



VILLAGES OF
MINOA, FAYETTEVILLE, AND MANLIUS

BICYCLE & PEDESTRIAN CONNECTIONS STUDY

NOVEMBER 2024

SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL

Villages of Minoa, Fayetteville, and Manilus Bicycle & Pedestrian Connections Study

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PREPARED FOR:



PREPARED BY:



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EXECUTIVE SUMMARY

The Villages of Minoa, Fayetteville, and Manlius, Bicycle and Pedestrian Connections Study, overseen by the Syracuse Metropolitan Transportation Council (SMTC), was tasked with identifying ways to better link the three villages to each other and to regional assets like Green Lakes State Park and the Empire State Trail.

There are many reasons why communities want to encourage more walking and biking, and want to make infrastructure improvements that will enable residents and visitors to do so safely and easily. During one advisory committee meeting at the start of this study, a village leader said she wanted to see more people be able to walk to one of the villages to get ice cream or bike to Green Lakes.

Recreation or leisure is often the primary thought when it comes to reasons why people want to walk or bike in suburban settings like the Town of Manlius, but the nature of having three individual villages, each with walkable downtowns, plus a park like Green Lakes and trails like the Erie Canal / Empire State Trail, means that people in this area might actually be able to also walk and bike for other trips, like to get to school or run errands or even to get to work. This study sought to find out: where are the best places to make those connections, what are the right treatments, and would people change their behavior if those sidewalks, bike lanes, or trails were built? The study needed to consider the in-depth work recently completed in the area and try to look at some corridors which have not received as much attention.

This study was conducted by a team of consultants lead by Creighton Manning Engineering, with support from EDR and Verity. SMTC staff managed the consultants and the project also had a Study Advisory Committee made up of representatives from the villages, the town, the county, Centro (area's public transit provider), and the state.

The work included a review of existing conditions, issues identifications, public outreach, and concept development. The main takeaways are:

- The individual villages and town are chipping away at many of the connections
- There are still gaps in the sidewalk network, in the villages and in the town
- If bicycle and pedestrian infrastructure improvements were made on the corridors people would change their travel behavior
- Residents are eager to see the most obvious connections improved for walking and biking.

The study presents types of treatments for improving walking and biking. Some are obvious like sidewalks, others are less known in these communities, such as bike boulevards. In the end, the study provides a few potential treatments on at least five locations that the municipalities, roadway owners could consider based on their value to achieving the goals of improving connections and the strong support they received through the public involvement process. These include:

- Sidewalks on Highbridge Street, from Audubon Road to Wild Wood Ridge
- Bike facility along Minoa Road, near N. Manlius Road to Costello Parkway/N. Main Street
- Multi-Use Path on Rt 5 E. Genesee Street from Duguid Road to George Taylor Road / Pierson Road near the entrance to Green Lakes State Park
- Bike Boulevards on Clinton Street and other local streets in the Village of Fayetteville
- Ledyard Canal Trail sections could be formalized in the Town of Manlius and both villages.

In addition to helping the community visualize these projects, the study provides initial estimates on construction costs (excluding any property acquisition), as well as suggestions on funding.

The study brought together municipal leaders and residents to discuss something they care about passionately – how to make their communities better. In this case, better for walking and biking and traveling between the locations without having to drive. Their feedback shaped a plan, that while it contains projects which may require individual investments from the villages and town, the results will help create the connections which were the goal of the study.

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I. INTRODUCTION



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INTRODUCTION

SMTC commissioned this study in conjunction with the Town of Manlius and the Villages of Manlius, Fayetteville, and Minoa to improve the bicycle and pedestrian network, connections, and access through the area that links the three villages to each other, as well as to neighboring parks and trails in the area – including the Empire State Trail system, Mill Run Park, and Green Lakes State Park.

The goal of this study is to provide detailed, site-specific concepts for bicycle and pedestrian facilities along the most appropriate roadways to strengthen and increase the safety of bicycle connections from local parks and trails to the village of Minoa, Fayetteville, and Manlius as well as increase the number of bicycle commuter trips through the villages of Fayetteville and Manlius.

STUDY PURPOSE & GOALS

SMTC enlisted the services of a consultant team led by Creighton Manning Engineering and included support from EDR and Verity Engineering. In addition, a Study Advisory Committee (SAC) was convened to provide additional support, assistance, and advice on the project. The SAC consisted of the Town of Manlius, Village of Minoa, Village of Fayetteville, Village of Manlius, New York State Department of Transportation (NYSDOT), Onondaga County Department of Transportation (OCDOT), Onondaga County Department of Planning, and the Central New York Regional Transportation Authority (Centro).

A Public Involvement Plan (PIP) was created to ensure that a variety of digital and in-person engagement methods were used to inform and dictate the overall trajectory of the study (see Appendix A for the PIP). A detailed description of the public engagement for this project is included in Section IV – Public Engagement.

In addition to collecting public and stakeholder feedback, the team collected existing conditions desktop data and completed a thorough review of existing planning studies of the corridors in the area. This was compiled to identify issues and opportunities for improvements.

A recommendation strategy was summarized along with planning-level cost estimates and is summarized in Section VI – Project Development.

Overall project goals identified by the SAC:

- **Identify safe on-road bike routes**
- **Provide connections to trails and parks**
- **Increase bike and pedestrian trips**

CONNECTION CORRIDORS

Eleven “**Connection Corridors**” were identified as key locations for proposed improvements. These corridors were chosen because they provide key connections to existing commercial and residential areas and to existing pedestrian, bike, or trail networks. Consideration was given to corridors that were identified in previous studies as potential improvement areas. The Connection Corridors are described below and shown in Figure 1 on the following page.

Corridor A – Minoa Road / Costello Parkway

This corridor runs from just beyond the northern end of the Village of Minoa, south along Minoa Road / Costello Parkway to the intersection of Manlius Center Road.

Corridor B – Route 290

Corridor B begins at the intersection of Route 290 / Green Lakes Road and Manlius Center Road and continues west to the intersection of Pierson Road.

Corridor C – Pierson Road / Route 5

Corridor C starts at the intersection of Pierson Road and Route 290 and runs south, continuing along George Taylor Road and then Route 5. The corridor ends at the intersection of Route 5 and Duguid Road.

Corridor D – Duguid Road

Corridor D runs the entire length of Duguid Road and a small part of E Seneca Street, finally terminating at the intersection of E Seneca Street and Main Street.

Corridor E – Route 173 / Troop K Road / Highbridge Street

This corridor begins in the Village of Fayetteville at the intersection of Highbridge Street and W Genesee Street. The corridor then continues south before continuing on Troop K Road. The corridor then bears east at the intersection of Route 173 and terminates at the intersection of Route 173 and Fayette Street.

Corridor F – North Burdick Street

Located on the western edge of the study area

Corridor F begins along the Erie Canalway Trail near the intersection of Route 257 / Manlius Street. The corridor meets proper roadway at N Burdick Street and continues south before hooking east along East Genesee Street, finally terminating at the intersection of Highbridge Street.

Corridor G – Route 257 / North Manlius Street

Corridor G begins at the intersection of Route 257 and Manlius Center Road and continues south into the Village of Fayetteville before ending at the intersection of Route 5.

Corridor H – Route 257 / South Manlius Street

Beginning at the terminus of Corridor G, Corridor H runs along Route 257 / South Manlius Street and ends at the intersection of Highbridge Road.

Corridor I – Route 5 / East Genesee Street

Corridor I runs west to east within the study area along Route 5 / East Genesee Street beginning at the intersection of Highbridge Street and ending at the intersection of Duguid Road.

Corridor J – Salt Springs Road

This corridor begins at the intersection of Salt Spring Street and South Manlius Street in the Village of Fayetteville and ends at the intersection of Duguid Road.

Corridor K – Route 92

Corridor K begins at the intersection of Highbridge Street and terminates where it meets East Seneca Street in the Village of Manlius.

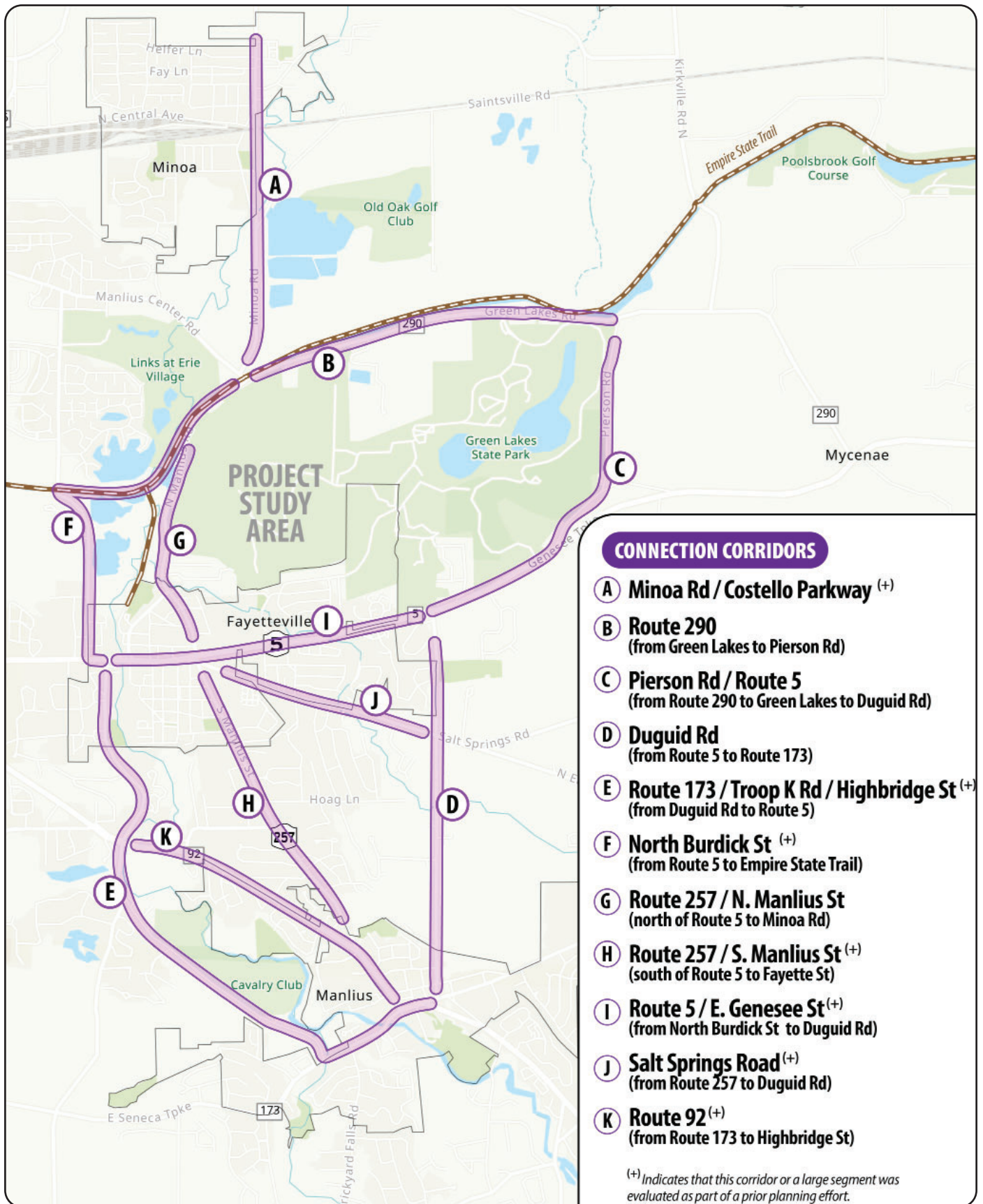


Figure 1. A map of identified "connection corridors" throughout the study area.

