedestrian safety. See the Community Engagement section for a summary of all engagement efforts.

### **EXISTING CONDITIONS**

#### **KEY TAKEAWAYS**

The Mt. Healthy Steering Committee completed an existing conditions analysis to understand the current transportation system and where improvements could be made for people walking and biking. In addition, the steering committee reviewed traffic volume and speed data, along with ODOT's Demand and Needs Analyses, which pinpointed areas with significant potential for biking and walking. Key areas for potential projects and interventions to increase access for walkers and cyclists in Mt Healthy include local alleyways, Compton Rd, Kinney Ave, Hamilton Ave, Perry St, and Harrison Ave. See the Existing Conditions section for a summary of all analyses.

# PROPOSED PROJECTS AND PROGRAMS

The existing conditions analysis, public input, and steering committee meetings led to the final active transportation network. Infrastructure recommendations include adding and/or improving:

- » 5.8 miles of sidewalks,
- » 3.58 miles of shared-use paths (local alleyways)
- » Improvements to 8 intersections.
- » Improvements to all Metro bus stop facilities in Mt. Healthy

The plan also proposes establishing supportive programs such as educational campaigns, encouragement programs, policies, and school-related programs. See Chapter 5 for details on the proposed bicycle and pedestrian projects and supportive programs.

# HIGHLIGHT PRIORITY PROJECT(S)

A prioritization process that included input from the community identified projects that should be implemented in the short term. Top projects included:

#### Crossing Enhancements

o At Mt. Healthy High School entrance

- Extend the crosswalk countdown timer from 15 seconds.
- Install audible pedestrian crossing signals
- Enhance vehicle awareness of crosswalk
- o Along Hamilton Ave
  - Add additional crosswalks near Metro bus stops
- Along Compton St.
  - Enhance vehicle awareness of crosswalks, including those with rectangular rapidflashing beacons (RRFB)
  - Add additional crosswalks near Metro bus stops

#### **Bus stop Improvements**

o Install shelters or benches at all Metro bus stops

#### > Alleyway Repairs

- o Repurpose local alleyways for bike/walk paths
- o Install lighting in alleyways

#### > Sidewalk Repairs

o Along Madison Ave, Elizabeth St, and Hamilton Ave

# VISION AND GOALS





# VISION AND GOALS

# **COMMUNITY VISION STATEMENT**

Walking and bicycling in Mt. Healthy will be a safe, convenient, accessible, and sustainable transportation option for everyone.

# **COMMUNITY GOALS**

- » Safety: Reduce pedestrian and cyclist injuries and fatalities.
- » Connectivity: Promote comfortable and continuous facilities that connect people to major destinations.
- » **Utilization**: Increase walking and bicycling usage.
- **Preservation**: Ensure critical existing infrastructure is in a state of good repair and does not disrupt the natural landscape.
- **Equity and Accessibility**: Ensure the system accommodates users of all ages, abilities, transportation methods, and incomes.
- » Climate Sustainability: Ensure the system positively impacts the social and environmental health of the community.

# **COMMUNITY ENGAGEMENT**





# **COMMUNITY ENGAGEMENT**

Community engagement was an essential tool in the plan development process. Involving the public builds trust in the ATP and improves the overall quality of the findings. The project team used several strategies to collect public input including Mt. Healthy Steering Committee meetings, community mapping events, and mapping exercises in collaboration with Toole Design.

# **ENGAGEMENT TIMELINE (MILESTONE TOUCHPOINTS)**



## **STRATEGIES**

#### **Steering Committee Meetings**

The Steering Committee, comprised of Mt. Healthy City staff, public health officials, religious organizations, school staff, library staff, and businesses, guided the development of the Mt. Healthy ATP. Steering Committee members are listed under Acknowledgments at the beginning of this document. The Steering Committee met 18 times over the course of the plan development.

### **Public Pop-Up Events**

Pop-up events have a broader reach than conventional public meetings. By leveraging existing events or popular destinations, the project team reached a wide cross-section of Mt. Healthy community members, especially those who might not want to or be able to participate in online or traditional forms of engagement.

Hamilton County Public Health, in collaboration with Blume Community Partners and Hamilton County Planning + Development, first conducted engagement activities with participants of the Tikkun Farm Free Market and then with student volunteers at Tikkun Farm in Mt. Healthy. Engagement consisted of a mapping activity that encouraged participants to identify specific geographic locations within Mt. Healthy that either had an issue that needed to be addressed or represented a successful "intervention" in the local built environment. Participants were also asked to share suggestions for the community that they believed would create positive change within Mt. Healthy. Analysis following the activity focused on summarizing major community concerns and strengths that emerged from discussion and comments received from participants. It also involved digitizing the final map created by the facilitators and participants for future reference (Figure 4).

The purpose of the pop-up events was two-fold: to gather information about existing walking and bicycling conditions during the first half of the project and to share preliminary recommendations with the public during the second half.

# **KEY TAKEAWAYS**

The public meetings and community events helped determine popular destinations, barriers to walking and biking in Mt. Healthy, and key streets that people are currently using to bike or walk.

#### **Destinations**

- » **Grocery Store** Kroger (7132 Hamilton Ave, Cincinnati, OH 45231)
- » Public Schools Mt. Healthy High School, Mt. Healthy South Elementary School, Mt. Healthy North Elementary School
- » Community Green Spaces Mt. Healthy City Park, Heritage Park, Forest Avenue Wetland Park
- » Religious organizations Trinity Lutheran Church, Church of the Assumption, Emmanuel Temple Apostolic Church
- » Healthcare Centers ECO Health Care Center, Mt. Healthy Family Practice, Women's Centers of Ohio
- » Library Mt. Healthy Branch Library

#### Top barriers to walking

- » High vehicle speeds
- » Lack of crosswalks on main roads
- » Lack of crosswalks near bus stops
- » Drivers not obeying traffic laws
- » Lack of dedicated space for pedestrians
- » Safety at crossings

#### Top barriers to biking

- » No bike lanes
- » Volume of traffic
- » High vehicle speeds
- » Lack of signage for bicyclists
- » No bicycle facilities
- » Drivers not obeying traffic laws
- » Safety at crossings

#### Streets currently serving as key routes for bicycling/walking

- » Hamilton Ave
- » Compton Rd
- » Adams Rd
- » Perry St
- » Harrison Ave

A draft network was presented in a steering committee meeting. Feedback from the public led to the addition of several projects including:

- » Crossing enhancements
- » Sidewalk addition/maintenance
- » Bike facilities
- » Traffic calming measures

The final public meeting and survey allowed residents to vote on which projects they would like to see implemented first. Top identified projects included:

- » Crosswalk improvements near Mt. Healthy High School
- » Crosswalk improvements along Compton Rd and Perry St
- » Bus shelter improvements



Figure 4. Mt. Healthy Tikkun Farm Engagement Map

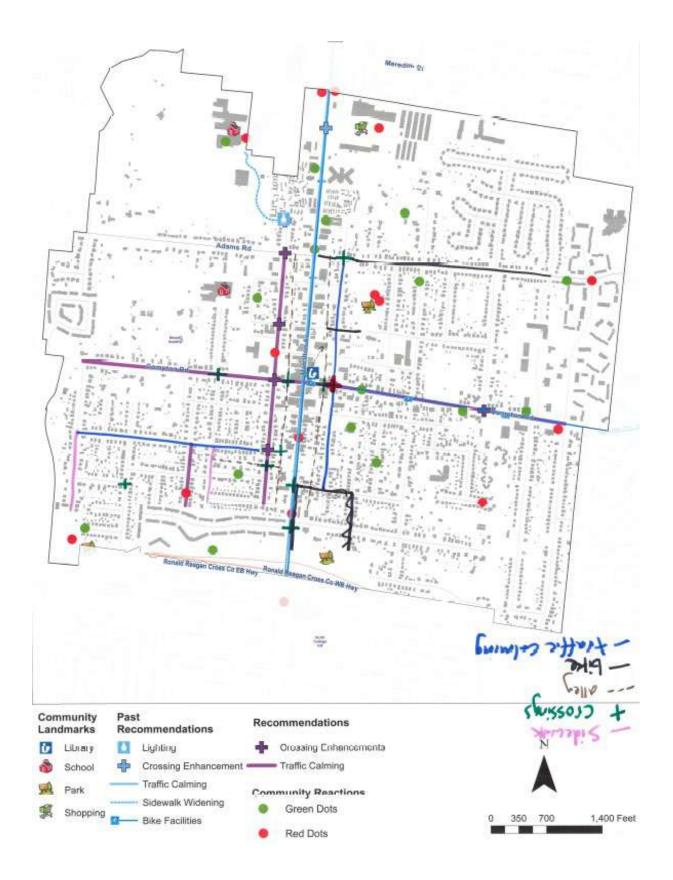


Figure 5. Mt. Healthy ATP Steering Committee Mapping Exercise (Group #1)

