

ONONDAGA COUNTY EMPIRE STATE TRAIL LOCAL ECONOMIC OPPORTUNITIES PLAN



Let's connect the
Empire State Trail to
your community.



ONONDAGA COUNTY EMPIRE STATE TRAIL LOCAL ECONOMIC OPPORTUNITIES PLAN

June 2022



Rectangular Rapid-Flashing Beacons (RRFBs) on the Empire State Trail.



Empire State Trail near Teall Avenue.



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Empire State Trail looking east at Gerelock Road and Horan Road.



Empire State Trail Bridge over Interstate 481, looking east.

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INTRODUCTION

200 Years of Canal History...and Counting

For the past 200 years, the massive transportation infrastructure project called the Erie Canal has shaped communities and economies throughout New York State. While the system may no longer be the freight and industry draw of centuries past, the Erie Canal, and its sister canals that make up the New York State Canal System, continue to provide a myriad of economic and community benefits to canalside communities through its evolution and rebirth as a network of recreational tourism corridors and destinations.

Beginning In 1995, New York State first commissioned the **New York State Canal Recreationway Plan**, to stimulate and guide a re-visioning of the system as a recreational jewel across the state, including the waterside development and trail system known as the *Erie Canalway Trail*.

In 2005, the Erie Canalway was recognized as one of approximately two dozen **National Heritage Corridors** by the National Parks Service, in recognition of the transportation, economic and cultural contributions of the canal system to US history, and the continued potential for the canal to drive economic development and cultural innovation.

In 2019, a state sponsored task force led an effort to **Reimagine the Canals**, soliciting input from across the state to identify challenges and opportunities facing canal communities and inspiring a vision for the Canal System’s legacy for the next 200 years.

And in 2020, former NYS Governor Cuomo announced completion of the rebranding and planned expansion of the trail system into the **Empire State Trail**, a 750-mile bicycle and walking trail spanning across Upstate New York from Buffalo to Albany, and from New York City north through the Hudson and Champlain Valleys to Canada - the longest single multi-use trail in the country.



The Empire State Trail near Reed Webster Park in Camillus.



The Empire State Trail across New York State.



The Empire State Trail in the Town of Camillus heading east.

With a renewed focus and reinvestment in the Erie Canalway and the recent completion of the Empire State Trail, the time is now to plan for Onondaga County’s part in the rebirth, and to capitalize on the massive economic, tourism, and recreational potential of the Canal System.

The Onondaga County Empire State Trail Local Economic Opportunities Plan

With an existing \$274 million in annual economic impact¹, even prior to completion, the Empire State Trail (EST) is projected to host an estimated 8.6 million visitors annually across the trail’s 750-mile route. Through Onondaga County, approximately 14 miles of new Empire State Trail, to the tune of \$36 million, has been recently completed, to make up a continuous 34-mile pathway across the county. The expanded trail runs through and near at least 11 municipalities in Onondaga County, including the City of Syracuse.

With build-out largely complete, trail usage across the state is set to rise. Already, local segments of the trail saw a 33% increase in usage from 2019 to 2020. As such, the **Onondaga County Empire State Trail Local Economic Opportunities Plan**, spearheaded by County Executive Ryan McMahon and the Syracuse-Onondaga County Planning Agency, has been developed as a first step in encouraging and enabling trailside and nearby municipalities in Onondaga County to capitalize on the economic potential that is the Erie Canalway and the new statewide Empire State Trail system.

1

<https://www.railstotrails.org/policy/trailtransform/newyork/>

By preparing this Local Economic Opportunities Plan, we hope to further these broad goals:

- Enliven our Main Streets, restaurants, shops, and other businesses and hotels with new regional and statewide trail and waterway travelers
- Increase community visitation and local spending by current and new users, by connecting the trail and waterway to Main Streets and economic centers
- Capitalize on and strengthen the tourism potential of the historic canal heritage, and the nearby charming communities and recreational resources of Onondaga County
- Improve quality of life, public health, transportation options, and property values in nearby villages and neighborhoods

Trail planning is being executed at all levels - across New York State, across the region, and in our own communities. With the execution of these primary trail spines now nearing completion, attention now pivots to planning for more local trail connections and entryways to the many nearby communities and neighborhoods.

The Empire State Trail near Reed Webster Park in Camillus.

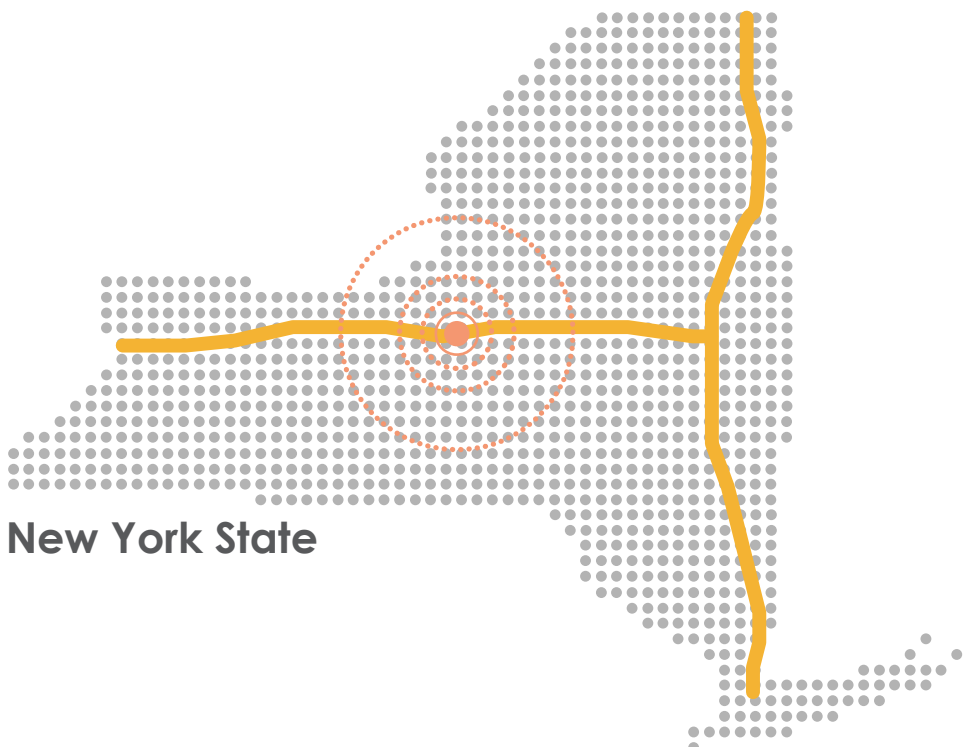


New York State

The newly minted *Empire State Trail* is a system of existing and newly connected multi-use trails spanning New York State. The main components of the EST are the 365-mile **Erie Canalway Trail**, which runs east and west primarily along the Old Erie Canal, and the **Hudson River Valley Greenway**, stretching from New York City north to Canada along the Hudson River and Champlain Canal. Approximately 350 miles of new trail were recently constructed to complete the system, and much of the Erie Canalway segment, approximately 85%, is off-road trail.²

In planning for the statewide trail, less than a dozen “Key Gateways”, or significant statewide connection points along the canalway trail, have been identified, and include the NYS Fairgrounds in Geddes and the Dewitt/Old Erie Canal State Park. A number of other significant regional trailheads and local access points are also identified within Onondaga County.

² https://www.ny.gov/sites/ny.gov/files/atoms/files/EST_Final_Plan_June_2018.pdf



New York State

Central New York Region

The Empire State Trail also plays a central role in regional trail and tourism planning. The *CNY Regional Recreation & Heritage Plan*, developed by the CNY Regional Planning & Development Board, illustrates a planning strategy to establish linkages of corridors (pathways) and nodes (communities) across the Central New York region. This framework, outlined in the Plan as the five-county **CNY Peace Trail**, hopes to catalyze the revitalization of historic and heritage sites, improve access to outdoor recreation, and better connect our regional assets.³

This CNY Peace Trail extends the Empire State Trail’s physical and economic impact throughout Central New York. As a part of the Peace Trail, The Empire State Trail is the primary east-west corridor through Onondaga, Cayuga and Madison Counties, with three northern trail connections and three traveling to the south. Utilizing this planned network, connections to almost all of Onondaga County’s historic villages, tourism and cultural assets, and significant recreational areas are made.

Onondaga County

Onondaga County, with a population of 476,000, is uniquely poised as the central hub of these statewide and regional trail systems and waterways. Recent work within Onondaga County has focused on 3 trail “arteries”, including:

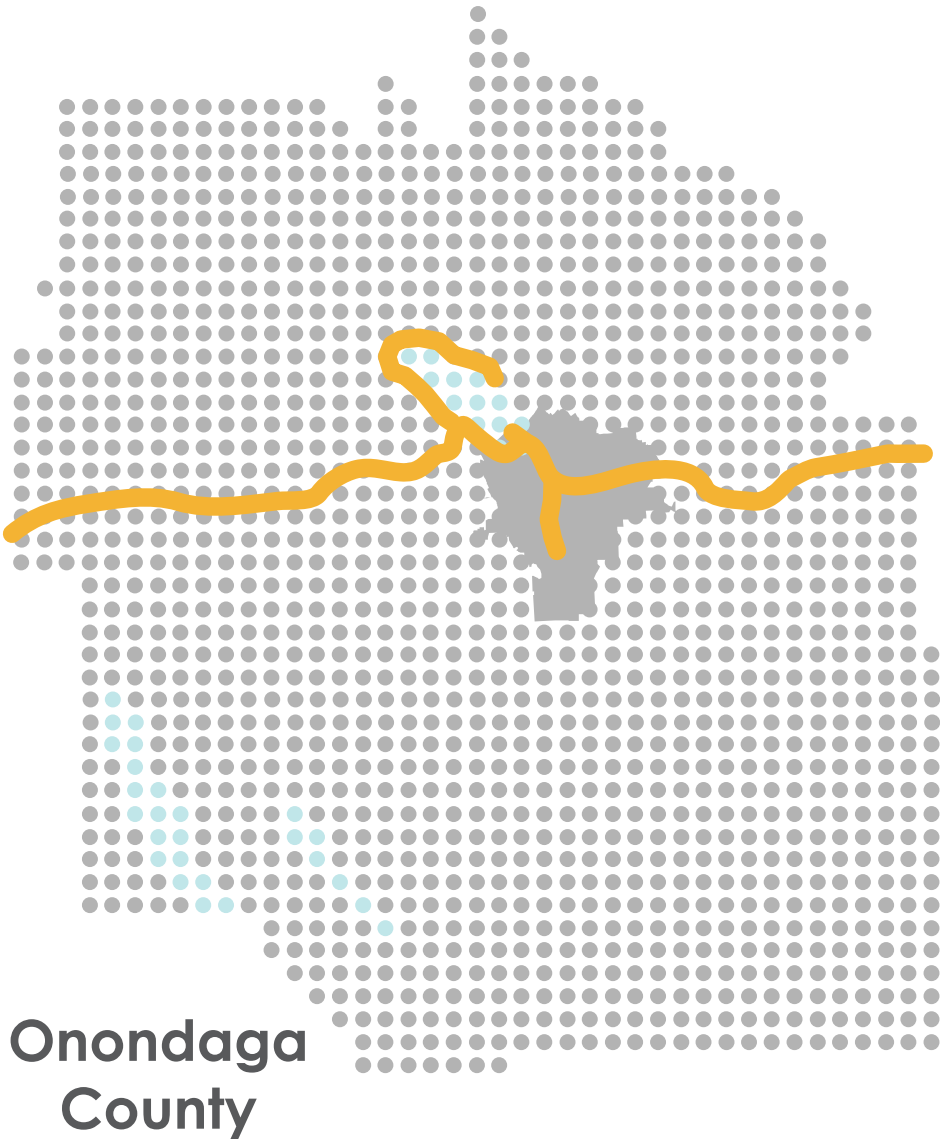
Erie Canalway Trail: The 14-mile stretch that encompasses the City of Syracuse and lands between Camillus and DeWitt canal parks has long been thought to be the most challenging “gap” in the statewide trail system. The path through this most urban section on the entire Erie Canalway uses a mix of city streets and county highways, existing local trail systems, and an innovative new 3-mile segment within the center median of Erie Boulevard. At completion, Onondaga County now has a continuous 34 miles of Erie Canalway / Empire State Trail crossing our County.

Onondaga Lake Loop the Lake Trail: Onondaga County is fortunate to have a centrally located lake with its shoreline largely in public ownership. The County has been working

³ https://www.cnyrpdb.org/programs/comdev/docs/Final_CNY_Regional_Recreation_and_Heritage_Plan_2017_edited.pdf

diligently to “Loop the Lake” with a high-quality multi-use trail and other amenities. Now at nearly 10 miles, a new 1.1-mile section with a pedestrian bridge over the CSX rail lines has just been added. The EST follows this portion of the Loop the Lake Trail to reach the City of Syracuse.