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II. EXISTING CONDITIONS & PRIOR EFFORTS



EXISTING CONDITIONS

An interactive webmap was created to highlight existing conditions and proposed improvement ideas within the study area (Figure 2). This tool allows users to pan around the study area, toggle layers on and off, and visualize how improvement ideas fit into the existing network of roads, trails, and sidewalks. Additionally, this webmap hosts geospatial data collected in the field, such as roadway signage. The following layers were included on the webmap:

Boundaries¹

- Study area boundary
- Village boundaries
- Town of Manlius boundary
- Onondaga County boundary

Crashes²

- All crashes
- Crashes with pedestrians or cyclists
- Crashes resulting in serious injuries or fatalities

Existing Pedestrian Features and Trails

- Sidewalks³
- Crosswalks³
- Empire State Trail¹
- Other trails¹

Transportation & Roadway Features

- Centro bus stops⁴
- Centro bus routes⁴
- Roadway signs⁶
- 85th percentile speeds (2019)⁵
- AADT (2019)⁵
- Blueway streams³
- Roadway jurisdictions⁵
- Level of traffic stress (LTS)⁶

Demographic Information⁷

- Total population by Census tract
- Median household income by Census tract
- Access to vehicles

Zoning & Land Use³

- Proposed new developments
- Growth centers
- Town of Manlius zoning
- Village of Manlius zoning
- Village of Fayetteville zoning
- Village of Minoa zoning
- Future land use

Corridor Layers

- Connection Corridors^{3, 6}
- Parcels along Connection Corridors¹
- All parcels within the town and three villages¹

Wetlands

- State regulated freshwater wetlands and check zones¹
- US wetland database⁹

Proposed Improvement Ideas (from both this study and other studies)^{3, 6}

- Sidewalks
- Multi-use path
- Bike lanes (use of shoulder)
- Bike boulevards
- Alternative routes/trails

DATA SOURCES

- | | |
|-------------------------------------|---------------------------------|
| 1 NYS GIS Clearinghouse | 6 Creighton Manning Engineering |
| 2 NYSDOT CLEAR Database | 7 US Census Bureau |
| 3 Onondaga County / SMTC | 9 US Fish and Wildlife Service |
| 4 Centro | |
| 5 NYSDOT Traffic Data Viewer (2019) | |

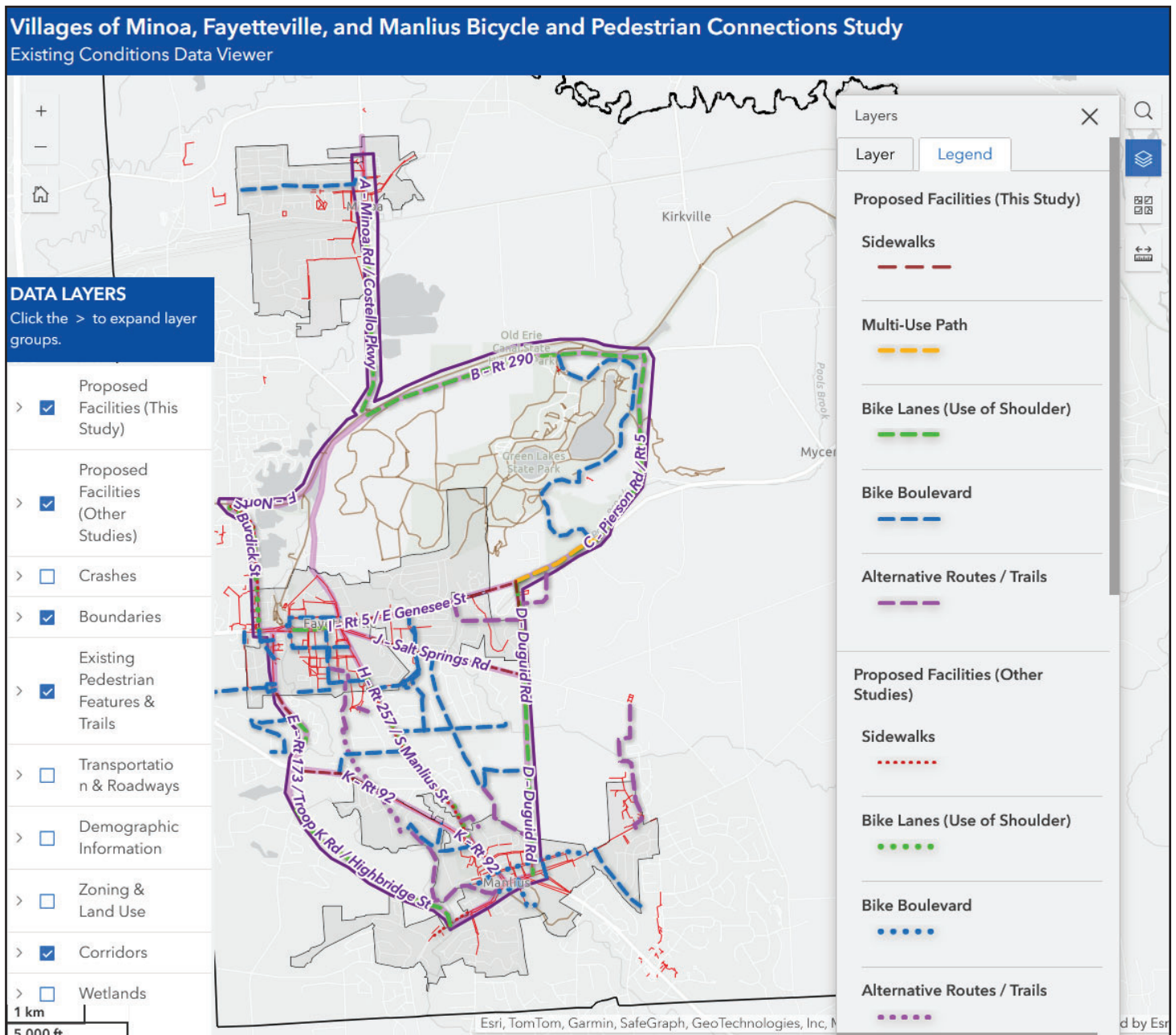


Figure 2. This screenshot shows the user interface of the interactive webmap used to display existing conditions and improvement ideas.

OBSERVATIONS

Various areas along Connection Corridors displayed a potential for roadway improvements. While some constraints exist, such as wetlands, other areas would benefit greatly from interventions such as shoulder widening, sidewalks, bike lanes, and other strategies (Figures 3a – 3d).



Figure 3a. Minoa Road demonstrates the ability to support more travel modes, such as biking and walking.

Figure 3b. Duguid Road has a limited shoulder that could be widened to provide safer conditions for both cyclist and pedestrians.





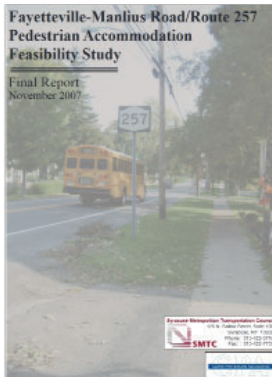
Figure 3c. The sidewalk network is good in the village centers but could be expanded along some of the corridors.

Figure 3d. Pedestrian and bicycle infrastructure like crosswalks and signs are present near the Empire State Trail but could be improved in other parts of the study area



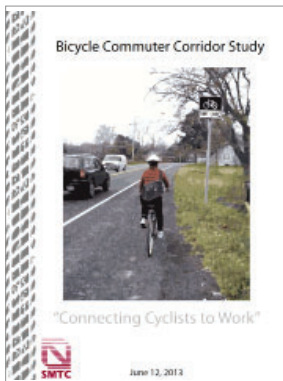
REVIEW OF PRIOR PLANS

SMTC and its municipal and county partners have conducted many past studies examining some or all of the locations included in this project's study area. These plans were reviewed and summarized in order to inform how, where, and why certain locations are suitable for bicycle and pedestrian improvements.



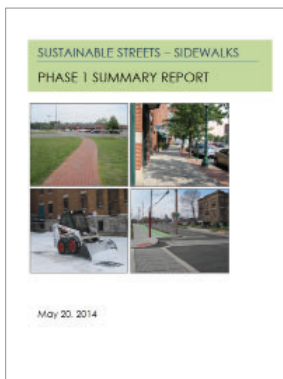
FAYETTEVILLE-MANLIUS ROAD/ROUTE 257 PEDESTRIAN ACCOMMODATION FEASIBILITY STUDY (2007)

This study identified seven alternatives for pedestrian accommodations along Route 257. Three alternatives were selected for further studying and consideration. These alternatives called for improvements such as sidewalks and/or a stone dust multi-use path on both or one side of the roadway.



BICYCLE COMMUTER CORRIDOR STUDY (2013)

This 2013 study examined the possibility of establishing a bike route along Route 92 to provide connections throughout the greater Syracuse area. The study proposed bicycle improvements along various routes within the Town of Manlius, Village of Manlius, and Village of Fayetteville.



SMTC'S SUSTAINABLE STREETS – PEDESTRIAN TRAVEL DEMAND MODEL AND SIDEWALKS, PHASE 1 SUMMARY REPORT (2014)

This report identified areas with high potential for pedestrian activity (i.e., "Priority Zones"). The construction costs of sidewalks and other pedestrian features in these Priority Zones were considered likely to be outweighed by their overall benefits.



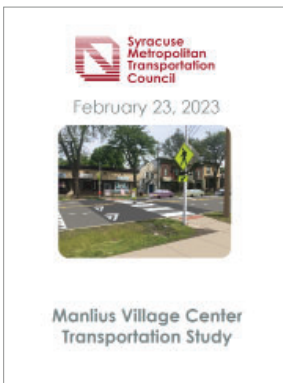
FAYETTEVILLE ROUTE 5 TRANSPORTATION AND LAND USE ANALYSIS (2018)

Combining data from previous comprehensive plans and the 2013 Bicycle Commuter Corridor Study, this analytical report identified existing sidewalk infrastructure and locations for potential pedestrian and on-road bike improvements.



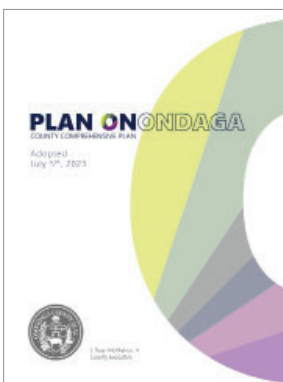
SMTC'S AND SOCPA'S 2022 LOCAL ECONOMIC OPPORTUNITY PLAN (2022)

This plan suggested potential improvements throughout the three villages, including bike facilities and on- and off-road trail connections.



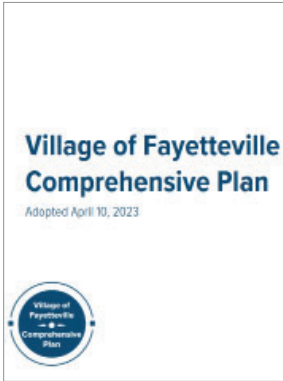
MANLIUS VILLAGE CENTER TRANSPORTATION STUDY (2023)

The purpose of this study was to identify areas to “mesh commuter traffic with bicycle and pedestrian activity” along Route 92 and Route 173. Based on the inventory of existing conditions, SMTC developed and assessed three scenarios relating to lane configuration and vehicle turning movements.



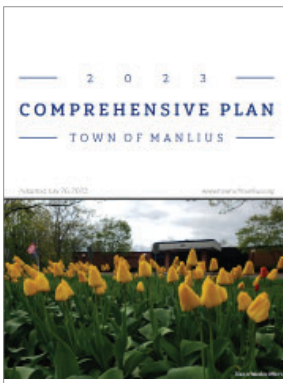
PLAN ONONDAGA, COUNTY COMPREHENSIVE PLAN (2023)

The Plan Onondaga Comprehensive Plan includes a number of goals and strategies per planning theme that aim to improve bicycle and pedestrian connections and safety. These recommendations are broad and pertain to the entirety of the county.



VILLAGE OF FAYETTEVILLE COMPREHENSIVE PLAN (2023)

The Village of Fayetteville Comprehensive Plan includes a number of goals and strategies per planning theme that aim to improve bicycle and pedestrian connections and safety. These goals were examined through thematic lenses such as existing/future land use and transportation.





















TOWN OF MANLIUS COMPREHENSIVE PLAN (2023)



The Town of Manlius Comprehensive Plan includes a number of objectives and implementation items per planning goal that aim to improve bicycle and pedestrian connections and safety, including connections to existing trails and outdoor recreational facilities.

CORRIDOR PROPOSALS FROM PRIOR PLANS

In addition to reviewing and summarizing content from prior plans and studies, specific references to bicycle and/or pedestrian improvements along study area corridors were identified.

Table 1. Prior Plan Summary

| | Route 257 Ped Accommodation Feasibility Study (2007) | Bicycle Commuter Corridor Study (2013) | Fayetteville Route 5 Transportation and Land Use Analysis (2018) | Empire State Trail Proximate Segments (2022) | SMTC and SOCPA Local Economic Opportunity Plan (2022) | Manlius Village Center Transportation Study (2023) | Village of Fayetteville Comp Plan Draft (2023) |
|--|---|---|---|--|---|---|--|
| MINOA RD | |  | |  |  | | |
| RT. 290 / GREEN LAKES RD | | | | | | | |
| PIERSON RD | | | | | | | |
| RT. 5 / EAST GENESSE ST | |  | | |  | | |
| DUGUID RD | | | | | | | |
| RT. 173 / SENECA ST | | | | | |  | |
| TROOP K RD | | | | | | | |
| HIGHBRIDGE ST | | | | | | | |
| N BURDICK ST | |  |  |  |  | | |
| SALT SPRINGS RD | | |  | | | | |
| RT. 257 – FAYETTEVILLE-MANLIUS RD (SOUTH OF RT. 5) |  |  |  | |  |  | |
| RT. 92 / HIGHBRIDGE RD | |  | | | |  | |

-  Pedestrian improvement (replace sidewalks, construct sidewalks, crosswalks, etc.)
-  Bicycle improvement (bike lane, signed route, etc.)

