

# Seneca County Active Transportation Plan



December 2018

THIS PAGE INTENTIONALLY LEFT BLANK

# ACKNOWLEDGMENTS

## SPONSOR

Ohio Department of Transportation

## CONSULTANT TEAM

Jeff Ciabotti, *Toole Design*

Susan Daniels, *P.E., AICP, Lawhon & Associates*

Siba El-Samra, *Toole Design*

Eli Glazier, *Toole Design*

Mike Sewell, *Gresham Smith and Partners*

Sally Sharrow, *AICP Candidate, Toole Design*

David Shipps, *AICP, Toole Design*

## PREPARED BY

Toole Design

Gresham Smith and Partners

Lawhon & Associates

## ADVISORY COMMITTEE MEMBERS

Sarah Betts, *Seneca County Park District*

Bryce Kuhn, *Tiffin City Parks District Director*

Aaron Montz, *Mayor, City of Tiffin*

Beth Schweitzer, *Seneca County General Health District*

Tyler Shuff, *City of Tiffin Council member*

Eugene Stacy, *Ohio Department of Transportation (Retired)*

Shayne Thomas, *Seneca County Commissioner*

Charlene Watkins, *Seneca Regional Planning Commission*

David Zak, *President/CEO, Seneca Industrial and Economic Development Corporation*

Mark Zimmerman, *PE,PS, Seneca County Engineer*

# CONTENTS

<b>Introduction</b> .....	<b>1</b>
<b>Existing Conditions</b> .....	<b>5</b>
<b>Public Engagement</b> .....	<b>15</b>
<b>Infrastructure Recommendations</b> .....	<b>19</b>
<b>Program and Policy Recommendations</b> .....	<b>35</b>
<b>Implementation</b> .....	<b>41</b>
<b>Appendices</b> .....	<b>A1</b>
A. Infrastructure Toolkit .....	A2
B. Public Engagement Details .....	A9

# TABLES

<b>Table 2: The Five Es Matrix.....</b>	<b>13</b>
<b>Table 3: Bicyclist and Pedestrian Characteristics.....</b>	<b>20</b>
<b>Table 4: Greater Seneca County Infrastructure Recommendations .....</b>	<b>22</b>
<b>Table 5: Fostoria Infrastructure Recommendations .....</b>	<b>26</b>
<b>Table 6: Tiffin Infrastructure Recommendations .....</b>	<b>28</b>
<b>Table 7: Implementation Responsibilities.....</b>	<b>38</b>
<b>Table 9: Short-Term Projects .....</b>	<b>42</b>
<b>Table 10: Medium-Term Projects .....</b>	<b>43</b>
<b>Table 11: Long-Term Projects.....</b>	<b>44</b>
<b>Table 12: Applicability of Federal Funding Sources for Active Transportation Projects.....</b>	<b>46</b>

# MAPS

<b>Map 1: Latent Active Transportation Demand .....</b>	<b>7</b>
<b>Map 2: Tiffin Strava Heat Map .....</b>	<b>8</b>
<b>Map 3: Fostoria Strava Heat Map.....</b>	<b>8</b>
<b>Map 4: Bicycle and Pedestrian Crashes since 2014.....</b>	<b>9</b>
<b>Map 5: Greater Seneca County Infrastructure Recommendations.....</b>	<b>21</b>
<b>Map 6: Fostoria Recommendations .....</b>	<b>23</b>
<b>Map 7: Tiffin Infrastructure Recommendations .....</b>	<b>25</b>

# FIGURES

<b>Figure 1: Bicyclist Confidence and Facility Preference .....</b>	<b>20</b>
<b>Figure 2: Recommendation #17: St Francis Trail, Section 1 (Port Road to County Farm Trail Connection) .....</b>	<b>32</b>
<b>Figure 3: Recommendation #17: St Francis Trail, Section 2 (Port Road to County Farm Trail Connection) .....</b>	<b>33</b>
<b>Figure 4: Recommendation #19: Front-Madison Route Shared Lane Markings (Madison Street Connector Trail) .....</b>	<b>34</b>

# CHAPTER 1

## INTRODUCTION

# Introduction

Seneca County is a largely rural county located in north central Ohio. It has a population of approximately 56,000 people, with around half of that population living in the cities of Tiffin and Fostoria. There are also six small villages scattered through the county: Attica, Bettsville, Bloomdale, Green Springs, New Riegel, and Republic.

In 2016, the median household income in Seneca County was \$48,415, about \$2,000 less than the median household income for Ohio. Seneca County ranks 41 of 88 counties in Ohio for health outcomes, according to the Robert Wood Johnson Foundation. This ranking measures length of life and quality of life in the county, and is related to health behaviors, clinical care, social and economic factors, and physical environment factors.

This Active Transportation Plan grew out of the need to provide a safer and healthier environment for residents of Seneca County and those who choose to visit and take advantage of its active transportation routes. Currently cyclists and walkers/hikers do not have a safe environment to partake in their activities in Seneca County. The development of this Active Transportation Plan will allow for better access to marked and separated routes that will enable healthier lifestyles in Seneca County. This plan also addresses health equity issues as a first step in reshaping the transportation system to make walking, bicycling and public transit the easy, convenient and safe choice for everyday travel needs.

“Active Transportation” is an umbrella term for all the ways people can get around without using a motorized vehicle. The most common forms of active transportation are walking and bicycling, but people using wheelchairs or other assistive devices also merit special consideration. The term does not limit these activities to their recreational function, but instead considers them as healthy, sustainable and practical ways to commute, run errands, connect to transit and carry out daily tasks, potentially reducing the need for private car ownership and improving the environment. In this document, the words “bicyclist” and “pedestrian” include users of scooters, tricycles, and other similar mobility devices.

The creation of this plan was prioritized in the 2017 Transportation Improvement Plan. The planning process has been led by the Seneca Regional Planning Commission (SRPC) with funding from the Ohio Department of Transportation (ODOT). Building upon the existing programs and facilities in Seneca County including well-used trails

**Active Transportation is an umbrella term for all the ways people can get around without using a motorized vehicle, such as walking, bicycling, and using wheelchairs, scooters, and other mobility devices. These are healthy, sustainable and practical ways to commute, run errands, connect to transit and carry out daily tasks.**

and an extensive park system, this plan provides Seneca County with an actionable road map for improving community mobility, with a focus on health and sustainable travel modes.

## Vision & Goals

The vision of the Seneca County Active Transportation Plan is to improve quality of life and promote safety, recreation, environmental sustainability, health, equity/inclusion, and economic development. This will be achieved by developing high-quality, integrated surface transportation infrastructure that increases active transportation options for people of all ages and abilities.

The Plan provides the County with an actionable road map for improving community mobility, with a focus on health and sustainable travel modes. The Plan components – policy, program and capital project recommendations – work in tandem to create a more complete and equitable transportation system for all users.



# Plan Development Process

The development of Seneca County’s first Active Transportation Plan began in fall 2017 when the SCPC applied for technical assistance from the Ohio Department of Transportation (ODOT). The grant was awarded in the winter 2017, and the planning process began in earnest in early 2018.

January 2018	Kick-off meeting with Advisory Committee
March 2018	Fieldwork
April 2018	Second Advisory Committee Meeting
April-June 2018	Pop-up mapping exercises (Earth Day event, Tiffin Farmers Market)
July 2018	Third Advisory Committee Meeting to present draft recommendations
September 2018	Draft recommendations presented to the public (Tiffin Flea Market)
December 2018	Final Plan adopted (tentative)



Community members participate in a mapping exercise

THIS PAGE INTENTIONALLY LEFT BLANK

# CHAPTER 2

## EXISTING CONDITIONS

# Existing Conditions

The first step towards understanding the context of Seneca County and developing its first Active Transportation Plan was conducting an existing conditions analysis. The analysis consisted of reviewing existing plans, mapping potential demand for biking and walking, surveying existing biking and walking infrastructure, and identifying organizations and programs that support walking and biking. Seneca County is in the early stages of developing its active transportation network and initiatives but has the potential to grow both over time.

Seneca County has a variety of land uses: from Tiffin, with its two colleges and historic downtown, which serves as the epicenter for regional bicycling and walking activities; to the vast rural areas, set up on a grid system with long tangents, providing high visibility for cyclists looking for longer rides on straight, flat, low-traffic roads.

## Planning Context

Active Transportation ideas have been addressed in several existing plans for the County and its cities.

### Seneca County Comprehensive Plan Update (2001)

The County's Comprehensive Plan includes several strategies related to the development of trails and greenways. The Open Space and Recreation chapter encourages the use of landowner incentives, railway conversions and strategic land purchases to support the development of trails and greenways. The Transportation Improvement Plan, within the Comprehensive Plan, does not include specific strategies for incorporating more active transportation into the transportation system. The Comprehensive Plan is currently in the process of being updated as of late 2018, and active transportation will be included as a priority in the updated plan.

### Seneca County Transportation Improvement Plan (2017)

The 2017 update to the Transportation Improvement Plan names the creation of

this Active Transportation Plan as one of the four priority projects for the county, with a focus on creating routes utilizing existing roads to link population clusters. It states that special attention should also be paid to routes emanating from parks, and to creating a trail across the county to connect to the North Coast Inland Trail in Sandusky County and the active transportation route in Wyandot County.

### Tiffin Recreational Trails Master Plan 2003

The City of Tiffin created a master plan for its recreational trails in 2003. The proposed trails focused on routes around parks, along the Sandusky River, and connecting to Tiffin University and Heidelberg College. The recommendations of this Active Transportation plan will be incorporated into the Master Plan.

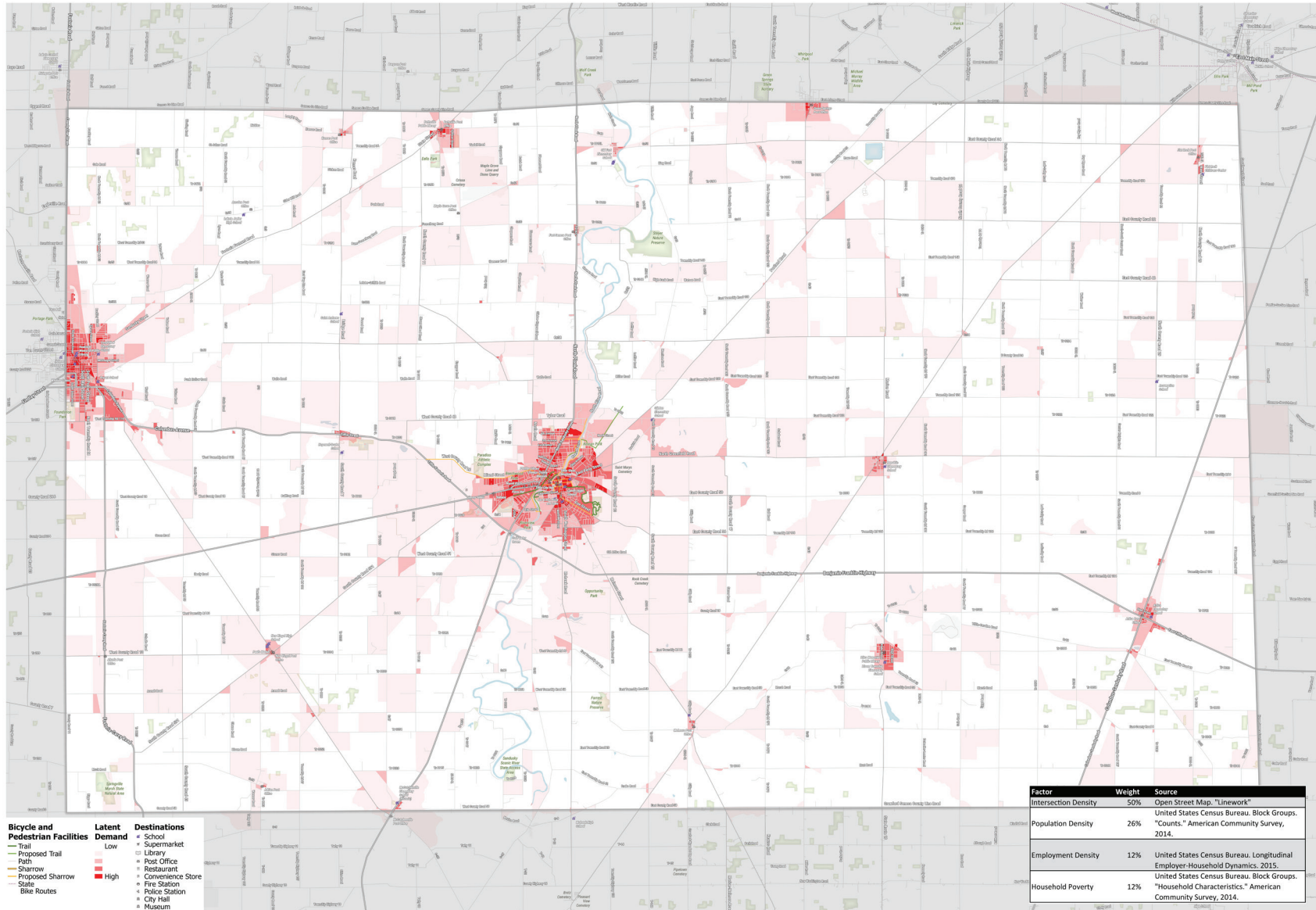
## Bicycle and Pedestrian Demand

Much of the County's population, and therefore its demand for walking and cycling, is concentrated in the cities of Tiffin and Fostoria. The latent demand maps and Strava heat map below were analyzed to better understand demand and develop the recommendations in Chapters 3 and 4.

### Latent Demand Map

Map 1 shows the latent demand, or potential, for walking and bicycling in the County and its cities. The maps were created using demographic and employment data from the US Census, and the locations of common destinations such as retail, services, schools, recreation opportunities and community centers. (The relative weights assigned to each of these factors can be seen in Map 1). The relative demand is higher in the areas shown in the darkest red and lower in the areas shaded light pink. Demand is generally higher in the cities of Fostoria and Tiffin, as well as in County's six villages. In Tiffin, demand is concentrated in the middle of town, but pockets of high demand are also present around the edges of the city. In Fostoria, demand is spread throughout the city.

Map 1: Latent Active Transportation Demand

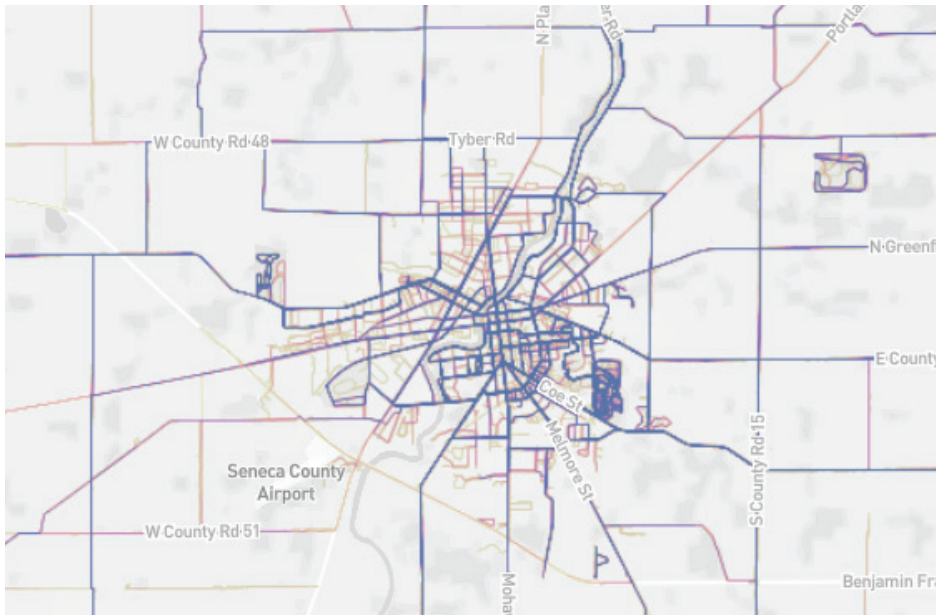


Seneca County Active Transportation Plan

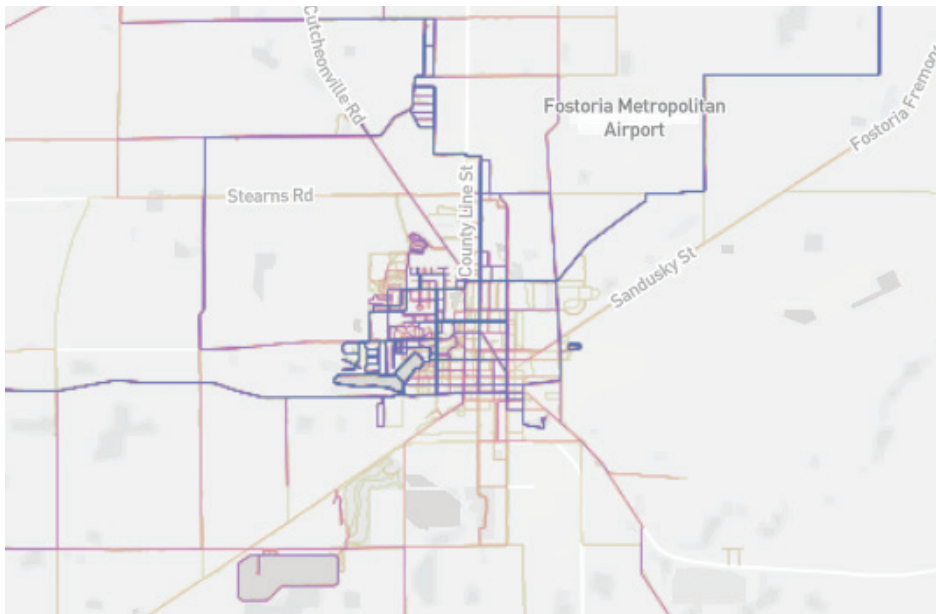
## Latent Active Transportation Demand



Map 2: Tiffin Strava Heat Map



Map 3: Fostoria Strava Heat Map



## Strava Heat Maps

Strava is a smartphone app generally used by avid runners and cyclists to record their activities. Map 2 and Map 3 show the corridors in Seneca County with the highest amount of biking and walking according to Strava data. (Because this app is not available to those without smart phones, nor frequently used by casual bicyclists and pedestrians, there are many walking and biking trips that are not represented on the maps).