Onondaga Creekwalk: Onondaga Creek flows from the southern rural lands of the County, north through the Onondaga Nation Territory and meanders through the City of Syracuse until it reaches the Syracuse Inner Harbor (Barge Canal harbor) and Onondaga Lake. The City of Syracuse has been constructing a creekside urban trail, with multiple segments in planning and construction phases over the past several years. The Empire State Trail follows on portions of the Creekwalk, from the lake south along the Inner Harbor to Erie Boulevard.



WHO should use this Plan?

The primary audiences for the Empire State Trail Local Economic Opportunities Plan (LEOP) are Onondaga County, and the municipalities and local governments within the county proximate to the Erie Canal and Empire State Trail. Additionally, businesses, tourism-based entities, and not-for-profit groups in our communities with a desire to attract trail users will find this plan useful. Onondaga County seeks local partners across the system to help spearhead and champion the many exciting projects herein.

WHAT is in the Local Economic Opportunities Plan (LEOP)?

The Plan includes a wealth of data and ideas for use by communities in identifying the makeup and needs of Empire State Trail users, and how we can better connect these users - from our day-use neighbors to our “end-to-end” travelers - to what our communities have to offer. This plan includes a current inventory of relevant nearby resources for trail users, an exploration of new opportunities to draw trail users to our businesses and attractions, and preliminary planning concepts on how to best create those needed physical linkages between the statewide trail and our economic centers.

WHERE does the Empire State Trail exist in Onondaga County?

The Empire State Trail travels 34 miles east-west across the midsection of Onondaga County. The trail has existed in some of our communities for decades, such as within the Old Erie Canal State Park in DeWitt and Manlius. Other sections of the EST are brand new, including sections in Downtown Syracuse and a long-desired link between the Erie Canal trail in Camillus and the Onondaga Lake Loop the Lake trail. Maps of the trail and related communities can be found throughout this document.

WHEN should we get involved?

Now! New York has recently completed work on the Empire State Trail across the entire state. Now is the time for Onondaga County and its communities to capitalize on this important recreational and economic resource. This Plan is the first step in visualizing the connections, physically and economically, between our trail systems and our economy. The next steps rely on our community leaders to implement the capital and programmatic projects to make these connections a reality.

WHY is this plan necessary?

The new Empire State Trail is a relatively untapped tourism resource here in Onondaga County. Trail usage by local day users has seen a significant rise as new sections have been completed. The Erie Canal also attracts long-distance users, including cyclists and boaters, from out-of-town locations and on multi-day trips. The Erie Canalway, as a National Heritage Corridor, attracts tourists from across the US and worldwide. In order to capture the spending power of these users that are now right in our backyards, it is imperative that we create both physical and psychological means to connect these local and non-local users to the businesses, services, and attractions we have to offer.

HOW should we use this Plan?

The focus of this plan is to provide the beginning tools for our local leaders to effectively capture a plethora of economic and quality of life opportunities offered/created by the trails for our businesses and commercial centers. Users of this plan can find ideas, conceptual renderings, maps, and design guidance for potential connection points and complementary projects, the Plan also provides a beginning framework for use by those seeking funding and support for capital projects and/or programmatic spending. Onondaga County stands ready to assist municipalities in tailoring this plan to local landscapes and conditions, advancing the vision to implementation, and improving the environment for visitors, residents, and businesses across Onondaga County.

The Onondaga County Empire State Trail Local Economic Opportunities Plan is envisioned as a planning process rather than a one-time document. This document is the first step in planning and realizing a network of trails, destinations, and recreational opportunities. It outlines potential routes that connect communities across Onondaga County into the Empire State Trail as well as identifies economic opportunities that each new link may support.

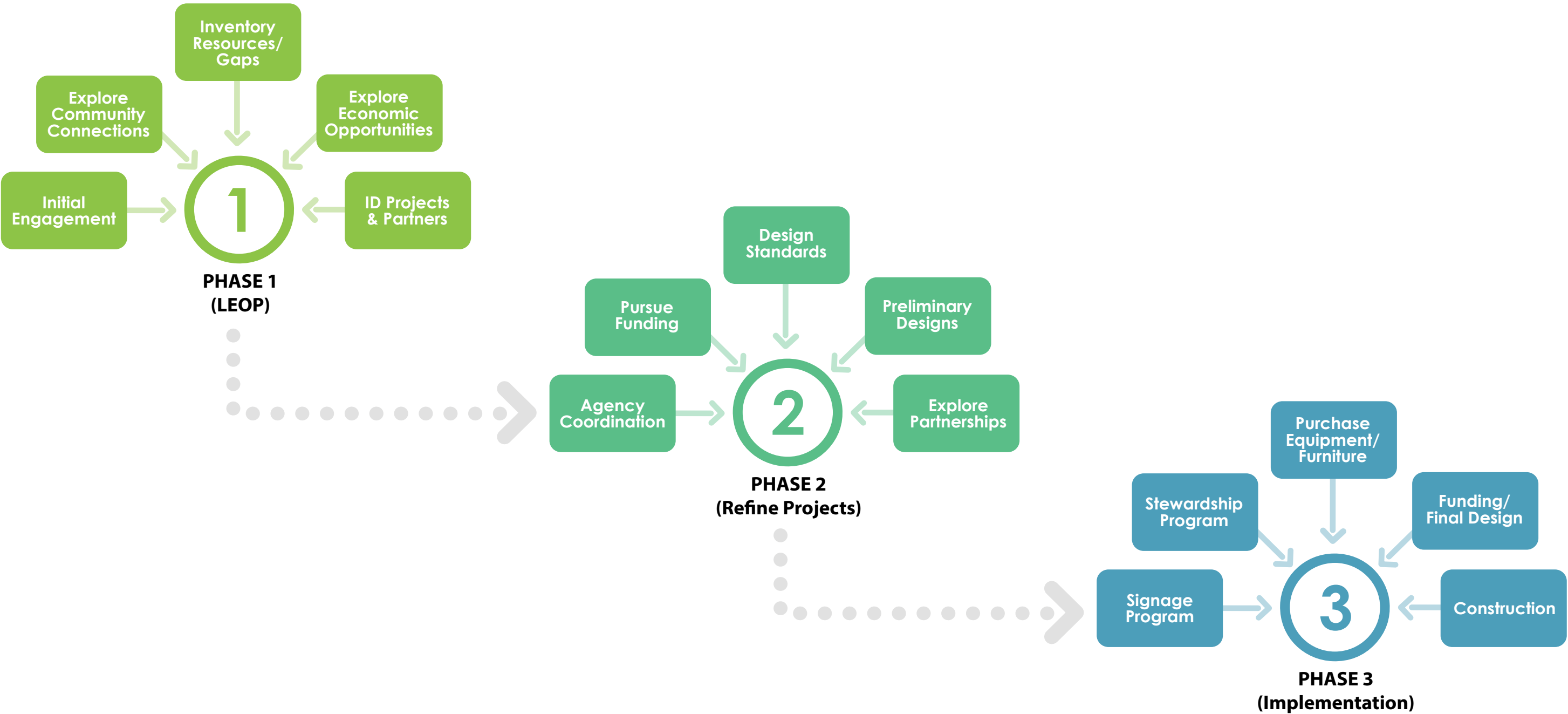
From this document, local leaders should begin to identify projects that suit the needs and desires of their communities.

After identification, a comprehensive corridor study of the desired routes will be necessary to help leaders focus in on the specific challenges and possibilities present along their path. The broad recommendations included here can be tailored and refined, including the creation of more detailed designs and cost estimates, along with identifying key partners and stakeholders to work with. Key partners should include the specific owners of the rights-of-way involved.

Once a plan is in place, communities will need to work with the owners of each facility to implement the desired changes. This

includes the owner of the roadways themselves (local, County, or State ownership) as well as the owners of any nearby lands where bike parking or campsites may be envisioned. Ongoing maintenance and improvements should be factored into the planning process to ensure the network remains in good condition.

The following graphic shows how the process can proceed with local, regional, and private sector partners, from vision to execution.



COUNTYWIDE AND PLANNING AREA INVENTORY

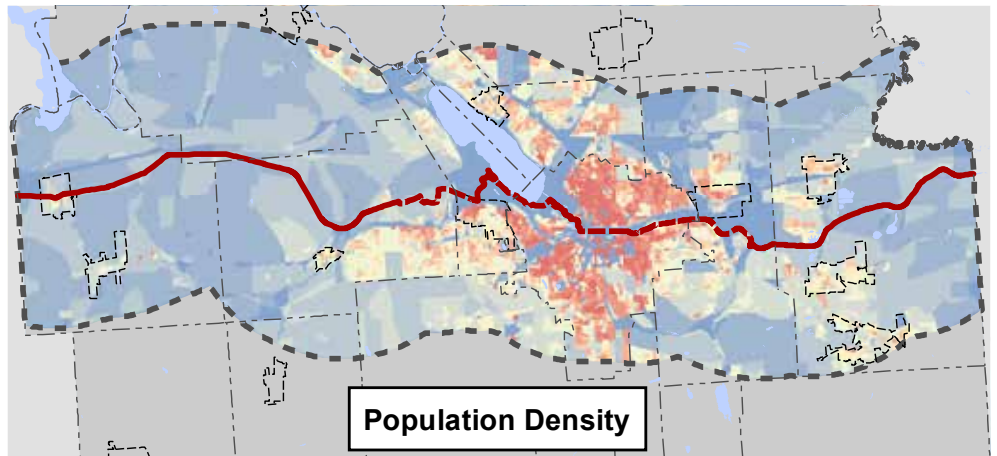
Population Density

As with all forms of transportation infrastructure, connecting residential populations is key to increasing the usage of the infrastructure. Denser residential areas help to promote the use of trails, like the Empire State Trail (EST), because it increases the number of available users and shortens the distances between likely destinations.

Onondaga County’s population is concentrated within the City of Syracuse, village centers, and inner ring suburbs, many of which surround the path of the EST. Beginning in the western end of the county, the EST passes through a sparsely populated area, with small pockets of higher density in Camillus and the Village of Jordan. The trail then continues towards the more densely populated Village of Solvay, and provides direct access to the New York State Fairgrounds and the Town of Geddes.

The EST cuts through the center of Syracuse, with dense urban neighborhoods on both sides. High population density continues into the Town of DeWitt. The trail then passes through a sparsely populated area equal distance from the more densely developed Villages of Minoa and Fayetteville, until it reaches the county’s eastern border.

Within four miles of the EST path, the Town of Salina, including the Village of Liverpool and Hamlet of Mattydale, is a dense suburban outgrowth of the City of Syracuse. The Villages of Elbridge and Manlius contain slightly higher levels of density from their surrounding areas and act as community nodes.



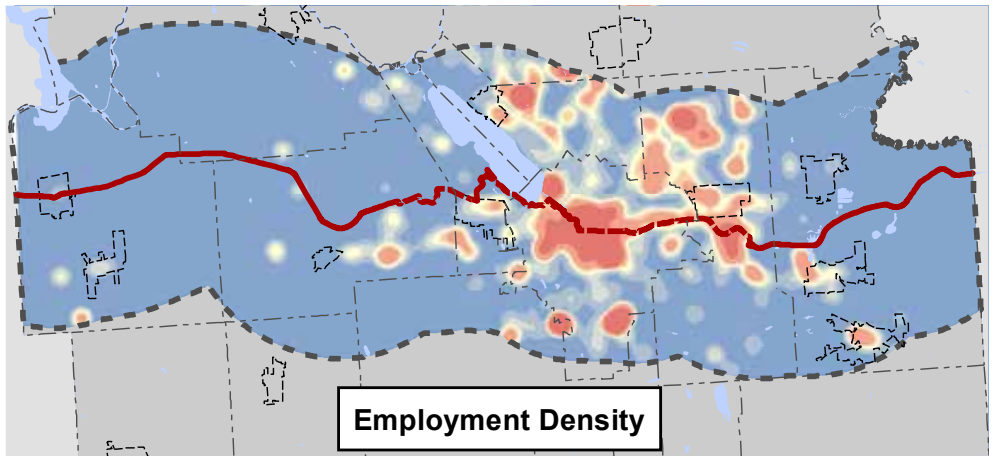
Employment Density

Transportation infrastructure must be considered useful in order to attract users. With that in mind, it makes sense that residential areas should be connected to commerce centers. Not only for personal employment, but for shopping, entertainment, and other daily interactions.

Employment centers within Onondaga County hug tightly to the path of the EST in many cases. Downtown, University Hill, and Destiny USA in the City of Syracuse are the largest employment centers within the County and are all within a short distance of, if not directly on, the EST.

Just west of Syracuse, commercial centers along West Genesee Street create large pockets of employment that mirror the path of the EST. As the trail heads eastward, commercial centers continue along Erie Boulevard follow the EST from Syracuse into DeWitt. Further east, more shopping and employment centers are a short trip from the EST, just outside the Village of Fayetteville.

Manufacturing and industrial hubs in the Towns of Salina and Dewitt are near the edge of the four-mile study area surrounding the EST, including along the Liverpool Bypass where Lockheed Martin and the newly constructed Amazon Warehouse reside. Also within the four-mile study area is Carrier Circle. While no longer the size it once was, Carrier still anchors a large employment center in the area, joined by many smaller businesses including hotels and fast-food restaurants.