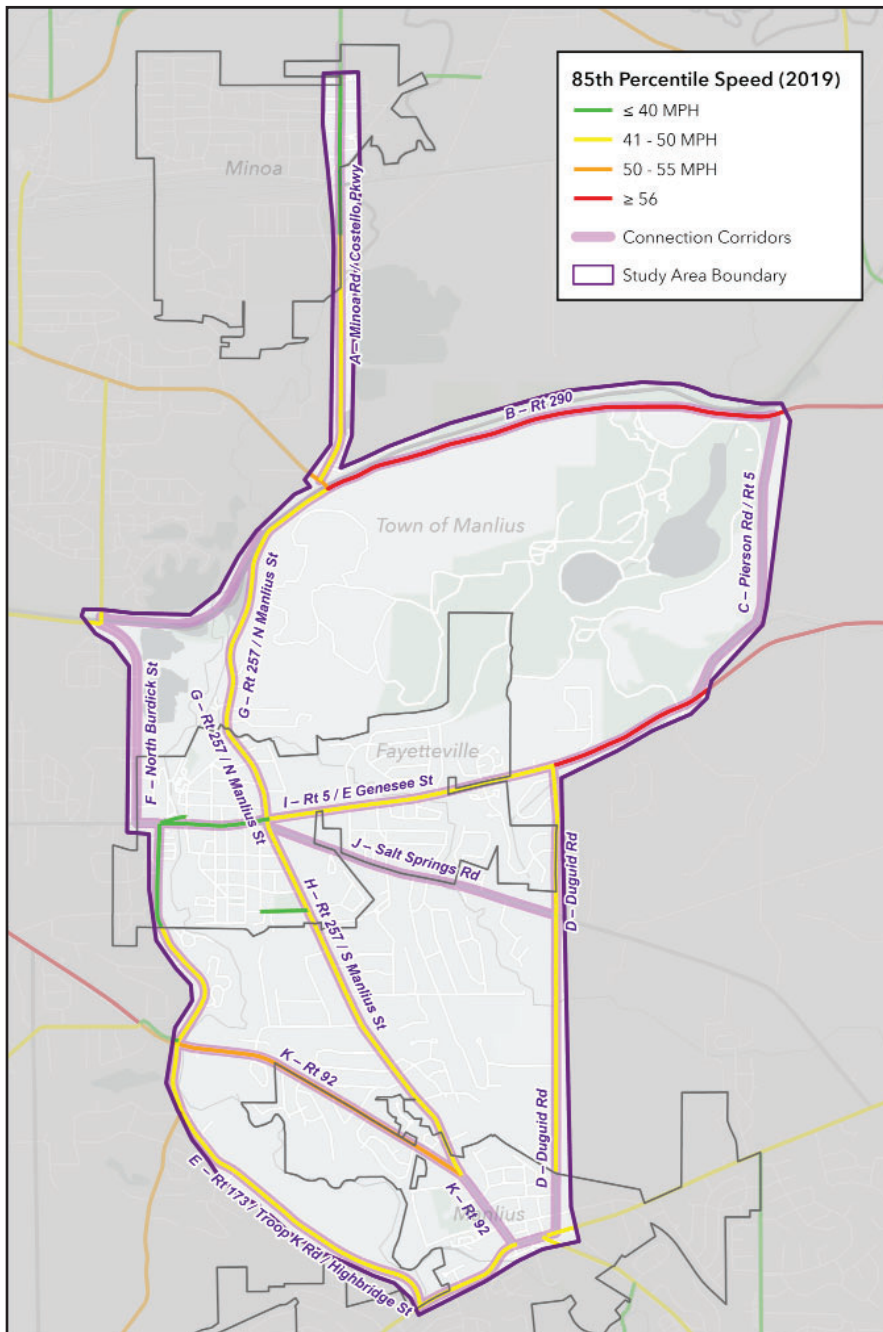
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III. ISSUES IDENTIFICATION



ISSUES IDENTIFICATION & INSIGHTS

Several issues relating to vehicle speeds, traffic volumes, crashes, land use, and existing infrastructure, as they relate to possible pedestrian or bicycle improvements, were identified throughout the study area and along corridors. The nature and location of these issues serve to inform the types of potential roadway and pedestrian improvements appropriate for the study area corridors.



SPEEDING

Using 85th percentile* speeds as a proxy for overall driving behavior, three corridors had notably high speeds:

- **CORRIDOR B** – Rt. 290
- **CORRIDOR C** – Rt. 5
- **CORRIDOR K** – Rt. 92

*According to FHWA, the **85th percentile speed** is the speed at or below which 85% of the drivers travel on a road segment. Motorists traveling above the 85th percentile speed are considered to be exceeding the safe and reasonable speed for road and traffic conditions.

INSIGHTS

The areas listed above would likely benefit from treatments that discourage speeding, such as lane narrowing. Bike lane shoulder enhancement (i.e., narrowing travel lanes and expanding shoulders within the existing ROW in order to establish bike lanes) would likely be an appropriate intervention to decrease driver speeds while establishing non-motorized connections to key locations throughout the study area.

Figure 4. 85th percentile speeds on study area roadways. Data source: NYSDOT Traffic Data Viewer, 2019.

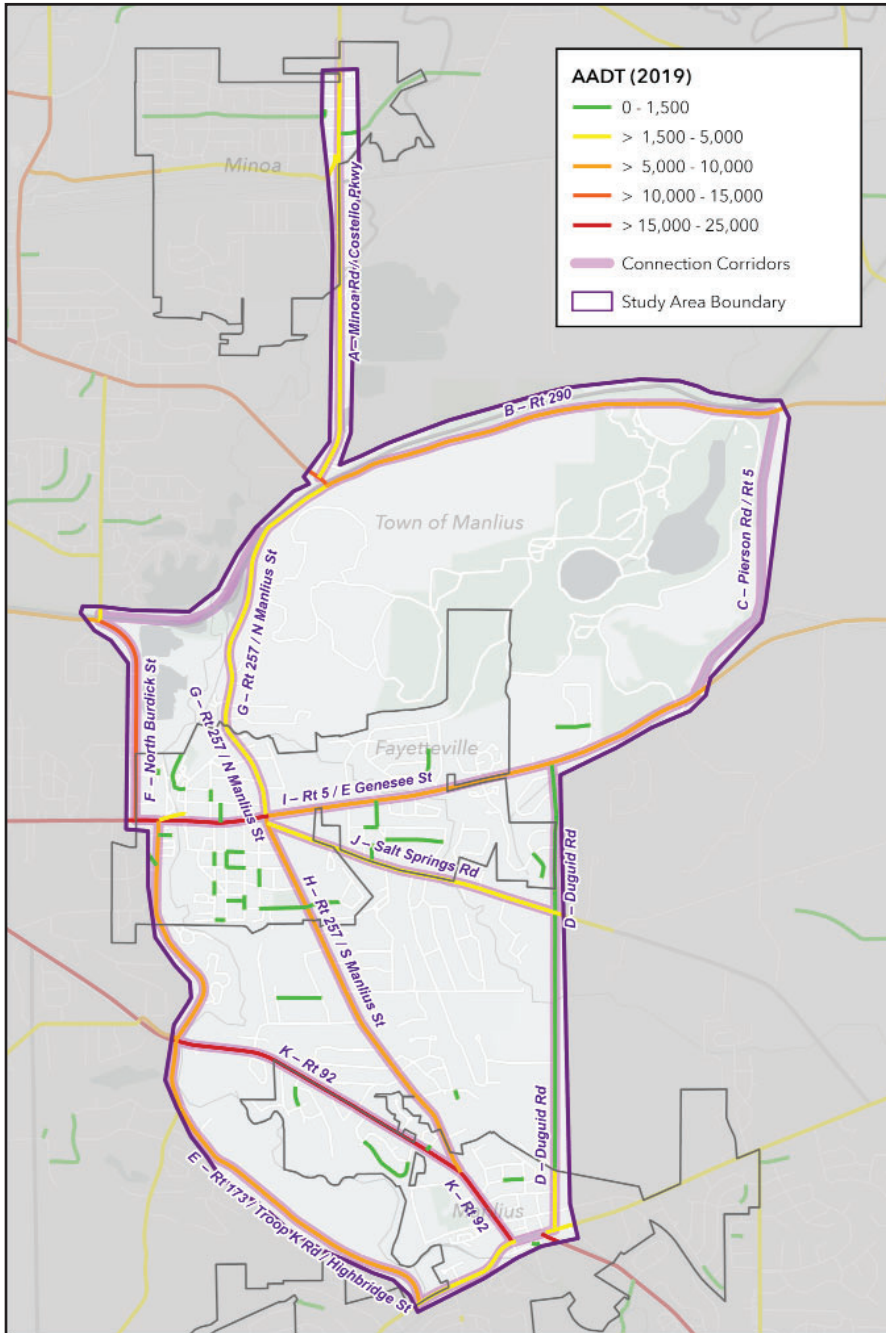


Figure 5. The annual average daily traffic (AADT) of study area roadways. Data source: NYSDOT Traffic Data Viewer, 2019.

VOLUMES (AADT)

Several high-volume roadways were identified in the study area. Each of these segments is located in a downtown area.

- **East Genesee Street**, between Highbridge Street and Salt Springs Street
21,308 vehicles per day
- **Fayette Street**, between Stickley Drive and East Seneca Street
23,195 vehicles per day
- **East Seneca Street**, between Fayette Street and Franklin Street
25,982 vehicles per day

INSIGHTS

One way of decreasing traffic volumes and congested roadways is to encourage other modes of transportation. Mode shifts could be encouraged through various treatments, including filling in sidewalk gaps and expanding existing sidewalks, adding bike lanes, establishing bike boulevards, and improving trail and pedestrian path connections. There is less incentive to drive when biking/walking/rolling is safer, easier, and more pleasant.

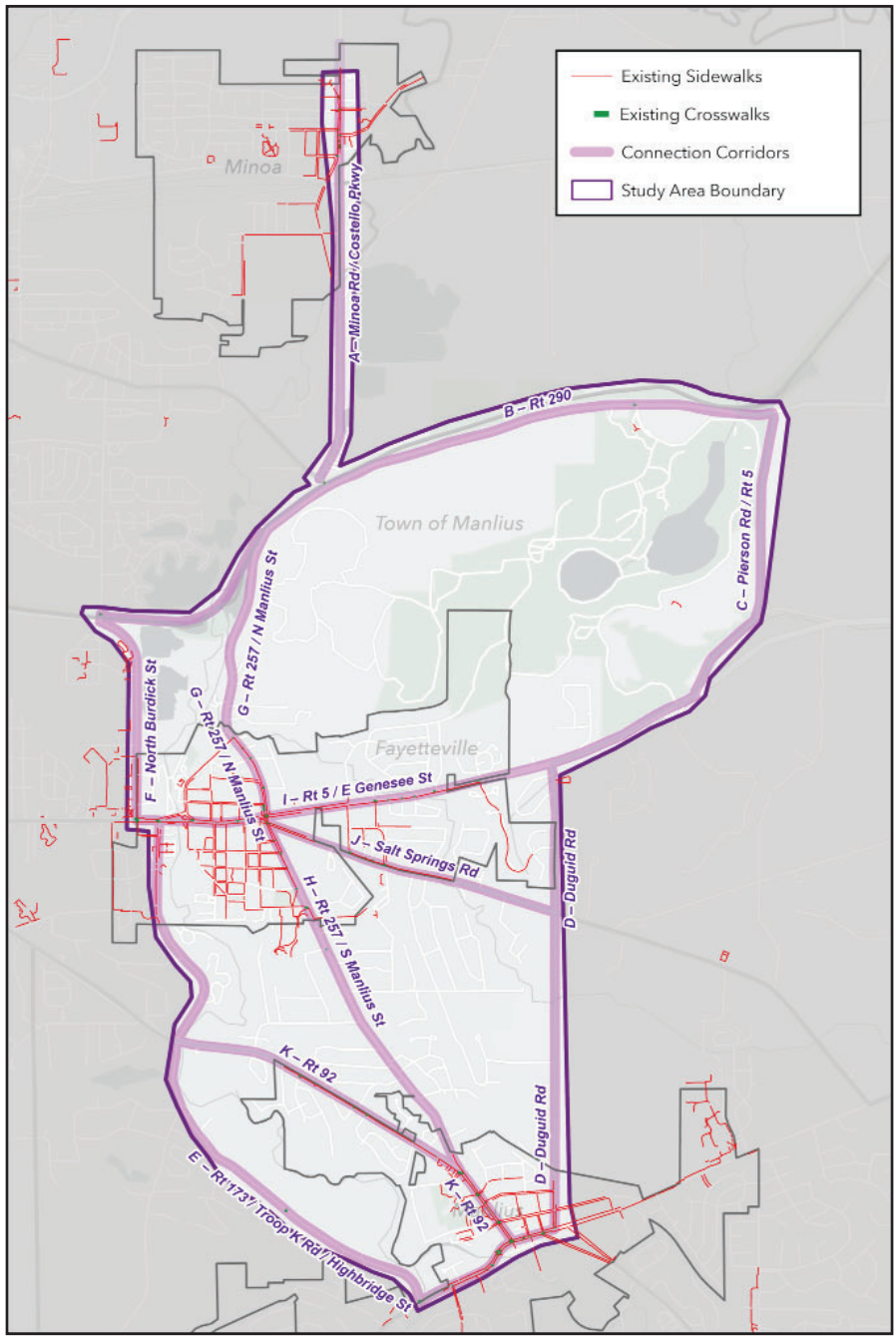


Figure 6. The extent of existing sidewalks and crosswalks throughout the study area. Data source: SMTC and Creighton Manning Engineering, LLC.

SIDEWALKS & CROSSWALKS

The consultant team identified sidewalk gaps and missing crosswalks throughout the study area. Key areas without sidewalks include:

- **E. Genesee Street (Rt. 5)** from Briar Brook Run to Green Lakes Park Drive
- **Duguid Road** from Salt Springs Road to E Genesee Street
- **Salt Springs Road** from Pine Ridge Road to Duguid Road
- **Rt. 92** from Yeaworth Lane to Highbridge Street
- **N Burdick Street** from Towne Center Mall to Empire State Trail
- **Highbridge Street** from Audubon Road to Wild Wood Ridge

INSIGHTS

As stated previously, filling sidewalk gaps and installing missing crosswalks can encourage mode shifts and improve the character and safety of study area streets.