Blue indicates the frequency and density of use, with dark blue being the most frequently utilized corridor. As can be seen in these maps, the strongest areas of blue occur in downtown Tiffin and Hedges-Boyer Park, with some frequency on the outlying county roads as well as Fostoria, OH and Seneca East Elementary and High Schools in Attica, OH.

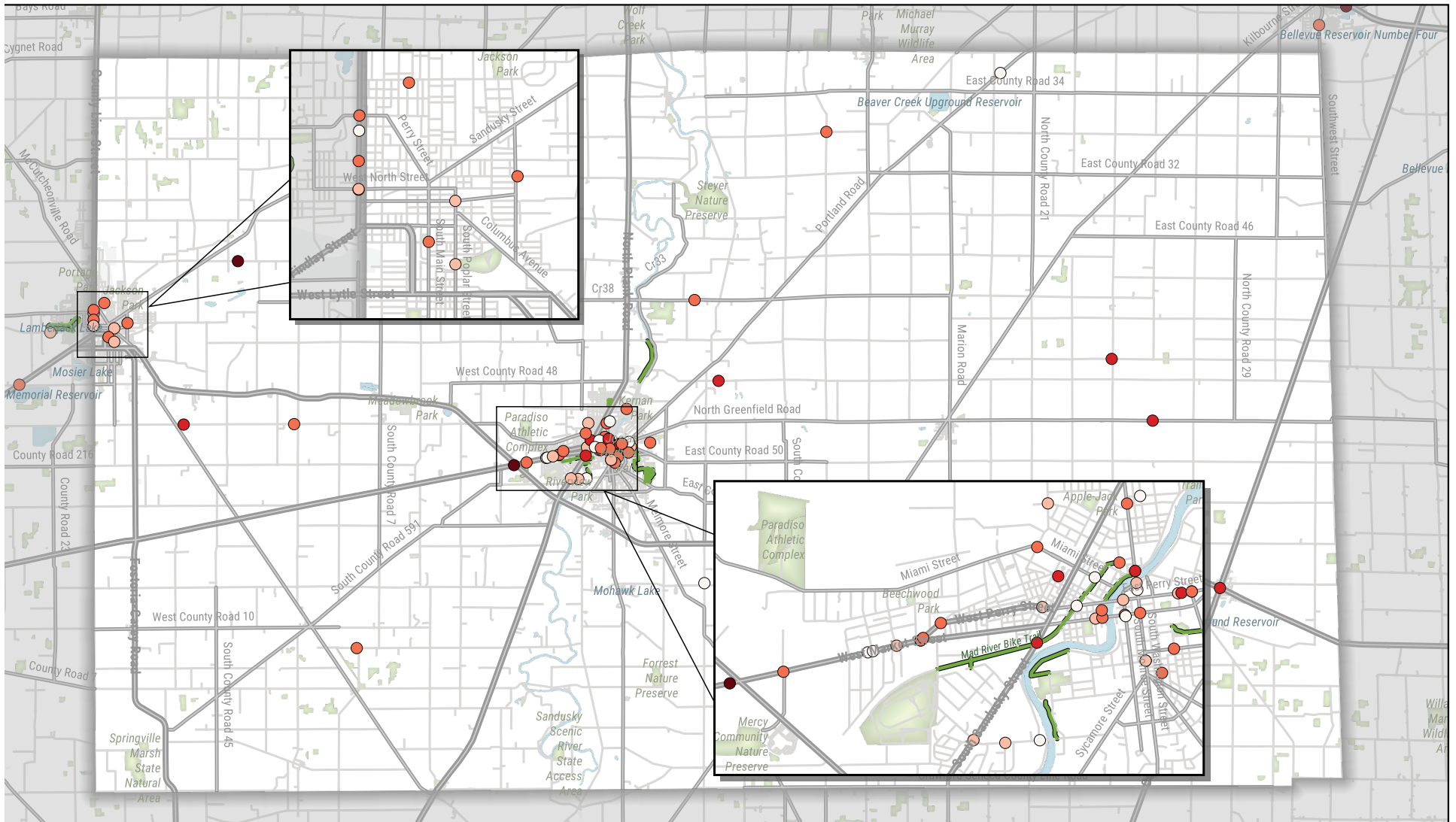
## Crash Analysis

Data on crashes involving bicyclists or pedestrians was downloaded from the Ohio Department of Transportation GCAT tool. Between January 2014 and October 2018, there have been sixty-eight crashes in Seneca County involving bicyclists or pedestrians. Of these, eleven were serious crashes leading to incapacitating injury or death.

Map 4 shows the geographic distribution of crashes throughout the county. The greatest number, logically, occurred in the cities of Fostoria and Tiffin. In Tiffin, most of the crashes occurred along Market Street and Perry Street, which are larger arterial roads with faster speeds. Significantly, several of the crashes occurred at locations where the Mad River Bike Trail intersects with the street grid, indicating a need for better visibility and signage at those locations. In Fostoria, a plurality of the crashes occurred along County Line Street.

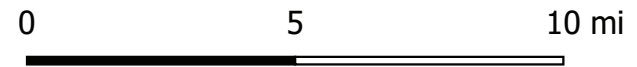
Outside of the two cities, crashes were more disperse, but also tended to be more serious. Five incapacitating injuries and two fatalities occurred as a result of crashes on rural and county roads. A system of trails that provides an alternative to sharing the road with motor vehicles on rural roads without dedicated bicycle and pedestrian facilities would be one way to reduce the number of these rural crashes.

Map 4: Bicycle and Pedestrian Crashes since 2014



### Bicycle and Pedestrian Crashes, 2014-2018

- Property Damage Only/No Injury [13]
- Possible Injury [15]
- Non-Incapacitating Injury [29]
- Incapacitating Injury [9]
- Fatality [2]



## Bicycle and Pedestrian Facilities

Sidewalks can be found on most streets within the cities of Tiffin and Fostoria (portions within Seneca County), but are not present on all streets. In the villages of Attica, Bettsville, Bloomdale, Green Springs, New Riegel, and Republic, there are sidewalks on most streets, with a stronger presence in the commercial centers. The unincorporated Census Designated Places of Bascom, Flat Rock, Kansas, McCutchenville, and Old Fort also have some sidewalks, but these are limited and do not extend to more than a handful of properties.

The Mad River Bike Trail extends for approximately 1.3 miles within the City of Tiffin. It is a former rail line that was converted to a hiking and biking trail that extends from Hopewell Avenue (adjacent to the Seneca County Fairgrounds) to Monroe Street. The trail crosses several higher volume/higher speed roadways including SR 53 (Sandusky Street) and the one-way pairs of Market and Perry streets (SR 18).

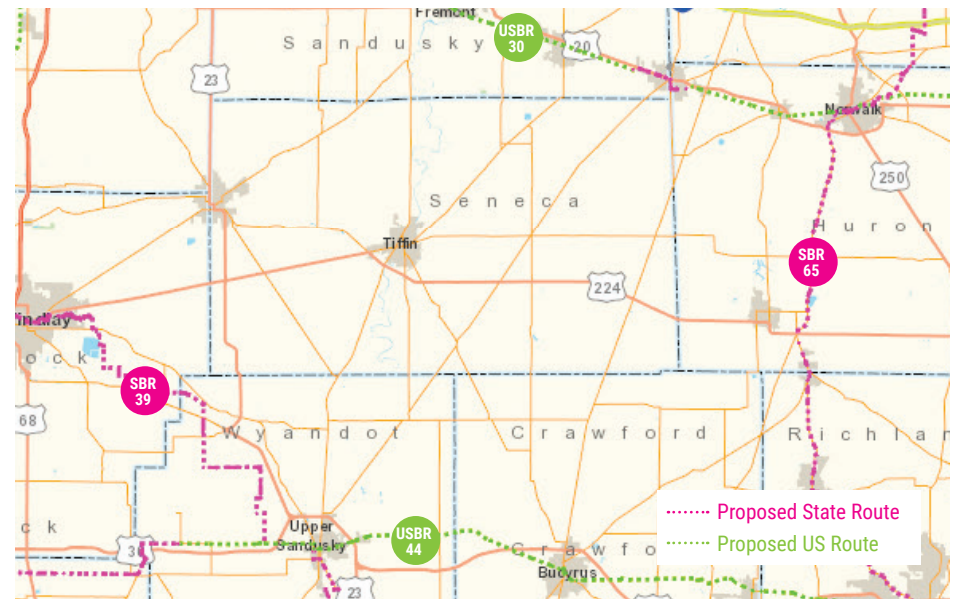
The City of Tiffin also completed the mile-long, fully accessible Rock Creek Trail in 2016. There is an existing 0.5 mile unimproved hiking trail through a wooded area adjacent to the Mercy Hospital Complex on the southwest side of Tiffin. Hedges-Boyer Park within the City of Tiffin includes several existing trail facilities that connect various recreational amenities within the park.

Several proposed State and US Bicycle Routes run through or near Seneca County.

- State Bike Route 39: located just to the south and west of Seneca County. It connects the cities of Findlay (Hancock County) and Upper Sandusky (Wyandot County) and continues south through Marion and Delaware counties.
- State Bike Route 65: located just to the east of Seneca County. It connects the cities of Sandusky (Erie County), Norwalk (Huron County), Shelby and Mansfield (Richland County) and continues south and eventually reaches the Ohio River.
- US Bike Route 30 (State Bike Route 36A): located just to the north of Seneca County. It stretches from Pennsylvania to Indiana and passes through Norwalk and Sandusky counties. This bike route is also known as the North Coast Inland Trail.
- US Bike Route 44: located just to the south of Seneca County. It roughly parallels US Highway 30 and passes through Wyandot, Crawford, and Richland counties. It continues west to the Indiana state line and east to the Pennsylvania state line.



Clinton Trail in Tiffin



Proposed State and US Bicycle Routes (Source: ODOT Transportation Information Mapping System)



Community comments highlighted the lack of access to parks and downtown for underserved populations due to lack of infrastructure, lack of safe crossings, and a busy rail line cutting through the middle of Tiffin. They also emphasized a lack of local trails outside of the Rock Creek Trail, which seems underutilized by the community and college students, in particular, who drive to the YMCA. There are a few unused rail lines in the area which may provide Rails to Trails conversion opportunities.

## Bicycle and Pedestrian Programs

The cities and villages of Seneca County have different needs when it comes to active transportation infrastructure and programming. This section describes the current active transportation programming to better understand where programming gaps may exist and help develop program recommendations to address them.

### Existing Programs and Policies

Organizations in Seneca County already offer programs that address several of the Es (Education, Encouragement, Enforcement, Evaluation and Engineering - these are further explained in the sidebar). Several programs stretch across multiple Es, like education and encouragement. The Five Es Matrix in Table 2 illustrates that Seneca County already has support for active transportation programs and outreach through local stakeholders, though there is room for improvement. Existing programs are indicated with green diamonds.

#### EDUCATION

Local school districts play a valuable role in teaching bicycle and pedestrian safety. **The City of Tiffin** and **Tiffin City Schools** won a Safe Routes to School grant in 2014 that provided \$220,000 for infrastructure improvements and \$30,000 for educational programs. The **Tiffin Police Department** has conducted educational programs for bicycling, and the **Fostoria Lions Club** has incorporated bicycle education in its summer playground program.

#### ENCOURAGEMENT

**Destination Seneca County** is the primary visitor’s bureau, and promotes the Rock Creek Trail connection between Hedges-Boyer Park and downtown Tiffin. Additionally,

## The 5 Es

Active Transportation planning and design can be broken down into 5 Es: **Education, Encouragement, Enforcement, Evaluation, and Engineering**. A sixth E, **Equity**, should be a prioritizing factor throughout. Of these, all but Engineering – the design and construction of improvements to the built environment – involve programming.

**Education** is the array of programs that teach people of all ages how to walk and bike safely.

**Encouragement** programs get people excited about walking and biking, either by providing incentives for developing walking and biking habits or by creating the venue for walking and biking, like hosting a “fun run” or 5k race.

**Enforcement** programs help deter unsafe behaviors by people using all travel modes. Examples include having a Trail Ranger program where volunteers draw user attention to inappropriate or unsafe uses of the trail; or having law enforcement officers create speed enforcement zones to deter dangerous driving and share information about the rules of the road.

**Evaluation** programs include bicycle and pedestrian counts, crash analysis, and other activities that help communities track and celebrate progress around active transportation performance measures. One evaluation method is to conduct pedestrian and bicycle counts before and after a new piece of active transportation infrastructure is installed to measure its effect on local mobility and make the case for additional investments.

**Equity** programs help improve access to safe walking and biking opportunities for traditionally underserved communities. This should include developing programming that specifically reaches out and includes voices and perspectives that tend to be missing from the planning discourse, and being conscientious of these communities when planning infrastructure investment to ensure they are served.

the organization serves as a clearinghouse for local events and programming from the Seneca County Park District and the Tiffin Parks and Recreation Department.

One year’s class from **Leadership Seneca County** sponsored a bicycling program and donated 100 bikes to children in the community, as well as bike parking racks that were installed in... The Tiffin Police Department obtained a grant to donate helmets.

**Seneca County Park District** has multiple pedestrian-related programs catering to people interested in tours of the natural landscape around Seneca County, including Toddler Trots, Nature Walk/Bird Talk, Walk & Wread, and more. They have specific programs targeting families, the aging population and youth groups.

**Flatlanders Bicycle Club** is based in Fremont, OH and primarily rides in Sandusky County. However, the club has active members in Seneca County. Bicycle clubs like this host regular rides that provide many people the opportunity to learn how to ride safely in a group, and provide the environment for people to bike further and more often than they would otherwise.

**Tiffin University** and **Heidelberg University** have collaborated on the annual “Around the Town” event in Tiffin to better connect their students to the downtown area, and capitalize on students wanting to walk and bike to more destinations. Heidelberg University is connected to Hedges-Boyer Park by the Rock Creek Trail, allowing walking and biking access to green space and recreational activities such as disc golf and swimming.

Wayfinding signage sponsored by the **Seneca Industrial and Economic Corp. (SIEDC)** directs pedestrians to both Tiffin College and Heidelberg University, as well as

Hedges-Boyer Park and other local destinations, and represents a tangible investment in infrastructure to encourage pedestrian and bicycle mobility.

Tiffin has a large percentage of school children who live close enough to school to walk, but do not do so. The **Tiffin Community YMCA** has sponsored the Walking School Bus program in the past, encouraging students to walk to school by providing adult escorted walks to their local school. However, this program has been discontinued due to feedback from the parents that the walking conditions were unsafe, with either unsafe crossing conditions or lack of sidewalk infrastructure.

Additionally, the YMCA sponsored a summer cycling program in 2017, with redeemable discounts at local destinations for biking in. This program received similar feedback; the rural population in particular felt that riding conditions in the county were unsafe with children.

## ENFORCEMENT

There are no current enforcement programs in effect beyond standard practices.

## EVALUATION

Seneca County does not currently have any evaluation programs in place.

Table 2: The Five Es Matrix

Responsible Organization	Education	Encouragement	Enforcement	Evaluation
Flatlanders Bicycle Club (Sandusky)		◆		
Destination Seneca County		◆		
Seneca County Park District		◆		
Leadership Seneca County		◆		
Tiffin University		◆		
Heidelberg University		◆		
City of Tiffin	◆			
Tiffin Police Department	◆			
Fostoria Lions Club	◆			
Tiffin City Schools	◆			
Tiffin Community YMCA		◆		
Seneca Industrial and Economic Corp.		◆		

THIS PAGE INTENTIONALLY LEFT BLANK

# CHAPTER 3

## PUBLIC ENGAGEMENT

# Public Engagement

Public outreach was an essential tool in the plan development process. Involving the public builds trust in the planning process and improves the overall quality of the findings. Two primary means of public involvement were used during plan development: a project advisory committee and public meetings and events.