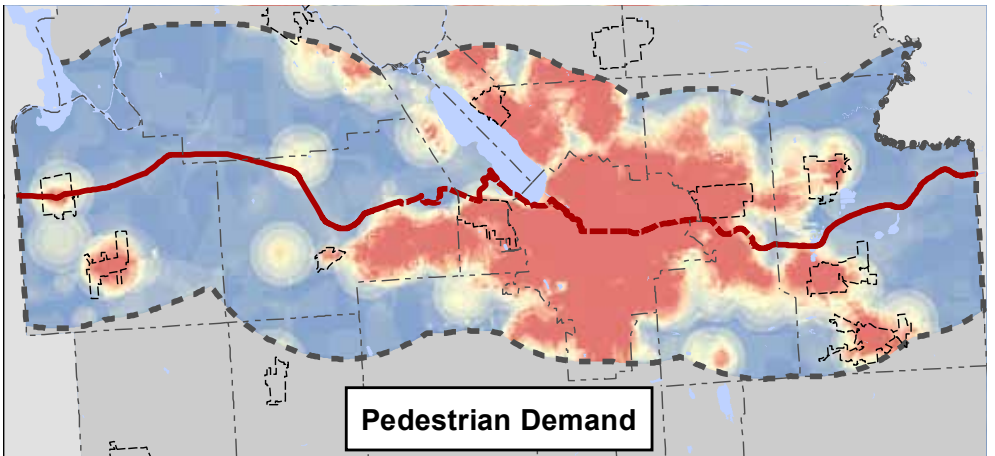


Pedestrian Demand

Multi-use trails, such as the EST, work best when connecting destinations that are easily accessible by foot or bicycle. Upon arriving at a destination, having a multitude of options for needed services within a short distance allows users to forego the use of a personal vehicle. Although this Plan largely deals with improvements in cycling infrastructure, one way to determine which areas promote the general ability to leave the car at home is using the SMTC’s Pedestrian Demand Model.

In the model, “pedestrian demand” is measured through a combination of factors, such as proximity to schools, parks, and grocery stores, as well as population density, employment density, and demographic characteristics. Based on these factors, pedestrian demand is highest in areas with dense employment and residential centers. As the EST hits the center of Onondaga County, it also hits areas with high levels of pedestrian demand.

To the west, the Village of Jordan sees the EST running straight through the village’s highest pedestrian demand zone. The City of Syracuse, southern portions of the Towns of Geddes and Camillus, and the central portion of the Town of DeWitt, including the Village of East Syracuse, flank either side of the EST. Within a short distance of the trail, the Town of Salina and Villages of Camillus, Elbridge, Fayetteville, Liverpool, Manlius, and Minoa offer up high levels of pedestrian demand. On the other hand, large stretches of the EST through Onondaga County have minimal pedestrian demand as the trail works its way through more rural areas on the eastern and western edges.



Inventory

The focus of this planning effort was to create a document to encourage and assist municipalities/economic development areas that are adjacent to the Empire State Trail (EST) to capitalize on their proximity to the trail. The intent is to prompt questions such as:

- How can we better connect both local and long-distance trail users to what our communities have to offer?
- How can we capture their spending power?

The first step in this process was to define what is meant by an EST-proximate economic development area. For the purposes of this study, “proximate” was considered to be a distance of approximately four miles to or from the EST, a comfortable cycling side-trip distance to access needed or desired services for EST travelers. Mapping of several potential resources and services for trail-goers was completed using GIS, including retail, shopping centers, transportation, information, finance, health care, arts and entertainment, recreation, accommodations, food, parks, agritourism, boat launches, festivals, events, farmer’s markets, fishing access, heritage resources, museums, and natural areas.

Not surprisingly, these potential resources and services are clustered in both the City and village/hamlet areas located within the four mile radius of the EST. Eighteen existing or potential economic activity clusters were identified using this initial mapped inventory, shown as “Economic Development Opportunity Areas” in Map 1 on the following page. They include, from west to east:

- Village of Jordan
- Village of Elbridge
- Hamlet of Jack’s Reef
- Village of Camillus
- Town of Camillus
- Village of Solvay

- Town of Geddes
- Town of Salina
- Syracuse Lakefront and Inner Harbor
- Tipperary Hill
- Downtown Syracuse
- Syracuse Southside
- University Hill
- Eastwood and Erie Boulevard
- Village of East Syracuse / Town of DeWitt
- Hamlet of Jamesville
- Village of Minoa
- Villages of Fayetteville and Manlius

The resulting draft resource and service mapping inventory helped to start the conversation and outreach to municipalities in the identified economic activity areas. Municipal leaders were interviewed and surveyed in outreach meetings to solicit local knowledge and input on optimal bike route linkages between the EST and local resources in support of existing as well as new or expanded economic opportunities. In addition, an effort was made to take note of gaps in key EST-related facilities and services that could be made available and help to draw both visitors and businesses into these EST-proximate economic

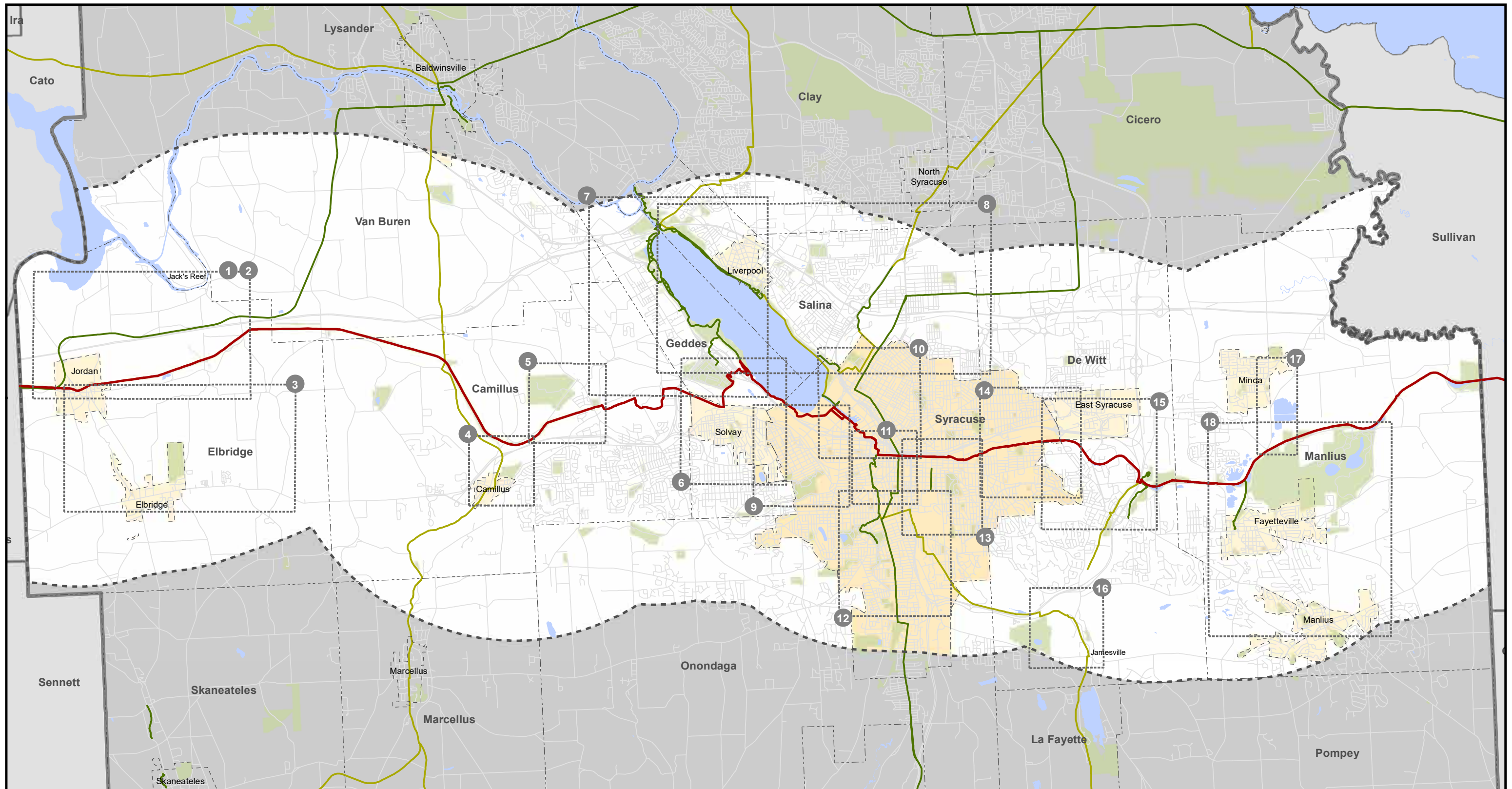


The Empire State Trail along Towpath Road in the Town of DeWitt.

activity areas. To help further map additional resources and services that may have been missed by existing GIS data, as well as gaps and opportunities in each community, municipal contacts in the economic activity areas were asked to complete a brief survey on ten specific types of local resources, shown below.

1. Key destinations or anchor institutions in the municipality - those that draw significant numbers of people, including recreation areas, public parking areas, and public restrooms
2. Community features like heritage sites, museums, recreation, festivals, and events
3. Employment centers such as major employers, corporate parks, and business centers
4. Trail corridor access points: does your community have existing trail access to the EST or to other trails?
5. Bicycle services: does your community offer any bike-specific services?
6. Restaurants
7. Accommodations, hotels, inns, and B&Bs
8. Dense neighborhood areas - are there potential links to be considered between higher density housing areas and potential trail nodes?
9. Transit hubs - are some of your transit stops more frequently used than others?
10. Potential development sites - are there locations in your community that you have existing plans for, or particular properties that could benefit from future development?

Based on the county-wide inventory within the project area and municipal outreach interviews, existing trail user resources and services were further refined. The following section illustrates these resources and services, and from this locational information, gaps in needed or desired resources and services can be determined.



This map is for presentation purposes only. The SMTC and CNY RPDB do not guarantee the accuracy or completeness of this map. Data sources include SMTC, CNY RPDB, SOCPA, and others. Date: 4/20/22



- Empire State Trail**
- Existing
 - 4-mile Buffer
- Other Trails**
- Existing
 - Proposed
- Legend:**
- Roads
 - Town/City Boundaries
 - Water Features
 - Parks

- Opportunity Areas**
- | | | |
|-------------------------|---------------------------|---------------------------------|
| 1 Village of Jordan | 7 Town of Geddes | 13 University Hill |
| 2 Hamlet of Jack's Reef | 8 Town of Salina | 14 Eastwood & Erie Blvd |
| 3 Village of Elbridge | 9 Tipperary Hill | 15 T. DeWitt & V. E. Syracuse |
| 4 Village of Camillus | 10 Lakefront/Inner Harbor | 16 Hamlet of Jamesville |
| 5 Town of Camillus | 11 Downtown Syracuse | 17 Village of Minoa |
| 6 Village of Solvay | 12 Syracuse Southside | 18 V. Fayetteville & V. Manlius |

**Empire State Trail
Economic Development
Opportunity Planning Areas**

0 0.5 1 2 Miles

Map 1

EST RESOURCES AND SERVICES GAP ANALYSIS

Through a county-wide inventory within the project area, four miles to the north and south of the EST, existing trail user resources and services were identified through GIS analysis and municipal outreach interviews.

Several types of resources and services are considered essential or important to EST users depending on their itineraries, schedule and personal preferences. Categories of these types of services, indicated in this section, are: Eat/Drink Establishments, Retail/Shopping Centers, Sporting Goods Stores, Hotel/Motel/B&B/Campground, Health Facilities, Grocery/Convenience/Pharmacies/Gas, Banks/Credit Unions, Parking Lots/Garages/Bike Parking, Potential Public Parking, and Public Restrooms.

Gaps in these services can make planning travel on the EST challenging, but at the same time, an identified gap is a clear potential economic development opportunity for the municipality where the gap exists. Developing resources and services in proximity to the recommended EST linkages adds incentive for visitation and increased business by way of EST travelers seeking that service or resource. The following section locates these resources and services, and from this locational information, gaps in needed or desired resources and services have been identified.