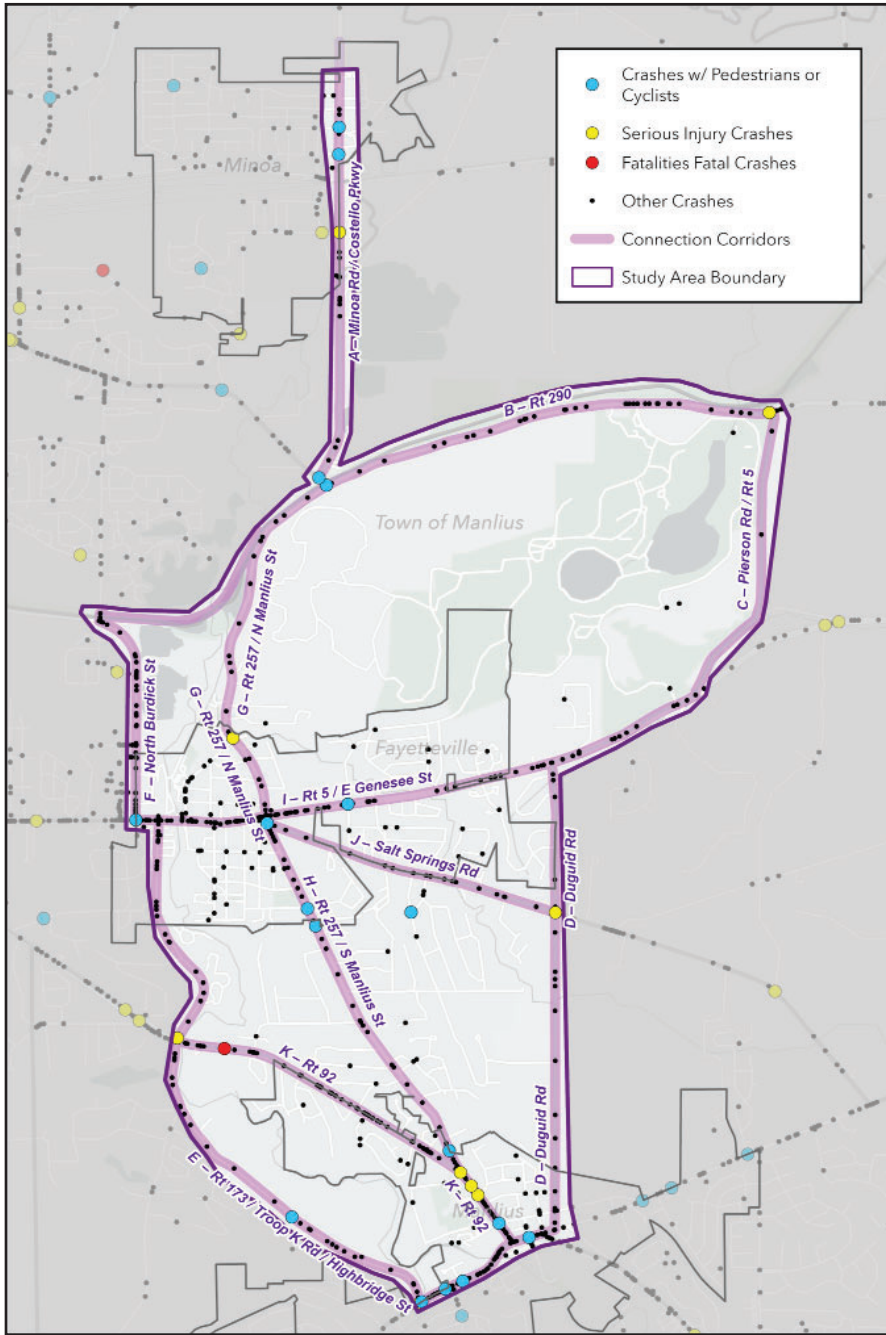


Figure 7. Motor vehicle crashes in the study area between January 1, 2018 and December 31, 2022. Crashes are classified by pedestrian/bicycle crashes, serious injury crashes, fatal crashes, and other crashes. Data source: NYSDOT CLEAR system.

CRASHES

Study area crashes from January 1, 2018 to December 31, 2022 were mapped and assessed based on type and severity. Particular attention was paid to serious injury, fatal, and bicycle/ pedestrian-involved crashes.

MAJOR CRASH AREAS:

- Rt. 5 / Genesee Street
- Rt. 92

BICYCLE/PEDESTRIAN CRASH AREAS:

- Rt. 257 between Rt. 5 and Rt. 173
- Rt. 173 in the Village of Manlius
- Costello Parkway

FATAL/SERIOUS INJURY CRASH AREAS:

- Rt. 92

INSIGHTS

Pedestrian- and/or bicycle-related crashes are oftentimes avoidable through thoughtful roadway design and the creation of better pedestrian and bicycle facilities. Sidewalk and crosswalk improvements are proposed at several areas throughout the corridor in an effort to make the surrounding communities safer and more walkable. Bike improvements, like shoulder expansions or shoulder enhancements (bike lanes) and bike boulevards, will better separate cyclists from vehicle traffic.

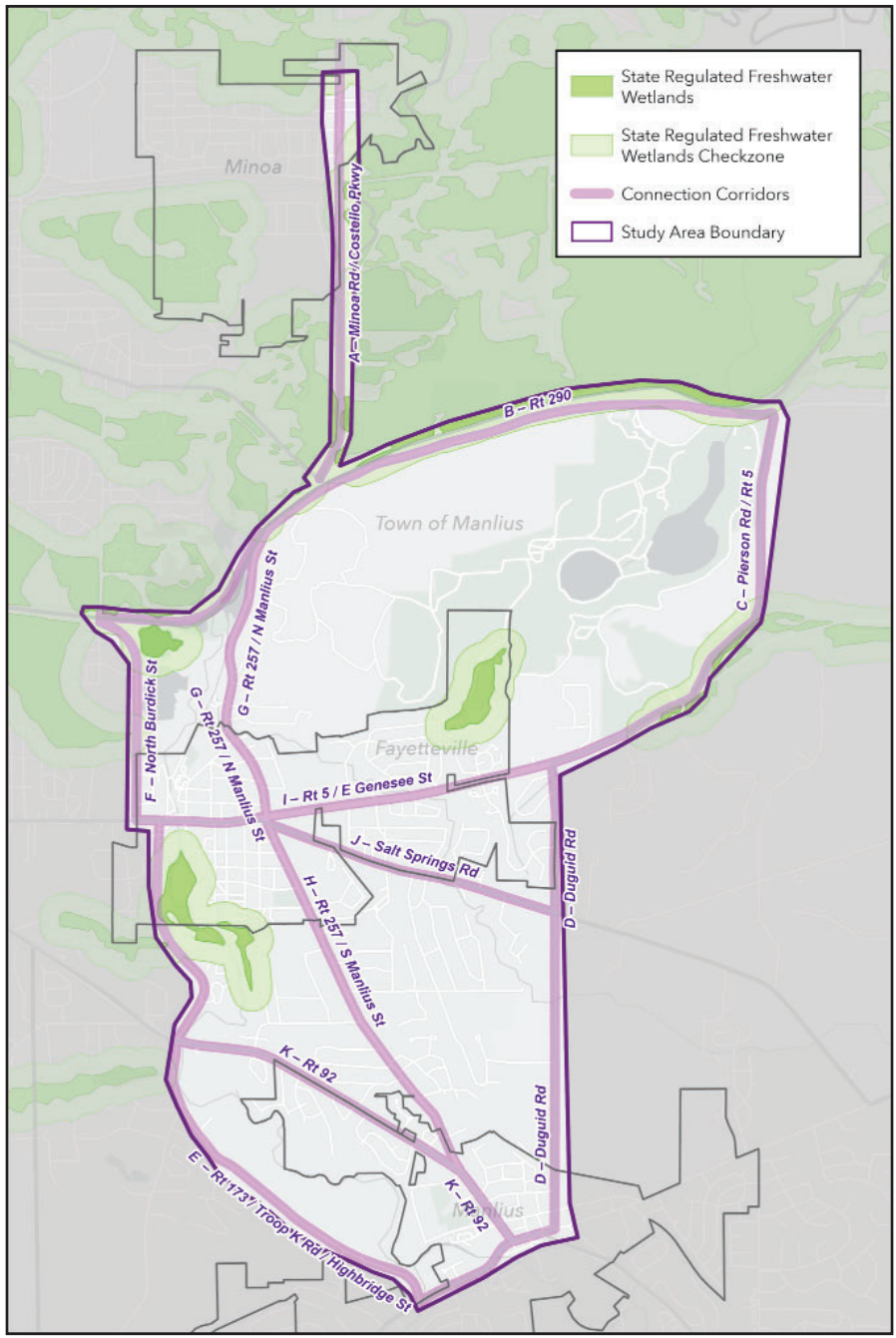


Figure 8a. State regulated wetlands throughout the study area. Data source: NYSDEC.

WETLANDS

Wetlands are vital components of the overall local ecosystem that serve as important habitats for native species, as well as mitigators of flooding and runoff. However, the presence of wetlands adjacent to roadways can restrict interventions and improvements. Areas with potential wetland constraints include:

- **Rt. 290** along the Erie Canal
- **Rt. 5 / Pierson Road** near Green Lakes State Park
- **Minoa Road / Costello Parkway**
- **Highbridge Street**

INSIGHTS

Any proposed corridor improvements will have to comply with state and federal wetland protection regulations. For example, there may be right-of-way limitations on certain roadways that prevent roadbed expansion or the construction of sidewalks.

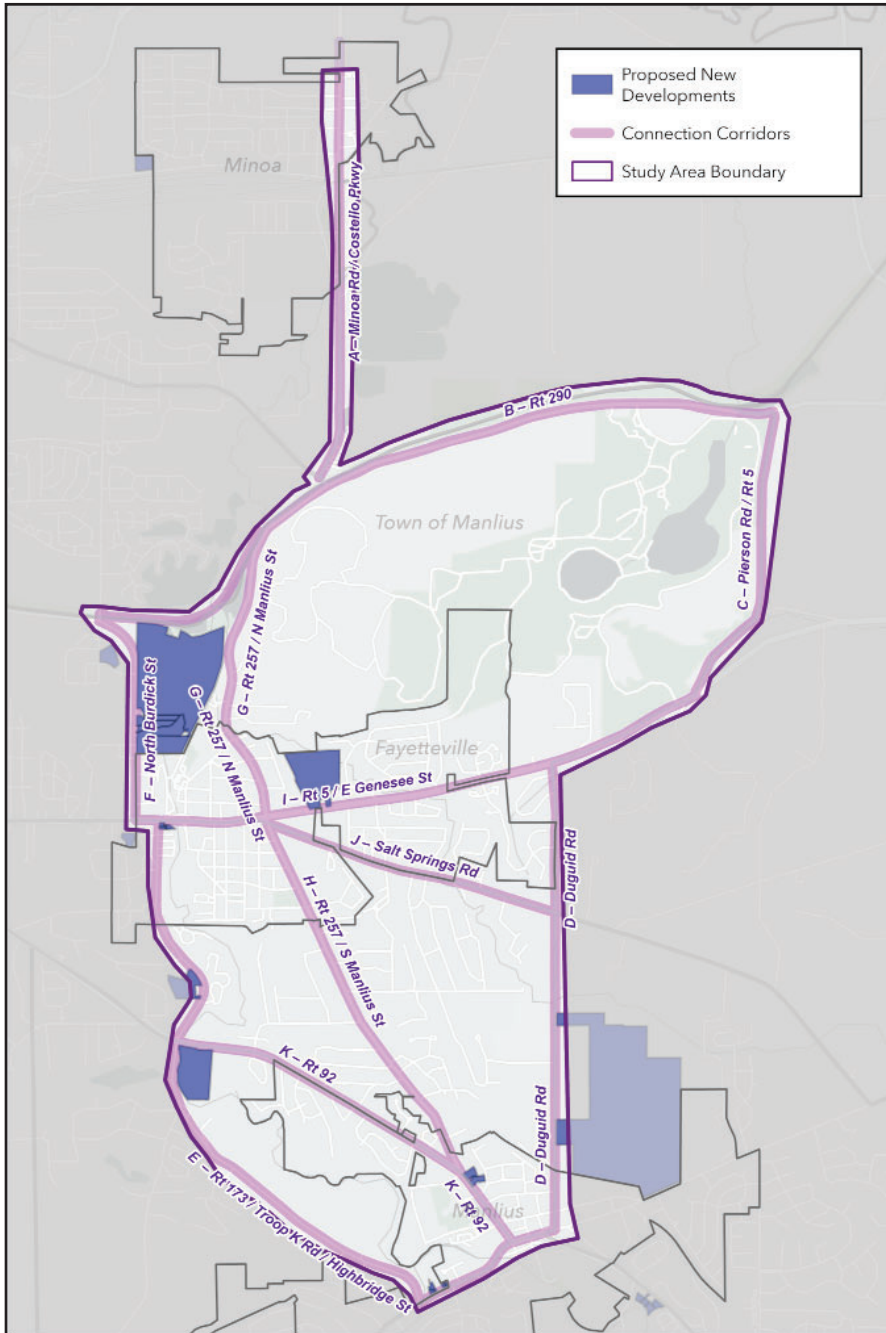


Figure 8b. Proposed new developments in and around the study area. Data source: Onondaga County.