## Project Advisory Committee

The Project Advisory Committee was made up of a group of County residents with personal and/or professional interest in promoting and improving active transportation for the County. The Advisory Committee were the principal “ambassadors” for the planning process to County residents. They also met with the project team at key intervals during the planning process to provide input, ask questions, and suggest recommendations. The Advisory Committee met in person three times throughout the planning process, providing initial impressions of County needs and perceptions of community attitudes toward active transportation, and later to give feedback on drafts

of the plan. The project kickoff was held in January. At the first meeting in March the project team discussed their findings from fieldwork and asked advisory committee members for input on walking and bicycling conditions. The Advisory Committee also toured some areas of the County to provide field observations on existing infrastructure. At the second meeting in April, the project team presented initial recommendations and asked committee members to select priority projects. Finally, at the third meeting in July, the Advisory Committee reviewed and commented on the draft network and program recommendations.

Details and meeting materials from the Advisory Committee meetings can be found in Appendix B.

## Community Pop-Up Mapping Events

To gather feedback from the Seneca County community on important walking and bicycling routes, as well as barriers to walking and bicycling, the Project Team held several mapping events. Called “pop-up” events, the Project Team set up tables and poster boards at County events where there were large groups of people present. Large base maps were available to collect community comments on existing walking and cycling routes, barriers to active transportation, and desired routes. In this way, the Project Team brought the planning process to the community, rather than developing and promoting standalone events that may not attract a wide cross-section of attendees.

The first mapping event took place as part of an Earth Day event at the Franciscan Earth Literacy Center on April 22 in Tiffin. The second event was on June 9 at the Tiffin Farmer’s Market. Some of the key items and community desires that emerged from these meetings included:

- Long trails along former railroad lines, such as from Tiffin to Bloomville,
- Connections to Opportunity Park through St Francis, and to Hedges Boyer Park from Downtown, and
- Access to the Sandusky Scenic River and to the North Coast Inland Trail

Details and public feedback from all community mapping events can be reviewed in Appendix B.



Advisory Committee members conduct fieldwork for the Plan

# Open House

An Open House was held at the Tiffin Flea Market on June 27, 2018 to share draft infrastructure and programming recommendations with the community. The dual goals of the Open House were to inform community members about the plan and gather feedback on which projects were the most important and should be prioritized for conceptual graphic development by the Project Team. Feedback on plan recommendations from this open house helped the Project Team work with the Advisory Committee to revise the draft active transportation plan.

Details from the Open House are in Appendix B.

The screenshot shows a news article on the website of The Advertiser-Tribune. The article title is "Transportation plans ready to view" and is dated September 23, 2018. The main image shows a woman, identified as Executive Director Charlene Watkins, pointing at a large map on a flipchart. The article text states that the open house was held at the Public Safety Building and that the community provided excellent feedback. A sidebar on the right includes a "MOST READ" section with several headlines, a "NEWSLETTER" sign-up form, and a "SUBSCRIBE" button. The website's navigation menu at the top includes categories like NEWS, SPORTS, OPINIONS, LIFE, OBITUARIES, JOBS, CLASSIFIEDS, and GARAGE SALES.

A news article in the Advertiser-Tribune about the Open House

THIS PAGE INTENTIONALLY LEFT BLANK



# CHAPTER 4

## INFRASTRUCTURE RECOMMENDATIONS

# Infrastructure Recommendations

This chapter includes a brief overview of bicycle and pedestrian planning considerations, and a list of the recommended bicycle and pedestrian infrastructure projects for Seneca County. A toolkit of active transportation facility types is included in Appendix A.

## Planning for Bicyclists and Pedestrians

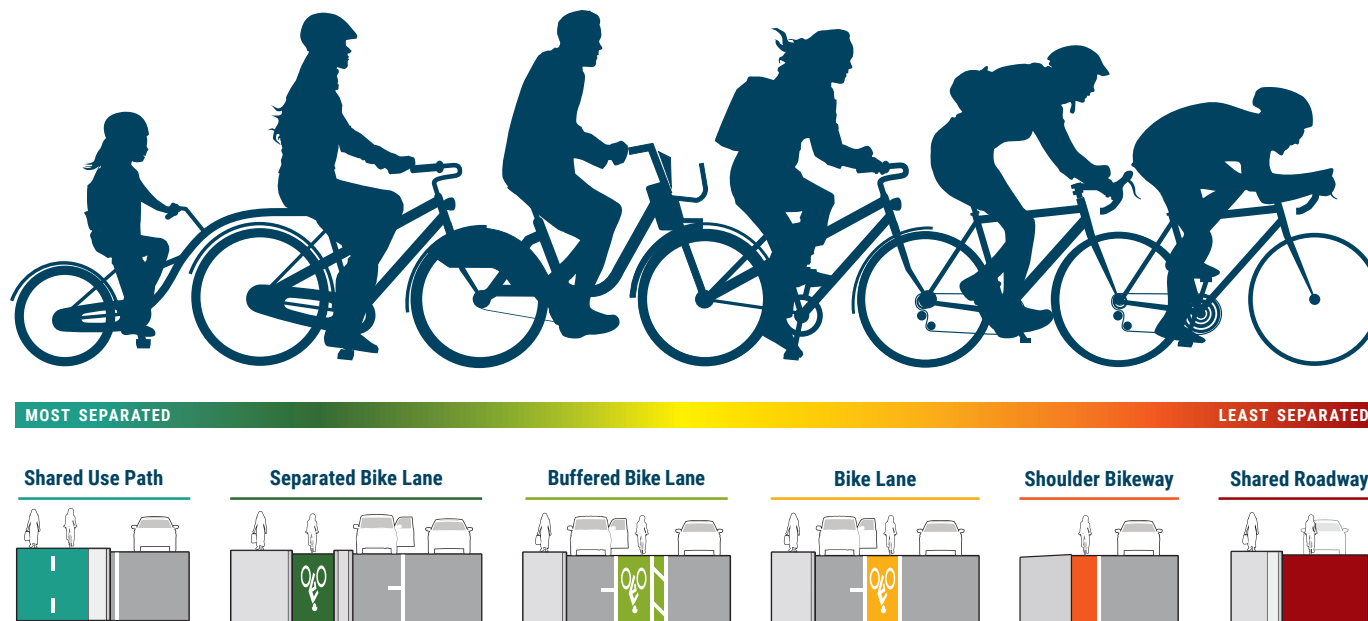
While this is an Active Transportation Plan that encompasses both biking and walking (including people using mobility devices), it is important to remember that bicyclists and pedestrians have unique characteristics that sometimes put them in conflict with one another and require different facility designs. These characteristics are referenced in Table 3.

Bicyclists can also vary more than pedestrians in their riding abilities and stress tolerance. Figure 1 illustrates the differences between bicyclists of varying stress tolerances and the types of facilities they prefer.

Table 3: Bicyclist and Pedestrian Characteristics

Pedestrians	Both	Bicyclists
Travel at slower speeds	Facilities should have adequate width to allow safe passing	Travel at faster speeds
Typically require facilities separate from motor vehicles	Facilities along roadways should have smooth, level surfaces	May share roadway with motor vehicles
Pedestrian facilities must meet ADA requirements for width and cross-slopes	Comfort level often influences decision to walk/bike	Need secure bike parking at their destination

Figure 1: Bicyclist Confidence and Facility Preference



## Infrastructure Types

Three types of bicycle facilities are recommended in this plan: A bicycle and pedestrian infrastructure toolkit is included in Appendix A to provide further information about the facility types recommended and for reference for future recommendations of additional bicycle and pedestrian facility types.

Facility Type	Description
Signed Route	Incorporate shared lane markings, wayfinding, and signage to direct bicyclists while alerting motorists that they may encounter bicyclists. Can be used to direct bicyclists to less-congested roadways.
Shared Lane Markings	Pavement markings that denote shared bicycle and motor vehicle travel lanes. Two chevrons positioned above a bicycle symbol, placed where the bicyclist should be anticipated to operate
Trail	A two-way, paved facility physically separated from motor vehicle traffic that is used by bicyclists, pedestrians, and other non-motorized users.

## Recommended Projects

The infrastructure recommendations that follow were developed based on the field review of existing conditions for active transportation, discussions with the Advisory Team, and feedback from the larger Seneca County community. The tables below summarize the project by ID number and general location. They also include project descriptions, potential funding sources, and indicate which projects are the highest priority for the county based on community input. Renderings of two of the proposed projects are included at the end of the chapter.

## County Projects

Projects proposed at the County level focus on connecting cities and villages, and connecting to regional active transportation routes. Many of the proposed recommendations take advantage of unused railroad right-of-way criss-crossing the county. Proposed facilities for the greater County are described in Table 4.

## City Projects

Demand for active transportation facilities is the highest in the cities of Tiffin and Fostoria. Better active transportation infrastructure in each city would provide residents with additional opportunities for physical activity and replace certain short car trips with biking and walking trips. Proposed facilities in the cities of Fostoria and Tiffin are described in Table 5 and Table 6, respectively.

## Table Key

### Priority Levels

Projects are assigned one of three priority levels:

1. Short-Term (1-2 years)
2. Medium-Term ( 3-5 years)
3. Long-Term (6-10 years)

The priority assigned to a given project is based on the amount of support the project received from the Advisory Committee. Map identification number is unrelated to priority, and is related to the recommendation’s location on the corresponding map. More information on prioritization is included in Chapter 6. Possible funding sources are also listed for each project, and are described in more detail in Chapter 6.

### Funding Source Acronyms

Below are potential funding sources that have been identified for the plan recommendations. Further details on each source are found in Chapter 6.

Acronym	Name	Funder/Distributor
COTF	Clean Ohio Trails Fund	Ohio Department of Natural Resources
GSCP	Green Space Conservation Program	Ohio Public Works Commission
HSIP	Highway Safety Improvement Program	Ohio Department of Transportation
SRTS	Safe Routes to School	Ohio Department of Transportation
TA	Transportation Alternatives	Ohio Department of Transportation
Other	Other federal funds	Various

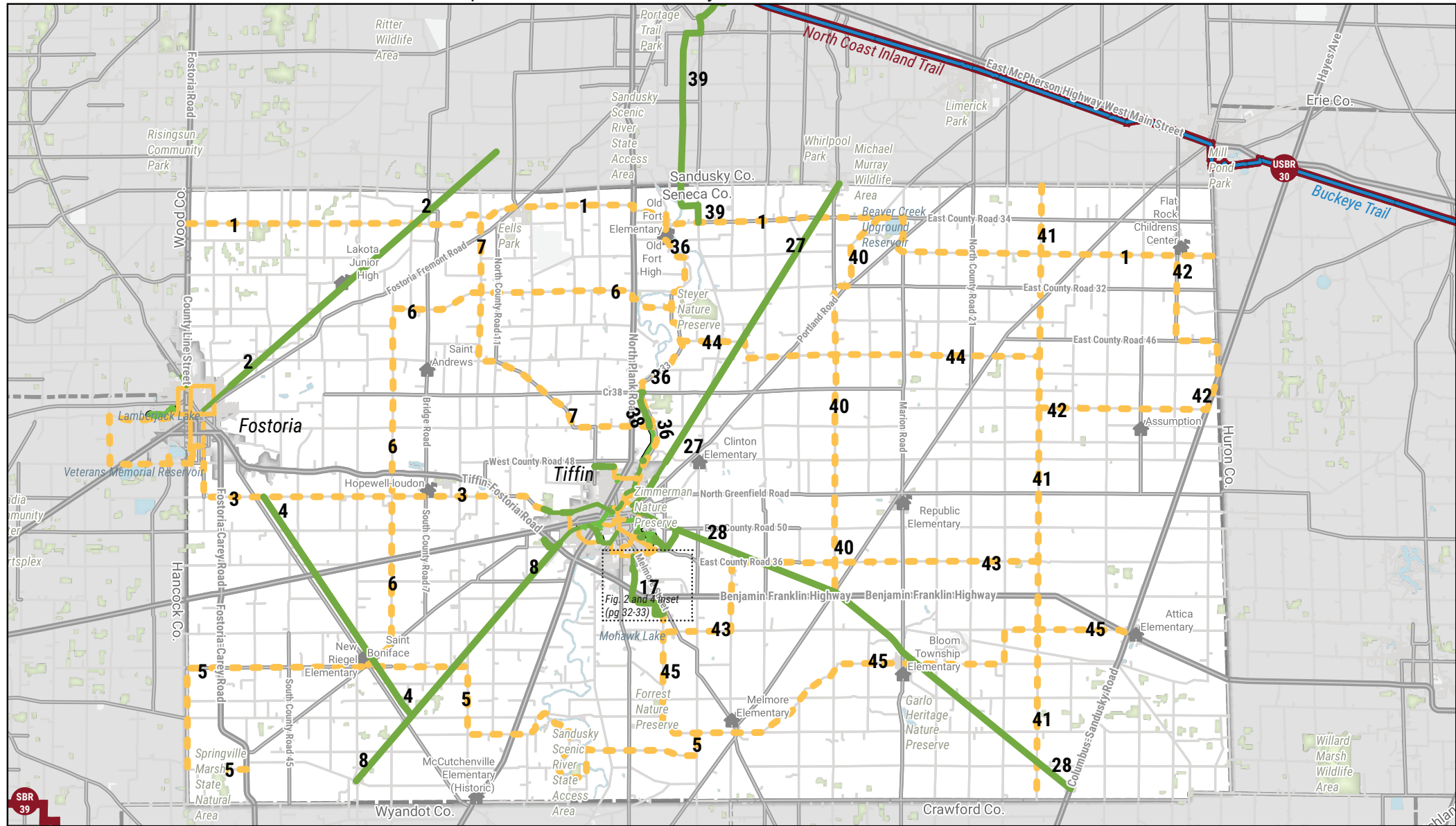
## GREATER SENECA COUNTY

The proposed network of trails in Greater Seneca County are designed to connect the County’s communities to each other and allow for recreational activities. Some routes take advantage of the many abandoned rail corridors to provide separated facilities for walking and biking. Other routes are signed routes along low-volume roads.

Table 4: Greater Seneca County Infrastructure Recommendations

ID	Name	Facility	Description	Priority	Funding
1	Northern Tier Route	Signed Route	This signed route connects communities in northern Seneca County to each other, and provides a through route for bicyclists passing through the County. The route connects to the Beaver Creek Reservoir and serves Kansas, Bettsville, and Old Fort. It provides connections to proposed trails connecting to Tiffin, Green Springs, Burgoon, Fostoria, and the North Coast Inland Trail.	1	GSCP SRTS
3	Fostoria Connector	Signed Route	This signed route between Fostoria and Tiffin uses low-volume roads to connect Seneca County’s two largest cities. At the eastern end, the signed route connects at the Tiffin University Nature Preserve to a proposed trail along Miami Street (9).	1	GSCP SRTS
4	New Riegel Rail-Trail	Trail	This trail uses an abandoned rail corridor to connect New Riegel to the proposed Fostoria Connector (3) route and the proposed Mad River Bike Trail Extension (8).	1	COTF TA SRTS
5	Springville Marsh/Collier State Park Connector	Signed Route	This signed route connects Springville Marsh and Collier State Park via New Riegel. The route’s eastern end connects to the Forrest Nature Preserve route (45) where riders can continue onto Tiffin, Bloomville, and Attica.	1	GSCP
6	Fort Seneca to New Riegel Connector	Signed Route	This signed route connects Fort Seneca to New Riegel via low volume roads. The route includes the Fry Road bridge.	2	Other
7	County Road 11 Route	Signed Route	This signed route connects the northern end of Schekelhoff Park to points north and west, ending west of Bettsville.	2	GSCP
17	St. Francis Trail	Trail	This facility connects St. Francis Avenue to Opportunity Park at Infirmary Road. The northern portion of this alignment is on-street through the convent before transitioning to an existing trail with its own underpass to cross Benjamin Franklin Highway. At the end of the existing trail, a new trail should be constructed along property lines onto the County’s property along Melmore Street and Infirmary Road.	2	COTF
36	River Road Route	Signed Route	This route connects Old Fort to Tiffin along the east side of the Sandusky River. This is a popular corridor with recreational bicyclists. Appropriate signage will help improve motorist awareness of bicyclists along this corridor. The route also connects to Steyer Nature Preserve.	1	GSCP SRTS
38	Plank Road Trail	Trail	This facility connects north from Clinton Park across the County Road 38 bridge to North River Road. In concert with other recommendations, this trail will allow pedestrians and bicyclists to travel from Ellwood Street up to County Road 38 without interacting with motor vehicles.	1	COTF
39	North Coast Inland Trail Connector	Trail	This trail, largely along utility easements, connects the Old Fort area to the North Coast Inland Trail. This recommendation occurs largely in Sandusky County, and is also recommended as part of their active transportation plan. Seneca County has identified connecting to the North Coast Inland Trail as a plan priority.	1	COTF TA

Map 5: Greater Seneca County Infrastructure Recommendations



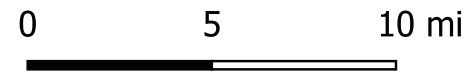
**Proposed Facilities**

- Shared Lane Markings
- - - Signed Route
- Trail

**Existing Facilities**

- Trail
- Buckeye Trail
- State/US Bike Route

- Park/Public Land
- Water Body
- School



ID	Name	Facility	Description	Priority	Funding
40	County Road 43 Route	Signed Route	This route connects Beaver Creek Reservoir to the proposed Carrothers Rail Trail (28).	2	GSCP
41	Eastern County North/South Route	Signed Route	This route along Lodi-Colby Road traverses the entirety of the county from north to south.	2	Other
42	Sorrowful Mother Connector	Signed Route	This signed route directs bicyclists to the Sorrowful Mother Shrine.	2	Other
43	Township Road 106 Route	Signed Route	This route connects Infirmary Road to Lodi-Colby Road.	2	Other
44	Hemminger Road Route	Signed Route	This route connects North River Road to Lodi-Colby Road largely along Hemminger Road.	2	Other
45	Forrest Nature Preserve Route	Signed Route	From west to east, this route connects the County Complex with Forrest Nature Preserve, Bloomville, and Attica.	2	TA GSCP SRTS