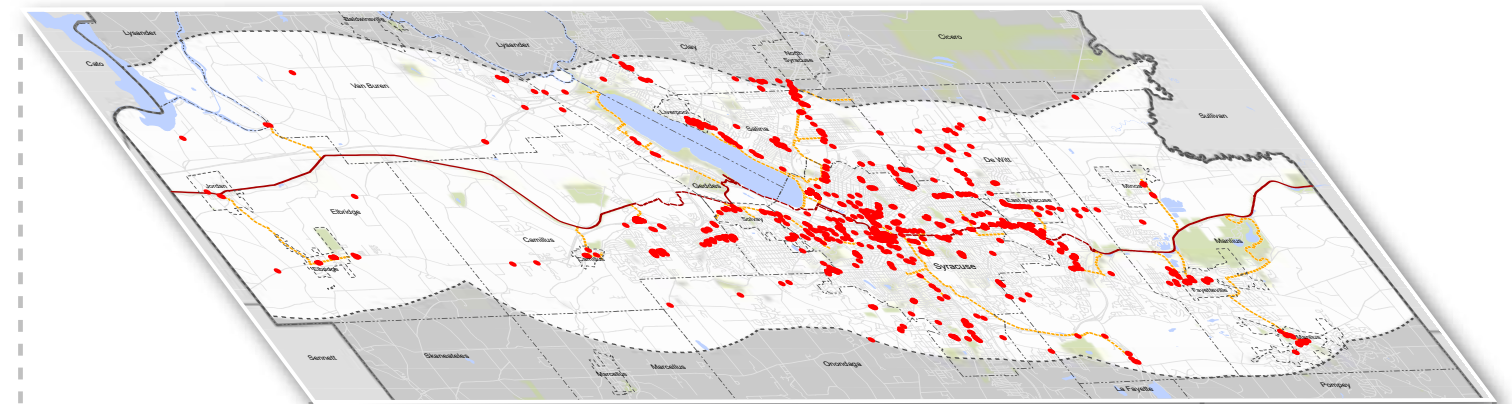
Eat/Drink Establishments

From the Village of Jordan heading east to the nearest Eat/Drink Establishment, it is 11 to 12 miles to establishments in Camillus. Instead, a ride of 20 - 25 minutes from Jordan, with improved bike infrastructure, will bring cyclists to Village of Elbridge eateries along Route 5.

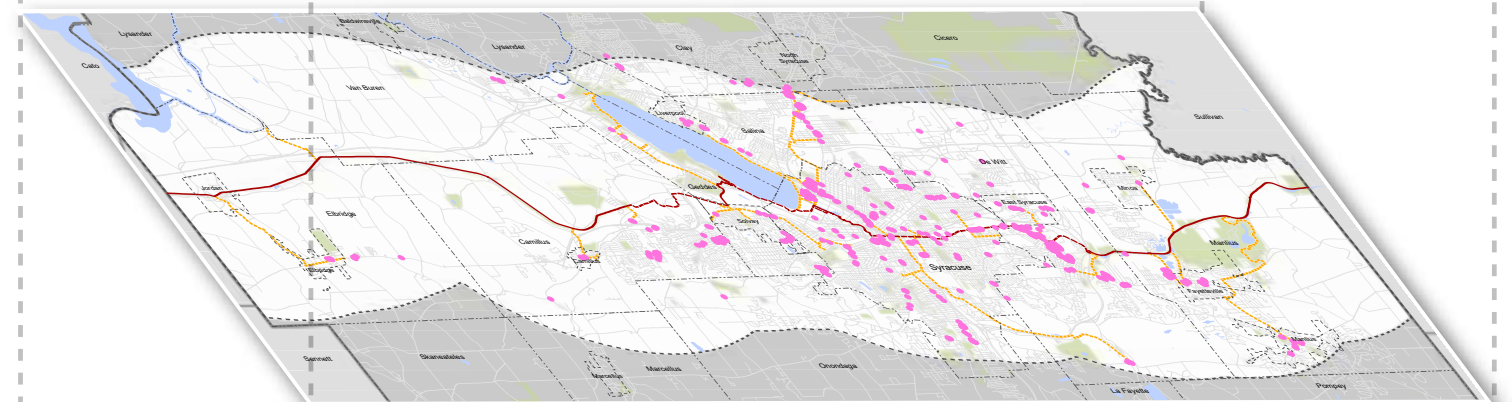
To the east of Jordan, with bike infrastructure improvements, travelers could take a detour of less than a mile from the EST north on Laird Road and Route 31 to a restaurant in the Hamlet of Jack's Reef on the Seneca River. Another good opportunity for an Eat/Drink Establishment in this section would be in the Hamlet of Warners, just a half mile from Erie Canal Park, via the planned CNY Peace Trail along Newport Road.

There are no significant gaps in Eat/Drink Establishments between the Villages of Camillus and East Syracuse where a variety of eateries can be found in Solvay, Syracuse, Salina, Liverpool, Geddes, and DeWitt. Between East Syracuse and Chittenango, travelers will find a variety of eateries as near as a half mile from the EST in the Village of Fayetteville, and in the Village of Manlius with a 4-mile ride. With additional or improved bike infrastructure on Genesee Street, Burdick Road, and Route 257, visitors will be able to access a variety of eateries in Fayetteville and Manlius.

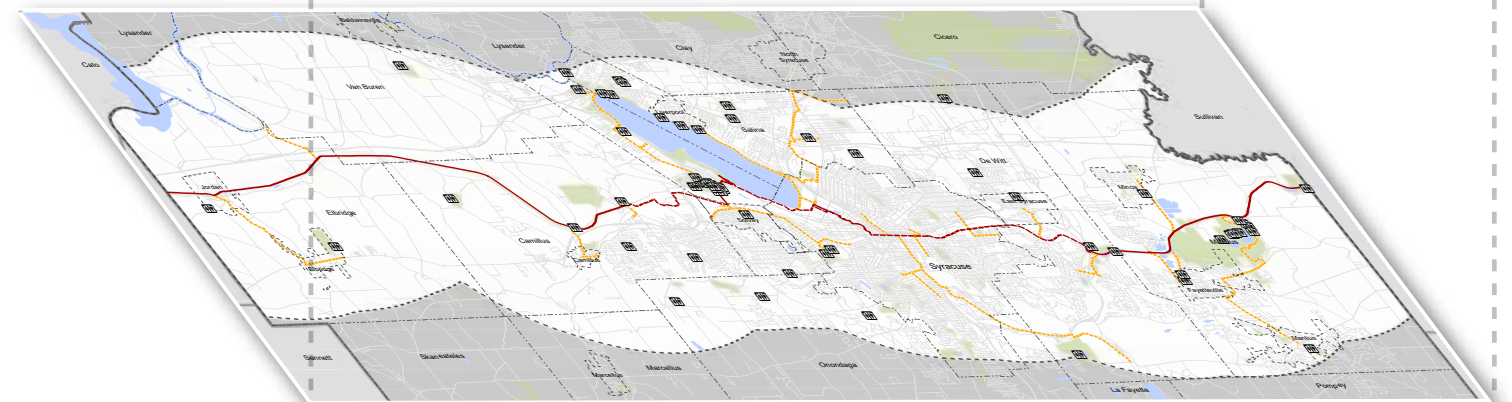
To the east of Fayetteville, there is an opportunity to access Village of Minoa eateries within about a mile to the north of the EST on Minoa Road with the addition of bike infrastructure.



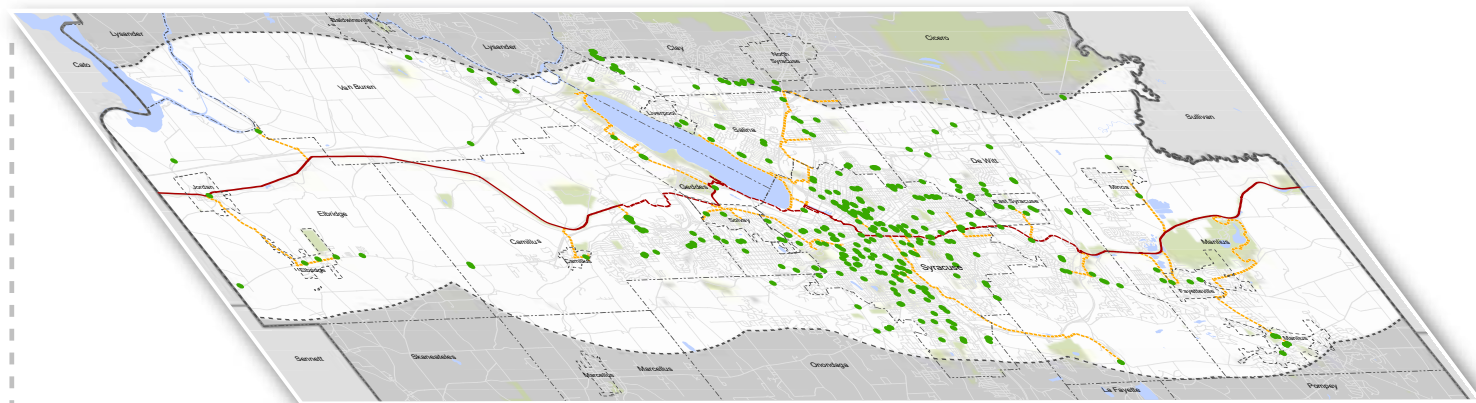
Eating & Drinking Establishments



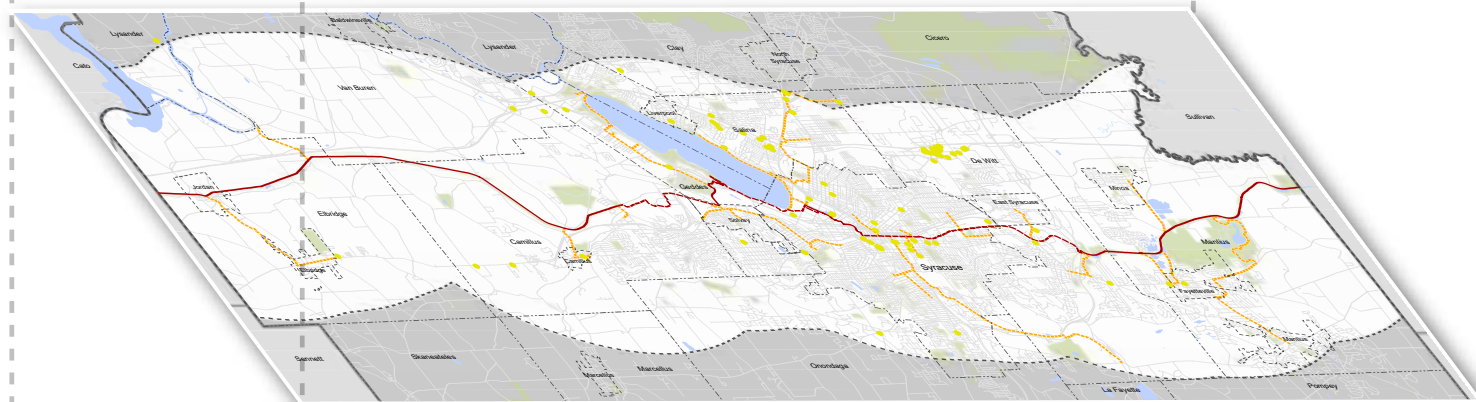
Retail/Shopping Centers



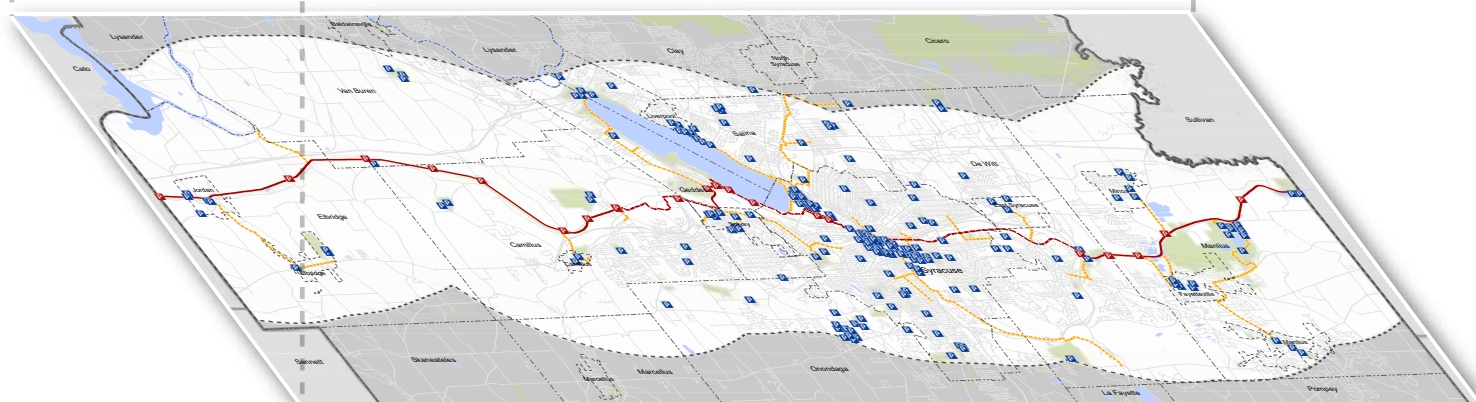
Public Restrooms



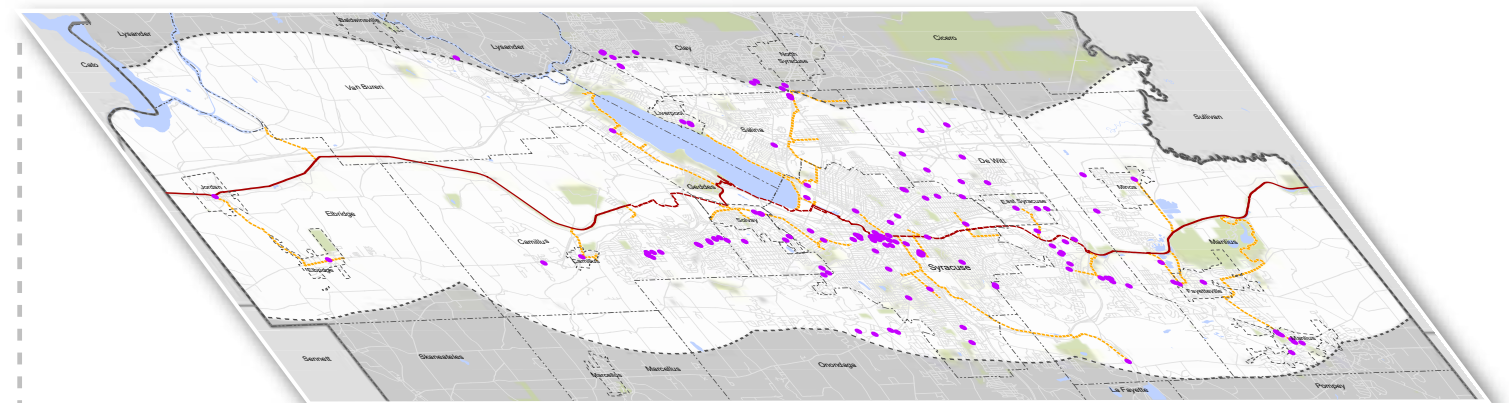
Grocery, Convenience Stores,
Pharmacies & Gas Stations