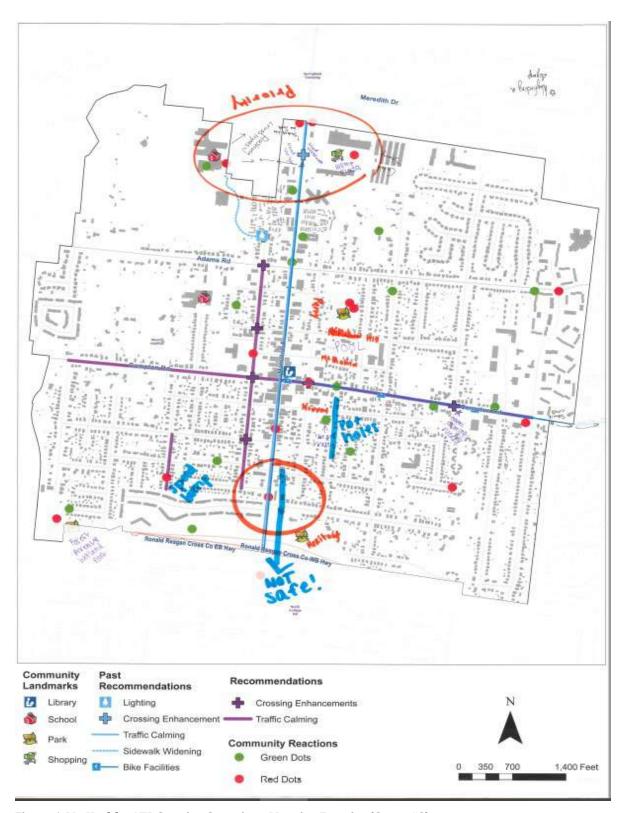


Figure 6. Mt. Healthy ATP Steering Committee Mapping Exercise (Group #2)

# **EXISTING CONDITIONS**





# **EXISTING CONDITIONS**

This chapter examines several elements of Mt. Healthy's transportation system. It presents a demographic profile of Mt. Healthy and a plan and policy review summarizing existing active transportation and related efforts to date. The plan frames the current planning process as a logical next step in Mt. Healthy's active transportation evolution. This chapter also summarizes existing programs that support active transportation. A set of analyses that examines the active transportation system from various perspectives (e.g. equity, safety, connectivity) is also included.

# **DEMOGRAPHIC PROFILE**

Mt. Healthy was founded in 1817 as a small settlement called Mt. Pleasant, eventually incorporated as a village in 1893 and due to its still-growing population, became a city in 1951. It is a suburb of Cincinnati with a total population of 6,949. Today, Mt. Healthy strives to be a fiscally sound and stable city providing all its residents with a safe, viable, and clean environment, complemented by an excellent quality of life. The largest employment sectors are Health Care & Social Assistance (318 people), Manufacturing (154 people), and Professional, Scientific & Technical Services (126 people). The median household income is \$44,471 and the per capita income is \$28,033. The unemployment rate is 6%. The total poverty and child poverty rates are 17% and 37%, respectively. Mt. Healthy faces challenges related to economic struggles, infrastructure issues, public safety, housing, and transportation.

**Table 1. Mt. Healthy Demographics** 

	Category	Percent
Race	White, non-Hispanic	49%
	Multiracial, non-Hispanic	1%

	Category	Percent
	Black, non-Hispanic	47%
	Hispanic	2%
	Other race, non-Hispanic	1%
Age	<18	22%
	18-29	17%
	30-49	23%
	50-64	18%
	Above 65	20%
Car Ownership by	0	13%
Household	1	45%
	2	28%
	3+	14%
Commute Mode	Drove alone	80.2%
Share	Carpooled	9.9%
	Walked	2.4%
	Bicycled	0.7%
	Transit	2.4%
	Other/Work from Home	4.5%

# EXISTING PLANS, POLICIES, AND SUPPORTIVE PROGRAMS

This plan builds on prior plans and initiatives developed by entities within Mt. Healthy. It looks to these plans for existing conditions data, issue identification, and recommendation support.

**Table 2. Existing Plans and Policies** 

Plan/Policy	Lead Agency	Year Completed	Key Takeaways (what proposed projects/policies will impact the active transportation plan?)
Comprehensive Plan	City of Mt. Healthy	2007	Lays out a plan for a safe, walkable, environmentally sensitive community.
Recreation and Trails Plan	City of Mt. Healthy		Bike trail plan.
Safe Routes to School Plan	Hamilton County Public Health/Mt. Healthy City School District	2017	School transportation plan.
Complete Streets Policy	n/a		
Vision Zero Policy	n/a		
Bicycle and Pedestrian Development Regulations	City of Mt. Healthy		All new housing developments require sidewalks.
Street Revitalization Plan	City of Mt. Healthy/Urban Fast Forward	2021	Helps revitalize major thoroughfares to increase mobility and walkability within the community.

**Table 3. Existing Supportive Programs** 

Program Name	Program lead (organization)	Target Audience	Key Takeaways (how does this program support active transportation?)
Walk/Bike to	Mt. Healthy City	Mt.	Increase the number of students who walk and bike to school
School Days	School District	Healthy	
		Students	
Open Streets	n/a		
Trail/Bicycle	City of Mt.	Mt.	Trail maps being posted at local parks
Maps	Healthy	Healthy	
		residents	
Bicycle/Walk	n/a		
Friendly			
Community			
Slow Roll Ride	n/a		

# BASE MAP (EXISTING TRANSPORTATION SYSTEM)

### Accommodations for people walking

Throughout the city of Mt. Healthy, sidewalks are generally present. They are more common in the population dense parts of town, particularly near commercial areas. However, in most residential neighborhoods, sidewalks and streets are in poor condition and do not meet ADA requirements. This forces pedestrians to walk on the streets, which can be unsafe and not accessible for all. Additionally, there is often minimal space between the road and the sidewalk. Enhanced crossings, such as those with pedestrian signals or marked crosswalks, are limited. Some intersections along Compton Rd have these features, but as observed during the walk audit, drivers do not obey the crossing signals which poses a significant risk for pedestrians.

Another challenge walkers face in Mt. Healthy is the lack of signage for pedestrians, especially on high-traffic roads. Students often have trouble crossing the street to get to Mt. Healthy High School in more ways than one. For example, the crosswalk countdown is only a few seconds which does not allow enough time for large groups of students to get across during school hours and there is no signage for pedestrians at these crossings.

Overall, ensuring pedestrian safety when walking/biking includes a combination of improving existing infrastructure, implementing new pedestrian-friendly projects, and increasing awareness about pedestrian safety.

# Accommodations for people biking

Improvements can be made to ensure safe and accessible biking infrastructure in Mt. Healthy. Cyclists either ride on busy streets or sidewalks, as there are no dedicated bike lanes in the community. Additionally, there is a noticeable lack of bicycle signage. Key challenges include the high speed and volume of vehicular traffic and safety concerns at crosswalks. Another challenge for bicyclists is the lack of bike parking and bike facilities in the community.

#### **Public transit services**

Public transit services in Mt. Healthy include Southwest Ohio's fixed-route bus service, Metro, a non-profit, tax-funded public service provided by the Southwest Ohio Regional Transit Authority (SORTA). Metro buses run continuously throughout the day. Additionally, residents can take advantage of a newer ondemand transit option called <a href="MetroNow!">MetroNow!</a> This service offers coverage within a few miles of Mt. Healthy. Users can book rides in smaller vehicles via phone or app and drivers pick up riders within minutes at convenient locations for \$2.00.

# **EXISTING CONDITIONS**



Figure 7: Basemap #1 (Data collected from Mt. Healthy walk audit)



Figure 8: Basemap #2 (Data collected from Mt. Healthy walk audit)



Figure 9: Basemap #3 (Data collected from Mt. Healthy walk audit)

# **ANALYSES**

After mapping the existing transportation system, the project team performed several analyses to better understand the equity of the network, its connectivity, use of walking and bicycling facilities, safety, and infrastructure conditions. The following section provides a summary of each existing condition analysis.

# **EQUITY**

# Incorporating Equity in Active Transportation Planning

Active transportation options contribute to a more equitable transportation system by reducing barriers for people who do not use a motor vehicle. Many people do not drive because of ability, income, age, or a combination of these factors. The cost of owning and maintaining a vehicle can be a major burden, especially on low-income families. People without a vehicle need to access employment, school, grocery shopping, and a variety of other activities to fully participate in society. Transit, walking, and bicycling play a vital role in the overall transportation system by offering increased mobility, independence, and access to opportunities for people without vehicles.

National statistics point towards the need for equity in active transportation planning and design. Across the country and in Ohio, a disproportionate share of walking and bicycling fatalities occurs among communities of color, older adults, and low-income populations. Connected and accessible active transportation infrastructure for these groups results in better access to daily physical activity and improved quality of life.

1. Ohio Department of Transportation. (2020), Walk.Bike.Ohio Safety Analysis Reports.

<a href="https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/walkbikeohio/existing-future-conditions-analysis/safety-analysis-reports">https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/walkbikeohio/existing-future-conditions-analysis/safety-analysis-reports</a>

# **Equity Analysis**

As part of its statewide bicycle and pedestrian plan, Walk Bike Ohio, the Ohio Department of Transportation (ODOT) performed an Active Transportation need analysis for the entire state. It created a composite need score for every census tract in the state, with scores assigned based on the presence of non-white groups, youth, older adults, poverty, low educational attainment, limited English proficiency, and low motor vehicle access. Higher scores correspond to a higher presence of underserved groups and indicate a greater need to increase equitable outcomes. Additional data for Mt. Healthy was also analyzed, including prevalence of low life expectancy (Figure 10) and coronary heart disease (Figure 11). Both health concerns can be addressed by increasing physical activity levels in the community.