THIS PAGE INTENTIONALLY LEFT BLANK

## FOSTORIA

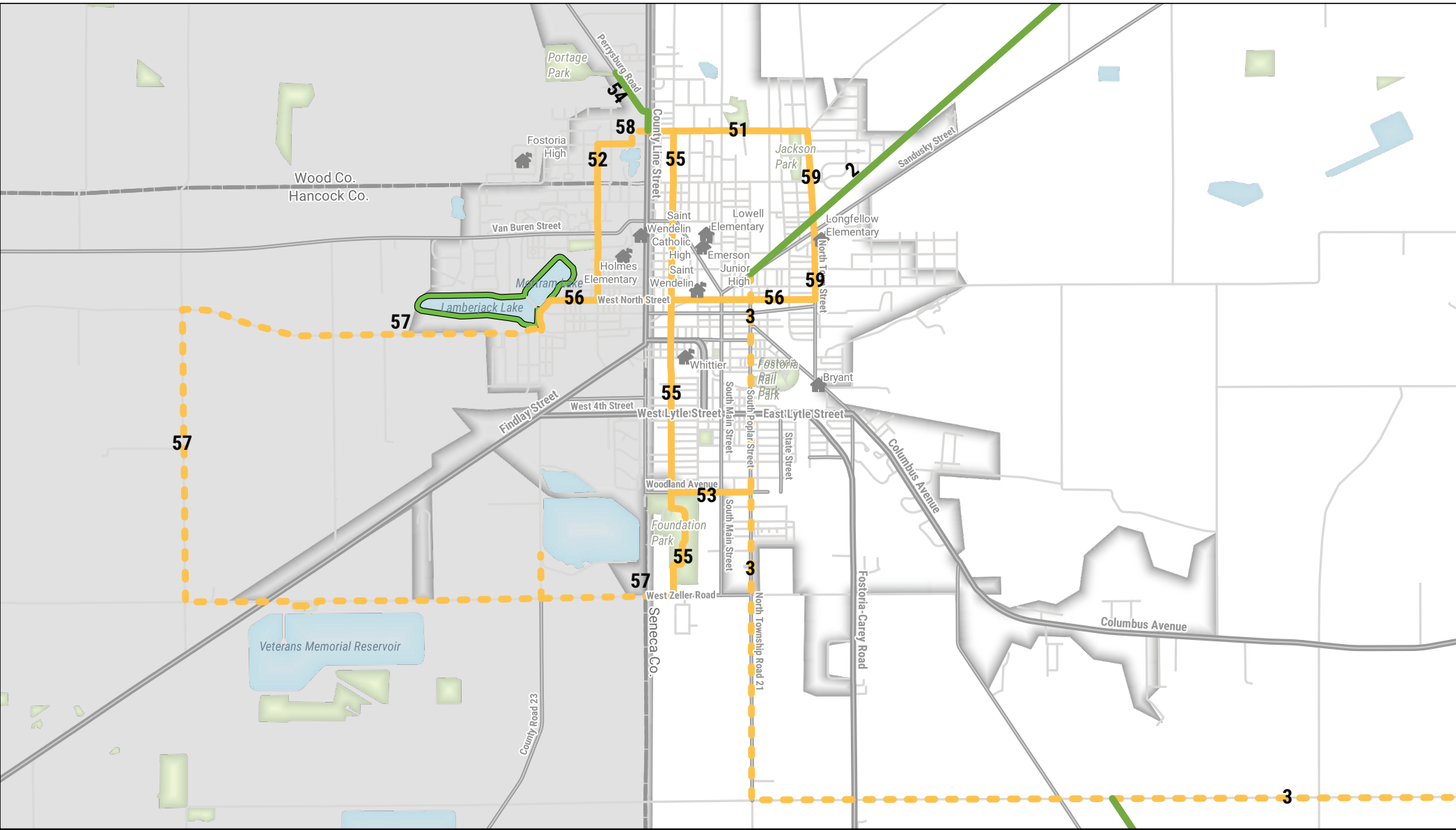
The city of Fostoria has one existing trail, and a number of parks and reservoirs scattered around the city. The proposed facilities include shared lane markings and signed routes along low-volume roads to connect those recreational destinations. Two off-street trails are also proposed.

Table 5: Fostoria Infrastructure Recommendations

ID	Name	Facility	Description	Priority	Funding
2	Burgoon Rail-Trail	Trail	This trail uses an abandoned rail corridor to connect Fostoria with Burgoon and potentially points further north in Sandusky County.	2	COTF SRTS
3	Fostoria Connector	Signed Route	This signed route between Fostoria and Tiffin uses low-volume roads to connect Seneca County's two largest cities. At the eastern end, the signed route connects at the Tiffin University Nature Preserve to a proposed trail along Miami Street (9).	1	GSCP SRTS
51	Culbertson Stret	Shared Lane Markings	This route follows Culbertson Street on the north side of Fostoria, Jackson Park to County Line Street and the proposed Portage Park Spur (54).	2	Other
52	Vine Street	Shared Lane Markings	This route follows Park Street and Vine Street.	1	Other
53	Woodland-Hissong Route	Shared Lane Markings	This route follow Woodland Avenue / Hissong Avenue to the north of Foundation Park.	2	GSCP
54	Portage Park Spur	Trail	This proposed trail would widen the sidewalk along County Line Street and McCutchensville Road, creating a shared-use sidepath that leads to Portage Park	3	GSCP COTF
55	Union Street	Shared Lane Markings	This route follows Union Street for much of the length of Fostoria, from Foundation Park to the proposed Portage Park Spur (54).	1	GSCP SRTS
56	North Street	Shared Lane Markings	This route crosses Fostoria from east to west along North Street and leads to the existing trail around Lamberjack Lake.	1	GSCP SRTS
57	West Fostoria Loop	Signed Route	This route follows low-volume roads to the west of Fostoria, starting at Lamberjack Lake, leading out to Tr 261, and looping back to Foundation Park.	3	GSCP
58	Park Avenue Cut-Through	Signed Route	This signed route cuts through a parking lot to allow continuity from the Culbertson Street (51) to Vine Street (52) routes.	2	Other
59	Town-Buckley Route	Shared Lane Markings	This route along Town Street/Buckley Street would connect the rest of the proposed network in Fostoria to the proposed Burgoon Rail-Trail (2).	2	SRTS



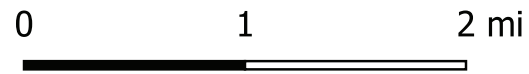
Map 6: Fostoria Infrastructure Recommendations



- Proposed Facilities**
- Shared Lane Markings
  - - - Signed Route
  - Trail

- Existing Facilities**
- Trail

-  School
-  Town Hall
-  Fire Station
-  Park/Public Land
-  Water Body
-  Fostoria City Limit



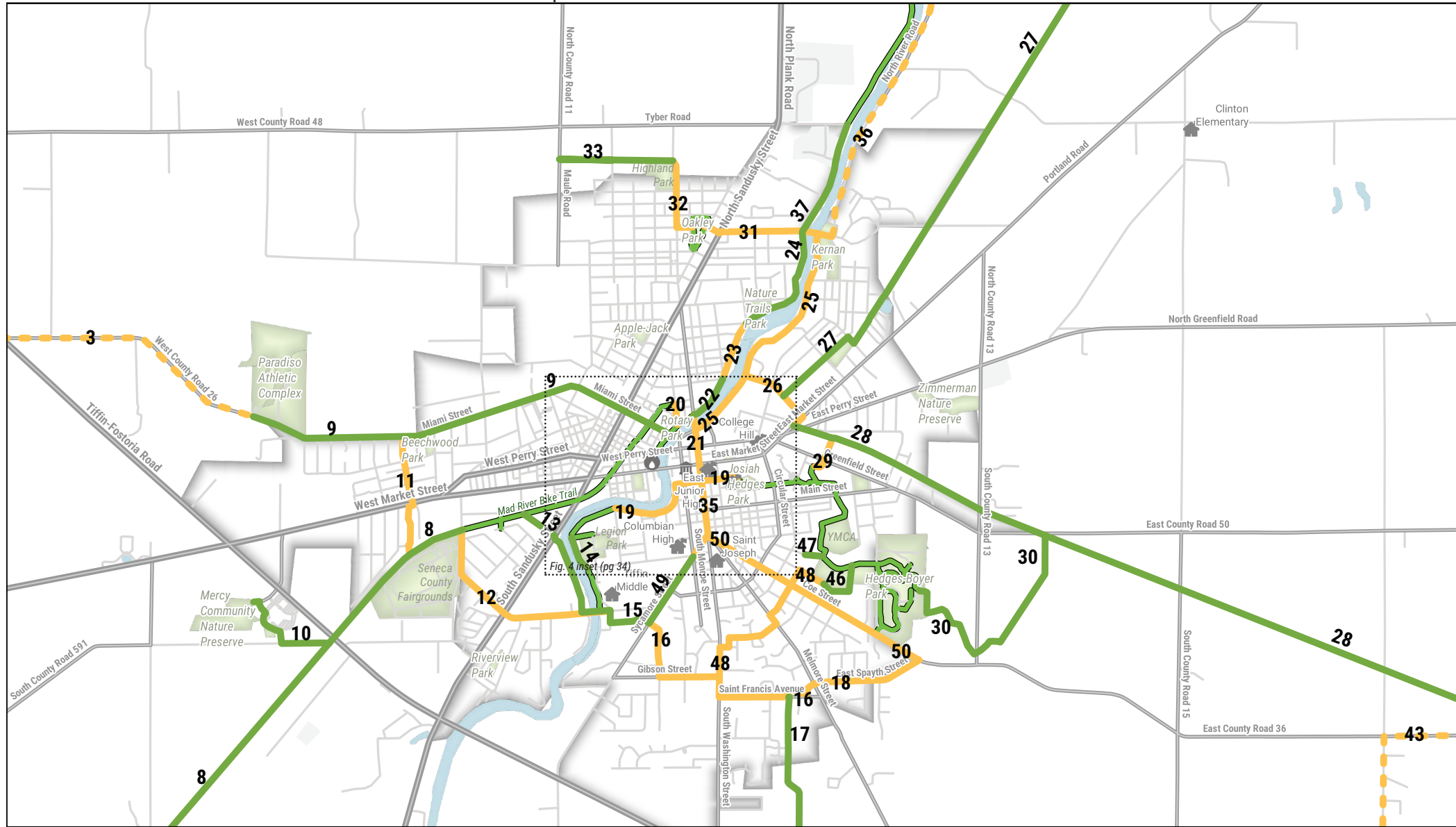
## TIFFIN

Tiffin is the County Seat, and home to two universities. The city already boasts several off-street trails, including the Mad River Bike Trail which leads to the center of town. The proposed routes and trails are designed to connect existing trail segments and provide access to parks, the universities, and other employment centers.

Table 6: Tiffin Infrastructure Recommendations

ID	Name	Facility	Description	Priority	Funding
8	Mad River Bike Trail Extension	Trail	This trail uses an abandoned railroad right-of-way to extend the Mad River Bike Trail, connecting Adrian to Tiffin. In the short term, Fair Lane in the Seneca County Fairgrounds Complex could be opened to people walking and biking.	2	COTF
9	Miami Street Trail	Trail	The Tiffin University Nature Preserve and the Paradiso Athletic Complex are both located on Miami Street on the outskirts of the City of Tiffin. There is currently a sidewalk on the south side of Miami Street that extends west to Birchwood Drive. This recommendation would extend it to the Nature Preserve entrance and widen it into a shared use path (trail) at least 10 feet wide. The shared use path would connect to the Mad River Bike Trail and the existing path along Frost Parkway. The recommendation will provide a high-quality pedestrian and bicycle connection through the area, improving access to downtown Tiffin, the Nature Preserve and Tiffin University's athletic facilities.	3	GSCP TA
10	Mercy Community Nature Preserve Connector	Trail	This trail connects Route 224 and the proposed Mad River Bike Trail extension (8) to the Mercy Community Nature Preserve and its trail network by way of Mercy Tiffin Hospital. If completed in concert with the Mad River Bike Trail extension, hospital staff and visitors living in Tiffin will be able to easily arrive on foot or by bicycle instead of driving.	3	GSCP TA
11	Casa Drive Connector	Shared Lane Markings	These shared lane pavement markings or "sharrows" connect the proposed Miami Street Trail (9) to Fair Lane and the proposed Mad River Bike Trail extension (8). The corridor is important because it guides bicyclists to cross Market Street at a signalized intersection. At the south end of the corridor, a short trail segment will be needed to connect to Fair Lane and the proposed trail.	2	TA
12	Hopewell/Euclid/Ella Connector	Shared Lane Markings	This facility is part of a larger route that connects the Mad River Bike Trail across the city to the proposed St. Francis Trail (17) and Hedges-Boyer Park.	1	TA
13	River Road Trail	Trail	This facility connects the Mad River Trail to the trail along the Mad River that parallels Shepherd Drive across from Tiffin Middle School. The trail connects across the Ella Street bridge before turning up River Road South, crossing Sandusky Street, and connecting into the Mad River Bike Trail. The trail will make it safer and easier for middle and high school students to walk and bike to school.	2	TA SRTS
14	Union Street Connector	Trail	This facility between Union Street and Charlotte Street connects existing trail segments, allowing pedestrians and bicyclists to travel from Third Street to Ella Street without interacting with motor vehicles.	2	TA
15	Martha Street Trail	Trail	This trail in the public right-of-way connects the existing trail along Shepherd Drive to Sycamore Street. It is part of a larger route connecting the Mad River Bike Trail to Hedges-Boyer Park.	1	GSCP
16	Gibson/St. Francis Connector	Shared Lane Markings	This facility is part of a larger route between the Mad River Bike Trail and Hedges-Boyer Park. It consists of shared lane markings and a short trail segment connecting Brookwood Park to Hampden Park.	1	GSCP

Map 7: Tiffin Infrastructure Recommendations

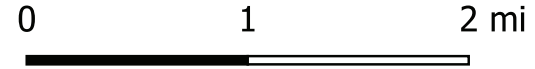


**Proposed Facilities**

- Shared Lane Markings
- Signed Route
- Trail

**Existing Facilities**

- Trail
- School
- Town Hall
- Fire Station
- Park/Public Land
- Water Body
- Tiffin City Limits



SENECA COUNTY ACTIVE TRANSPORTATION PLAN | INFRASTRUCTURE RECOMMENDATIONS

ID	Name	Facility	Description	Priority	Funding
18	Hedges-Boyer Connector	Shared Lane Markings	This facility is part of a larger route that connects the Mad River Bike Trail to Hedges-Boyer Park. Street connectivity in this part of Tiffin make alternate connections or facility types impractical.	1	TA
19	Front-Madison Route	Shared Lane Markings	This facility will connect the Front Street Trail to the Rock Creek Trail across downtown Tiffin. Longer-term, the Front Street Trail could be extended up Front Street to Madison Street. With street reconstruction, Madison Street's northern sidewalk could be widened to trail width to seamlessly connect pedestrians and bicyclists across the city.	1	SRTS
20	Monroe Street Connector	Shared Lane Markings	This short facility connects the end of the Mad River Bike Trail to the Frost Parkway Trail.	1	TA
21	South Washington Street	Shared Lane Markings	This facility connects the Frost Parkway Trail to Madison Street and downtown Tiffin.	1	SRTS TA
22	Frost Parkway Extension	Trail	The Frost Parkway Trail should be extended north along the river to Harrison Street. This corridor's current sidewalks are narrow and severely deteriorated. The trail will provide a more accessible walking and biking connection from the neighborhood north of Harrison Street to downtown Tiffin. This trail connection is part of a larger route connecting downtown Tiffin to Schekelhoff Park.	2	TA
23	Water Street	Shared Lane Markings	Shared lane markings between Harrison Street and Elwood Street along Water Street will help define a bicycle route between downtown Tiffin and Schekelhoff Park.	2	TA GSCP
24	Nature Trails Park Trail	Trail	A trail should connect Elwood Street to Huss Street via Nature Trails Park. This connection is part of a larger route connecting downtown Tiffin to Schekelhoff Park, but it will also provide local connectivity to Nature Trails Park.	2	GSCP
25	Riverside Drive	Shared Lane Markings	This recommendation connects downtown Tiffin to Kernan Park.	1	GSCP
26	Hunter Street Connector	Shared Lane Markings	This recommendation connects Riverside Drive to start of proposed Carrothers Rail Trail (28).	2	Other
27	Green Springs Rail Trail	Trail	This trail connects Tiffin and Green Springs along an abandoned railroad right-of-way.	3	COTF
28	Carrothers Rail Trail	Trail	This trail connects Tiffin to Carrothers by way of Bloomville along an abandoned railroad right-of-way.	3	COTF
29	Sarah Street Connector	Shared Lane Markings	This on-street connection links Rock Creek Trail at Heidelberg University with the proposed Carrothers Rail Trail (28).	2	TA
30	Hedges-Boyer Spur	Trail	This is a conceptual alignment for a trail spur connecting Hedges-Boyer Park to the proposed Carrothers Rail Trail (28). Identifying the actual corridor would result from planning process and property owner consultation.	2	COTF
31	Huss Street Route	Shared Lane Markings	This facility connects Oakley Park to Junior Home Park and Kernan Park.	2	GSCP
32	North Washington Route	Shared Lane Markings	This route connects Oakley Park to the Tiffin Bark Park along North Washington Street. At its northern end, this facility connects to a proposed trail west to Maule Road (33).	3	GSCP
33	Windbreak Trail	Trail	Together with Project 32, this trail along the windbreak would connect Tiffin residents to jobs at American Fine Sinter.	3	TA
35	South Washington Route	Shared Lane Markings	This route links routes 21, 49 and 50 along South Washington Street through Downtown. The route should include additional markings and signage alerting drivers to the presence of cyclists.	1	TA