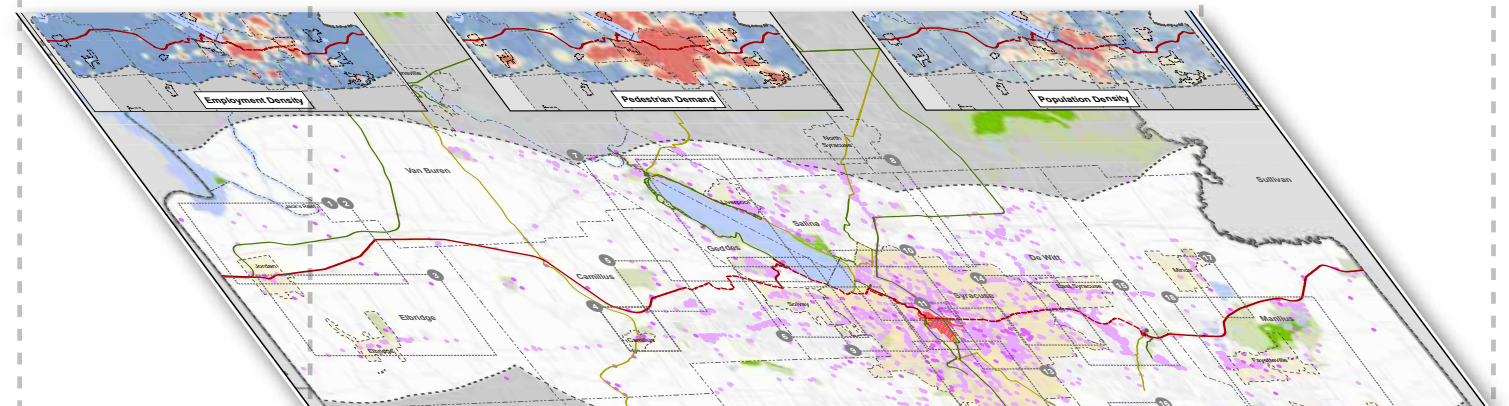
Hotel, Motel, BB & Campground



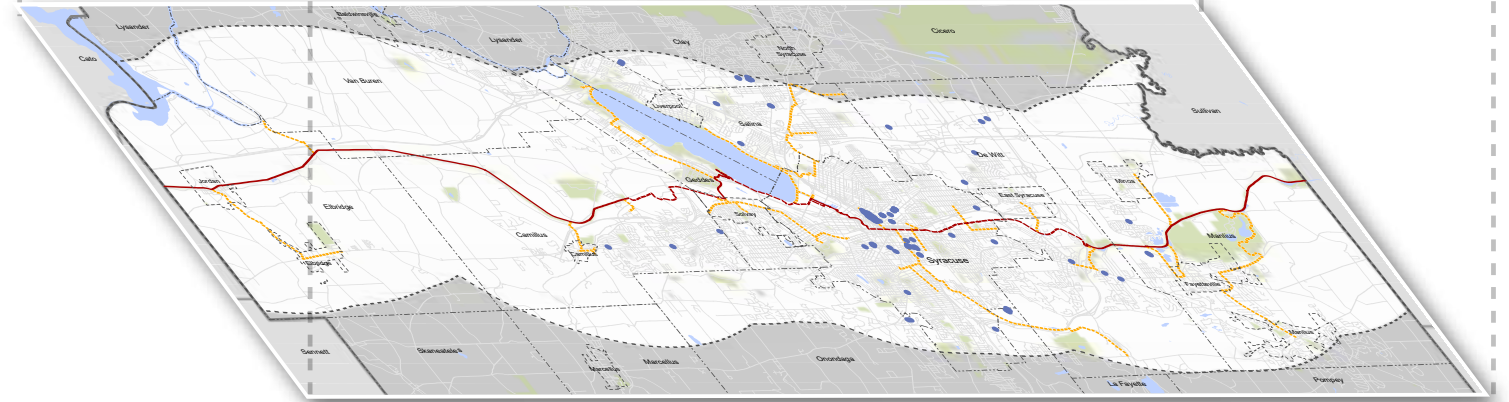
Parking



Banks & Credit Unions



Recreation



Health Facilities

Hotels, Motels, B&Bs, or Campgrounds

In the three-hour ride on the EST across Onondaga County (33 miles) there is only one campground within two miles of the trail, at Green Lakes State Park. Green Lakes State Park, in the far eastern section of the County, has 142 tent sites and 7 cabins. The existing gap for tent sites near the EST in Onondaga County is nearly 30 miles from Green Lakes State Park to the Village of Jordan. EST cyclists sometimes travel from campsite to campsite, meaning that if they don't have that option in Onondaga County, they won't spend as much time or dollars in the County. The gap in this service in Onondaga County is an opportunity for several municipalities in the project area, with suitable sites, to offer tenting cyclists an option to spend more time and dollars in their community.

There are several hotels, motels, and inns across the County where travelers can find a bed; however, there is an opportunity to provide new lodging services right at the EST in the Village of Jordan for those travelers between Weedsport and the NYS Fairgrounds who want to stay close to the trail. The Village of Jordan is a gem of historic architecture with many good prospects for building rehabilitation and reuse, and establishing guest quarters that are historically compatible in Jordan could spark additional related economic development in the Village.

Another opportunity for a B&B or Guest Inn would be in the Village of Minoa. Although there are facilities in Fayetteville, Minoa offers a smaller scale, rural village experience that cyclists may enjoy over a more urban setting, or when the B&Bs in Fayetteville have no vacancies.

Groceries, Pharmacies, Convenience Stores, or Gas

There are grocery, convenience, pharmacy, and/or gas stations in proximity to the trail across the County. The gaps in this category of services are between the Villages of Camillus and Jordan, a stretch of approximately 12 miles, and to the east between the Village of Fayetteville and Chittenango, a gap of approximately 11 miles.

Sporting Goods Stores

With improved bike infrastructure connectivity, EST trail users will be able to access sporting goods stores in Syracuse and DeWitt. West of Camillus, there is a gap and an opportunity for sporting goods and services related to hiking and cycling on the EST in the Village of Jordan or in Elbridge.

Health Facilities

There are health facilities in proximity to the trail across the County, but gaps in the rural portions of the County exist.

Banks/Credit Unions

Between Township 5 in Camillus and the Village of Jordan, a gap of 12 miles exists in these banking or credit union services. In the east of the County, between the Village of Fayetteville and Chittenango, a gap in these services of approximately 11 miles exists.

Retail/Shopping Centers

There are no significant gaps in these services other than between the Village of Jordan and Camillus, and to the east of Fayetteville. Both of these gaps are more rural, and of low density in character. Even with a service gap of 6 to 10 miles between retail shopping centers, this will likely not pose a problem with travelers on the EST. Filling small retail gaps is unlikely to be a top demand for most cyclists.

Parking Lots, Garages, and Bike Parking

There are several public and private parking facilities near the EST in the Syracuse area, as well as convenient Erie Canalway parking access lots outside the City, such as at McDonald Road, the Erie Canal Parks in Warners and Camillus, Reed Webster Park, and at the Old Erie Canal State Parks in DeWitt, Fayetteville, Kirkville, and Pools Brook. There is ample vehicular parking access to the EST across Onondaga County. Dedicated bicycle parking is needed at the clusters of services and resources identified in this plan in almost all municipalities. In northern climates with snow like Central New York, bike parking locations should be outside of dedicated snow storage space.

Bicycle Parking

Selecting an appropriate installation surface and technique is key to creating bicycle parking that remains secure and attractive over time. Effective bike parking for short-term users depends on two main factors: proximity to the destination and ease of use.

Short-term parking is designed to meet the needs of people visiting businesses and institutions, and others with similar needs - typically lasting up to two hours. Short-term users may be infrequent visitors to a location, so the parking installation needs to be readily visible and self-explanatory.

Users of long-term parking generally place high value on security and weather protection. Long-term parking is designed to meet the needs of employees, residents, public transit users, and others with similar needs. These users typically park either at home or at a routine destination such as a workplace. They often leave their bicycles unmonitored for a period of several hours or longer, so they require security and weather protection that lets them park without unreasonable concern for loss or damage. Long-term parking can take a variety of forms, including a room within a residential building or workplace, a secure enclosure within a parking garage, or a cluster of bike lockers at a transit center. Some long-term parking is open to the public - such as a staffed enclosure at a transit hub - and some of it is on private property with access limited to employees, residents, or other defined user groups.

Source: The Essentials of Bike Parking, from the Association of Pedestrian and Bicycle Professionals

Public Restrooms

Between the Village of Jordan and the Sim's Store Erie Canal Museum, there is a ten mile gap in public restrooms available to travelers on the EST, unless travelers take a mile-and-a-half detour to Veterans' Memorial Park at Gillie Lake. This is an important user service for EST travelers and the gap in this service in the Jordan to Camillus section offers an opportunity to communities to draw cyclists to other desired services.

LINKAGES TO OTHER TRAILS

Trail linkages in Onondaga County are a key component of the County's potential economic development opportunity. By capitalizing on planned recreational trail links to existing cultural and natural resources, these linkages translate to improved local quality of life for County residents as well as visitors.

New York State Bicycle Routes 5 and 11

Considerations for developing bike facilities and linkages to existing and needed facilities and services were part of the outcome of the gap analysis for each identified resource area across the Onondaga County stretch of the Empire State Trail. Two NYS Bike Routes intersect the linkages recommended in this plan along Route 31 (NYS Bike Route 5) and Route 11 (NYS Bike Route 11). These state-designated bike routes have occasional bike route signage, but are largely without sufficient accommodating bike infrastructure. These bike routes should be enhanced for bike safety with expanded shoulders, narrowed vehicle lanes, and sharrows or bike lanes where they are needed, as well as improved crossing markings, signage, and/or signals to accommodate cyclists safely.

Central New York Peace Trail and Other Recreational Trails

The CNY Peace Trail is a regionally-planned network of 29 bike touring corridors to connect heritage and recreation resources across the five-county Central New York region (Cayuga, Cortland, Madison, Onondaga, and Oswego Counties). The planned network intersects with the EST in three locations in Onondaga County: Devoe Road in Camillus, Water Street at the Creekwalk in Downtown Syracuse, and at the Loop the Lake Trail at Long Branch Road in the Town of Salina. With over 800 miles of proposed bike touring corridors across the five-county CNY region, when developed, these three Onondaga County connection points to the CNY Peace Trail offer opportunities for the thousands of annual EST users and nearby communities to enjoy bike touring excursions to hundreds of heritage locations and natural resources, from the City of Oswego to the Village of Marathon, or from Union Springs to Oneida Community

Mansion House. Along the way, the CNY Peace Trail will link cyclo-tourists with festivals, events, agritourism sites, farmers markets, fishing and boating access sites, and trails in communities across Central New York. With local implementation of the CNY Peace Trail, a river of future bike touring visitation will cross the county's communities, bringing substantial opportunities for growth to businesses, and employers linked via bike facilities to a sustainable economic development initiative.