Areas of high need and high demand should be prioritized for bicycle and pedestrian improvements because residents in these areas likely rely more heavily on active transportation options for getting around. High demand areas and areas of high need in Mt. Healthy include local alleyways, crosswalks near Mt. Healthy High School, Compton Rd, bus shelters, and crossing conditions headed towards North College Hill. Areas with overlapping high demand and high need are key areas to invest in pedestrian and bicycle infrastructure including those listed.

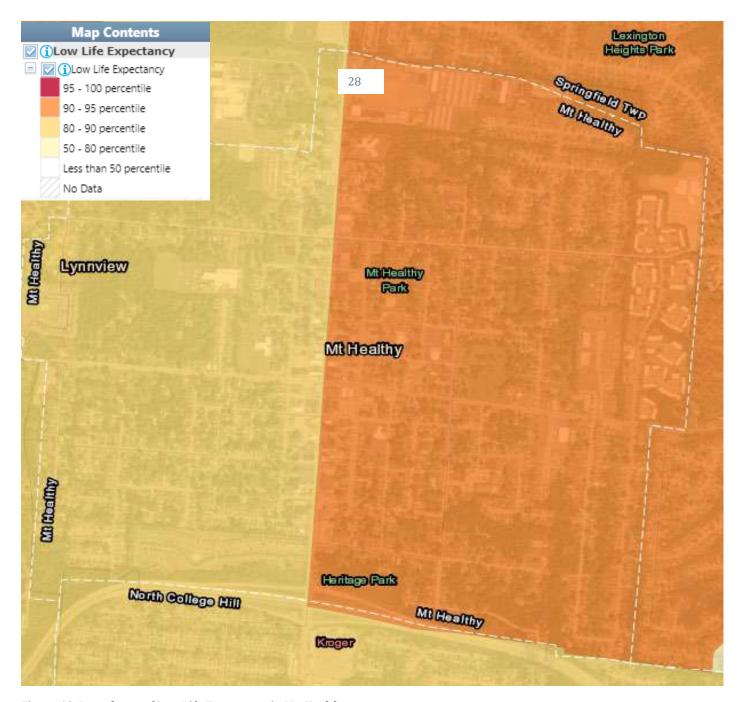


Figure 10. Prevalence of Low Life Expectancy in Mt. Healthy

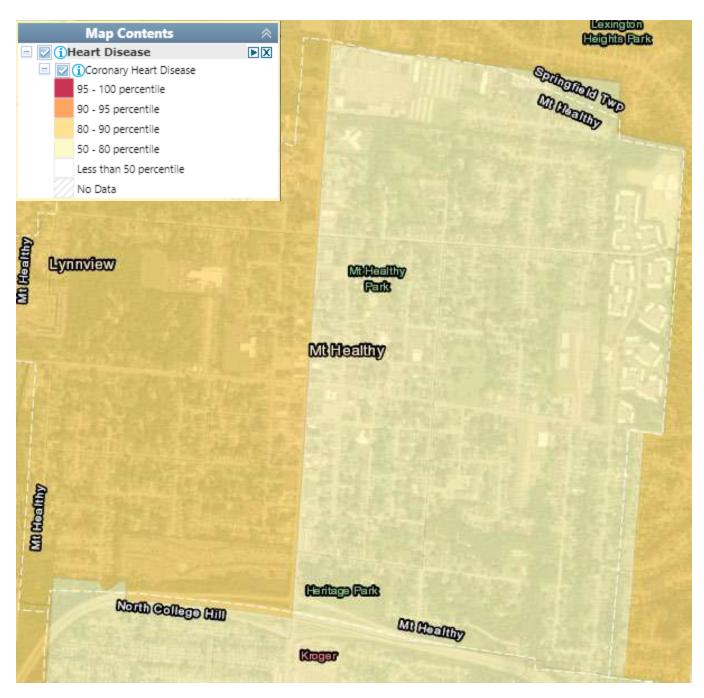


Figure 11. Prevalence of Coronary Heart Disease in Mt. Healthy

# **NETWORK UTILIZATION**

# Level of walking and bicycling activity in Mt. Healthy

Network utilization describes who is walking and bicycling, where, and how often. Several factors impact network usage, including land use and development patterns, the presence or absence of active transportation facilities, proximity of destinations, safety concerns, and socioeconomic needs. Understanding the level of walking and bicycling activity in Mt. Healthy provides an understanding of where people are already walking and bicycling and where there may be a lack of infrastructure due to low levels of walking and bicycling activity.

# Walking and bicycling activity

The project team used StreetLight to analyze levels of walking and bicycling and better understand where and when walking and bicycling activity is currently occurring within Mt. Healthy. Based on the analysis the following areas have high levels of walking and biking:

- » Walking activity:
  - o Hamilton Ave
  - Harrison Ave
  - Compton Rd
  - Harrison Ave
  - o Adams Rd
- » Bicycling activity:
  - o Hamilton Ave
  - o Harrison Ave
  - o Compton Rd
  - o Harrison Ave
  - o Adams Rd

#### **NETWORK CONNECTIVITY**

## Completeness of active transportation system

Active transportation facilities that connect people to jobs, schools, parks, and other destinations form a complete network. Filling in missing connections expands access and mobility for people walking and bicycling and provides multiple route options that accommodates people of all ages and abilities. Evaluating network connectivity provides an understanding of where gaps in the network exist and whether low comfort or high comfort walking and bicycling facilities exist.

# Pedestrian and bicycle facilities

The project team conducted a digital inventory of existing infrastructure including sidewalks, bike lanes, curb ramps, and marked crosswalks using Google Earth and OpenStreetMap. The inventory helped the team understand the completeness and connectedness of the current active transportation system.

Major gaps in the current network include:

- » Bicycle lanes
- » Frequency of crosswalks
- » Safety at crosswalks
- » Signage for pedestrians

Destinations currently not connected by walking or biking facilities include:

- » Tikkun Farms
- » Mt. Healthy City Park and Pool
- » Forest Avenue Wetland Park

## Gaps and generators mapping

A gap analysis examines physical breaks in an active transportation network, such as sidewalk gaps or missing connections between bicycle facilities as well as generators to biking and walking trips. Generators are places or factors that encourage biking or walking. It can also identify deficiencies in policy, planning, and programming that pose barriers to walking and bicycling. During the Mt. Healthy walk audit, attendees identified the following gaps and generators:

- » Gaps
  - Bicycle lanes

- Frequency of crosswalks
- Safety at crosswalks (Along Compton Rd & Hamilton Ave)
- Lack of signage for pedestrians
- » Generators

- o Mt. Healthy High School
- o Mt. Healthy Elementary School
- o Zero-vehicle households
- o Mt. Healthy Library
- o Heritage Park
- Forest Ave Wetland Park
- o Tikkun Farms
- o Mt. Healthy City Park & Pool

#### » Key takeaways:

- o Improve existing infrastructure to better accommodate walkers and bikers.
- o Increase driver awareness about pedestrian safety through education and enforcement.
- o Enhance crossings to make them more visible to drivers through painting or lighting.

### Connecting the dots mapping

Participants identified walking and bicycling routes that connect the generators identified in the *gaps and generators* mapping exercise. Routes are intended to overcome or avoid gaps and barriers. During the walk audit and Tikkun Farm Community Mapping event attendees identified the following critical routes:

- » Existing Routes:
  - Grocery Store
    - Hamilton Ave
  - Mt. Healthy High School
    - Hamilton Ave
  - o Mt. Healthy Library
    - Compton Rd & Hamilton Ave
  - o Parks
    - Heritage Park Hamilton Ave
    - Forest Ave Wetland Park Forest Ave
    - Mt. Healthy City Park McMakin Street between Perry St and Joseph Street
  - o Tikkun Farms
    - Adams > Elizabeth St.
- » Desired Routes:
  - Grocery Store
    - Kroger (7132 Hamilton Ave, Cincinnati, OH)
  - School

- Mt. Healthy High School
- Mt. Healthy South Elementary School
- Mt. Healthy North Elementary School
- Community Green Spaces
  - Heritage Park
  - Forest Ave Wetland Park
  - Mt. Healthy City Park

- o Religious Places of Worship
  - First Baptist Church of Mt Healthy
  - Church of the Assumption
  - Trinity Lutheran Church
  - Emmanuel Temple Apostolic Church
- o Health Care Centers
  - Mt. Healthy Family Practice,
  - Cincinnati Health Institute

#### » Key takeaways:

- o Repurpose local alleyways to create a safe and sustainable bike/walk path for pedestrians.
- Redirect pedestrians off main roads by identifying routes to key destinations through backroads and side streets.
- Enhance access to key destinations by adding ADA requirements at all parks, schools, and libraries.

## **SAFETY**

# Evaluating crash trends and patterns

Evaluating crash trends and patterns identifies where crashes are currently occurring and provides a better understanding of what factors may be contributing to crashes. Understanding these crashes can lead to projects that have the greatest likelihood of improving safety for pedestrians and bicyclists. These analyses are especially important because Ohio is not trending in the right direction for bicyclist and pedestrian safety.