ID	Name	Facility	Description	Priority	Funding
37	North Water Street Trail	Trail	This trail along the northbound side of North Water Street is the final link in a set of facilities that connect Schekelhoff Park to downtown Tiffin.	2	GSCP
46	Rosa Street Rock Creek Spur	Trail	This facility connects Rosa Street to the Rock Creek Trail at the Hidden Valley Soccer Complex to improve access to the trail and to Hedges-Boyer Park.	3	GSCP COTF
47	Scheiber Street Rock Creek Spur	Trail	This facility connects Scheiber Street to the Rock Creek Trail, improving routing options for pedestrians and bicyclists trying to enter or leave Hedges-Boyer Park and the Rock Creek Trail network.	3	GSCP COTF
48	Glenn Street Connector	Shared Lane Markings	This route connects Hedges-Boyer Park to Krout Elementary School.	2	SRTS
49	Sycamore Street	Trail	Widen the sidewalk on the southbound side of Sycamore Street from Union Street to proposed Martha Trail (15). This new trail, in concert with the Monroe Street Separated Bike Lane (49) and other connected recommendations, greatly improve walking and biking access to the city's schools and downtown.	3	TA SRTS
50	Coe Street	Shared Lane Markings	This facility connects the end of the Jefferson Street Separated Bike Lanes (51) to Hedges-Boyer Park along Coe Street.	1	Other

Figure 2: Recommendation #17: St Francis Trail, Section 1 (Port Road to County Farm Trail Connection)



Figure 3: Recommendation #17: St Francis Trail, Section 2 (Port Road to County Farm Trail Connection)



A view of a section of the proposed shared use trail connecting Port Road and County Farm

Figure 4: Recommendation #19: Front-Madison Route Shared Lane Markings (Madison Street Connector Trail)



Shared lane markings and signage on the proposed Front-Madison route.



# CHAPTER 5

## PROGRAM AND POLICY RECOMMENDATIONS

# Program Recommendations

The program recommendations that follow build on the existing programming already in place in Seneca County to provide a more supportive environment for active transportation. The recommendations are organized according to the non-engineering Es of Active Transportation (described on page 10) as well as other programs and policies; programs often span more than one category. Ultimately, the goal should be to have a mix of programs that incorporate all the categories. Table 7 indicates responsibilities for implementation of these programs; Green markers indicate topics the organizations are already pursuing, and yellow markers indicate recommended program areas for each organization.

## Education

### **Bicycle and Pedestrian Education as part of the physical education curriculum.**

School districts in Seneca County could use the physical education curriculum to teach safe walking and biking behaviors to elementary school-age children. In Washington, D.C. public schools, all second-grade students are taught how to ride a bicycle. A similar program in Seneca County would help create a culture of healthy, active living and improve student safety.

**Regular Bicycle Rodeos and Adult Bicycle Education.** In addition to bicycle/pedestrian safety education in schools, there should be regular bicycle rodeos and other bicycle education events countywide. A bicycle rodeo is an activity with stations that test various bicycling skills like obstacle avoidance, riding slow but stable, and starting and stopping. Bicycle Rodeos can be great activities as part of larger events like the County Fair or Tiffin Farmers Market. The YMCA or other organizations should also consider hosting regular adult bicycle education classes. There are many adults interested in bicycling who may not know how to ride at all or how to ride on roads with motor vehicles. Classes in basic bicycle riding and riding in mixed traffic would help target these interested people and lower barriers to bicycling in the County.



Bicycle rodeos teach various bicycling skills to children.

## Encouragement

**Walking School Buses and Bike Trains.** There should be Walking School Bus and Bicycle Train programs in communities across the County. In many places, parents may not be comfortable with their child walking or biking to school alone, but they are unable to walk or bike with them every day. In a walking school bus or bike train, an adult walks or bikes to school with their child and stops by houses along the way, picking up additional children walking or biking to school. In this way, children can walk or bike to school and are supervised the entire time. Usually, parents whose children participate take turns being the chaperone. These programs lower barriers to getting kids active and help create a culture of walking and biking. While the Tiffin Community YMCA organized a Walking School Bus program in the past, it was discontinued due to feedback from the parents that the walking conditions were unsafe, with either unsafe crossing conditions or lack of sidewalk infrastructure. The benefits of these types of programs – increasing student physical activity, reducing car trips to/from school, improving school area safety, among others – are extremely worthwhile, and Parent Teacher Organizations or other groups should consider giving these programs a second chance. Safe walking and biking routes can be identified at each school by school staff in consultation with local planners and engineers. University students

and high school students could also potentially chaperone these programs to gain community service hours.

**Bike/Walk to School Days.** Bike to School Day and Walk to School Day are nationwide events encouraging parents to bike and walk to school with their children. Bike to School Day takes place in May and Walk to School Day happens in October. There were more than 3,200 registered Bike to School events nationwide on Bike to School Day in 2017. On Walk to School Day in 2017 there were more than 5,600 events. The events help families understand how they might walk or bike to school, making it easier for them to consider walking or biking a strong alternative to driving. The County or schools within the County should coordinate events and track participation over time. Tiffin City Schools have participated in the past. More information can be found at <http://www.walkbiketoschool.org/>

**Bike to Work Day.** Like Bike to School Day, Bike to Work Day is an encouragement event that helps people understand how they might commute to work by bicycle. While events across the country take place at different times of year, most take place during Bike Month in May. The County should work with local jurisdictions to publicize the event and to set up “pit-stops” where participating bicyclists can get Bike to Work Day t-shirts or other prizes.



Parents chaperone children walking to school in a Walking School Bus.

## Enforcement

**Targeted Driver Speed Enforcement.** An integrated approach to speed enforcement might include driver education, speed feedback signs, progressive ticketing, and other elements. Driver education may include yard signs urging drivers to “slow down,” and safe driver pledges. Speed feedback signs can be used to increase driver awareness about their speed and collect motor speed and volume data. The latter may be helpful for prioritizing locations for police enforcement. Each Highway Patrol District in Ohio has a speed feedback trailer that local jurisdictions can request. Progressive ticketing is a method of introducing police enforcement in stages. First an announcement is made that police enforcement will take place. Officers initially give only warnings and proceed to ticketing only after a specified warning period has passed. Enforcement should take place at irregular times.

**Bicycle Police.** Equipping police officers with bicycles and adding bicycle racks to police cruisers can help officers get out on the County’s streets and trails to monitor and enforce safety issues. Police officers walking or cycling are better positioned to understand the needs of active transportation users than those who patrol only in motor vehicles. Bicycles are also needed for officers to access trails that are not open to motor vehicles. The Tiffin Police Department, Fostoria Police, Department, and Seneca County Sheriff’s Office should collaborate to phase in these capabilities.

**Trail Ambassador Program.** Trail ambassadors who volunteer to spend time on the bicycle trail system to assist with education and enforcement activities. This may include providing directions, monitoring trail maintenance issues, and educating trail users about bicycle safety. They also can give minor aid and call for assistance in case of an emergency. Having active ambassadors on the trail can increase the sense of security for trail users. The County should establish a Trail Ambassador program, and can look to examples of similar programs around Ohio, such as in Butler County: <https://opraonline.org/wp-content/uploads/2017/03/Butler-greatmiamiriverrecreationtrailambassadorprogram.pdf>.

## Evaluation

**Regular Bicycle and Pedestrian Counts.** Twice a year, the County should conduct several days of bicycle and pedestrian counts to get a sense of popular active transportation corridors and how levels of walking and biking change over time.

County staff could coordinate volunteers to conduct these counts. The UCLA Bike Count Data Clearinghouse has great resources for starting a count program (<http://www.bikecounts.luskin.ucla.edu/>).

create more walkable, bikeable, and rollable places and can help organize and facilitate educational and encouragement programming.

## Other Programs

**Local Active Transportation Advocacy.** The County should work with interested parties to develop a bicycle and pedestrian advocacy organization. Usually called something like “Bicycle [Jurisdiction Name]” or “Active [Jurisdiction Name]”, these organizations help channel support for infrastructure, policies, and programs that

**Bicycle Friendly Community (BFC).** The County should pursue Bicycle Friendly Community status with the League of American Bicyclists to affirm its commitment to improving bicycling and get credit for the work it has done to date. BFC status would help the County understand how it measures up to other bike-friendly places across the country, and what it needs to do to climb the ranks.

Table 7: Implementation Responsibilities

Responsible Organization	Education	Encouragement	Enforcement	Evaluation	Other
Flatlanders Bicycle Club (Sandusky)	◆	◆			◆
Destination Seneca County		◆			
Seneca County Park District		◆	◆		
Leadership Seneca County		◆			
Tiffin University	◆	◆			
Heidelberg University	◆	◆			
City of Tiffin	◆	◆	◆	◆	
Tiffin Police Department	◆		◆		
City of Fostoria	◆	◆	◆	◆	
Fostoria Police Department	◆		◆		
Fostoria Lions Club	◆				
Seneca Regional Planning Commission	◆	◆		◆	◆
County School Districts (All)	◆	◆	◆		
Tiffin Community YMCA	◆	◆ ◆			
Seneca Industrial and Economic Corp.		◆			◆

◆ Continue current programs    ◆ Implement new programs

# Policy Recommendations

**Bicycle-Friendly Road Sealing on Signed Bicycle Routes.** Chip sealing is often the most cost-effective method for road resurfacing. However, chip seal can be very detrimental to the bicycling experience by creating a rougher road surface. The County should develop a new chip seal method for Signed Bicycle Routes that is smoother. Wyoming Pathways worked with Teton County, Wyoming and Teton County, Idaho to successfully create a new method, detailed in this report: [http://www.wyopath.org/wp-content/uploads/2013/08/Tour\\_de\\_Chip\\_Seal\\_Report.pdf](http://www.wyopath.org/wp-content/uploads/2013/08/Tour_de_Chip_Seal_Report.pdf).

**Complete Streets Policy.** The County should enact a Complete Streets policy to govern County roadway projects and any roadway projects relying on County funds. A Complete Streets policy commits the County to planning and designing roadways to be safe and comfortable for all users, not just motor vehicles. This context-sensitive approach to planning and design can help create livable communities. Jurisdictions within the County should also consider enacting similar policies. More information on Complete Streets can be found here: <https://smartgrowthamerica.org/work-with-us/workshop-types/complete-streets/>.

**Designate the Sandusky River a Water Trail.** The County should coordinate with Sandusky and Wyandot Counties to develop the Sandusky River into a ODNR-recognized Water Trail. ODNR has a “How To” guide on their website for pursuing Water Trail designation, at <http://watercraft.ohiodnr.gov/Portals/watercraft/pdfs/wt/WTinfpocket.pdf>.

**E-Bike and Scooter Policy.** Shared mobility companies such as Lime, Bird, and others have been quickly expanding in communities across the country. These include new mobility options such as dockless shared bicycles, e-bicycles, and electric scooters. Seneca County has the opportunity to be proactive and thoughtfully incorporate these new modes into its transportation system before they are deployed by developing county-wide policies and regulations regarding their use and distribution.



Electric scooters are a new shared mobility option gaining in popularity across the country.

THIS PAGE INTENTIONALLY LEFT BLANK

# CHAPTER 6

## IMPLEMENTATION

# Implementation

The first step towards implementation is identifying the projects with the most potential to achieve the vision and goals of this plan. The second step is creating a phased timeline for these projects that considers available resources, concurrent construction projects and planning efforts, and public support. It is important that this implementation process is revised on an annual basis to reflect changing conditions in the county and take advantage of new opportunities as they arise. Underpinning each of these steps is securing the commitment of those agencies and organizations that will be ultimately responsible for implementing the project recommendations.

## Priority Projects and Programs

All projects and programs identified in this plan are important to Seneca County, but the ones listed below are the top priorities for the Advisory Committee. Projects not on the list below should still be constructed when funding and/or opportunity arises. More complete descriptions of these projects and programs can be found in Chapters 4 and 5.

### Short Term (1-2 Years)

Over the next one to two years, Seneca County should start the following programs:

- Launch walking school buses and bike trains.
- Participate in Bike/Walk to School and Bike to Work days.
- Establish bicycle and pedestrian count program.
- Encourage the establishment of a local transportation advocacy group.
- Develop and track performance measures.

Over the next one to two years, Seneca County is encouraged to focus on constructing the following projects, also listed as “Short-Term Priority (1)” in the tables in Chapter 4.

Table 9: Short-Term Projects

ID	Name	Facility Type
1	Northern Tier Route	Signed Route
3	Fostoria Connector	Signed Route
4	New Riegel Rail-Trail	Trail
5	Springville Marsh/Collier State Park Connector	Signed Route
36	River Road Route	Signed Route
38	Plank Road Trail	Trail
39	North Coast Inland Trail Connector	Trail
3	Fostoria Connector	Signed Route
52	Vine Street	Shared Lane Markings
55	Union Street	Shared Lane Markings
56	North Street	Shared Lane Markings
12	Hopewell/Euclid/Ella Connector	Shared Lane Markings
15	Martha Street Trail	Trail
16	Gibson/St. Francis Connector	Shared Lane Markings
18	Hedges-Boyer Connector	Shared Lane Markings
19	Front-Madison Route	Shared Lane Markings
20	Monroe Street Connector	Shared Lane Markings
21	South Washington Street	Shared Lane Markings
25	Riverside Drive	Shared Lane Markings
35	South Washington Route	Shared Lane Markings
50	Coe Street	Shared Lane Markings

### Medium-Term (3-5 Years)

While continuing efforts started in years one and two, Seneca County should also focus efforts on the following programs in the next three to five years:

- Begin regular bicycle rodeos and adult bicycle education
- Incorporate bicycle and pedestrian education as part of the physical education curriculum.



- Develop a program for elementary school crossing guards.
- Apply for designation as a bicycle-friendly community
- Develop a Complete Streets policy
- Establish a policy for bicycle-friendly road sealing on signed bicycle routes.
- Apply to designate the Sandusky River as a Water Trail.

Over the next three to five years, Seneca County is encouraged to focus on the following projects listed as “Medium-Term Priority (2)” in the tables in Chapter 4.

Table 10: Medium-Term Projects

ID	Name	Facility Type
6	Fort Seneca to New Riegel Connector	Signed Route
7	County Road 11 Route	Signed Route
17	St. Francis Trail	Trail
40	County Road 43 Route	Signed Route
41	Eastern County North/South Route	Signed Route
42	Sorrowful Mother Connector	Signed Route
43	Township Road 106 Route	Signed Route
44	Hemminging Road Route	Signed Route
45	Forrest Nature Preserve Route	Signed Route
2	Burgoon Rail-Trail	Trail
51	Culbertson Stret	Shared Lane Markings
53	Woodland-Hissong Route	Shared Lane Markings
58	Park Avenue Cut-Through	Signed Route
59	Town-Buckley Route	Shared Lane Markings
8	Mad River Bike Trail Extension	Trail
11	Casa Drive Connector	Shared Lane Markings
13	River Road Trail	Trail
14	Union Street Connector	Trail
22	Frost Parkway Extension	Trail
23	Water Street	Shared Lane Markings
24	Nature Trails Park Trail	Trail
26	Hunter Street Connector	Shared Lane Markings
29	Sarah Street Connector	Shared Lane Markings
30	Hedges-Boyer Spur	Trail

## Demonstration Projects

Active Transportation projects can take many years to go from concept to completion. Many of them require repurposing existing elements of the streetscape in new ways, which can cause concerns among the street users, adjacent residents and businesses, and the agencies that own and maintain the roadway. Demonstration projects, or temporary installations of the proposed changes, are a low-cost way to test and refine a proposed concept long before permanent construction.

Demonstration projects vary in size and complexity from taking over a single parking space with café tables to striping a temporary bike lane for several blocks. They can be part of a larger community event or stand on their own. Common materials used for demonstration projects include traffic cones, duct tape, chalk and cardboard signs. For the best outcomes, demonstration projects should secure permission from the appropriate agency, notify community members in advance, and collect baseline data (i.e. bicycle and pedestrian counts, traffic speeds) before, during and after the demonstration.

### Resources

There are several resources available online from Street Plans Collaborative to guide the design and implementation of successful demonstration projects: <http://tacticalurbanismguide.com/guides/>. The Better Block Foundation has helped other communities in Ohio implement large scale demonstration projects.