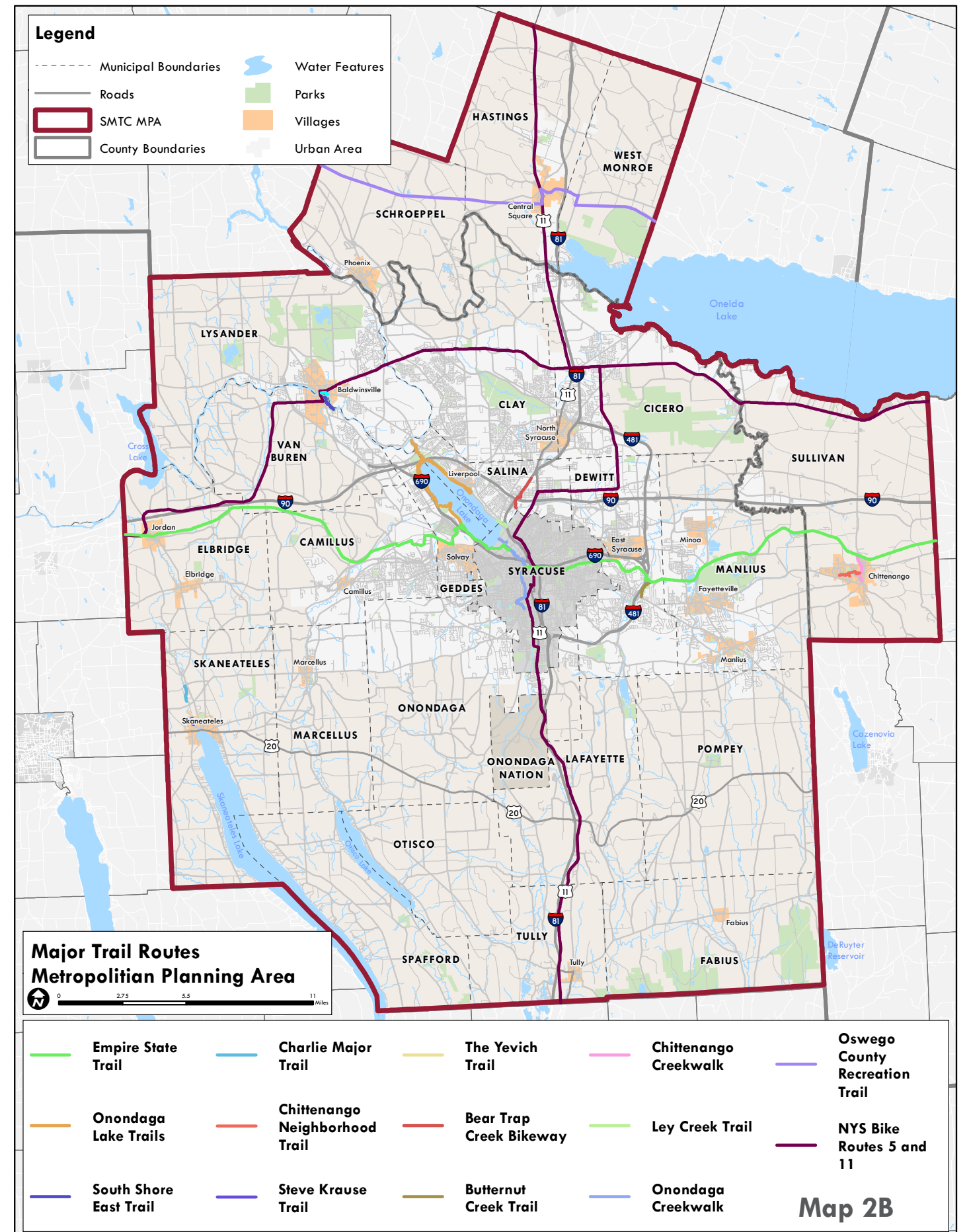
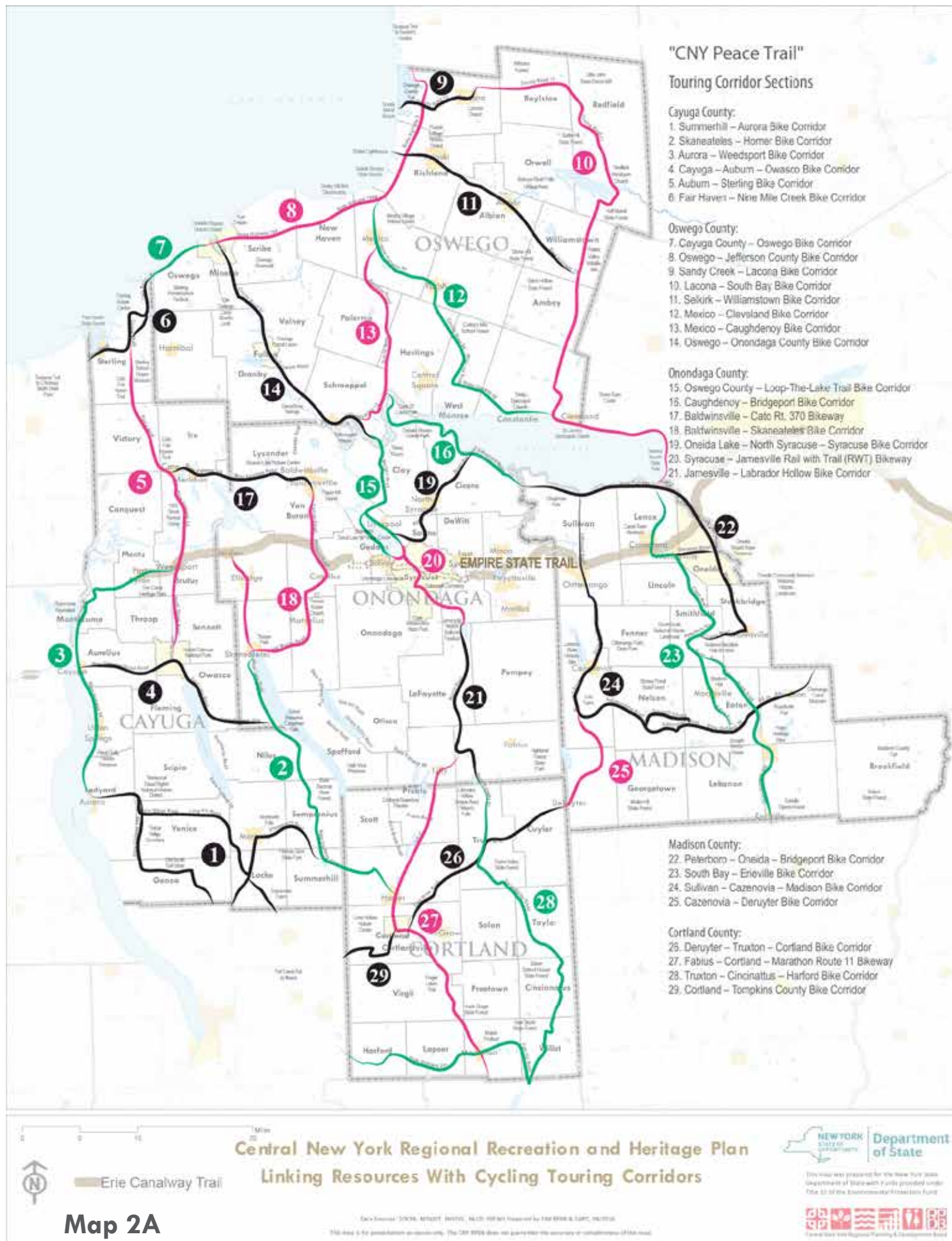
Other Nearby Trails

Some of the recreational trails that intersect, or are close to, the EST include the Bear Trap Creek Trail, the Camillus Forest Unique Area, and the Camillus Valley Natural Area, which protects 2.5 miles of Nine Mile Creek, one of the premier trout streams in Onondaga County. The preserve lies between NYS Route 174 on the west, and a railroad embankment on the east, just south of the Village of Camillus. Just beyond the southern end of the preserve, the Central New York Chapter of the National Railway Historical Society maintains Martisco Station as a museum. On the preserve, marked trails and fishing holes invite hikers and anglers alike. To access the preserve between Martisco Station and the Village of Camillus, a parking lot is available on Route 174.

The Limestone Creek Trail in Fayetteville and Manlius, Green Lakes State Park, Onondaga Creekwalk, the Loop the Lake Trail, and the Butternut Creek Recreation and Nature Area and trail offer additional recreational opportunities to both residents of the area and visitors from the EST. Improved wayfinding signage can direct trail users to these facilities. Examples of wayfinding can be found in the EST Design Guide, available at <https://empiretrail.ny.gov/documents-resources>.



NYS Bicycle Routes 5 and 11 in Onondaga County.



OPPORTUNITY AREAS: RESOURCES, VISIONS, AND RECOMMENDATIONS

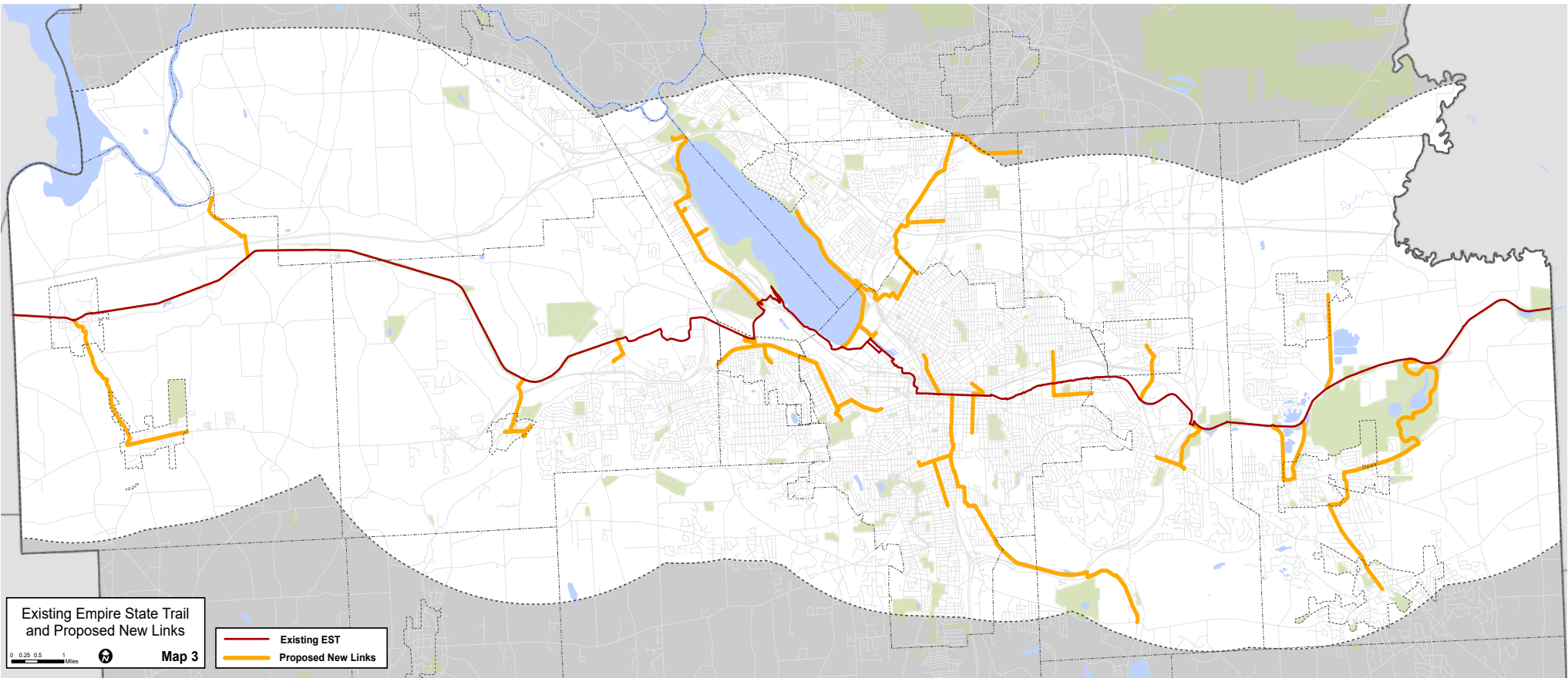
Onondaga County is not only a destination at the heart of the scenic Central New York Empire State Trail (EST) region, but also at the center of a major northeast transportation hub: the intersection of two primary north-south and east-west interstate highways, Interstate 81 and Interstate 90. County transit options include an international airport, regional Amtrak train service, and Centro, the regional public transportation authority with buses equipped to carry bicycles. Linking the cycling recreational “spine” of the EST with the County’s hamlet and village centers, and the full slate of transportation services available here, makes the County extremely accessible to cycling travelers and visitors. Cyclist accessibility, services, and resources have the potential to spur both economic development and quality of life across the County.

Through Geographic Information Systems (GIS) analysis and municipal outreach, this plan locates eighteen concentrations of potential EST-related resources and services, called “Opportunity Areas,” in municipalities within the study area. Both the path of the EST as well as other existing or proposed regional trail systems intersect many of these Opportunity Areas. Municipal inventories, including survey-based interviews of EST-proximate communities, identified existing resources and potential economic development initiatives related to the EST.

By developing optimal bike route linkages through these surveys and planning-level field investigation, these Opportunity Areas can help close the gaps in features and services identified in previous chapters. These linkages can support new or expanded economic opportunities, helping to draw visitors and business to each community’s resources.