# Crash analysis

Three years of bicycle and pedestrian crash data were reviewed and mapped using the Ohio-Kentucky-Indiana Regional Council of Governments GIS Bicycle and Pedestrian Crashes tool, ODOT Strategic Highway Safety Plan (SHSP), and Crash Data Reports from the Mt. Healthy Police Department. This exercise identified problem locations for people walking and bicycling. During the period reviewed (2022-2024), there were over 200 crashes involving bicyclists and pedestrians, some of which resulted in serious injuries and fatalities.

Concentrations of pedestrian crashes are located:

- » Hamilton Ave
- » Compton Rd
- » Harrison Ave

Concentrations of bicycle crashes are located:

- » Hamilton Ave (on the border of Mt. Healthy and North College Hill)
- » Compton Rd

#### LIVABILITY

#### Understanding Mt. Healthy's quality of life

Livability is the sum of the factors that add up to a community's quality of life. Factors include the natural and built environments, social conditions, economic conditions, and public health. Ohio is one of the least healthy states in the country, falling behind on physical activity. This is due in part to the lack of adequate options for walking and bicycling for both transportation and physical activity. In addition, auto-oriented lifestyles increase emissions and harm air quality. Finally, transportation costs can be a burden to Ohioans; replacing automobile trips with walking and bicycling trips creates more economic stability for families. Active transportation networks provide greater choices and positively impact quality of life.

#### Community Health Assessment (CHA)

Hamilton County Public Health completed Mt. Healthy's most recent CHA in 2017. The CHA evaluated health status and issues impacting Mt. Healthy, outlining the following strategies that address health priorities related to active transportation.

#### Strategies:

- » Identify problem intersections and install traffic calming measures to prevent motor vehicle accidents.
- » Post 'Share the Road' signs throughout the community for increased bicycle visibility.
- » Increase safe physical activity opportunities for children and adults.
- » Continue working on Safe Routes to School.

» Repair sidewalks throughout the city as needed.

#### **PRESERVATION**

#### Mt. Healthy transportation system's state of repair

Local governments are responsible for maintaining their transportation networks, including walkways and bikeways. The lack of maintenance dollars and resources is one of the primary barriers for agencies wanting to build active transportation facilities. A proactive approach to preservation starts with understanding the transportation system's current state of repair and having a clear division of roles and responsibilities for maintaining what facilities and how often.

#### **Asset condition inventory**

The project team conducted an asset condition inventory to catalog the presence and condition of bicycle and pedestrian networks in Mt. Healthy and prioritize investments accordingly. The team performed a field and digital inventory to collect the following data: surface condition, facility width, presence and condition of protective features on bike lanes, presence and condition of median refuge islands at crosswalk locations, maintenance information, etc.

# PROPOSED PROJECTS AND PROGRAMS





### PROPOSED PROJECTS AND PROGRAMS

This plan makes recommendations that promote and support active transportation through a combination of infrastructure projects, policies, and programs. Infrastructure recommendations refer to physical, built projects that will change how roadways are configured to provide space for all users. Policy and program recommendations aim to re-prioritize walking and bicycling, change the culture around active transportation, and help increase its use through engagement, education, encouragement, and evaluation.

#### INFRASTRUCTURE PROJECTS

The final network is based on the existing conditions analyses, steering committee meetings, and public input. The network includes critical connections to key destinations in the community. The network also identifies multiple intersections that should be improved to make walking and biking safer along major roads, such as Hamilton Rd and Compton. See Table 4 for a complete list of all proposed projects with descriptions.



Figure 12. Proposed Projects by Miles



**Table 4. Project Recommendations** 

Project ID	Location	Extents	Facility Type	Description	Potential Funding Sources
1	Werner Ave		Sidewalk	Repair sidewalks and fill gaps along Werner Ave	Local funding or other leveraged opportunities
2	Forest Ave		Sidewalk	Extend the sidewalk south along Forest Ave.	Local funding or other leveraged opportunities
3	Local Alley		Alley bicycle route	Consider bicycle routes in alleys. Consideration would need to be taken to ensure adequate pavement conditions, visibility and crossings and intersections, lighting, and continued trash collection and garage access.	Transportation Alternative Program
4	Hill Ave	City Park	Bike Facility	Provide a bicycle facility connecting the dead ends of Hill Ave through City Park.	Transportation Alternative Program
5	Adams Rd	Hamilton Ave/Clover nook Ave	Bike Facility	Provide a bicycle facility along Adams Rd from Hamilton Ave to Clovernook Ave.	Transportation Alternative Program
6	Stevens Ave		Traffic Calming + Crossings	Calm traffic and provide safe crossings of Stevens Ave.	Transportation Alternative Program
7	Adams Rd	Eastern Alley	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
8	Hill Ave & Lincoln Ave	Lincoln Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
9	Park Ave	Madison Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
10	Hamilton Ave	St Clair Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
11	Hamilton Ave	Madison Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program

Project ID	Location	Extents	Facility Type	Description	Potential Funding Sources
12	Compton Rd	Werner Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
13	Harrison Ave		Traffic Calming + Crossings	Calm traffic and provide safe crossings	Transportation Alternative Program
14	Compton Rd	Perry St	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
15	Mt. Healthy High School		Address school circulation	Improve vehicle circulation at Mt Healthy High School to reduce potential conflicts with people walking and biking.	Safe Routes to School
16	Compton Rd		Traffic Calming + Crossings	Calm traffic and provide safe crossings	Transportation Alternative Program
17	Compton Rd	Steward Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
18	Maple Ave		Traffic Calming + Crossings	Calm traffic and provide safe crossings	Transportation Alternative Program
19	Harrison Ave	Stevens Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
20	Compton Rd	Harrison Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
21	Adams Rd	Harrison Ave	Crossing Enhancements	Add crossing enhancements	Highway Safety Improvement Program
22	Harrison Ave	Hill Ave	Crossing Enhancements	Add crossing enhancements.	Highway Safety Improvement Program
23	Southeast School Drive		Lighting	Add lighting	Safe Routes to School

Project ID	Location	Extents	Facility Type	Description	Potential Funding Sources
24	Harrison Ave		Crossing Enhancements	Add a ladder-style crosswalk across the southeast school drive at Harrison Avenue. ADA-compliant curb ramps should be included at the ends of the crosswalk.	Safe Routes to School
25	Hamilton Ave		Traffic Calming + Crossings	Calm traffic along Hamilton Ave and provide safe crossings. This might be achieved through a road diet or other measures. Upcoming Bus Rapid Transit initiatives will influence final design possibilities.	Transportation Alternative Program
26	Hamilton Ave		Bike Facility	Provide a bicycle facility	Transportation Alternative Program
27	North, East, and West legs of the school drive	Hamilton Avenue/US 127 intersection	Crossing Enhancements	Paint ladder-style crosswalks across the north, east, and west legs of the school drive and Hamilton Avenue/US 127 intersection. ADAcompliant curb ramps should be included at the ends of the crosswalks and countdown timers should also be included.	Safe Routes to School
28	Winton Woods		Bike Facility	Create a bicycle connection to Winton Woods.	Transportation Alternative Program