PROPOSED DEVELOPMENT

Proposed and ongoing developments within the study area may also influence which corridors would benefit from roadway interventions, especially if those developments add housing units, density, and vulnerable road users. Examples of proposed developments in the study area include:

- **Highbridge Street** – senior housing
- **Highbridge Street** – subdivision
- **Duguid Road** – subdivision
- **Rt. 92** – mixed-use development
- **E Genesee St** – grocery store
- **N Burdick St** – mixed-use development

INSIGHTS

Proposed bicycle and pedestrian improvements should not only connect existing local attractors like business districts, parks, neighborhoods, and schools, but also take into consideration future development. There are several sections of the study area that are slated for development, and roadway improvements should preemptively provide connections to these new places.

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IV. PUBLIC INVOLVEMENT



The Study relied heavily on the input of members of the public and from the Study Advisory Committee (SAC). To ensure adequate public involvement, SMTTC created a dedicated public involvement plan (PIP) to ensure that a variety of digital and in-person engagement methods were used to inform and dictate the overall trajectory of the study (see Appendix A). Overall, direct public engagement occurred via a digital survey distributed to members of the town and three villages and a major public meeting held on April 11, 2024. A second public meeting was held on August 8, 2024.

STUDY ADVISORY COMMITTEE

The SAC served as a specialized and technical overseeing body whose membership included representatives from the consultant team, the town and three villages, NYSDOT, Centro, the Onondaga County Department of Planning, and the Onondaga County Department of Transportation. In total, four SAC meetings were held between October 2023 and June 2024. These meetings provided updates on the project to the SAC members and allowed for their input and ideas to be incorporated into ongoing work. The SAC meetings also helped dictate the content and format of the public meeting and other public outreach efforts (see Appendix A).

SURVEY

An online public survey was conducted between January 22 and February 12, 2024. The survey was hosted via Survey123, a survey platform that is natively integrated with ArcGIS. The survey was distributed via email lists, social media, and local news outlets. In total, 356 responses were collected, and over 90% of respondents indicated that they live in the town of Manlius or the three villages.

The survey questions generally focused on respondents' mode choices and travel behaviors (e.g., walking and biking frequency, corridor usage, etc.) and improvement preferences (e.g., bike lanes, multi-use paths, sidewalk improvements, etc.). Additionally, some questions were open-ended and allowed for free text responses. The survey responses were then analyzed and concatenated by the consultant team to identify key issues and further inform the study recommendations. Summarized survey responses can be found in Appendix G.

Bicycle and Pedestrian Connections Survey

Welcome! The Syracuse Metropolitan Transportation Council (SMTTC), on behalf of its municipal partners, wants to build on recent planning efforts (local and regional) which relate to pedestrian and bicycle accommodations.

Specifically, they are interested in connections that link the **villages of Fayetteville, Manlius, and Minoa** to each other, as well as to neighboring parks and trails in the area, including, the Empire State Trail system, Mill Run Park, and Green Lakes State Park. As part of that study, this survey aims to help SMTTC and their consultant team, led by Creighton Manning, better understand the attitudes and behaviors of community members, as they relate to walking and biking.

Please review the questions below and hit "submit" when you are finished. You may only answer the survey one time. Questions marked with a red asterisk (*) require an answer before the survey can be submitted.

While this survey is anonymous, please note that we are collecting some very general information about respondents. This information will not be shared with any outside party and will be used solely for planning purposes.

1. Where do you live?*

- Village of Fayetteville
- Village of Minoa
- Village of Manlius
- Elsewhere in the Town of Manlius, outside of the previously listed villages
- Elsewhere in the region

Figure 9. A screenshot from the online public survey.

SURVEY SUMMARY



356
responses



Open from
Jan 22 – Feb 12, 2024



Over 90% of
respondents are
from Manlius or the
three villages

Do you ever walk or bike for short trips (less than 3 miles) from your home to destinations like stores, parks, school, etc.?

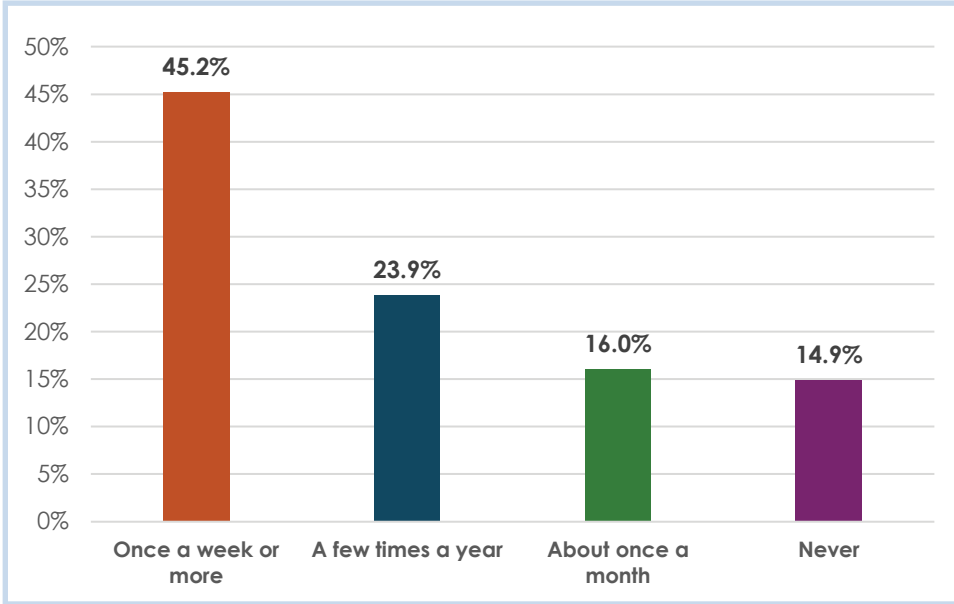
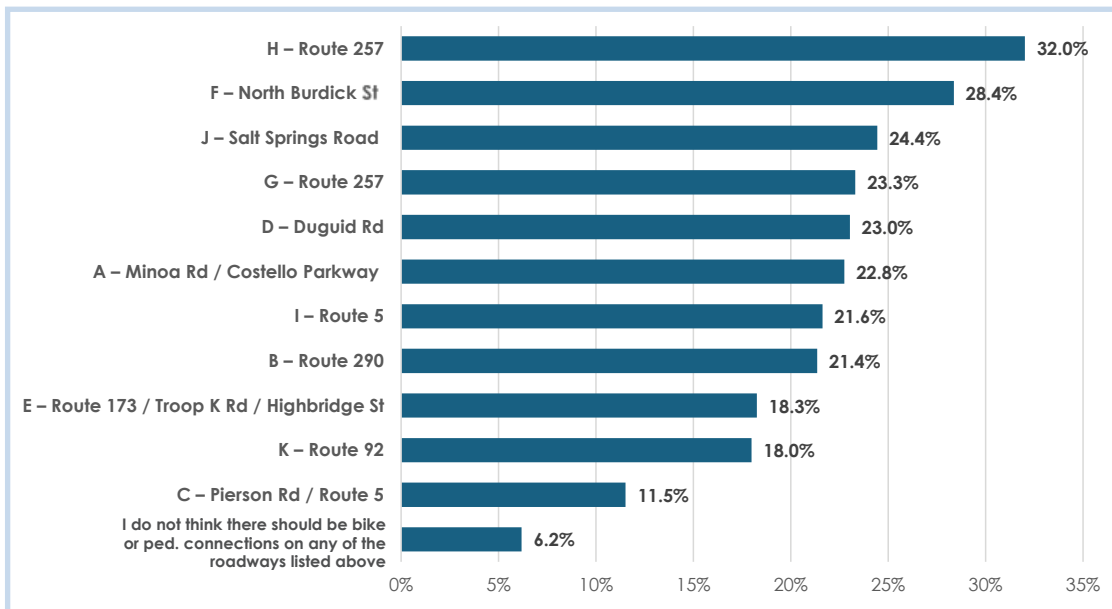


Figure 10a (left) and 10b (below). Summarized results from the online public survey.

Select the three (3) roadways that you would like to see enhanced to support better bicycle and pedestrian connections in this area. This could include bike lanes, sidewalks, crosswalks, or other dedicated infrastructure.



PUBLIC MEETINGS

Two public meetings were held in order to solicit public feedback and present ongoing project progress. The first meeting was held on April 11, 2024 at the Village Auditorium in Manlius. The meeting was attended by 47 people who asked questions, interacted with SMTC and consultant team staff, and provided input on preliminary improvement proposals throughout the study area. Attendees were encouraged to fill out comment cards with thoughts and opinions following the conclusion of the meeting. SMTC also received emailed feedback from attendees.

PUBLIC MEETING #1 AT A GLANCE



47 ATTENDEES



APRIL 11, 2024



**15 COMMENT FORMS RECEIVED;
ADDITIONAL FEEDBACK EMAILED
POST-MEETING**



Thank you for visiting us for the Villages of Minoa, Fayetteville & Manlius Pedestrian and Bicycle Connectivity Study on Thursday, April 11, 2024. Please provide any additional comments you may have in the space below. This form can be returned to the comment box or to any SMTC staff member. You may also return this form via mail (SMTC, 126 N. Salina St., Suite 100, Syracuse, N.Y. 13202) or fax (315-422-7753). **Please return comment forms by Friday, April 19, 2024.**

Question: Where do you live? (check one)

Village of Minoa

Village of Fayetteville

Village of Manlius

Elsewhere in the Town of Manlius, outside of previously listed villages

Elsewhere in the region

Question: Do you feel that your current behavior will change because of the proposed treatments to provide better pedestrian and bicycle connectivity? (circle one number)

Yes, I will bike/walk more than I do now No, I will not bike/walk more

5 4 3 2 1 N/A

Open Comment: Use this space to provide written feedback on the project.

Thank you for the initiative and for the work done.

I would like to see some areas with a more robust infrastructure to provide a safe alternative to ride cars. For example, leaving bike path 20' away from roads or with a vertical structure separating the bike path from the car road.

Name (optional) _____

Address (optional) _____

E-mail (optional - we will email you study updates) _____

Would you like to be added to the SMTC mailing list? Yes No

For additional information please contact Danielle Krol at the SMTC by phone (315.422.5716 x1308) or via e-mail (dkrol@smtcny.org).

Figure 11a. A comment card from Public Meeting 1.

Figure 11b. Photos of the presentation and informational boards from Public Meeting 1.

The second public meeting was held on August 8, 2024 again at the Manlius Village Auditorium. At the meeting, community members were able to review the preliminary improvement ideas for the study area. Overall, 23 community members attended the meeting. Attendees were asked to leave sticky notes on the display boards clarifying the public use and accessibility of locations on the map, as well as explain their preference for improvement corridors. Comment forms were available to meeting participants to share additional information regarding where they live and how the proposed improvements will impact their walking and biking behaviors around the community.

PUBLIC MEETING #2 AT A GLANCE



23 ATTENDEES



AUGUST 8, 2024



**13 COMMENT FORMS RECEIVED;
ADDITIONAL FEEDBACK EMAILED
POST-MEETING**



Thank you for visiting us for the Villages of Minoa, Fayetteville & Manlius Pedestrian and Bicycle Connectivity Study on Thursday, August 8, 2024. Please provide any additional comments you may have in the space below. This form can be returned to the comment box or to any SMTC staff member. You may also return this form via mail (SMTC, 126 N. Salina St., Suite 100, Syracuse, N.Y. 13202) or fax (315-422-7753). Please return comment forms by Friday, August 16, 2024.

Question: Where do you live? (check one)
 Village of Minoa
 Village of Fayetteville
 Village of Manlius
 Elsewhere in the Town of Manlius, outside of previously listed villages
 Elsewhere in the region

Question: Do you feel that your current behavior will change because of the proposed treatments to provide better pedestrian and bicycle connectivity? (circle one number)
 Yes, I will bike/walk more than I do now No, I will not bike/walk more
 5 4 3 2 1 N/A

Question: Please select three enhancements/improvement ideas that you would like to see progressed moving forward (refer to Next Steps & Implementation board):

| CORRIDOR | STREET NAME | IMPROVEMENT TYPE |
|----------|-------------------|---------------------|
| 1 | F E Genesee St | bike/sidewalk/CAROL |
| 2 | H S Manlius St | Sidewalk/Bike |
| 3 | N/A Ledyard Canal | Trail |

Open Comment: Use this space to provide written feedback on the project.
 Cars are a major factor affecting biking/walking:
 - E Genesee going East over Ledyard Creek
 needs to be improved to be safer, so
 does S. Manlius St, so walker/bikers can get around

Name (optional) _____
 Address (optional) _____
 E-mail (optional - we will email you study updates) _____

Would you like to be added to the SMTC mailing list? Yes No

For additional information please contact Mario Colone at the SMTC by phone (315.422.5716 x1306) or via e-mail (mcolone@smtcmpo.org).

Figure 12a. A comment card from Public Meeting 2.

Figure 12b. Photos of attendees interacting with the informational boards from Public Meeting 2.

At the second public meeting, community members shared what their top three (3) priority improvement types were. The resulting graph below (Figure 13a) indicates that the top three priority corridors and treatments are sidewalks at S. Manlius Street/ Fayetteville-Manlius Road (Route 257), bike facilities on S. Manlius Street/Fayetteville-Manlius Road (Route 257), and bike facilities on E. Genesee Street/State Route 5.