A demonstration project for a trail

ID	Name	Facility Type
31	Huss Street Route	Shared Lane Markings
37	North Water Street Trail	Trail
48	Glenn Street Connector	Shared Lane Markings

## Long-Term (5+ Years)

Programming initiated in the first five years should be continually monitored and implemented beyond the fifth year.

The following projects listed in Chapter 4 as “Long-Term Priority (3)” are to be completed more than five years from now.

Table 11: Long-Term Projects

ID	Name	Facility Type
54	Portage Park Spur	Trail
57	West Fostoria Loop	Signed Route
9	Miami Street Trail	Trail
10	Mercy Community Nature Preserve Connector	Trail
27	Green Springs Rail Trail	Trail
28	Carrothers Rail Trail	Trail
32	North Washington Route	Shared Lane Markings
33	Windbreak Trail	Trail
46	Rosa Street Rock Creek Spur	Trail
47	Scheiber Street Rock Creek Spur	Trail
49	Sycamore Street	Trail

## Project Delivery

Active transportation projects vary in scope, complexity, and funding sources. All projects should assess the needs of stakeholders, availability of resources, and effectiveness of designs by following the five phases of ODOT’s Project Delivery Process:

### Phase 1 – Planning

The purpose of the Planning Phase is to identify transportation problems, assess existing and future conditions, identify stakeholders, develop goals and objectives, define the purpose and need and determine the scope, schedule and budget for the project.

### Phase 2 - Preliminary Engineering

In this phase, more detailed information is collected through field investigations and other technical studies and designs are further refined. At the end of this phase, a preferred alternative should be selected.

### Phase 3 - Environmental Engineering

Environmental Engineering builds on the preliminary engineering to determine the environmental impacts and potential mitigations for a project before moving on to final design.

### Phase 4 - Final Engineering/Right-of-Way

In Phase 4, the detailed engineering design of the preferred alternative and right-of-way acquisition for the project are completed.

### Phase 5 – Construction

The fifth phase of project delivery is construction, including the necessary pre- and post-construction tasks. Once constructed, projects must be maintained. The responsibility for maintenance may be with a different agency than the one that constructed or funded the project.

More information about the ODOT Project Development Process is available on their website: <http://www.dot.state.oh.us/projects/pdp/Pages/default.aspx>.

## Funding Sources

Plan implementation will hinge on the ability to find funding sources from various public agencies and private organizations. This section highlights the most important potential funding sources for both infrastructure and programming projects. Table 12 indicates what types of projects are eligible for funding under each of the sources described, as well as additional sources.

## Transportation Alternatives

The Transportation Alternatives Set-aside (TA, formerly know as the Transportation Alternatives Program, or TAP) is one of the most common funding sources of active transportation projects. It provides federal funds to the Ohio Department of Transportation for projects that advance bicycle, pedestrian, and recreational trail facilities. The Ohio Department of Transportation (ODOT) annually sub-allocates a portion of TAP funding via its Metropolitan Planning Organizations (MPO) and Large Cities Program. ODOT encourages adding alternatives to planned transportation projects rather than stand-alone projects. Eligible activities include separated bike lanes, new sidewalks, bicycle parking racks, bicycle lockers, safety lighting, and adjustments for meeting ADA requirements. Projects that connect activity centers such as businesses, schools, libraries, shopping areas, or recreational areas will receive higher priority.

Seneca County has not received any funding from TAP in the past five years. Currently, ODOT provides up to 100 percent (this is due to the use of Toll Revenue Credit) of the construction cost up to a maximum amount for projects scheduled to begin in FY 2023 or sooner. Projects scheduled to begin construction after 2024 will be funded up to 80 percent, with remaining costs borne by the locality where the project is located. This program will be a crucial one for funding the construction of the recommendations in this plan, and Seneca County should apply to the program on an annual basis. Applications are due in May.

## Clean Ohio Trails Funds Recreational Trails Program

The federal Recreational Trails Program (RTP) provides funds to states to develop

and maintain trails and trail-related facilities. In Ohio, the RTP is administered by the Ohio Department of Natural Resources as part of the Clean Ohio Trails Fund (COTF). The Clean Ohio Trails Fund works to improve outdoor recreational opportunities for Ohioans by funding trails for outdoor pursuits of all kinds. Eligible projects include: Land acquisition for a trail, trail development, trailhead facilities, engineering, and design. Local governments, park and joint recreation districts, conservancy districts, soil and water conservation districts, and non-profit organizations are eligible to receive grants for conservation projects from the Clean Ohio Trails Fund. Applicants must provide a 25 percent local match, which can include contributions of land, labor, or materials. Up to 75 percent matching State of Ohio funds are reimbursed under the Clean Ohio Trails Fund. All projects must be completed within 15 months from the date that they are signed into contract.

## Highway Safety Improvement Program

Most of Ohio's fatalities, serious injuries, and total crashes occur on local roads, and ODOT recognizes the public safety benefit of engineering improvements in high-crash locations beyond the ODOT network. ODOT works with MPOs and local governments to identify locations with severe safety problems and fund infrastructure improvements in these areas through Highway Safety Improvement Program (HSIP). HSIP funds are available for safety projects aimed at reducing traffic fatalities and serious injuries. Bike lanes, roadway shoulders, crosswalks, intersection improvements, underpasses and signs are examples of eligible projects. Projects in high-crash locations are most likely to receive funding. States that have identified bicycle safety and pedestrian safety as Emphasis Areas are more likely to fund bicycle and pedestrian safety projects. HSIP funds are available through the Ohio Department of Transportation (ODOT). This funding is available to ODOT staff and local governments, and can be used to make improvements on any public roadway.

## Safe Routes to School

The Safe Routes to School program provides funds for safety projects that encourage or enable children in grades k-8, including those with disabilities, to walk or ride their bikes to school. Ohio sets aside \$4 million yearly to continue the Safe Routes to School program. SRTS projects include traffic calming, enhanced crossing treatments, signal upgrades, sidewalks, and other countermeasures. These treatments are most effective when used in combination with non-infrastructure solutions (i.e. education,

Table 12: Applicability of Federal Funding Sources for Active Transportation Projects

Project Type	Funding Sources										
	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	TRP	SRTS
Bicycle and pedestrian overpasses	●	●	●	●	●	●	●	●	●	●	●
Bicycle parking	●	●	●	●	●	●	●	●	●	●	●
Bicycle and pedestrian scale lighting	●	●	●	●	●	●	●	●	●	●	●
Crosswalks (new or retrofit)	●	●	●	●	●	●	●	●	●	●	●
Curb ramps	●	●	●	●	●	●	●	●	●	●	●
Bike lanes	●	●	●	●	●	●	●	●	●	●	●
Paved shoulders	●	●	●	●	●	●	●	●	●	●	●
Separated bike lanes	●	●	●	●	●	●	●	●	●	●	●
Shared use paths	●	●	●	●	●	●	●	●	●	●	●
Sidewalks (new or retrofit)	●	●	●	●	●	●	●	●	●	●	●
Signed routes	●	●	●	●	●	●	●	●	●	●	●
Signs and signals	●	●	●	●	●	●	●	●	●	●	●
Streetscaping	●	●	●	●	●	●	●	●	●	●	●
Traffic calming	●	●	●	●	●	●	●	●	●	●	●
Trail bridges	●	●	●	●	●	●	●	●	●	●	●
Trail crossings	●	●	●	●	●	●	●	●	●	●	●
Trail facilities (e.g. restrooms)	●	●	●	●	●	●	●	●	●	●	●
Tunnels/underpasses	●	●	●	●	●	●	●	●	●	●	●

● Funds may be used for this activity   ● See program-specific notes for restrictions   ● Eligible, but not competitive unless part of a larger project   ● Not eligible

**Program Abbreviations**

TIGER: Transportation Investment Generating Economic Recovery Discretionary Grant program  
 TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)  
 FTA: Federal Transit Administration Capital Funds  
 ATI: Associated Transit Improvement (1% set-aside of FTA)  
 CMAQ: Congestion Mitigation and Air Quality Improvement Program

NHPP: National Highway Performance Program  
 STBG: Surface Transportation Block Grant Program  
 HSIP: Highway Safety Improvement Program  
 TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)  
 TRP: Recreational Trails Program  
 SRTS: Safe Routes to School Program / Activities

encouragement, enforcement, and evaluation). Projects identified in this plan that meet the requirements of ODOT’s SRTS program are eligible for SRTS funding. Communities and schools interested in applying need to complete the Parent Surveys and Classroom Tallies for relevant schools and submit student address data to ODOT to develop 2-mile radius maps. Information on the SRTS program, requirements for funding, and resources on developing School Travel Plans can be found at [walk.ohio.gov](http://walk.ohio.gov).

## Green Space Conservation Program

The Green Space Conservation Program is administered by the Ohio Public Works Commission. Its goals include enhancing eco-tourism and economic development related to outdoor recreation in economically challenged areas and providing pedestrian or bicycle passageways between natural areas and preserves. Applicants must provide a 25 percent local match.

## Other Sources

Table 12 lists additional federal funding sources for bicycle and pedestrian infrastructure projects based on project type and eligibility, which could potential apply to these recommendations.

In addition to relying on state and federal funding, the County and its jurisdictions will

need to allocate money from their operating and capital budgets to implement Plan infrastructure and programming recommendations. Plan implementation will also hinge on the ability to secure funding sources from other government agencies and non-profit organizations. Beyond the sources listed, the county should work with utility companies and developers to include active transportation infrastructure into their projects. The costs for sidewalks, bike lanes, and trails is much less when they are added to existing projects than when they are constructed on their own.

# Performance Measures

As recommendations in the Plan are constructed and programs are started, the County should continually examine whether its investments are paying active transportation dividends. An affirmative answer reinforces decisions the County has made, and provides evidence that future investment will also yield positive results. The performance measures in Table 13 help measure progress towards achieving the Plan vision discussed at the beginning of this document. Progress on these measures should be documented and published for public review annually.

Table 13: Performance Measures

Performance Measure	Description
Semi-Annual Pedestrian and Bicycle Counts	After developing a baseline of pedestrian and bicycle activity, aim for year-over-year increases.
Education Programming	Track the number of children and adults who participate in pedestrian and bicycle education programming every year.
Safety	Track the number of crashes that occur in Seneca County every year, including whether bicyclists or pedestrians were involved and the level of severity, if injuries occurred.
Public Opinion	Conduct an annual active transportation survey to gauge resident comfort and opinion about active transportation in the County
Mode Share	As of 2016, bicycle mode share is 0.1 percent and pedestrian mode share is four percent. Track how these figures change as Census data are available.
Students Walking and Bicycling	Conduct student travel tallies for all schools and identify a baseline percentage of students who walk and bike. Conduct travel tallies semi-annually and measure the change in the number of students walking and bicycling.

THIS PAGE INTENTIONALLY LEFT BLANK

# APPENDICES

- A. Infrastructure Toolkit**
- B. Public Engagement Details**

# A. Infrastructure Toolkit

This toolkit is an introduction to the bicycle and pedestrian facility types recommended in this plan for Seneca County. Additional information and detailed design guidance for these facilities can be found in:

- FHWA Guidance on Pedestrian and Bicycle Design Flexibility
- AASHTO Guide to Bicycle Facilities
- FHWA Small Towns and Rural Multimodal Networks Guide
- Accessibility Guidelines for Pedestrian Facilities

ODOT has compiled a list of additional resources available here: <http://www.dot.state.oh.us/Divisions/Planning/SPR/bicycle/Design%20Library/Links%20to%20Planning%20and%20Design%20Resources.pdf>

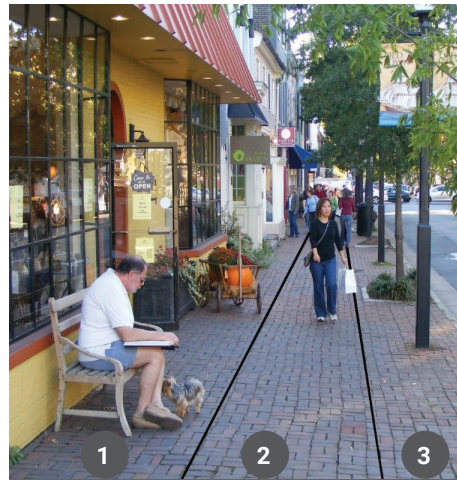
## PEDESTRIAN FACILITIES

### Sidewalks

Sidewalks are the place typically reserved for pedestrians within the public right-of-way and play a critical role in the accessibility of neighborhoods. Sidewalks typically run parallel to the road, or adjacent to property lines or building faces. Wide sidewalks can also accommodate street trees and other plantings, street lights, and bicycle racks, helping define the character, function, and enjoyment of the pedestrian realm.



Sidewalk with buffer



Sidewalk Zones

### Considerations and Guidance

- Well-designed sidewalks make walking an easy choice between destinations and create a network for pedestrian travel throughout the city.
- The desired width for sidewalks is 6 feet to allow pedestrians to travel comfortably side by side or pass without stepping into the street.
- Pavement materials should be as uniform as possible, and all new sidewalks and curb ramps need to comply with Americans with Disabilities Act regulations.
- Buffers between the sidewalk and roadway increase pedestrian comfort and provide space for sign posts and utilities. The width of a buffer varies depending on the character of an area and the traffic conditions on the adjacent roadway.

In commercial areas, wider sidewalks can be divided into three zones:

#### 1. Pedestrian Zone

Also known as the “walking zone,” the Pedestrian Zone is the portion of the sidewalk space used for active travel. For it to function, it must be kept clear of any obstacles and be wide enough to comfortably accommodate expected pedestrian volumes including those using mobility assistance devices, pushing strollers, or pulling carts.

#### 2. Frontage Zone

The Frontage Zone is the area of sidewalk that immediately abuts buildings along the street. In residential areas, the Frontage Zone may be occupied by front porches, stoops, lawns, or other elements that extend from the front door to the sidewalk edge. The Frontage Zone of commercial properties may include architectural features or projections, outdoor retailing displays, café seating, awnings, signage, and other intrusions into or use of the public right-of-way.

#### 3. Amenity Zone

The Amenity Zone lies between the curb and the Pedestrian Zone. This area can be occupied by a number of street fixtures such as street lights, street trees, bicycle racks, parking meters, signposts, signal boxes, benches, trash and recycling receptacles, and other amenities. This zone should be designed to accommodate winter snow storage and prevent snow from obstructing the Pedestrian Zone.

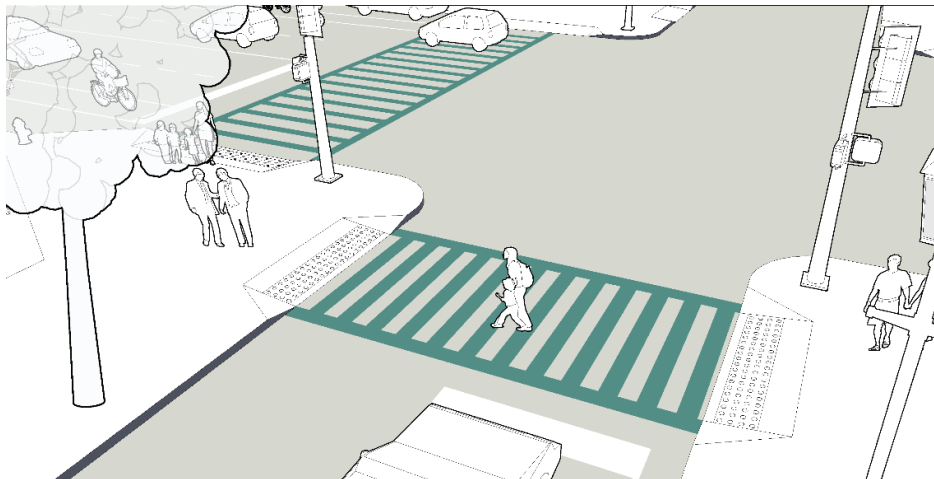


## High Visibility Crosswalks

Providing high visibility crosswalks communicates to drivers that pedestrians may be present and helps guide pedestrians to locations where they should cross the street.

### Considerations and Guidance

- Ladder and continental striping patterns are more visible to drivers than narrow parallel lines.
- Crosswalks should be marked on all legs of signalized intersections, in school zones, and across streets with more than minimal levels of traffic.
- Crosswalks should be at least 10 feet wide.
- Crosswalks should cross perpendicular to streets, minimizing crossing distances and therefore limiting the time that pedestrians are exposed.