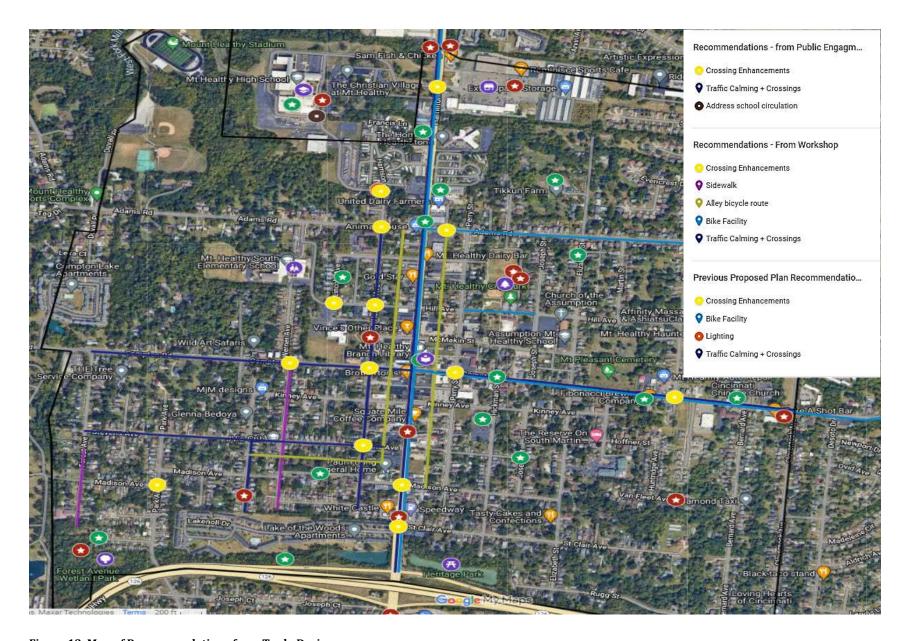


Figure 13. Map of Recommendations from Toole Design



Figure 14: Recommendation Map #1 - Mt. Healthy High School to Adams Rd



Figure 15: Recommendation Map #2 - Adams Rd to Compton Rd

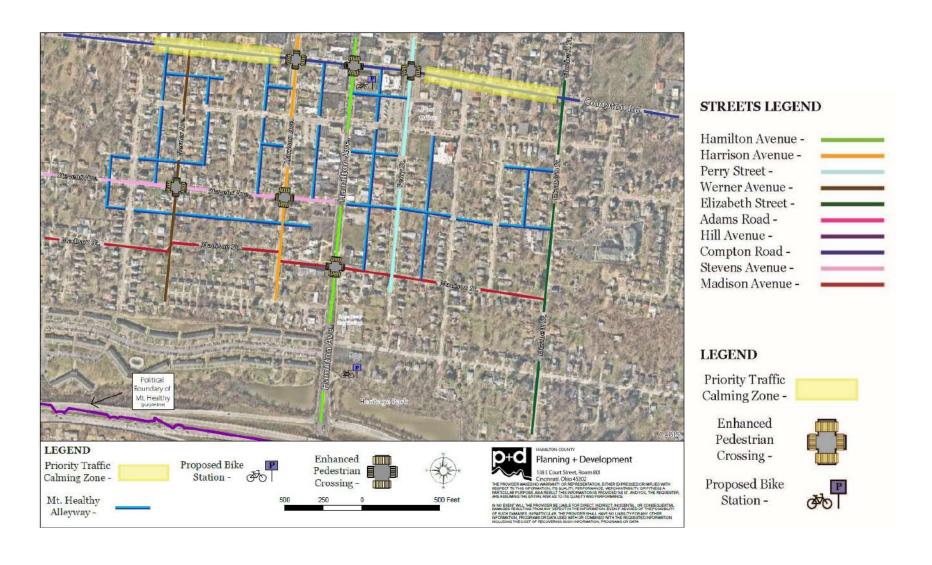


Figure 16: Recommendation Map #3 - Compton to Expressway

## ACTIVE TRANSPORTATION NETWORK RATIONALE

The primary goal of this plan is to increase the safety and convenience of walking and biking. To that end, recommendations include a variety of route options and facility types to accommodate the majority of community members. The recommendations outlined in Table 4 improve over 5.8 miles of sidewalks, 2.96 miles of on-street bikeways, 3.58 miles of shared-use paths to the transportation system, and 8 intersection or crossing improvements. The following section goes into more detail on how and why facilities in the network were selected.

#### **Pedestrian Facilities**

Pedestrian infrastructure is primarily provided in the form of sidewalks, crosswalks, and streets. The presence of sidewalks along a roadway corresponds to a 65 to 89 percent reduction in walking along road pedestrian crashes.<sup>1</sup> Pedestrians are also among the most vulnerable road users and 72 percent of pedestrian fatalities occur at non-intersection locations.<sup>2</sup> Additional treatments implemented along roadways and crossing improvements would improve the bicycling and walking experience, encourage more walking, and decrease the number of crashes that occur. Crossing improvements proposed in this plan include high-visibility crosswalks, signage, and curb extensions.

#### **Bicycle Facilities**

Local infrastructure and routes will help riders of varying abilities access their daily destinations such as schools, grocery stores, parks, and work. There are several important factors to consider during bicycle facility selection, such as design users and roadway conditions. This section describes the different types of bicyclists, highly confident, somewhat confident, and interested but concerned, who make up the majority of the population. It also introduces the Federal Highway Administration (FHWA) bicycle facility selection matrix that identifies what type of facility is appropriate for the majority of bicyclists based on speed, volume, and context.

<sup>&</sup>lt;sup>1</sup> FHWA (2017). Desktop Reference for Crash Reduction Factors, FHWA-SA-08-011, Table 11. Referenced in https://safety.fhwa.dot.gov/provencountermeasures/walkways/

<sup>&</sup>lt;sup>2</sup> FHWA (2018). Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, Page 1. https://safety.fhwa.dot.gov/ped\_bike/step/docs/STEP\_Guide\_for\_Improving\_Ped\_Safety\_at\_Unsig\_Loc\_3-2018\_07\_17-508compliant.pdf

#### **Design Users**

Understanding which types of bicyclists feel comfortable using a given facility is key to building a safe, convenient, and well-used network.

#### **Design User Profiles**

#### **Highly Confident Bicyclist (~4-7%)**

- » Smallest group.
- » Prefer direct routes and will operate in mixed traffic, even on roadways with higher motor vehicle operating speeds and volumes.
- » Many also enjoy separated bikeways.
- » May avoid bikeways perceived to be less safe, too crowded with slower moving users, or requiring deviation from their preferred route.

#### Somewhat Confident Bicyclist (~5-9%)

- » Comfortable on most types of facilities.
- » Lower tolerance for traffic stress, prefer striped or separated bike lanes on major streets and low-volume residential streets.
- » Willing to tolerate higher levels of traffic stress for short distances.

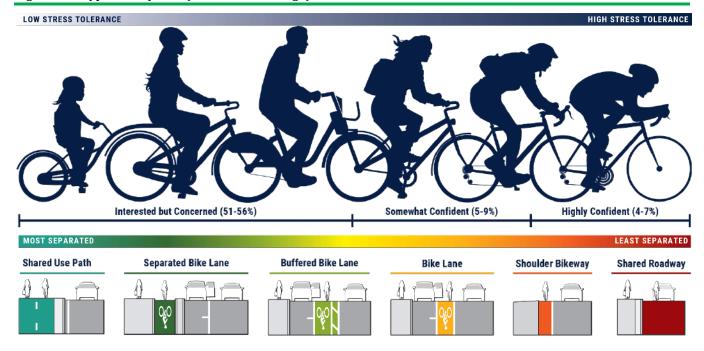
#### Interested but Concerned Bicyclist (~51-56%)

» Largest group.

- » Lowest tolerance for traffic stress.
- » Avoid bicycling except with access to networks of separated bikeways or very low-volume streets with safe roadway crossings.
- » Tend to bicycle for recreation but not transportation.
- » Generally, the recommended design user profile to maximize the potential for bicycling.

Bicyclists are classified according to their comfort level, bicycling skill and experience, age, and trip purpose. These characteristics can be used to develop generalized profiles of various bicycle users and trips, also known as "design users," which inform bicycle facility design. Comfort, skill, and age may affect bicyclist behavior and preference for different types of bicycle facilities. Selecting a design user profile is often the first step in assessing a street's compatibility for bicycling. The design user profile should be used to select a preferred type of bikeway treatment for different contexts, urban, suburban, rural town, or rural roadways. People who bicycle are influenced by their relative comfort operating with or near motor vehicle traffic. To accommodate most of the population, the "Interested but Concerned" rider should be the primary user type that facilities are designed for. In some contexts, such as rural roadways where fewer people may be expected to be traveling by bike, the Somewhat Confident or Highly Confident rider is the most relevant design user.

Figure 165: Types of Bicyclists (Source: Toole Design)

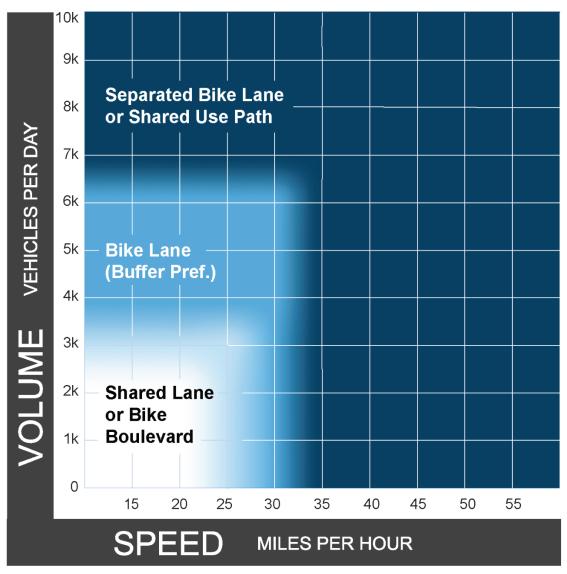


#### **Facility Selection Methodology**

Bicycle networks should be continuous, connect seamlessly across jurisdictional boundaries, and provide access to destinations. Anywhere a person would want to drive for utilitarian purposes, such as commuting or running errands, is a potential destination for bicycling. As such, planning connected low-stress bicycle networks is not achieved by simply avoiding motor vehicle traffic. Rather, planners should identify solutions for lowering stress along higher traffic corridors so that bicycling can be a viable transportation option for most of the population.

Before projects can be implemented the type of on-street bicycle facility will need to be defined. The <u>Federal Highway Administration (FHWA)'s Bikeway Selection Guide</u>'s facility selection matrices (Figure 17 and Figure 18) can be used to help determine the best facility for the roadway based on context, speed, and volume as well as the relevant design user type. See the full guide for further details on facility selection.

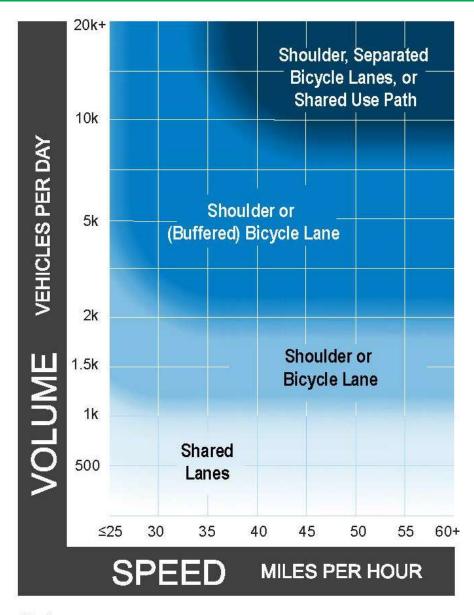
Figure 176: FHWA Bikeway Facility Matrix: Preferred Bikeway Type for Urban, Urban Core, Suburban and Rural Town Contexts (Design User: Interested but Concerned)



#### Notes

- 1 Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- 2 Advisory bike lanes may be an option where traffic volume is <3K ADT.
- 3 See page 32 for a discussion of alternatives if the preferred bikeway type is not feasible.