These Opportunity Areas expand outward to further cycling adventures into scenic Onondaga County and Central New York. Linkages to other existing and planned trail systems like the Loop the Lake Trail, the Onondaga Creekwalk, the CNY Peace Trail, the North Country Trail, and the Finger Lakes Trail can make the County a launching spot for cycling visitation and outdoor adventure. Imagine a cycling traveler from east or west on the EST, planning their excursion to begin or end by rail or air in Onondaga County with an extended stay in a B&B, a few days of hiking, and a sampling of the local fare. Now, multiply that by hundreds of individuals or group travelers, with unique interests, making their plans because Onondaga County is an ideal place for scenic bike rides, unparalleled outdoor adventure, and hospitality with incredible ease of accessibility to travelers from all origins.

This section includes additional information on all eighteen Opportunity Areas. The existing resources are identified, the visions of the municipality from outreach and interviews are documented, and planning-level recommendations are suggested for connections along the EST.



Recommendations

Blue boxes with suggested recommendations are found throughout this section. While actual improvements will need to be studied further, the icons show general categories of enhancements which would be appropriate for each opportunity area. Additional resources related to implementing these improvements can be found in the appendices of this report. The EST Design Guide is another available resource.

 Signage	Improvements in wayfinding. Signage should be consistent across the County.	 Racks	Addition of bicycle parking and storage facilities. Suggestions are found on page 12.
 Infrastructure	Improvements in on-road bike infrastructure. Examples can be found in Appendix A.	 Repair Station	Suggestions for bicyclist-focused retail and maintenance areas.
 Trails	Added or improved off-road trails. Examples can be found in Appendix A.	 Tent Sites	Added overnight accommodations for people cycling the full Empire State Trail.
 Bike Cafe		Suggestions for bicyclist-focused dining options.	



Village of Jordan

Hamlet of Jack's Reef

Village of Elbridge



Facilities Recommended for Improvements

- Laird Road - 1.3 Miles (OCDOT)
- Old Route 31 - 0.2 Miles (OCDOT)
- Main Street - 0.1 Miles (NYSDOT)
- Elbridge Street - 0.1 Miles (NYSDOT)
- Vale Street - 0.1 Miles (Local)
- Valley Drive / Mill Street - 2.3 Miles (Local)
- Main Street (NYS Route 5) - 1.2 Miles (NYSDOT)

Existing Resources and Visions

There is an opportunity to promote Jordan as “The Gateway to Onondaga County” to EST travelers from the west. Jordan is currently working on planning to develop a “Comfort Station” with public showers, restrooms, and tent camping in the Village. The Lock Tender’s House for Lock 51 exists across the middle school driveway at Water Street and needs an improved, more defined setting. Lock 51 is the only double lock on the Erie Canal and needs to be revealed and maintained. The Village of Jordan has Kegs Canalside (a venue featuring live country music performances), Towpath Pizza, an electric vehicle charging station, Jordan Pool, Jordan Library and Museum, and an annual fall festival that attracts thousands of visitors, but it has no restaurants or coffee houses. In the northwest sector of the Village, Beaver Street and Railroad Street are both dead ends. Connecting these two streets would allow a full loop bike ride around the Village of Jordan.

The Hamlet of Jack’s Reef on the Erie Canal portion of the Seneca River, five miles to the northeast of the Village of Jordan, is a location of interest to travelers. “The Reef” is a

redeveloped canalside restaurant and the location of a historic eating establishment dating to the early nineteenth century. With public access to the canal for fishing and car top boaters, Jack’s Reef could be a key link between the EST and Erie Canal recreation.

The Village of Elbridge is less than three miles from the Village of Jordan via the partially unpaved and scenic Valley Drive, which winds gently along Skaneateles Creek, dropping 100 feet in elevation along its course. A portion of the creek in springtime could potentially become a small race for recreational boaters. Trail corridor access points are located on McDonald Road, Route 31, and Laird Road. Elbridge village resources include Seymour Lofft Park, the Elbridge Motel, and Tres Primos Mexican restaurant.

The Bailiwick Market and Cafe is outside of the Village on Route 5 in the Town of Elbridge, as are employers, including Tessy Plastics (900 employees), Acrolite, Allred, and Northeast Electronics. The Kester Homestead, located on Kester Road in the Town of Van Buren, is a gathering place for weddings, farm to table suppers, retreats, and overnight stays in a historic farmhouse three miles from the EST. Annual Memorial Day events are held in both villages, and both have Centro public transportation links.

Potential Recommendations

Existing historic commercial block buildings on Main Street and side streets in Jordan offer opportunities for economic development initiatives to attract visitors to local shopping, activities, food and accommodations, and other bike/hike goods and services. Potential development sites abound in Jordan with opportunities for businesses like a bike shop or restaurant in one of many historic buildings in the Village, or bike camping which could be developed at the Jordan festival grounds. Rehabilitation of the large historic warehouse on Water Street (currently apartments) could potentially be redeveloped as a mixed-use building with a trail-related cultural center, such as the Jordan Museum of Local Canal History. Additionally, an EST access point to the east of Jordan on Laird Road could link the resources of the Hamlet of Jack’s Reef.



A shoulder on Main Street in Jordan where additional bike signage could be added.



A potential “bike cafe” in Elbridge.

The Village of Jordan, directly on the path of the Empire State Trail where it intersects with Main Street is ideally situated to invite visitors into the Village and into Onondaga County from the west, and linking the Village of Jordan and the EST with the Village of Elbridge.

Adding a “Village of Jordan - Gateway to Onondaga County” sign directing visitors from the EST to Village resources, as well as linking to the Village of Elbridge and its resources by way of Vale Street and Valley Drive, can begin with a Canal Corporation guide sign at the juncture of Main Street and the EST.

Valley Drive dead ends at a paved trail that leads all the way to Mill Street and West Main Street at the Elbridge Village Hall. The roadway portions of Valley Drive and Mill Street would need bicycle infrastructure and guide signs directing visitors toward the center of the Village of Elbridge where resources are concentrated. Expanded shoulder bike lanes could serve to bring cyclists safely along Route 5 to North and South Streets in Elbridge.

The Elbridge village center at North and South Streets already

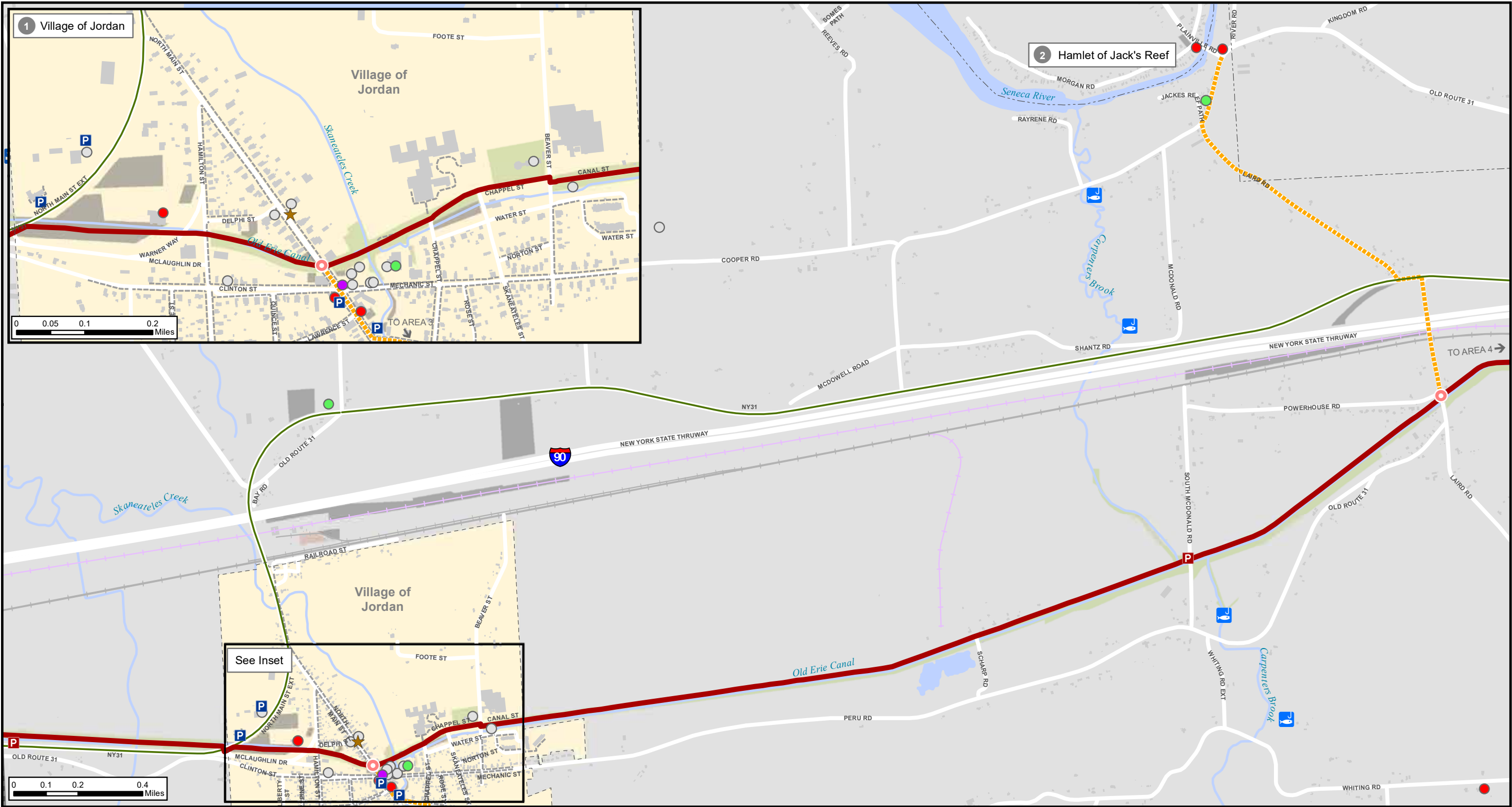
features resources and services of interest to EST travelers, like a nearby grocery store, post office, and library, but the area also offers substantial reuse opportunities for new business development in vacant or underused commercial floorspace in existing historic structures. One development concept is to establish a bike cafe by converting some of the expansive vehicular parking area to outdoor dining, with attractive surface treatments, plantings, and street furnishings, including modern locking bike racks bringing cyclists from the EST down Valley Drive into the heart of the village.

New facilities, geared towards cycling travelers, could offer long-distance cyclists a unique rural Central New York village experience close to additional resources they may need like groceries, eateries, and opportunities to connect with the Elbridge community in myriad ways.



A potential bike lane and new signage on Main Street in Jordan.





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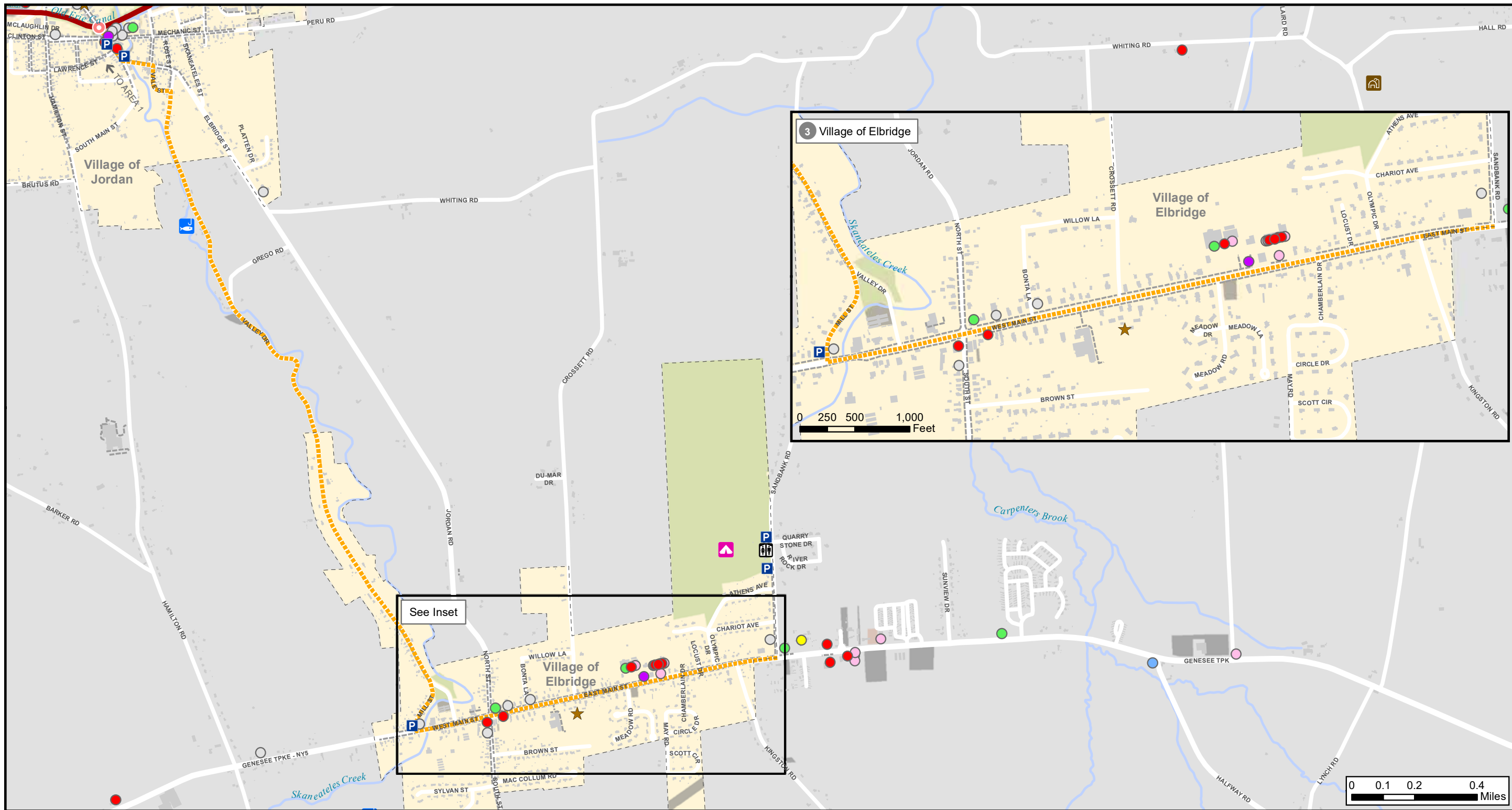
- Empire State Trail**
- Existing
 - Proposed Connections
 - Access Point
 - Access Point w/ Parking
 - Parking
- Other Trails**
- Existing On-Road
 - Existing Off-Road
 - Proposed On-Road
 - Proposed Off-Road
- Accommodations and Services**
- Eat/Drink Establishments
 - Hotel/Motel/B&B/Campground
 - Grocery/Convenience/Pharmacy/Gas
 - Sporting Goods Stores
 - Health Facilities
 - Banks/Credit Unions
 - Retail/Shopping Centers
 - Other Resources & Services
 - Parking Lots/Garages
 - Bike Racks
 - Transit Hub
- Public Restrooms**
- NY SHPO National Register of Historic Places
 - Agritourism
 - Boat Launch
 - Festival, Event, or Farmers Market
 - Fishing Access
 - Heritage Resource or Museum
 - Natural Area