Figure 13b compares responses from both public meetings to the question of behavior change. Attendees at both meetings indicated that they would be inclined to change their travel behavior based on if proposed treatments were implemented.

Concluding the engagement process, the main takeaways were summarized to inform next steps for the project. Notably, the feedback was consistently that the public is interested in seeing sidewalks and bicycle facility investments on Corridor H (Route 257/South Manlius Street) and Corridor F (North Burdick Street). The community generally thought that if the demonstrated concepts were implemented, they would change their behavior to walk or bike more.

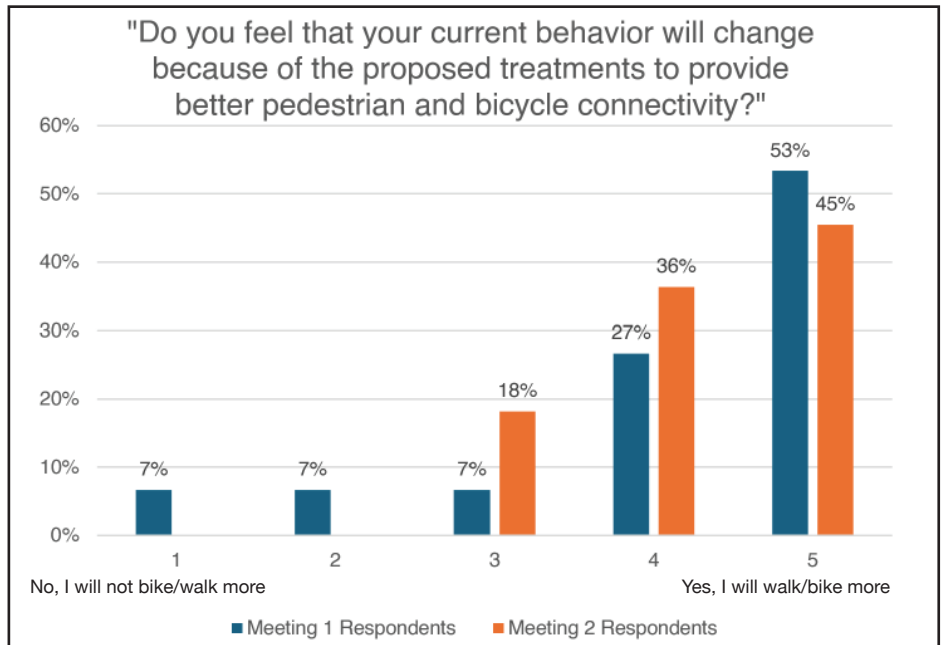


Figure 13b. A graph comparing respondents' desire to change travel mode/behavior as a result of the study's proposed improvements.

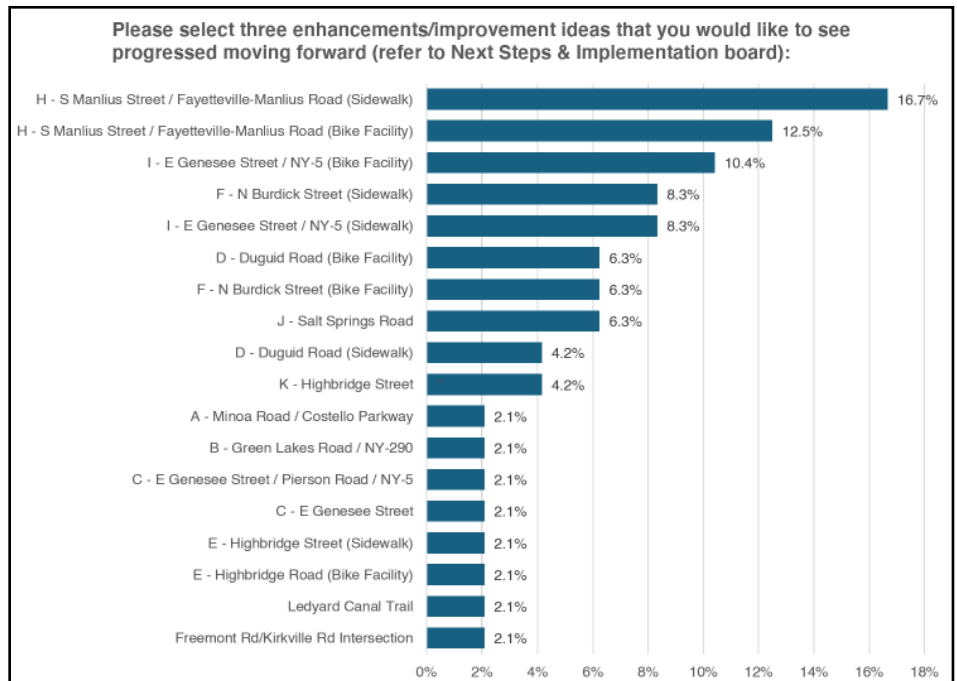


Figure 13a. A graph showing respondents' preferred locations for treatments/improvements.

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V. IMPROVEMENT IDEAS



Proposed interventions were separated into five general thematic categories: sidewalks and crosswalks, bike lanes (shoulder enhancements and expansions), multi-use path, bike boulevards, and alternative trails and links. Key areas for these improvements were identified throughout the study area, and high level cost estimates were assessed on a linear quarter mile basis. The five improvement idea categories are outlined below, along with an approximate cost for each intervention.

SIDEWALKS & CROSSWALKS

Typical 5' sidewalks are proposed along several key corridors within the study area. These sidewalk improvements include a shoulder, curb, and maintenance strip. Construction materials include concrete, paint, and plantings. The map on the following page details recommended sidewalk locations.

ENHANCEMENT \$ \$

- Adding new sidewalks or expanding upon existing sidewalk network
- Install landscaped or hardscaped maintenance strip where needed

KEY AREAS

- **CORRIDOR D** – Duguid Road
- **CORRIDOR E** – Rt. 173 / Highbridge Street
- **CORRIDOR F** – Burdick Street
- **CORRIDOR J** – Salt Springs Road
- **CORRIDOR K** – Rt. 92

CONCEPT – Install sidewalk

PRIMARY USE – Walking, can be used for younger/less experience cyclists

MATERIALS – Concrete, asphalt, curbing where needed

WIDTH – 5ft minimum

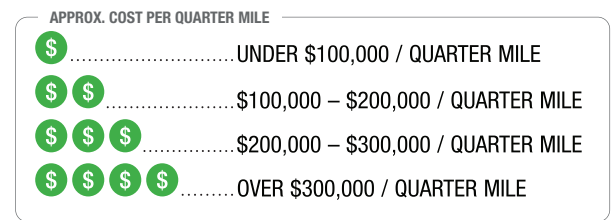


Figure 14. A typical sidewalk treatment.

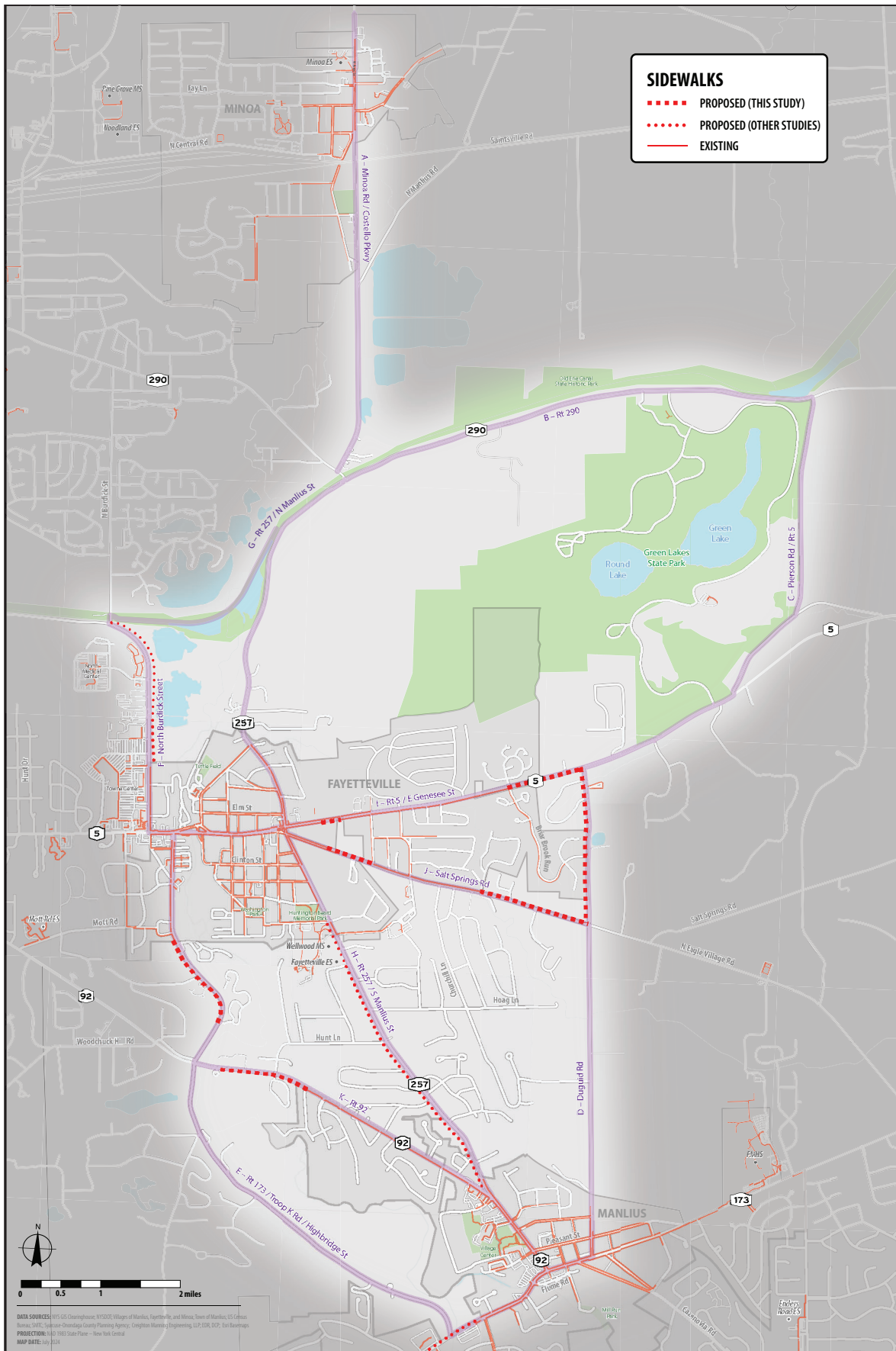


Figure 15. A detailed map of proposed and existing sidewalks throughout the study area.

BIKE LANES (SHOULDER ENHANCEMENTS & EXPANSION)

Bike lane improvements will involve widening roadway shoulders to create a demarcated bike lane. These shoulder widening proposals are separated into two tiers: **enhancement** and **expansion**. Shoulder **enhancement** involves re-striping shoulders within the bounds of the existing right-of-way. This in effect narrows the travel lanes, reduces speed, and provides more space between the cyclist and the moving vehicle. On-road buffers can also be used to provide greater separation and lane delineation. Shoulder **expansion** requires widening the existing pavement width, effectively creating a bike lane while maintaining lane widths. Like the shoulder enhancement, striping and road buffers will demarcate the bike lanes. Both bike lane options are among the higher-cost improvement ideas. A map on the following page details recommended bike lane locations.

CONCEPT – Widen shoulders by narrowing travel lane and/or expanding pavement (with or without curb)

PRIMARY USE – Biking (may be used for walking when no sidewalk)

MATERIALS – Asphalt, epoxy paint (or pavement markings)

WIDTH 5ft minimum; buffer or separation preferred

| APPROX. COST PER QUARTER MILE | |
|-------------------------------|--|
| \$ | UNDER \$100,000 / QUARTER MILE |
| \$ \$ | \$100,000 – \$200,000 / QUARTER MILE |
| \$ \$ \$ | \$200,000 – \$300,000 / QUARTER MILE |
| \$ \$ \$ \$ | OVER \$300,000 / QUARTER MILE |

ENHANCEMENT \$ \$ \$

- No roadway expansion
- Widening shoulders using striping, narrow travel lanes, and adding buffers

KEY AREAS

- **CORRIDOR A** – Minoa Road / Costello Parkway
- **CORRIDOR F** – Burdick Street
- **CORRIDOR I** – Rt. 5 / Genesee Street

EXPANSION \$ \$ \$

- Expand pavement to create wider shoulders

KEY AREAS

- **CORRIDOR B** – Rt. 290
- **CORRIDOR C** – Pierson Road / Rt. 5
- **CORRIDOR D** – Duguid Road
- **CORRIDOR E** – Rt. 173 / Troop K Road / Highbridge Street



Figure 16. A typical shoulder expansion bike lane treatment.