Figure 187: Preferred Bikeway for Highly Confident Bicyclists in Rural Contexts (Modified FHWA Bikeway Facility Matrix)



#### **Notes**

- 1 Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- 2 If the percentage of heavy vehicles is greater than 10%, consider providing a wider shoulder or a separated pathway.

#### **Facility Toolkit**

Bicycle infrastructure recommendations include three bicycle facility types to accommodate people of varying abilities and in different riding environments. Research shows that the provision of low stress, connected bicycle networks improves bicyclist safety and encourages bicycling for a broader range of user types.<sup>3</sup> Pedestrian infrastructure is primarily provided in the form of sidewalks, crosswalks, and streets.

Table 4. Facility Toolkit\*

	Sidewalk	Shared Use Path	Crossing
Description	Sidewalks are intended for exclusive use by pedestrians. They are adjacent to but separated from the roadway by a curb and/or buffer, such as a tree lawn. As roadway speeds and volumes increase, more separation is needed to maintain a safe and comfortable walking environment for pedestrians. Common in urban areas, they may also be necessary in rural areas with pedestrian generators, such as schools and businesses. May notably increase levels of walking in areas with high traffic speeds/volumes.	Typically designed as two-way facilities physically separated from motor vehicle traffic and used by bicyclists, pedestrians, and other non-motorized users, shared-use paths provide a low-stress and comfortable travel environment for users of all confidence levels. They are used for recreational opportunities in addition to transportation and are located along roadways or completely separated from the road network, sometimes along rivers or old railroad corridors.	A variety of solutions can be employed to make intersections and mid-block crossings safer and more convenient for people walking. These treatments range from painted facilities, such as high-visibility crosswalks, to lights and signals, such as rectangular rapid flashing beacons (RRFB). Painted crosswalks delineate the safest pathway for pedestrians, and RRFBs enhance user safety and convenience at crossing points when full signalization is not warranted.
Intended Users	Pedestrians	Bicyclists and Pedestrians	Bicyclists and Pedestrians

<sup>&</sup>lt;sup>3</sup> AASHTO (2021). Guide to Bicycle Facilities, 4th Edition, 2.2. Why Planning for Bicycling is Important.

	Sidewalk	Shared Use Path	Crossing
Context	Urban	Urban and Rural	Urban and Rural
Posted Speed Limit	30 mph or lower (preferred) 50 mph (acceptable)	Urban: Any speed (typically 30 mph+) Rural: Any speed (typically 55 mph+)	Any Speed (appropriate treatment will vary)
Motor Vehicle Traffic Volume	12,000 ADT or lower (preferred)	Urban: Any volume (typically 15,000 ADT+) Rural: Any volume (typically 6,500 ADT+).	Any Volume (appropriate treatment will vary)
Other Considerations	N/A	Shared use paths should be at least 10 feet wide (wider where higher bicycle and pedestrian traffic is expected, e.g., in urban areas). Special consideration must be given to the design of roadway crossings to increase visibility, clearly indicate right-of-way, and reduce crashes. Alternative accommodations should be sought when there are many intersections and commercial driveway crossings per mile.	Treatments may include:  ""> High visibility markings  ""> Advance yield lines and signage  ""> Curb extensions  ""> Raised crosswalk  ""> RRFB  ""> Textured intersection pavement

<sup>\*</sup>For more information on facility selection and design see the FHWA Bikeway Selection Guide, AASHTO Guide for Development of Bicycle Facilities, and future ODOT Multimodal Design Guide

Table 5. Facility Toolkit\* (continued)

	Bicycle Boulevard	Paved Shoulder	Separated Bike Lane
Description	Where traffic volumes and speeds are low, many bicyclists can comfortably share lanes with motor vehicles. Shared lane markings and signs are added to inform people driving that bicyclists may operate in the lane and where to expect bicyclists. Wayfinding signage and traffic calming can help increase user comfort and prioritize bicycle travel.	Providing additional pavement width outside of the travel lanes can reduce crashes, aid maintenance, and provide space for bicyclists. Benefits include reducing pavement edge deterioration, accommodating oversized and maintenance vehicles, and providing emergency refuge for public safety vehicles and disabled vehicles. Paved shoulder recommendations should be accompanied by signage.	One- or two-way facilities within the roadway and physically separated from adjacent travel lanes with vertical elements such as a curb, flex posts or on-street parking. Such facilities reduce the risk of injury and can increase bicycle ridership due to perceived and actual safety and comfort.
Intended Users	Bicyclists and Motorists	Bicyclists	Bicyclists
Context	Urban and Urban Periphery	Rural and Urban Periphery	Urban
Posted Speed Limit	25 mph or lower (preferred) 35 mph or lower (acceptable)	Any speed (typically 45 mph or higher)	Any speed (typically 30 mph or higher)
Motor Vehicle Traffic Volume	≤3,000 ADT (preferred) ≤5,000 ADT (acceptable)	≤ 6,500 ADT (preferred) Any volume (acceptable)	Any volume (typically 15,000 ADT or greater)
Other Considerations	May be used in conjunction with wide outside lanes. Explore opportunities to provide parallel facilities for less confident bicyclists. Where motor vehicles are allowed to park along shared lanes, place markings to	Shoulder width to accommodate bicyclists depends on traffic volume and speed in adjacent motor vehicle lanes. Placement of the rumble strip is critical to providing usable space for bicyclists.	Intersection designs should promote the visibility of bicyclists and raise awareness of potential conflicts. Separation may be provided through temporary measures such as planters or removable bollards as an interim and low-cost design.

Bicycle Boulevard	Paved Shoulder	Separated Bike Lane
reduce potential conflicts with		
opening car doors.		
On low speed (<25 mph) low		
traffic (<3,000 ADT) streets		
traffic calming, and diversion		
can be used to slow traffic or		
 create a bicycle boulevard.		

<sup>\*</sup>For more information on facility selection and design see the <u>FHWA Bikeway Selection Guide</u>, AASHTO Guide for Development of Bicycle Facilities, and future ODOT Multimodal Design Guide

#### PROGRAMS AND POLICIES

Establishing safe and convenient active transportation infrastructure is critical to improving walking and bicycling conditions. Without programs and policies in place to support active transportation, infrastructure projects can only go so far. A variety of non-infrastructure tools can increase pedestrians' and bicyclists' safety by establishing a culture of walking and biking and creating a friendly regulatory and political environment for active transportation.

Programs and policies can typically be implemented relatively quickly and inexpensively. Programs can be easily scaled to a wide audience, such as elementary school students, transit riders, or business owners, or they can target specific groups for programming, like speeding motorists in school zones. Individual programs can increase walking and bicycling in specific circumstances and locations but should be coordinated with policy development to ensure lasting change. See Table 6 for a list of proposed programs and policies. These proposed programs and policies aim to accomplish the following goals:

- » **Foster culture change:** shift community members' mindset so that walking and bicycling is normal and expected.
- » **Maintain momentum:** help maintain momentum and excitement around active transportation while infrastructure projects are in development.
- » **Build support:** encourage new people to try active transportation and help community partners recognize the value of increased active transportation options.
- **Support efficient operations and maintenance:** help institutionalize best practices in active transportation operations and maintenance.

The timeframes outlined in Table 6 are defined as follows:

» Short-term: Two years

» Medium-term: Two to five years» Long-term: Five years or more

The status of programs and policies should be assessed and updated each time the overall plan is updated. Status is defined as:

- » **New:** A program or policy that is proposed in this Plan.
- **» Ongoing:** An existing program or policy that will be continued.
- **On-hold:** A program or policy that has been stalled or deferred.
- » **Completed:** When regularly updating the plan, update the program or policy status to complete when applicable to help track progress.