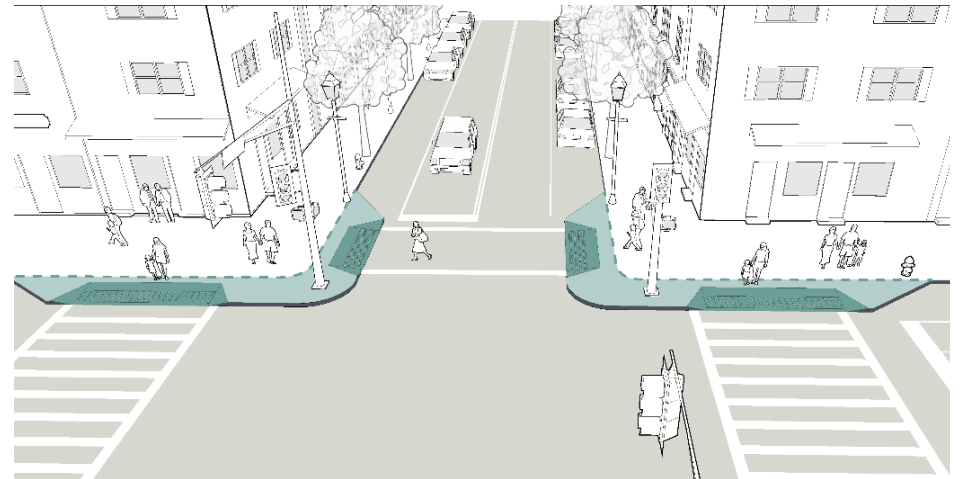
High visibility crosswalk

## Curb Extensions

Curb extensions are created by extending the sidewalk to the edge of the travel lane at corners or mid-block crossings. Curb extensions are intended to increase visibility, calm traffic, and provide additional extra space for pedestrians and sidewalk amenities. In addition to shortening crossing distances, curb extensions change the geometry of the intersection and help slow turning motor vehicles.

### Considerations and Guidance

- Curb extensions are particularly valuable in locations with high volumes of pedestrian traffic, near schools, at unsignalized pedestrian crossings, or where there are demonstrated pedestrian safety issues.
- Curb extensions should be considered only where on-street parking is present.
- Curb extensions should not reduce a travel lane or a bicycle lane to an unsafe width.



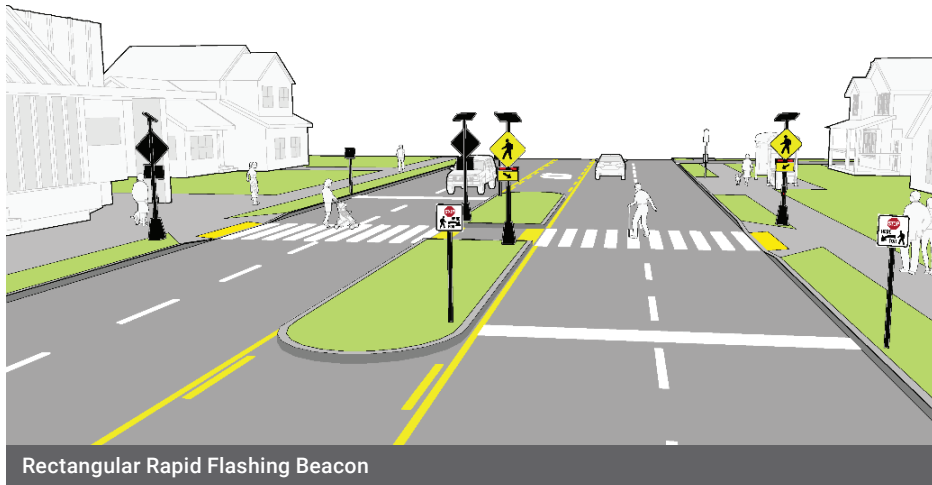
Curb extensions

## Rapid Flashing Beacon

Vehicle speeds and poor pedestrian visibility can combine to create conditions in which very few drivers are compelled to yield for pedestrians crossing the street. One device proven to be successful in improving yielding compliance at these locations is the Rectangular Rapid Flash Beacon (RRFB). RRFBs combine a pedestrian crossing sign with a bright flashing light that is activated via push button by the pedestrian crossing the street.

### Considerations and Guidance

- RRFBs are installed on both sides of the roadway at the edge of the crosswalk. If there is a pedestrian refuge or other type of median, an additional beacon should be installed in the median.
- RRFBs should be limited to locations with critical safety concerns and installed in conjunction with advance yield pavement lines and signs.
- RRFBs can be used when a signal is not warranted at an unsignalized crossing. They are not appropriate at intersections with signals or STOP signs.
- RRFBs are considerably less expensive to install than mast arm-mounted signals. They can also be installed with solar power panels to eliminate the need for an external power source.



Rectangular Rapid Flashing Beacon

## Pedestrian Signals

Signal timing for pedestrians is shown with pedestrian signal heads. Pedestrian signal heads display the three intervals of the pedestrian phase:

1. The Walk Interval, signified by the WALK indication (the walking person symbol) alerts pedestrians to begin crossing the street.
2. The Pedestrian Change Interval, signified by the flashing DON'T WALK indication (the flashing hand symbol accompanied by a countdown display) alerts pedestrians approaching the crosswalk that they should not begin crossing the street.
3. The Don't Walk Interval, signified by a steady DON'T WALK indication (the steady upraised hand symbol) alerts pedestrians that they should not cross the street.

### Considerations and Guidance

- One of primary challenges for traffic signal design is to minimize conflicts between motor vehicle and pedestrian movements.
- Intersection geometry and traffic controls should encourage turning vehicles to yield the right-of-way to pedestrians.
- Pedestrian signals should allocate enough time for pedestrians of all abilities to safely cross the roadway.
  - › A Leading Pedestrian Interval (LPI) initiates the pedestrian WALK indication three to seven seconds before motor vehicles traveling in the same direction are given the green indication, allowing pedestrians to establish themselves in the intersection in front of turning vehicles.
- Requiring pedestrians to wait for extended periods can encourage crossing against the signal.
  - › In areas with higher pedestrian activity, pedestrian signals should be set to automatic recall and display the WALK sign every signal phase, rather than requiring pedestrians to push a button to call for a pedestrian phase.



Example pedestrian signal

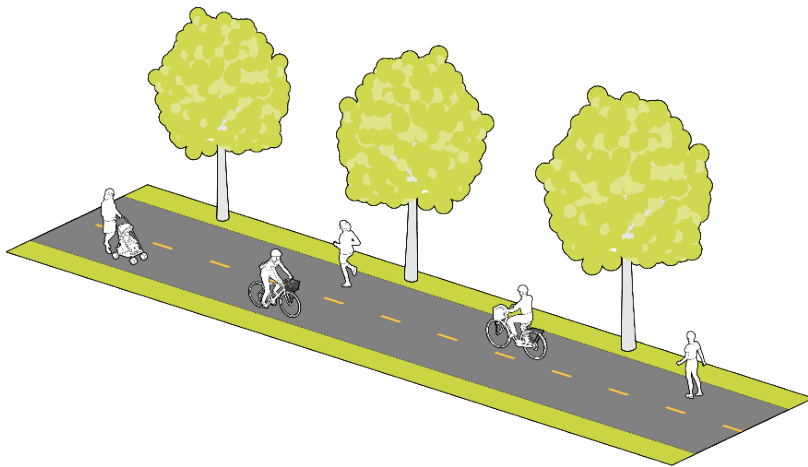
## BICYCLE FACILITIES

### Trails

Trails are facilities for use by both pedestrians and bicyclists, and they can be either a paved or natural surface. A multiuse trail is a two-way, paved facility physically separated from motor vehicle traffic that is used by bicyclists, pedestrians, and other non-motorized users. Multiuse trails are often located in an independent right-of-way. When constructed along roadways they may be also called “sidepaths.” Natural surface trails using dirt or gravel are typically located in parks or reserves and provide users with a more recreational experience. In addition to pedestrians and bicyclists, natural surface trails may accommodate mountain bikers, equestrians, and hikers.

### Considerations and Guidance

- Multiuse trails may be desirable along high-volume or high-speed roadways, where accommodating the targeted type of bicyclist within the roadway in a safe and comfortable way is impractical.
- The minimum width of a multiuse trail is 10 feet but should be wider based on the anticipated user volume.
- Factors such as construction costs, anticipated life of the trail, and maintenance costs play into the decisions about the surface materials.
- Hard surfaces allow for a better path experience for bicyclists traveling at higher rates of speed, storm water flow over the trail, and snow plowing.
- Good design includes intuitive and safe intersection crossings.



Paved multiuse trail

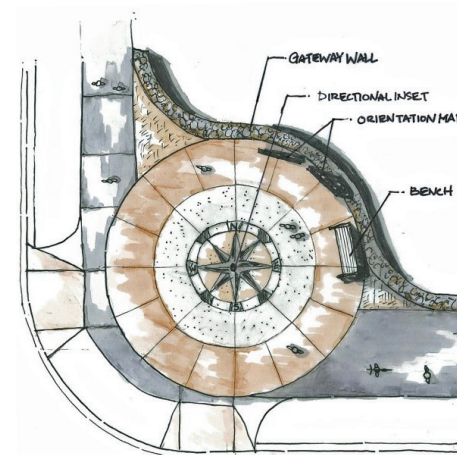
## Trail Features

### Trailheads

Trailheads mark entry points to trail network, provide meeting points, can encourage more people to use a trail. The number and type of amenities provided at a trailhead should be based on the number of users of the trail and the relative ease of finding services nearby. Amenities may include parking lots, signage, informational kiosks with trail orientation maps, benches, bicycle racks, bicycle repair stations, and shade structures.

### Mile Markers

Mile markers can provide distance and location information to a trail user and serve as a confirmation sign for wayfinding purposes. When consistently designed, mile markers can enhance the identity of a trail. Like wayfinding signage, it should be consistent throughout the reach of an entire trail, not just through a single jurisdiction. If a trail user needs emergency assistance, citing a location using mile markers can be extremely helpful where roads or other defining features may not be visible.



Trailhead concept design



Painted mile markers on the Hocking Adena Bikeway

## Separated Bike Lanes

Separated bike lanes (also known as protected bike lanes or cycletracks) are an exclusive bike facility type that combines the user experience of a sidepath with the on-street infrastructure of a conventional bike lane. They are physically separated from motor vehicle traffic and distinct from the sidewalk.

### Considerations and Guidance

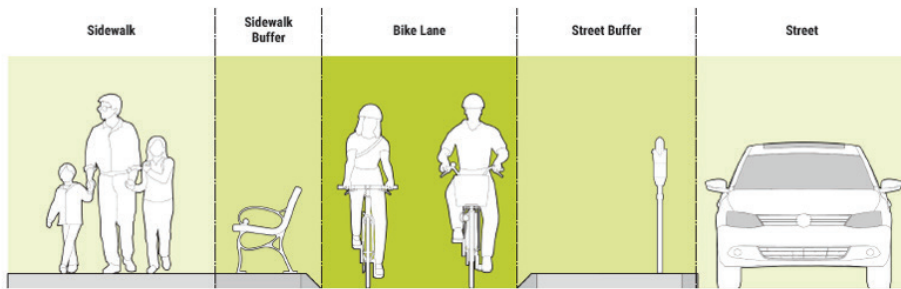
- The bike lane width should be at least 6.5 feet for one-way bike lanes and 8 feet for two-way bikeways, to ensure bicyclists can safely pass each other.
- Separated bike lanes are more attractive to a wider range of bicyclists than striped bikeways on higher volume and higher speed roads.
- Separated bike lanes eliminate the risk of a bicyclist being hit by an opening car door and prevent motor vehicles from driving, stopping or waiting in the bikeway.
- Types of separation include flex posts, curbs, and parked vehicles.

## Buffered Bike Lanes

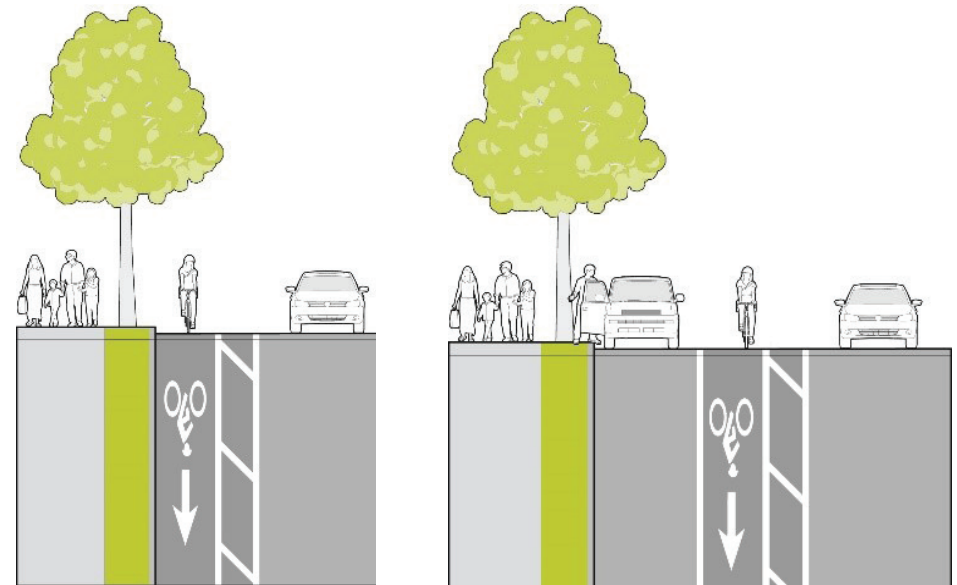
Buffered bike lanes are created by painting a buffer zone between a bicycle lane and the adjacent travel lane. While buffers are typically used between bicycle lanes and motor vehicle travel lanes to increase bicyclists' comfort, they can also be provided between bicycle lanes and parking lanes in locations with high parking turnover to discourage bicyclists from riding too close to parked vehicles.

### Considerations and Guidance

- The desirable width for a buffered bike lane width is 6 feet, plus 1.5 feet or more for the buffer.
- Buffered bike lanes should be considered on roadways where speeds are 30 mph or greater or when traffic volume exceeds 6,000 vehicles per day.



Separated bike lane with curb and parking separation



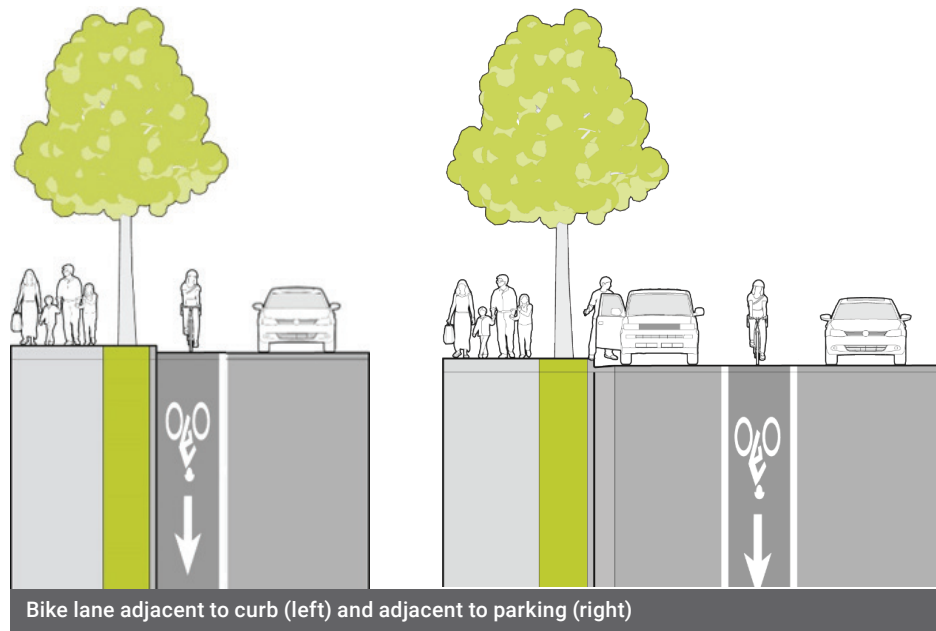
Buffered bike lane adjacent to curb (left) and adjacent to parking (right)

## Bike Lanes

Bike lanes provide an exclusive space for bicyclists in the roadway designated with pavement markings. Bike lanes are for one-way travel and are normally provided in both directions on two-way streets and/or on one side of a one-way street.

### Considerations and Guidance

- The desirable width for a bike lane is 6 feet. The minimum width of a bike lane adjacent to a curb is 5 feet exclusive of a gutter.
- Bike lanes should generally be considered on roads with a posted speed limit of 30 mph or less and Average Daily Traffic (ADT) of 9,000 vehicles or fewer.
- Contra-flow bike lanes may be used to allow two-way bicycle travel on streets designated for one-way motor vehicle travel to improve bicycle network connectivity.