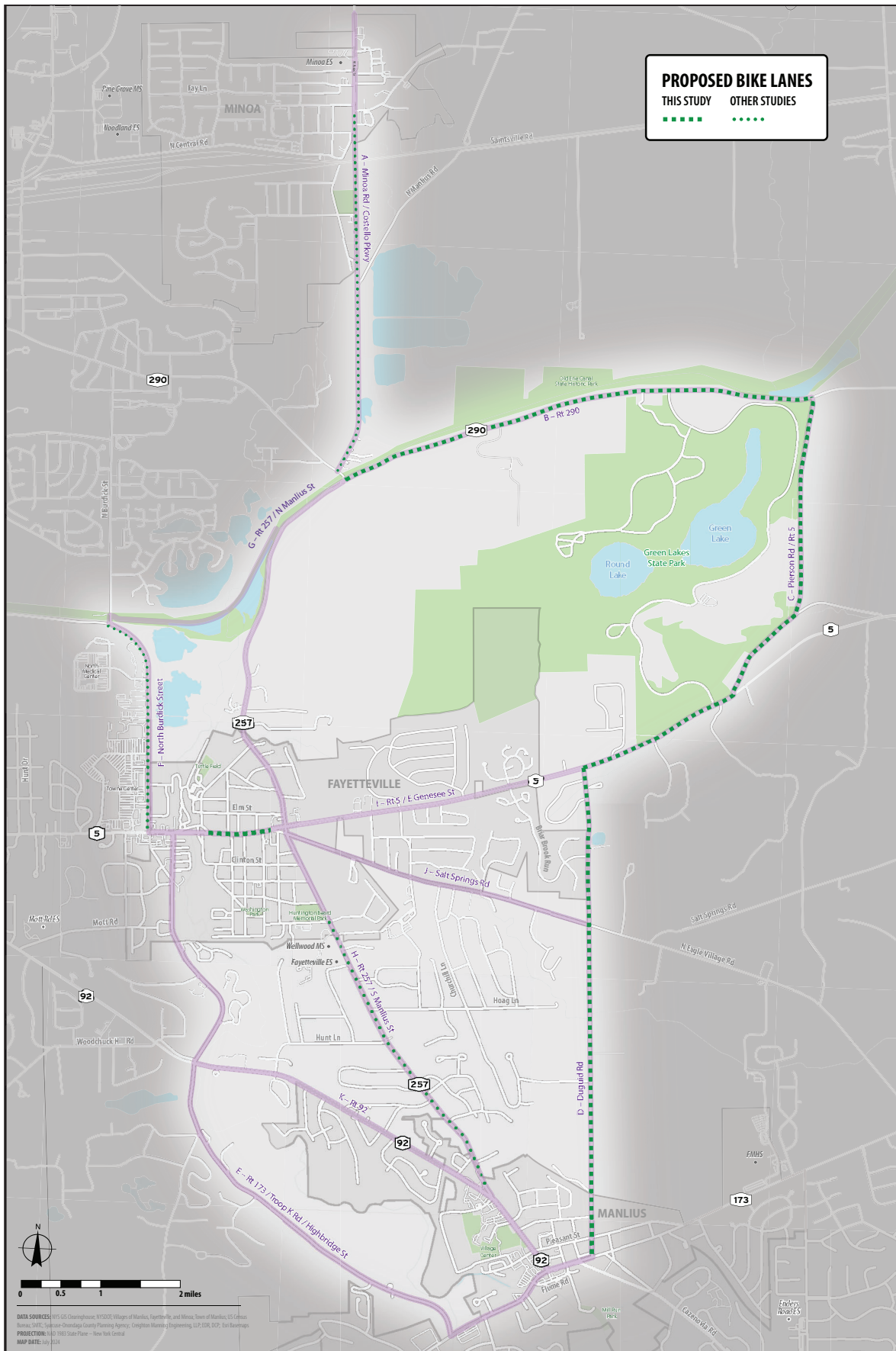


Figure 17. A detailed map of proposed bike lanes within the study area.

MULTI-USE PATH

A 10-15' multi-use path (MUP) is proposed along East Genesee Street. This MUP would run adjacent to the existing roadway but separated from the travel lanes by a shoulder, curb, and maintenance strip. MUPs are appropriate for a variety of users and mobility types, including walking, biking, and rolling. The path will also be bi-directional. MUP materials vary, although construction costs are relatively high compared to other improvement ideas. A map on the following page shows the recommended location for a multi-use path.

CONCEPT – Install multi-use path

PRIMARY USE – Walking, biking, rolling; bi-directional

MATERIALS – Concrete, asphalt, curbing where needed

WIDTH – 10ft minimum; 15ft preferred

ENHANCEMENT \$ \$ \$

- Separated path adjacent to roadway

KEY AREA

- **CORRIDOR C** – Rt. 5 (Duguid Road to George Taylor Road / Pierson Road)

| APPROX. COST PER QUARTER MILE | |
|--|--|
| \$ | UNDER \$100,000 / QUARTER MILE |
| \$ \$ | \$100,000 – \$200,000 / QUARTER MILE |
| \$ \$ \$ | \$200,000 – \$300,000 / QUARTER MILE |
| \$ \$ \$ \$ | OVER \$300,000 / QUARTER MILE |



Figure 18. A typical multi-use path treatment.

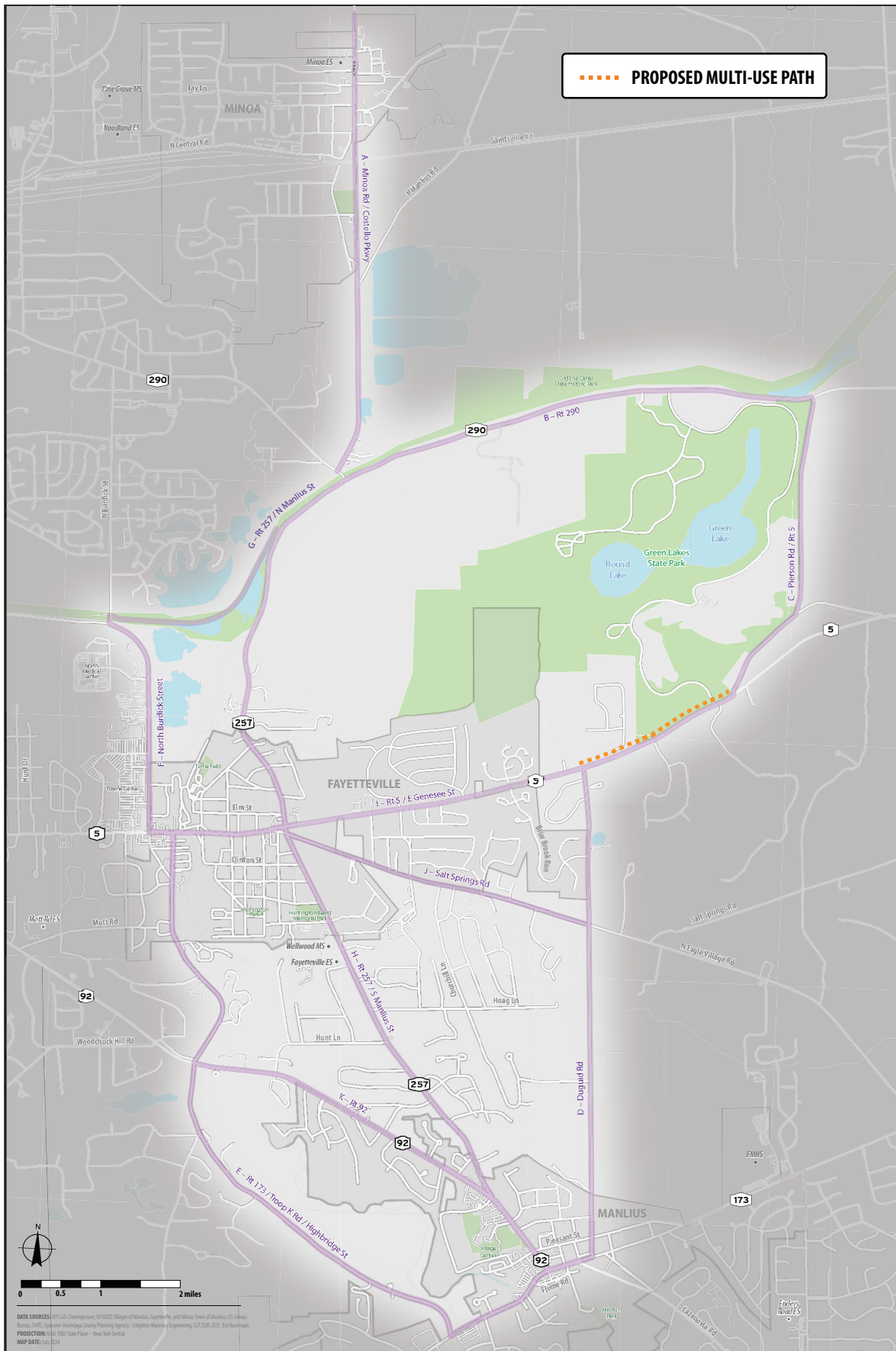


Figure 19. A detailed map of the proposed multi-use path.

OTHER OFF-CORRIDOR TREATMENTS

In addition to the above improvement ideas that are proposed along study area corridors, other interventions are proposed at other locations throughout the Town of Manlius and the three villages.

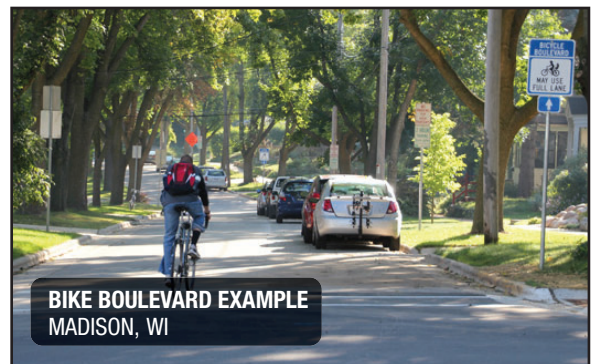
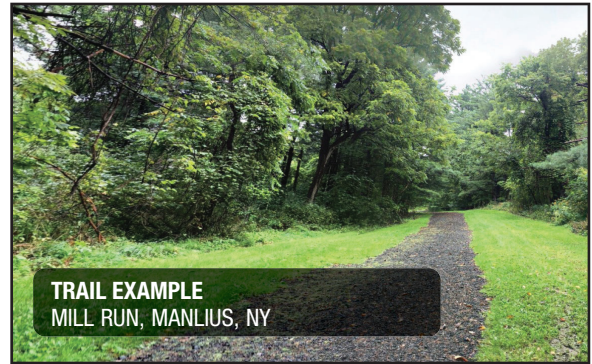
ALTERNATE TRAILS & LINKS – Many neighborhood-scale trails are proposed to strategically link to other pedestrian connections, like sidewalks, other trail networks, or destinations. The creation of this type of neighborhood-scale trail network is associated with the highest general cost of any improvement idea, and trail materials vary.

BIKE BOULEVARDS – Bike boulevards are slow and low-volume roads that provide biking connections to primary bike routes. These types of roads are designated with signage and pavement markings. Costs for bike boulevards are low and require pavement markings and signage.

A map on the following page details recommended off-corridor treatment locations.

APPROX. COST PER QUARTER MILE

| | | |
|-------------|-------|--------------------------------------|
| \$ | | UNDER \$100,000 / QUARTER MILE |
| \$ \$ | | \$100,000 – \$200,000 / QUARTER MILE |
| \$ \$ \$ | | \$200,000 – \$300,000 / QUARTER MILE |
| \$ \$ \$ \$ | | OVER \$300,000 / QUARTER MILE |



ALT. TRAILS & LINKS \$ \$ \$ \$

CONCEPT – The creation of neighborhood-scale trails or shorter, strategic links which allow for pedestrian connections to other trails, sidewalks, or destinations

MATERIALS – Varies

KEY AREA

- Ledyard Trail

BIKE BOULEVARDS \$

CONCEPT – Use signage and pavement markings—along with other traffic calming—to create a slow speed and low volume road good for bicyclists to use to connect to main routes

MATERIALS – Pavement markings; signs

KEY AREAS

- Fay Lane
- Churchill Lane

Figure 20. Examples of trails, links, and bike boulevards from both within the study area and from other locations.