Table 5. Program and Policy recommendations

Theme	Program/ Policy	Action Items	Responsible Party	Key Partners	Time frame	Status
Planning + Guidance	Model Zoning Code	Work with Hamilton County Planning & Development to update the Model Zoning Policy in Mt. Healthy	Mt. Healthy	Hamilton County Planning & Developme nt	Long- term	New
	Comprehensive Plan	Planning and assessment	Mt. Healthy	Hamilton County Planning & Developme nt	Long- term	New
Education + Promotion	Bicycle Friendly Businesses	Recruit local businesses in Mt Healthy that support active transportation and allow bicyclist to use their facility, as needed.	Mt. Healthy	Local businesses, Hamilton County Public Health, WeTHRIVE!	Short- term	New
	Mt. Healthy Walking Group	Promote active living by creating a walking group	Mt Healthy	Hamilton County Public Health, WeTHRIVE!	Short- term	In Progress
	Demonstration Project	Design and implement demonstration projects in the city to calm traffic	Mt Healthy	Hamilton County Public Health	Mediu m- term	New
Implementation	American Disabilities Act	Implement ADA standards on all streets/sidewal ks/ parks in the city	Mt Healthy	Hamilton County Planning & Developme nt	Long- term	New
Data	Demonstration Projects	Collect feedback on implemented demonstration projects and assess effectiveness	Mt Healthy	Hamilton County Public Health	Mediu m- term	New
	Bike/Ped Crash Data	Analyze data and determine	Mt Healthy	Hamilton County	Long- term	New

Theme	Program/ Policy	Action Items	Responsible Party	Key Partners	Time frame	Status
		the effectiveness of Active Transportation Plans		Public Health		
Collaboration	Hamilton County Public Health	Build an existing relationship with HCPH WeTHRIVE!	Mt Healthy	WeTHRIVE!	Long- term	New
	Businesses	Build relationships with new businesses to encourage development and Bike Friendly Initiatives	Mt. Healthy	Businesses	Long- term	New

## PRIORITY PROJECTS







## PRIORITY PROJECTS

The infrastructure recommendations in the previous chapter are conceptual routes, meant to show the potential of a comprehensive active transportation system in Mt. Healthy. The recommendations are planning level in scope and are not necessarily constrained by existing challenges. Funding, land use, property rights, terrain, and other project-specific factors may make certain recommendations less practicable than others. Project prioritization uses measurable data to determine which projects are feasible, given real-world constraints, and align with stakeholders' priorities.

#### PRIORITIZATION METHODOLOGY

**Table 7. Weighted Categories for Quantitative Prioritization** 

Category	Weight	Variable	Description
Safety	25	Volume (AADT) Speed Crash	Weighted average AADT value among the street segments that make up a project. Weighted average speed limit among the street segments that make up a project. Bicycle and pedestrian crashes within 200 feet of each project weighted by severity.
Synergy	5	Synergy	Overlap with ODOT District Work Plan projects or city-identified projects.
Connections	10	Connections to existing infrastructure	Counts the number of connections to existing and proposed projects.
Public Engagement	25	Public Engagement	Number of agrees for a project from public meetings and online surveys.
Equity	25	Needs Demand	Based on ODOT's Walk.Bike.Ohio efforts. Based on ODOT's Walk.Bike.Ohio efforts.
Cost	10	Cost	Relative cost of facility recommendation based on construction cost and prioritizes less-expensive projects.

#### PRIORITIZED INFRASTRUCTURE PROJECT LIST

Implementing this plan will take time and significant effort. The following table identifies short-, medium-, and long-term plan priorities. Implementation will require working with a larger number of partners, as well as building public support for priority projects. Whenever possible, recommendations in this plan should be incorporated into other roadway projects. Every year Mt Healthy should re-evaluate the priority list to track which projects have been implemented and make adjustments, as needed.

**Table 8. Prioritized Infrastructure Project List** 

	Project ID	Facility Type	Location	Description
Short-term (2 years)	1	Sidewalk	Werner Ave	Repair sidewalks and fill gaps
	20	Crossing Enhancements	Compton Rd & Harrison Ave	Add crossing enhancements
	17	Crossing Enhancements	Compton Rd & Steward Ave	Add crossing enhancements
	21	Crossing Enhancements	Adams Rd & Harrison Ave	Add crossing enhancements
	14	Crossing Enhancements	Compton Rd & Perry St	Add crossing enhancements
	2	Sidewalk	Forest Ave	Extend the sidewalk south along Forest Ave.
	6	Bike Facility	Stevens Ave	Calm traffic and provide safe crossings
	7	Crossing Enhancements	Adams Rd	Add crossing enhancements
	8	Crossing Enhancements	Hill Ave & Lincoln Ave	Add crossing enhancements
	9	Crossing Enhancements	Park Ave & Madison Ave	Add crossing enhancements
	12	Crossing Enhancements	Compton Rd & Werner Ave	Add crossing enhancements
Medium-term (2-5 years)	11	Crossing Enhancements	Hamilton Ave & Madison Ave	Add crossing enhancements
(2-3 years)	24	Crossing Enhancements	Harrison Ave	Add a ladder-style crosswalk across southeast school drive at Harrison Ave. ADA-compliant curb ramps should be included at the ends of the crosswalk.
	22	Crossing Enhancements	Hill Ave	Add crossing enhancements
	23	Lighting	Southeast School Drive	Add lighting
	19	Crossing Enhancements	Harrison Ave & Stevens Ave	Add crossing enhancements

	Project ID	Facility Type	Location	Description
	18	Traffic calming & crossings	Maple Ave	Calm traffic and provide safe crossings
	13	Traffic Calming & Crossings	Harrison Ave	Calm traffic and provide safe crossings
	15	Address school circulation	Mt. Healthy High School	Improve vehicle circulation at Mt Healthy High School to reduce potential conflicts with people walking and biking
	16	Traffic calming & crossings	Compton Rd	Calm traffic and provide safe crossings
	4	Bike Facility	Hill Ave	Provide a bicycle facility connecting the dead ends of Hill Ave through City Park.
	5	Bike Facility	Adams Rd/Hamilton Ave/Clovernook Ave	Provide a bicycle facility along Adams Rd from Hamilton Ave to Clovernook Ave
	10	Crossing Enhancements	Hamilton Ave & St Clair Ave	Add crossing enhancements
Long-term (5+ years)	3	Alley bicycle route	Local alley	Consider bicycle routes in alleys. Consideration would need to be taken to ensure adequate pavement conditions, visibility and crossings and intersections, lighting, and continued trash collection and garage access.
	28	Bike Facility	Winton Woods	Create a bicycle connection to Winton Woods
	25	Traffic Calming & Crossings	Hamilton Ave	Calm traffic along Hamilton Ave and provide safe crossings. This might be achieved through a road diet or other measures. Upcoming Bus Rapid Transit initiatives will influence final design possibilities.
	26	Bike Facility	Hamilton Ave	Provide a bicycle facility

## **IMPLEMENTATION**







## **IMPLEMENTATION**

#### **ROLES AND RESPONSIBILITIES**

Collaboration is the first step toward the successful implementation of the Mt. Healthy ATP. Stakeholders involved in the planning process will be collectively responsible for the design, funding, construction, maintenance, monitoring, and/or evaluation of the network. See Table 9. Implementation Responsibilities for a list of responsibilities.

**Table 9. Implementation Responsibilities** 

Agency	Responsibility	Description
Public Works	Streets	Maintain and evaluate bicycling and walking facilities
Department	Alleyways	Maintain and evaluate bicycling and walking facilities
	Sidewalks	Maintain and evaluate bicycling and walking facilities
	Crosswalks/Inters ections	Maintain and evaluate bicycling and walking facilities
City Engineer	City Engineer   Streets   Design & construct bicycling and walking facili	
	Alleyways	Design & construct bicycling and walking facilities
	Sidewalks	Design & construct bicycling and walking facilities
	Crosswalks / Intersections	Design & construct bicycling and walking facilities
Emergency	Streets	Maintain and evaluate bicycling and walking facilities
Services	Sidewalks	Maintain and evaluate bicycling and walking facilities
	Crosswalks / Intersections	Maintain and evaluate bicycling and walking facilities

#### **FUNDING STRATEGIES**

Active transportation projects comprise a fraction of overall transportation network construction and maintenance. While pedestrian and bicycle infrastructure generally does not serve as many users as highways, bridges, and other critical infrastructure, it can have a substantial positive effect on local economies. Additionally, providing opportunities for active living promotes public health and may reduce the burden on taxpayer-funded healthcare systems over time. In this light, active transportation infrastructure is a critical component of a complete transportation network and results in a positive return on investment for communities that fund such projects.

Several state and federal funding sources can be used to supplement local funding sources to build out the active transportation network and fund related programming efforts. Table 10 lists the primary funding sources for active transportation projects in Ohio; click on the name of each funding source to access web pages with further information. In addition, ODOT and the Ohio Department of Health (ODH) have developed an <a href="Active Transportation Funding Matrix">Active Transportation Funding Matrix</a>. Communities may use this tool to search for additional potential funding sources to support infrastructure and non-infrastructure projects that advance walking and bicycling. As part of the statewide Walk.Bike.Ohio Plan, ODOT published a <a href="Funding Overview Report">Funding Overview Report</a> that provides more details on the types of funding available, schedules, and eligibility requirements. For information on funding for public transit, visit the <a href="ODOT Office of Transit's website">ODOT Office of Transit's website</a>.