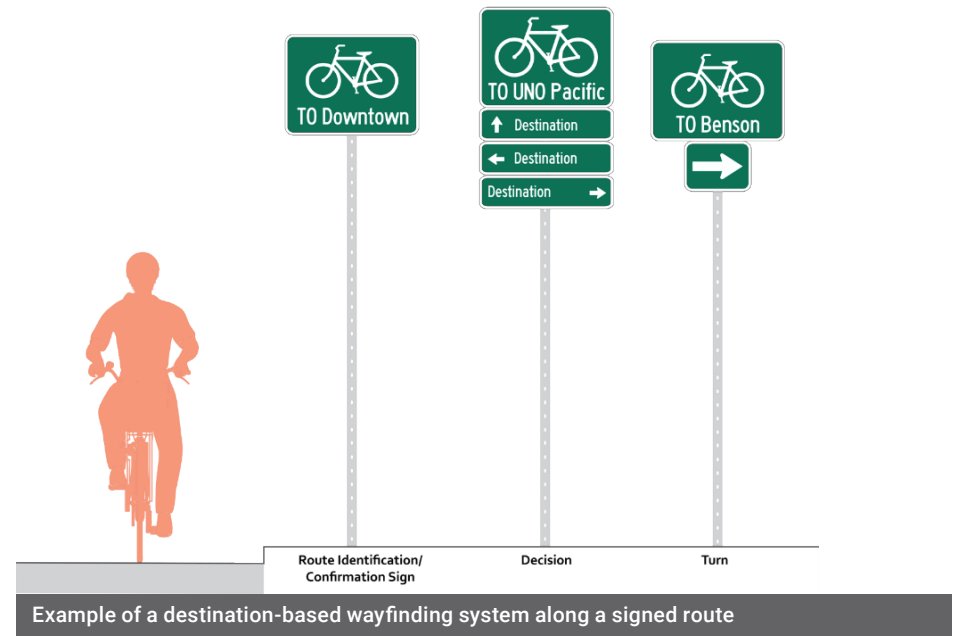


## Signed Bike Routes

Signed bike routes along rural roads incorporate shared lane markings, wayfinding, and signage to direct bicyclists while alerting motorists that they may encounter bicyclists. Signed routes can be used to direct bicyclists to less-congested roadways that follow the same general corridor as more heavily traveled highways.

### Considerations and Guidance

- On signed routes lacking continuous paved shoulders the BICYCLE warning sign or BICYCLES MAY USE FULL LANE sign may be used to provide an indication to motorists to expect bicyclists operating within the travel lane.
- Shared lane markings may not be appropriate on rural roadways where the operating speed is higher than 35 mph.
- Adding or improving paved shoulders on signed bike routes can enhance safety for all roadway users.
- Wayfinding for signed bike routes can be either destination-based or route-based, depending on the goal of the system.



## Shared Lane Markings

Shared lane markings (or “sharrows”) are pavement markings that denote shared bicycle and motor vehicle travel lanes. The markers are two chevrons positioned above a bicycle symbol, placed where the bicyclist should be anticipated to operate. In general, this is a design solution that should only be used in locations with low traffic speeds and volumes as part of a signed route, bicycle boulevard, or as a temporary solution on constrained, higher-traffic streets until additional right-of-way can be acquired.

### Considerations and Guidance

- Typically used on local, collector, or minor arterial streets with low traffic volumes.
- Typically feasible within existing right-of-way and pavement width even in constrained situations.
- Typically supplemented by signs, especially Bikes May Use Full Lane (R4-11).
- The marking’s centerline must be at least 4’ from curb where parking is prohibited, or 11’ from curb where parking is permitted.



Shared lane markings or “sharrows”

## Bicycle Parking

Secure bicycle parking enhances the bicycle network by providing designated locations for storing bicycles when not in use. Bicycle parking requires far less space than automobile parking: 10 bicycles can typically park in the area needed for a single car.

### Considerations and Guidance

- Bicycle racks should provide two points of support to prevent locked bicycles from falling over.
- Bike rack design should allow easy locking of the frame and at least one, but preferably both, wheels.
- Bicycle racks should be installed in visible locations near the entrances to buildings.
- Where possible, bike racks should be placed in a location that provides cover or protection, such as under awnings, shelters or other covered areas.



“Inverted U” bicycle racks

# B. Public Engagement Details

## ADVISORY COMMITTEE

In addition to serving as “ambassadors” for the Active Transportation Plan, the Advisory Committee met with the project team at key intervals during the planning process to provide input, ask questions, and suggest recommendations.

## KICK-OFF MEETING

The project kick-off meeting was held via conference call on December 20, 2017.

### Meeting Agenda

1. Introductions
2. Review Project Scope
3. Project Lead and Advisory Team Roles
4. Community Engagement Strategy
5. Baseline Data
6. Existing Programs to Support Active Transportation

## MEETING 1

Meeting 1 was held in person on March 30, 2018. The project team discussed their findings from fieldwork and asked advisory committee members for input on walking and bicycling conditions.

### Meeting Agenda

1. Welcome and Introductions
2. Plan Purpose
3. Review of Project Schedule
4. Discussion of Current Active Transportation Programming
5. Review of 3/29 Fieldwork
6. Discussion of Potential Community Mapping Event Venues/Locations
7. Route/Barrier Mapping Exercise

## MEETING 2

Meeting 3 was held in April of 2018. The project team presented initial recommendations and asked committee members to select priority projects.

## MEETING 3

The third Advisory Committee meeting was held in July to present the draft network and program recommendations.



Advisory Committee members conduct fieldwork

# Advisory Committee Meeting Materials

## Meeting 1



**Seneca County Active Transportation Plan Kick-off Meeting**  
January 16, 2018

**Toole Design Group**

**Eli Glazer**  
Project Manager

**Jeff Cabotti**  
Strategic Advisor

**David Shipp, AICP**  
Chief Office Director

### Agenda

- Advisory Team Introductions
- Project Overview & Schedule
- Advisory Team Role
- Community Engagement Strategy
- Work to Date
- Next Steps

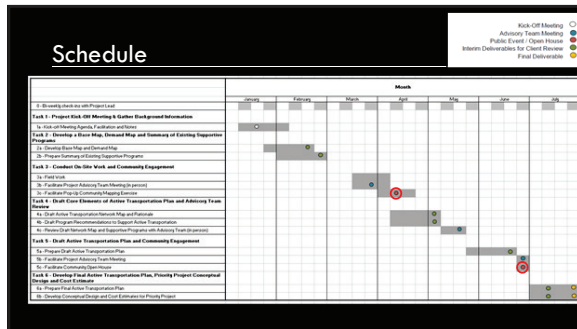
### Introductions

- Name & Organization
- What would you like this plan to help your community accomplish?
- What does your community need most when it comes to Active Transportation?
  - Facilities, programs, etc
- What policies/programs are already in place that will contribute to this plan?

### Project Overview

1. Kick-off
2. Existing Conditions (Infrastructure/Programming)
3. Fieldwork & Community Engagement
4. Draft Active Transportation Plan
5. Final Active Transportation Plan and Concept Designs

### Schedule



**Legend:**  
 Kick-Off Meeting  
 Advisory Team Meeting  
 Public Event / Open House  
 Internal Deliverables for Client Review  
 Final Deliverable

### Advisory Team Role



### Community Engagement Strategy

- Pop-Up Community Mapping Exercises
- Public Open House



### Work to Date

- Data Requested/Received from County GIS staff

### Next Steps

- Developing base map and demand map
- Reviewing existing programs that support Active Transportation
- Scheduling fieldwork and future Advisory Team meetings



## Meeting 2

**Seneca County  
Active Transportation Plan  
Advisory Team Meeting**  
Eli Glazier Silba El-Samra David Shipp, AICP  
Toole Design Group

**Agenda Roadmap**

- Introductions
- Plan Purpose
- Project Schedule Review
- Current Active Transportation Programming
- Fieldwork Highlights
- Community Mapping Event Venue/Date Brainstorming
- Route/Barrier Mapping Exercise

**Introductions**

**Photo Overlaid Text**



**Photo Overlaid Text**

**Photo Overlaid Text**

**Community Mapping Exercise Brainstorming**

When?  Where? 

**Route/Barrier Mapping Exercise**



# Meeting 3

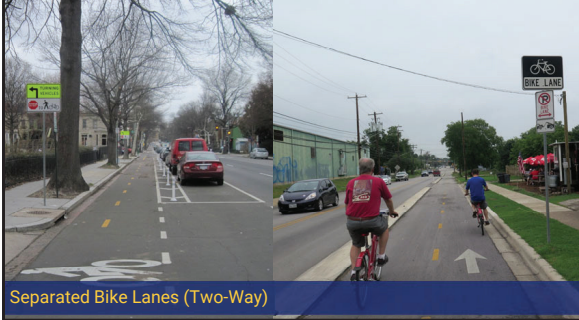


## Community Popup Mapping Feedback

- A Selection of Community Ideas**
  - Connect to Opportunity Park through St. Francis trail under 224
  - Use River Road South to connect Mad River and other trails
  - Long route along old railroad line from Tiffin to Bloomville (Other rail trails as well)
  - Connect to Sandusky Scenic River State Access Area
  - Downtown Tiffin to Hedges-Boyer Park connection
  - Connect Tiffin to North Coast Inland Trail
- April 21 – Earth Day at St. Francis
- June 9 – Tiffin Farmers Market



Signed Routes



Separated Bike Lanes (Two-Way)

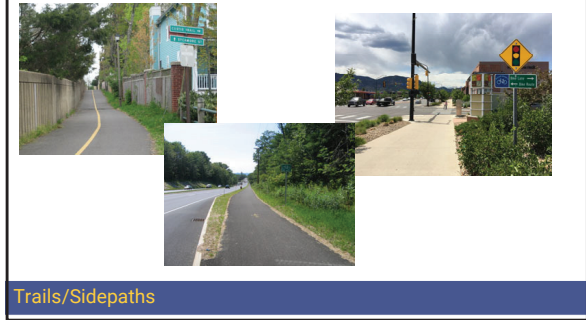
## Agenda Roadmap

- Project Schedule Review
- Popup Community Event Observations
- Proposed Active Transportation Programming
- Proposed Pedestrian/Bicycle Infrastructure

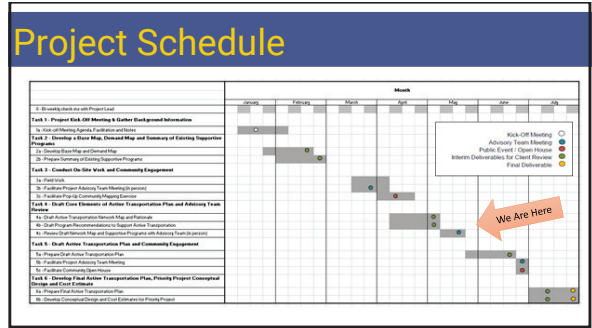
- ## Proposed Active Transportation Programming/Policy
- Education**
    - Bike/Ped Education in PE classes
    - Regular Bicycle Rodeos/Adult Bicycle Education
  - Encouragement**
    - Walking School Buses/Bike Trains
    - Bike/Walk to School Days
    - Bike to Work Day
  - Enforcement**
    - Elementary School Crossing Guards
  - Evaluation**
    - Regular Bike/Pedestrian Counts
  - Other**
    - Bicycle Friendly Communities
    - Local Transportation Advocacy
  - Policies**
    - Bicycle-Friendly Road Sealing on Signed Bicycle Routes
    - Complete Streets Policy
    - Sandusky River Water Trail



Shared Lane Markings



Trails/Sidepaths



Separated Bike Lanes (One-Way)



## POP-UP COMMUNITY EVENTS

Two pop-up mapping events were held to solicit community input for this plan. At the events, large base maps were available to collect community comments on existing walking and cycling routes, barriers to active transportation, and desired routes.

### POP-UP #1

Sunday, April 22, 2018

11:00 AM - 2:00 PM

Franciscan Earth Literacy Center (Earth Day Event)

194 St. Francis Ave.

Tiffin, OH

### POP-UP #2

Saturday, June 9, 2018

9:00 AM - 1:00 PM

Seneca Farmers Market

Downtown Tiffin

## FEEDBACK RECEIVED

### Biking Feedback

#### Barriers:

- Loop on CR 50 and CR 36: traffic, no room to pull over, vehicles go too fast, and drivers are distracted, got chased by a dog
- Existing Hedges-Boyer Park access being limited by Heidelberg
- Traffic/county road traffic
- See a lot of people biking on CR 19, but does not feel that it is safe. Too much traffic, traffic moves fast.

#### Destinations:

- Steyer Nature Preserve: currently have to drive there to enjoy it – wants connection to Nature Trails Park
- Beaver Creek Reservoir
- Trail under 224 from St. Francis campus (RELC) to Opportunity Park (underpass at 224 already exists)
- Connect Schekelhoff Park to Steyer Nature Preserve
- Trail at St. Francis connecting to county park facilities (Opportunity Park). Paved trail
- Tie in existing Mad River/Hedges-Boyer Park/culvert trails using River Road South
- Connecting St. Francis to Hedges-Boyer Park. There are existing trails at both destinations. The route is optional and there are some highly traveled roads in between.
- Access to Nature Preserves (no ideal routes)
- Scheklehoff Park



Pop-up booth at the Farmer's Market

- Garlo Nature Preserve
- Sandusky Scenic River State Access Area.
- Sandusky River – would like trails along the river as much as possible
- Schekelhoff Park (north of Tiffin)
- New housing development west of downtown just south of W. Market Street— connection from here to the Mad River Bike Trail and downtown.

**Routes:**

- Want a route from St. Francis to the library
- Old railroad line from Tiffin to Bloomville (~20-25 miles): want a long route for running and biking
- Desire bike path between Tiffin and Bloomfield. There is an old rail line along this route that could be used. This route could also provide easy access to Hedges.
- Connect Tiffin to the Garlo Nature Preserve

- Multiple people commented that they would like to be able to get to (from Tiffin) and get around the Sandusky Scenic River State Access Area.
- Multiple people suggested connecting Tiffin to North Coast Inland Trail.
- Provide a connection between downtown Tiffin and Hedges-Boyer Park.
- Currently use Riverside Drive (to bike along Sandusky River north of downtown), but traffic can be bad/fast going around the curves (particularly on east side of river). A path would be nice.
- Connect Mad River Bike Trail and downtown area to Hedges Park and the trail that goes through that park.

**General Comments:**

- Would love to see distant trails using old railroads
- Concerns with current roads and traffic when riding – for safety
- Have been using Rock Creek Trail a lot
- Need bike lanes (general countywide comment)
- Want more places to bike in Seneca County that are safe and off the road.
- Uses the North Coast Inland Trail

**Walking Feedback**

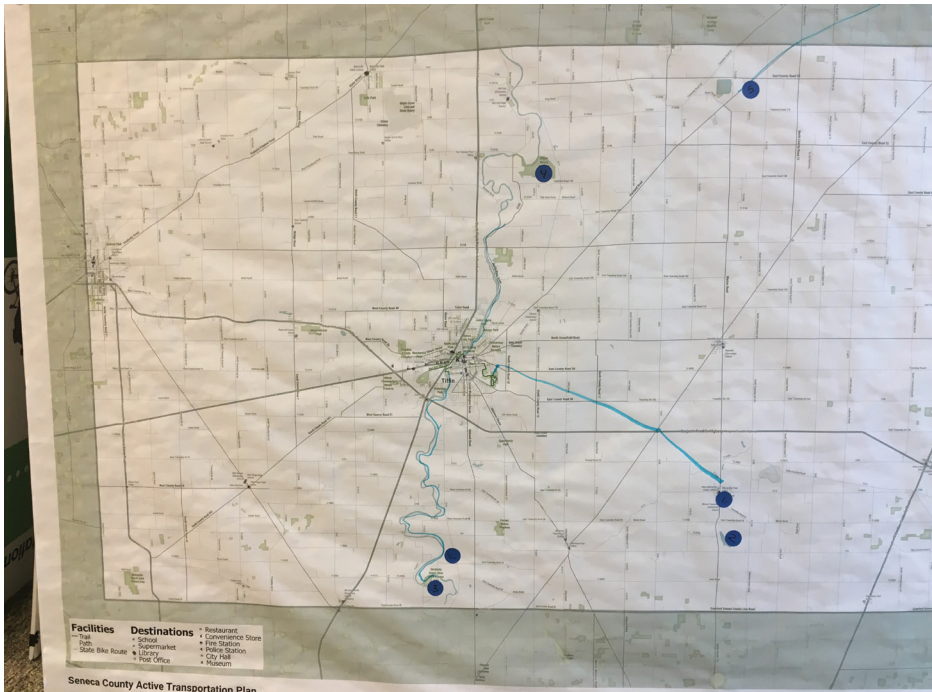
**Barriers:**

- Sidewalk issues on Washington
- Lack of sidewalks on Grand Ave
- Walking from Benner Street into downtown, there are some bad sidewalks and also some challenges crossing the bridges.

**Destinations:**

- Heidelberg: track and cross country runners use CR 50 in a group
- Airman Nathan E. Smith Memorial 5k/1k Run Start/Finish @ Tiffin Glass Museum
- Provide pedestrian connections for new apartments on West Market

**General Comments:**



Mapped comments from the pop-up events

- Love the new multi-use path. Wife runs on it.
- Like to walk in the Steyer Nature Preserve
- Walks dog in Hedges Park and does not always feel safe.
- Lives on Frost – can walk nearly everywhere for what she needs. There are fewer sidewalks once you get out of downtown area.
- Need more wheelchair access in Hedges Park

## OPEN HOUSE

A two-day Open House event was held on September 22 and 23 at the Tiffin Flea Market to present the draft recommendations to the broader community. The advisory team and consultant team staffed a display at the county EMS building in the center of the flea market. There were maps of the recommendations (countywide and Tiffin/Fostoria) and the 3 project renderings focusing on the St. Francis Trail, Section 2 (Port Road to County Farm Trail Connection) and the Front-Madison Route Shared Lane Markings (Madison Street Connector Trail).

### Feedback Received

The majority of the feedback was related to Recommendation #17 (St Francis Trail). Several positive comments were provided related to this trail extension proposal. Additionally, attendees were excited about the regional connections that are longer term recommendations; specifically, connections to the North Coast Inland trail and some of the other state bicycle facilities.