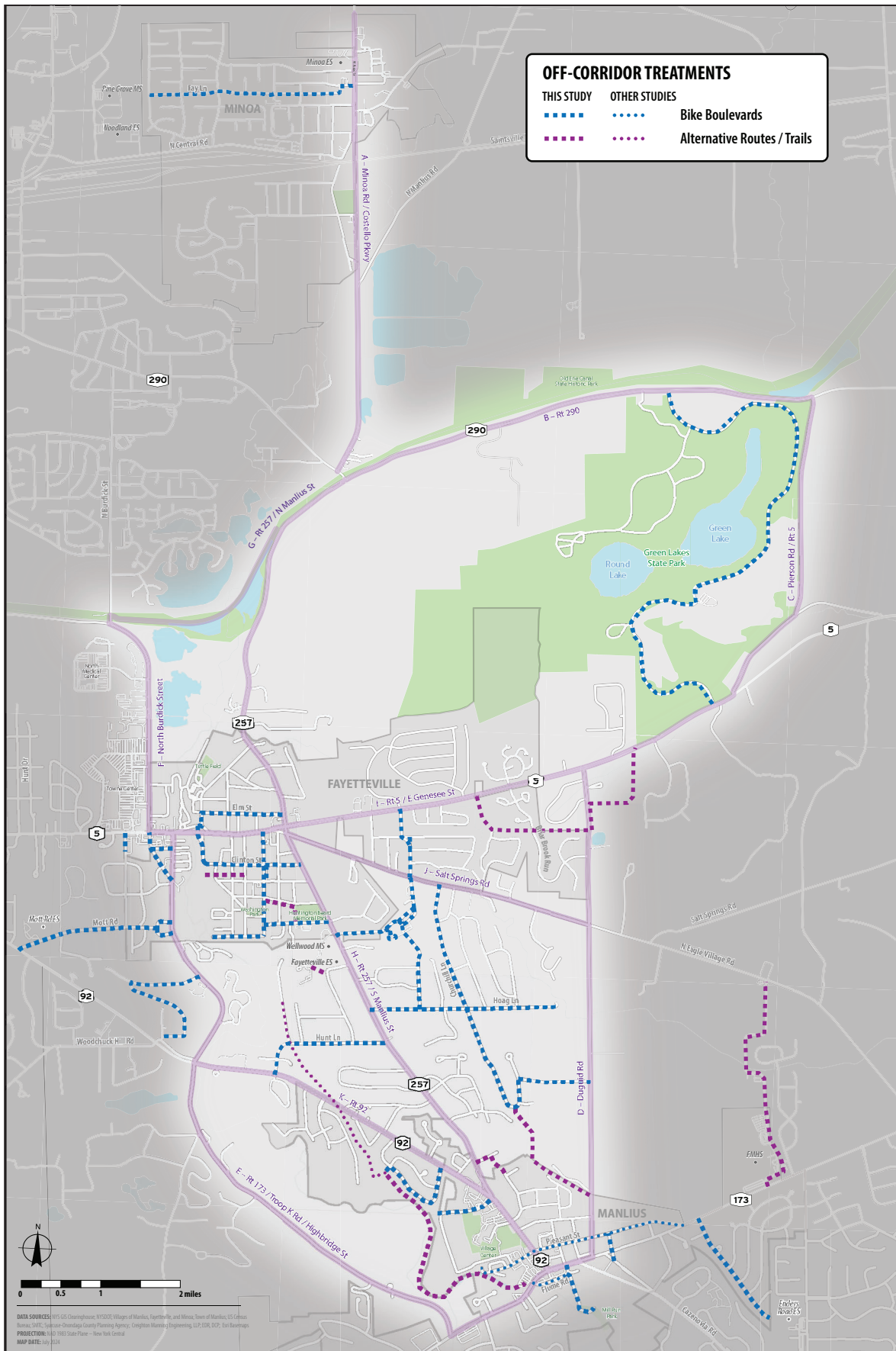


Figure 21. A detailed map of off-corridor treatments throughout the study area.

COST SUMMARY TABLE

The improvements will require varying levels of investment based on their specific location and length. For example, a Bike Boulevard for a few blocks or even up to a half-mile is fairly simple to implement, as it mostly includes signs and lane markings. On the other end of the spectrum, a Multi-Use Path could come with significant costs. What is not accounted for in these construction estimates are things such as property acquisition, which might be needed for some potential treatments like sidewalks outside of the roadway boundary. A concept level construction estimate per quarter mile was calculated and summarized in the following table.

Table 2. High-level construction cost comparison for the different treatment options.

| IMPROVEMENT | CONSTRUCTION COST (EST.) |
|--|--------------------------|
| BIKE LANES SHOULDER ENHANCEMENT | |
| BIKE LANES SHOULDER EXPANSION | |
| SIDEWALK | |
| MULTI-USE PATH | |
| MULTI-USE PATH WITH RIGHT-OF-WAY | |
| BIKE BOULEVARD | |
| ALT. TRAILS & LINKS | |

APPROX. COST PER QUARTER MILE

- UNDER \$100,000 / QUARTER MILE
- \$100,000 – \$200,000 / QUARTER MILE
- \$200,000 – \$300,000 / QUARTER MILE
- OVER \$300,000 / QUARTER MILE

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VI. POTENTIAL TREATMENTS



VILLAGES OF MINOA, FAYETTEVILLE, AND MANLIUS • BICYCLE & PEDESTRIAN CONNECTIONS STUDY

The following section includes a list of potential improvements/treatments that municipal partners (state, county, town, and villages) may want to progress based on professional judgment of feasibility, alignment with the study’s goals of connectivity, and public support. The table below lists the type, length, and location of these potential improvements. Additionally, this study identified community support for bicycle and pedestrian improvements that had been proposed or studied in prior planning efforts but have not yet been developed. For example, sidewalks in the town of Manlius from the Towne Center to Lyndon Corners or along Rt 257 between the villages of Fayetteville and Manlius. The following table is a summary of all the combined treatment ideas for the study area. Five improvement opportunities are highlighted in blue (concepts provided on the following pages), while efforts from previous studies with particularly strong public support are highlighted in yellow.

Table 3. Location, type, and length of each proposed improvement idea.

| Corridor | Street Name | Municipality | Type | Length (mi.) |
|--|--|--|----------------|--------------|
| A | Minoa Road / Costello Parkway | Minoa Manlius (T) | Bike Facility | 2.3 |
| B | Green Lakes Road / NY-290 | Manlius (T) | Bike Facility | 3.0 |
| C | E Genesee Street / Pierson Road / NY-5 | Manlius (T) | Bike Facility | 3.0 |
| | E Genesee Street | Manlius (T) | MUP | 1.0 |
| D | Duguid Road | Manlius (T) Fayetteville | Sidewalk | 1.0 |
| | Duguid Road | Fayetteville Manlius (V) Manlius (T) | Bike Facility | 3.0 |
| E | Highbridge Street | Fayetteville | Sidewalk | 0.4 |
| | Highbridge Street | Manlius (T) | Bike Facility | 0.3 |
| F | N Burdick Street | Fayetteville Manlius (T) | Bike Facility | 1.0 |
| | N Burdick Street | Manlius (T) | Sidewalk | 1.4 |
| H | S Manlius Street / Fayetteville-Manlius Road | Fayetteville Manlius (V) Manlius (T) | Sidewalk | 2.0 |
| | S Manlius Street / Fayetteville-Manlius Road | Fayetteville Manlius (V) Manlius (T) | Bike Facility | 2.0 |
| I | E Genesee Street / NY-5 | Fayetteville Manlius (T) | Sidewalk | 0.5 |
| | E Genesee Street / NY-5 | Fayetteville | Bike Facility | 0.4 |
| J | Salt Springs Road | Manlius (T) | Sidewalk | 0.9 |
| K | Highbridge Road | Manlius (T) Manlius (V) | Sidewalk | 0.6 |
| N/A | Green Lakes Park Drive | Manlius (T) | Bike Boulevard | 2.9 |
| | Local Roads East of Route 257 | Manlius (T) | Bike Boulevard | 4.3 |
| | Local Roads West of Route 257 | Manlius (T) | Bike Boulevard | 1.4 |
| | Local Roads (e.g., Clinton Street) | Fayetteville | Bike Boulevard | 3.3 |
| | Fay Lane | Minoa | Bike Boulevard | 1.0 |
| | Local Roads | Manlius (V) | Bike Boulevard | 2.8 |
| | West Seneca Street | Manlius (V) | Sidewalk | 0.2 |
| | Along Lincoln Avenue to W Franklin Street | Fayetteville | Trail | 0.2 |
| | N Eagle Village Road to E Seneca Turnpike and FMHS | Manlius (T) | Trail | 1.1 |
| | E Genesee Street to south of E Ridge Pointe Drive, along Duguid Road | Fayetteville Manlius (T) | Trail | 1.2 |
| Fayetteville-Manlius Road to Park Drive | Manlius (T) | Trail | 0.2 | |
| Wheeler Avenue to Fayetteville Elementary School | Manlius (T) | Trail | 0.1 | |
| Churchill Lane to North Street | Fayetteville Manlius (T) | Trail | 0.6 | |
| Ledyard Canal Trail | Manlius (V) Fayetteville Manlius (T) | Trail | 2.5 | |

CONCEPTS



SIDEWALK CONCEPT
HIGHBRIDGE STREET NEAR SPRING POND FISHERIES, FACING NORTH

SIDEWALK
IMPROVEMENTS

Municipality: Village of Fayetteville
Proposed length: 3,200 ft.
Construction cost estimate: \$535,000*



BIKE FACILITY CONCEPT
MINOA ROAD AT N MANLIUS ROAD, FACING NORTH

EXPANDED OR
ENHANCED SHOULDER

Municipalities: Village of Minoa; Town of Manlius
Proposed length: 2.3 mi.
Construction cost estimate: \$2.3 million*

* Estimates do not include right-of-way acquisition



Municipality: Town of Manlius
Proposed length: 5,500 ft.
Construction cost estimate: \$1.17 million*

TRAILS & LINKS



Municipalities: Village of Fayetteville
Proposed length: 2.5 mi.
Construction cost estimate: \$3 million*

* Estimates do not include right-of-way acquisition



BIKE BOULEVARD
CLINTON ST, FAYETTEVILLE, NY

Municipality: Village of Fayetteville

Proposed length: 2,300 ft.

Construction cost estimate: Less than \$100,000

POTENTIAL TREATMENTS DEVELOPMENT PROCESS

The future development of these potential treatments can be broadly outlined by the graphic below (Figure 22). The potential treatments can be grouped by location, type, and interconnectivity to/ interaction with other treatments. Once improvements are selected, sponsors are established to provide political, financial and administrative support. The engagement process involves soliciting stakeholders, adjacent property owners, and other relevant members of the public who will be affected by the potential improvements. After cost estimates are conducted and funding sources are identified, the treatment undergoes a design process that ultimately results in construction and implementation.



Figure 22. The potential treatments development process.

FUNDING SOURCES

There are several Federal, State, and local funding sources that may be available to help realize the proposed improvements identified in this study. Transportation projects programmed with Federal transportation funds, including but not limited to those below, would be listed in the SMTC's Transportation Improvement Program (TIP). This capital program is updated generally every 3 years and is maintained on an annual basis. Relating to the Federal sources, a few are available on a competitive basis (HSIP, NHPP, STBG [Flex, Urban]) via the SMTC's TIP when an update occurs. The other Federal sources may be available on a recurring basis through separate statewide (TAP, CMAQ) or Federal (SS4A, RAISE) solicitations.

FEDERAL

- **HSIP** – Highway Safety Improvement Program funding is for projects designed to achieve significant reductions in traffic fatalities and serious injuries on all public roads.
- **NHPP** – National Highway Performance Program funding is for projects that support progress toward achievement of national performance goals for improving infrastructure condition, safety, mobility on National Highway System (NHS) roadways. Route 5/E Genesee Street is an NHS roadway, and is therefore eligible for NHPP funding. NHPP eligible activities include roadway reconstruction, resurfacing, operational improvements (including traffic signal upgrades), safety improvements, and bicycle and pedestrian facilities.
- **Surface Transportation Block Grant Program (STBG)** – Surface Transportation Block Grant Program funding provides flexible funding (Flex and Urban) that may be used by states and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway or bridge on any public road, pedestrian and bicycle infrastructure, operational improvements, and transit capital projects.
 - **Transportation Alternatives Program (TAP)** – Transportation Alternatives Program funding is a set-aside of funds under the Surface Transportation Block Grant (STBG) program. These funds can be used for a variety of smaller-scale transportation projects such as bike/pedestrian facilities, trails, and safe routes to schools.
- **Safe Streets and Roads for All (SS4A)** – The Safe Streets and Roads for All (SS4A) program helps local governments create tailored road safety plans, focusing on reducing traffic fatalities and injuries through comprehensive strategies. Example projects include redesigning dangerous intersections, adding bike lanes, and improving pedestrian crossings. Local governments must have a safety Action Plan in place before applying for SS4A implementation funds.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE)** – The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program provides competitive federal grants for infrastructure projects that improve safety, environmental sustainability, and equity, especially in relation to public transit and pedestrian infrastructure (e.g., pedestrian bridges).

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)** – The Congestion Mitigation and Air Quality Improvement (CMAQ) Program funds transportation projects that reduce traffic congestion and improve air quality, particularly in non-attainment or maintenance areas for air pollution standards. Projects include expanding bike infrastructure/facilities and traffic management improvements that reduce idling.
- **Recreational Trails Program** – The Federal Recreational Trails Program (RTP) provides funding to develop and maintain recreational trails for motorized and non-motorized users, promoting outdoor recreation and conservation. Projects include building multi-use trails, restoring damaged trail sections, and installing trailhead amenities like signage and rest areas.

STATE

- **CFA/REDC** – The Consolidated Funding Application is an efficient, streamlined tool to apply for State economic development funds. The application examines funding for transportation infrastructure from multiple State sources including NYSDOT.
- **CHIPS** – The Consolidated Local Street and Highway Improvement Program provides State funds to municipalities to support the construction and repair of public roads under the jurisdiction of counties and local governments (i.e., Village of Fayetteville) in New York State. The project must be for a highway-related purpose, and have a service life of 10 years or more.
- **State Dedicated Funds** – Programmed at the discretion of the NYSDOT.

LOCAL

Municipalities can fund projects outright through their individual budgets. If federal funds are used on a project, transportation programs typically require a 20% local match. A town, village, or agency sponsoring a federally funded project should plan to cover a portion of the project’s cost through their general fund or bonding.

NEIGHBORHOOD SIDEWALK PROGRAM

TOWN OF MANLIUS

During public outreach, the consultant team heard from residents of the Town of Manlius who were working to create a Neighborhood Sidewalk program where a portion of their taxes were directed to building sidewalks in sections of the town. This model of a special district can be used to fund other infrastructure investments.



Figure 23. The goals of the Town of Manlius Neighborhood Sidewalk Program. Source: Town of Manlius

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