Table 10. Primary Active Transportation Funds in Ohio

Funding Source	Distributed by	Eligible Project Examples	Eligible Project Sponsor
Transportation Alternatives	Metropolitan Planning Organization (if applicable), or Ohio Department of Transportation (ODOT) if not	Bicycle & pedestrian facilities Safe routes for non-drivers Conversion & use of abandoned railroad facilities Overlooks & viewing areas	Local governments
Safe Routes to School	ODOT	Infrastructure Non-Infrastructure School Travel Plan assistance	Local governments (infrastructure) Local governments, school or health district, or non- profit (non-infrastructure)
<u>Highway Safety</u> <u>Improvement</u> <u>Program</u>	ODOT (Coordinate with local ODOT District to submit a safety study)	Signalization Turn lanes Pavement markings Traffic signals Pedestrian signals/crosswalks Bike lanes Road diets	Local governments
Recreational Trails Program	Ohio Department of Natural Resources (ODNR)	New recreational trail construction Trail maintenance/restoration Trailside and trailhead facilities Purchase/lease of construction & maintenance equipment Acquisition of easements Educational programs	Local governments State and federal agencies Park districts Conservancy districts Soil and water conservation districts Non-profits
Clean Ohio Trails Fund	Ohio Department of Natural Resources (ODNR)	New trail construction Land acquisition for a trail	Local governments Park districts Conservancy districts

Funding Source	Distributed by	Eligible Project Examples	Eligible Project Sponsor
		Trail planning/engineering and design (must include construction)	Soil and water conservation districts Non-profits
Clean Ohio Green Space Conservation Program	Ohio Public Works Commission (OPWC)	Open space acquisition including easements Bike racks Kiosks/Signs Hiking/Biking trails Pedestrian bridges Boardwalks	Local governments Park districts Conservancy districts Soil and water conservation districts Non-profits

#### MAINTENANCE STRATEGIES

The long-term performance of bicycle and pedestrian networks depends on both the construction of new facilities and an investment in continued maintenance. Maintaining bicycle and pedestrian facilities is critical to ensuring those facilities are accessible, safe, and functional.

#### **FREQUENCY**

The first step to approaching maintenance is to understand how often maintenance should be performed. Many activities, such as signage updates or replacements, are performed as needed, while other tasks such as snow removal are seasonal (see Table 11). Creating a winter maintenance approach is important to encourage year-round travel by walking and biking. One key component of this approach should be identifying priority routes for snow removal. More information on winter maintenance such as types of equipment needed for different facility types and how to consider snow removal in the design of facilities can be found in <a href="Toole Design's Winter Maintenance Resource Guide">Toole Design's Winter Maintenance Resource Guide</a>.

**Table 11: Maintenance Activity Frequency** 

Frequency	Facility Type	Maintenance Activity
		Tree/brush clearing and mowing
		Replace/repair trail support amenities (parking lots, benches, restrooms, etc.)
	Shared Use Paths	Map/signage updates
		Trash removal/litter clean-up
		Repair flood damage: silt clean-up, culvert clean-out, etc.
		Patching/minor regrading
As Needed	Shared Use Paths/ Separated Bike Lanes / Paved Shoulders/ Bike lanes	Sweeping
	Bicycle Boulevards	Sign replacement
	Sidewalks	Concrete panel replacement
	All	Snow and ice control
Seasonal	Shared Use Paths	Planting/pruning/beautification
Seasonat		Culvert/drainage cleaning and repair
		Installation/removal of seasonal signage
	Shared Use	Evaluate support services to determine the need for repair/replacement
Yearly	Paths/ Sidewalks	Perform walk audits to assess ADA compliance of facilities
	Separated Bike Lanes / Paved Shoulders/ Bike lanes	Surface evaluation to determine the need for patching/regrading/re-striping of bicycle facilities
5-year	Shared Use Paths	Repaint or repair trash receptacles, benches, signs, and other trail amenities, if necessary
		Sealcoat asphalt shared-use paths

Frequency	Facility Type	Maintenance Activity
10-year	Shared Use Paths	Resurface/regrade/re-stripe shared-use paths
20-year	Shared Use Paths/ Sidewalks	Assess and replace/reconstruct shared-use paths/ sidewalks

#### PLAN FOR MAINTENANCE

Creating a strong maintenance program begins in the design phase. The agency that will eventually own the completed project should collaborate with partners to determine the infrastructure placement, final design, and life cycle maintenance cost. Maintenance staff should help identify typical maintenance issues, such as areas with poor drainage or frequent public complaints. They may have suggestions for design elements that can mitigate these issues or facilitate maintenance activities and can provide estimates for ongoing maintenance costs for existing and proposed facilities.

#### COORDINATION & RESPONSIBILITY BETWEEN AGENCIES

Many jurisdictions struggle with confusion around which entity – city, village, township, county, or state – is responsible for the maintenance of trails and other active transportation facilities. Frequently there is no documentation showing who is responsible for the maintenance of existing facilities, which can prolong unsafe conditions for trail users. Coordination between the government agencies is key for effective maintenance programs. Intergovernmental agreements (IGAs) are used to codify the roles and responsibilities of each agency regarding ongoing maintenance. For example, a local government may agree to conduct plowing, mowing, and other maintenance activities on trails in its jurisdiction that were built by another agency. Clarifying who is responsible for maintenance costs and operations ensures that maintenance problems are resolved promptly.

#### MAINTENANCE ACTIVITIES

Different facility types require different types of strategies to be maintained. Table 12 breaks down maintenance activities and strategies for each by facility type.

**Table 6: Maintenance Strategy Recommendations** 

Facility Type	Maintenance Activity	Strategy
	Pavement Preservation	Develop and implement a comprehensive pavement management system for the shared-use path network.
	Snow and Ice Control	Design shared-use paths to accommodate existing maintenance vehicles.
Shared Use Paths/	Drainage Cleaning/Repairs	Clear debris from all drainage devices to keep drainage features functioning as intended and minimize trail erosion and environmental damage.
Separated Bike		Check and repair any damage to trails due to drainage issues.
Lanes	Curaning	Implement a routine sweeping schedule to clear shared-use paths of debris.
	Sweeping	Provide trail etiquette guidance and trash receptacles to reduce the need for sweeping.
	Vegetation	Implement a routine vegetation management schedule to ensure user
	Management	safety.

Facility Type	Maintenance Activity	Strategy
		Trim or remove diseased and hazardous trees along trails.
		Preserve and protect vegetation that is colorful and varied, screens
		adjacent land uses, provides wildlife habitats, and contains prairie,
		wetland and woodland remnants.
	ADA Requirements	Conduct walk and bike audits to assess the accessibility of new,
		proposed, and existing shared-use paths.  Ensure that ADA compliance is incorporated into the design process for
		new facilities.
		Explore approaches to routinely inspect pavement markings for bicycle infrastructure and replace them as needed.
	D	Consider preformed thermoplastic or polymer tape on priority
	Pavement Markings	bikeways (identified in this Plan) adjacent to high-volume motor vehicle
Paved		routes (preformed thermoplastic or polymer tape are more durable
Shoulders/		than paint and requires less maintenance).
Bike Lanes	Snow and Ice Control	Clear all signed or marked shoulder bicycle facilities after snowfall on all
		state-owned facilities that do not have a maintenance agreement with a local governmental unit in place.
		Implement a routine sweeping schedule to clear high-volume routes of
	Sweeping	debris.
Bicycle Boulevards	Sign Replacement	Repair or replace damaged or missing signs as soon as possible.
		Conduct routine inspections of high-volume sidewalks and apply
	Pavement Preservation and Repair	temporary measures to maintain functionality (patching, grinding, mud
		jacking).
Sidewalks		Consider using public agency staff or hiring contractors for sidewalk repairs, rather than placing responsibility on the property owner (the
		property owner can still be financially responsible).
		Educate the public about sidewalk snow clearance.
		Require sidewalk snow clearance to a width of five feet on all sidewalks.
	Snow and Ice Control	Establish required timeframes for snow removal.
		Implement snow and ice-clearing assistance programs for select
		populations.

#### ON-GOING MONITORING AND EVALUATION

Measuring the performance of active transportation networks is essential to ongoing success. Bicycle and pedestrian counts, crash records, and other data contribute to a business case for continued improvement of and investment in multimodal infrastructure. As recommendations are implemented, Mt. Healthy must be able to measure whether these investments are paying active transportation dividends (i.e. more people walking and bicycling). An affirmative answer reinforces this plan's legitimacy and provides evidence that future investments will also yield positive results. The performance measures in Table 13 will chart progress toward making walking and bicycling safe, connected, and comfortable. Mt. Healthy should establish baseline targets and revisit these metrics as new plans and priorities occur. Data on these measures should be documented and published for public review annually. A robust performance measures program includes establishing baseline measurements, performance targets, data collection frequency, and data collection and analysis responsibility.

**Table 7: Performance Measures** 

Performance Measure	Goal	<b>Timeline</b> (how often is data collected/updated)	<b>Responsibility</b> (who will collect the data)
Active Transportation Infrastructure	Increase miles of pedestrian network built annually – target 5% increase per year.	Annually	Hamilton County Planning and Development
	Increase miles of bicycle network built annually – target 5% increase per year.	Annually	Hamilton County Planning and Development
	Increase miles of shared use path built annually – target 1% increase per year.	Annually	Hamilton County Planning and Development
Health Assessments	Decrease pedestrian and bicyclist crashes by 1% per year, assessed in data profiles.	Annually	Hamilton County Public Health
	Decrease prevalence of coronary heart disease by 5-7% by 2026, assessed by the EPA EJ Screening Tool	Bi-Annually	Hamilton County Public Health
	Decrease prevalence of low- life expectancy by 5-10% by 2026, assessed by the EPA EJ Screening Tool	Bi-Annually	Hamilton County Public Health
Code Enforcement	Increase the number of business permits by 2% per year.	Annually	Mt. Healthy
	Increase the amount of revenue in the city by 2% per year.	Annually	Mt. Healthy
	Decrease complaints and violations to Mt. Healthy code enforcement office by 5% per year.	Annually	Mt. Healthy