- Vacant Commercial & Industrial w/Minor Improvements**
- Vacant Commercial/Industrial/Utility Lands
 - Parks
 - Building Footprints
 - Sidewalks
 - Railroads
 - Abandoned railroads
- Opportunity Areas**
- 1 Village of Jordan
 - 2 Hamlet of Jack's Reef
 - 3 Village of Elbridge
 - 4 Village of Camillus
 - 5 Town of Camillus
 - 6 Village of Solvay
 - 7 Town of Geddes
 - 8 Town of Salina
 - 9 Tipperary Hill
 - 10 Lakefront/Inner Harbor
 - 11 Downtown Syracuse
 - 12 Syracuse Southside
 - 13 University Hill
 - 14 Eastwood & Erie Blvd
 - 15 T. DeWitt & V. E. Syracuse
 - 16 Hamlet of Jamesville
 - 17 Village of Minoa
 - 18 V. Fayetteville & V. Manlius



Empire State Trail
Village of Jordan
Hamlet of Jack's Reef
Resources & Services

Areas 1&2
See Map for Scale

Map 4



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Central New York Regional Planning & Development Board

Empire State Trail

- Existing
- Proposed Connections
- Access Point
- Access Point w/ Parking
- Parking

Other Trails

- Existing On-Road
- Existing Off-Road
- Proposed On-Road
- Proposed Off-Road

Accommodations and Services

- Eat/Drink Establishments
- Hotel/Motel/B&B/Campground
- Grocery/Convenience/Pharmacy/Gas
- Sporting Goods Stores
- Health Facilities
- Banks/Credit Unions
- Retail/Shopping Centers
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- Natural Area
- Vacant Commercial & Industrial w/Minor Improvements
- Vacant Commercial/Industrial/Utility Lands
- Parks
- Building Footprints
- Sidewalks
- Railroads
- Abandoned railroads

Opportunity Areas

1 Village of Jordan	7 Town of Geddes	13 University Hill
2 Hamlet of Jack's Reef	8 Town of Salina	14 Eastwood & Erie Blvd
3 Village of Elbridge	9 Tipperary Hill	15 T. DeWitt & V. E. Syracuse
4 Village of Camillus	10 Lakefront/Inner Harbor	16 Hamlet of Jamesville
5 Town of Camillus	11 Downtown Syracuse	17 Village of Minoa
6 Village of Solvay	12 Syracuse Southside	18 V. Fayetteville & V. Manlius

Empire State Trail Village of Elbridge Resources & Services

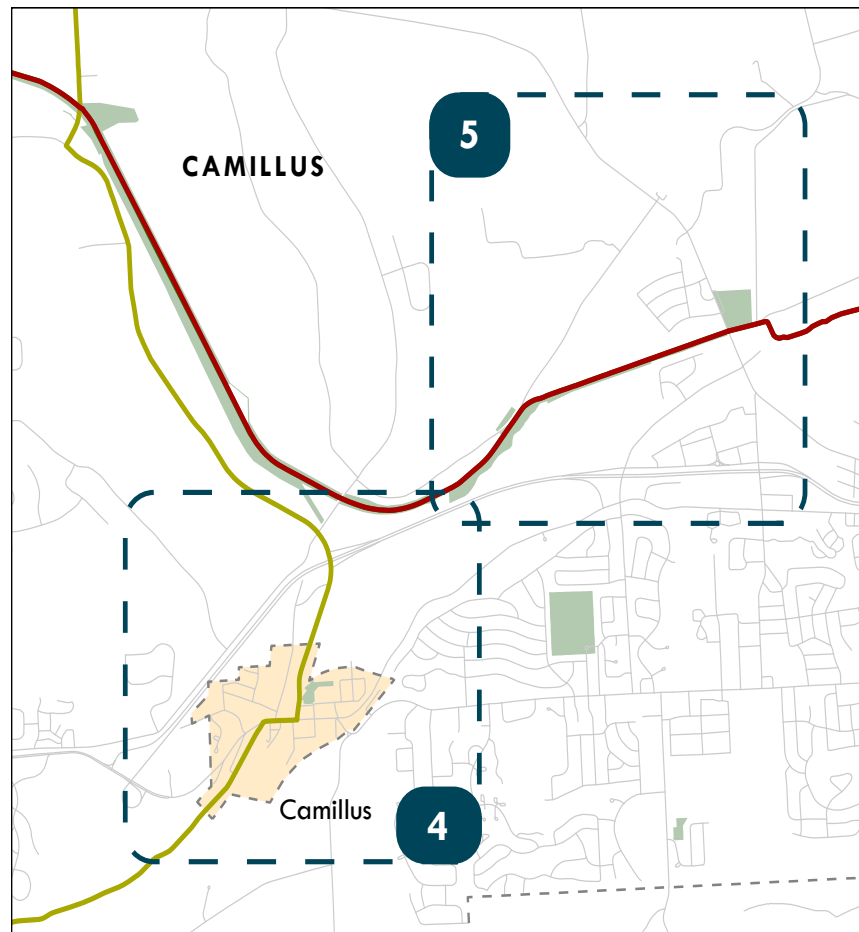
Area 3
See Map for Scale



Map 5



Village of Camillus Town of Camillus



Facilities Recommended for Improvements

Devoe Road - 0.2 Miles (OCDOT)
Newport Road - 0.8 Miles (OCDOT)
Genesee Street - 0.4 Miles (Local)
Munro Road (Local) - 0.1 Miles
Milton Avenue - 0.2 Miles (OCDOT)
Warners Road - 0.3 Miles (OCDOT)
National Grid ROW - 0.2 Miles (National Grid)

Existing Resources and Visions

Two economic activity clusters in Camillus are within easy reach of EST travelers: the Village of Camillus and the Township 5 area just south of Reed Webster Park.

At present, there are no existing bike services in the Village of Camillus. However, the Village features eateries, coffee shops, and other small shops in a traditional compact and walkable rural village. A development project across from the Village Hall at the former Camillus Cutlery will begin Phase II to establish a four-story mixed-use structure with underground parking, once grant funding is secured. The mixed-use nature of this large warehouse development potentially offers space for EST user-related businesses an addition to opportunities for expanding Village overnight stays and business growth, through establishment of new B&Bs or a boutique hotel geared towards the needs of cyclists. Publications like Visit Syracuse could feature smaller Villages and Hamlets, like Camillus, set in the scenic areas surrounding the City.

Township 5 offers a collection of potential cyclist services including eateries, a hotel, and an assortment of retail services.

Potential Recommendations

A Martisco Railroad right-of-way trail connection south to the Village of Marcellus is a further opportunity for off-road connection for non-motorized recreation, like cross country skiing and bicycling. An off-road trail along the east side of Devoe



Added bike parking and wayfinding at the Camillus Cutlery building.

Road and Newport Road could link the EST at the Sim's Store to the Village of Camillus by way of the north entrance to the Camillus Cutlery development.

At Reed Webster Park in the Town of Camillus, a bicycle repair station could be added. From the park, a short link to the Township 5 development along Warners Road could be established with dedicated bike lanes on each side of the roadway linking to a pedestrian crossing. This link could continue on a bike path along the National Grid right-of-way that runs along the north edge of the Township 5 property.



A potential bike lane on Newport Road just outside the Village.

Recommendations



Infrastructure



Signage



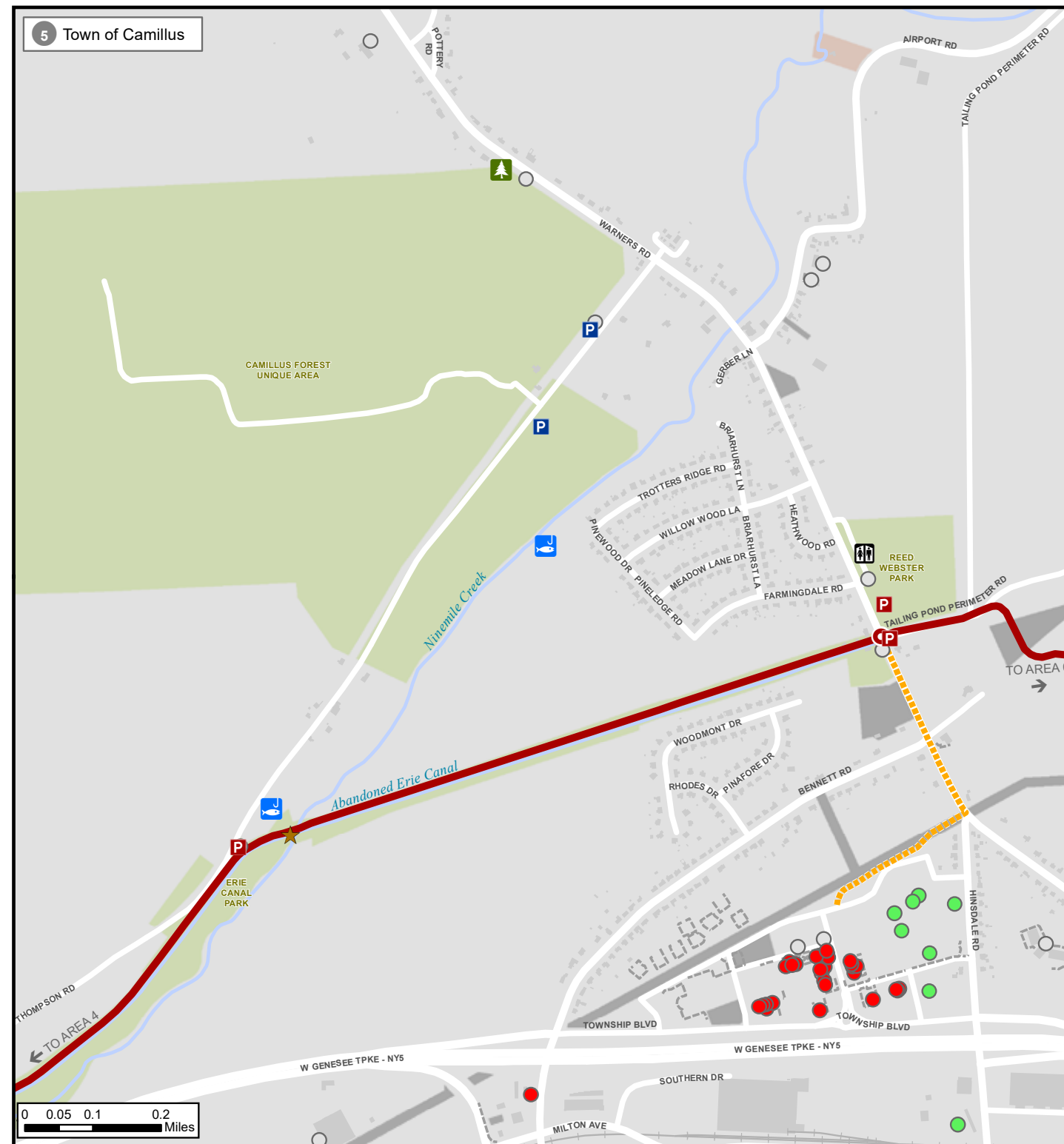
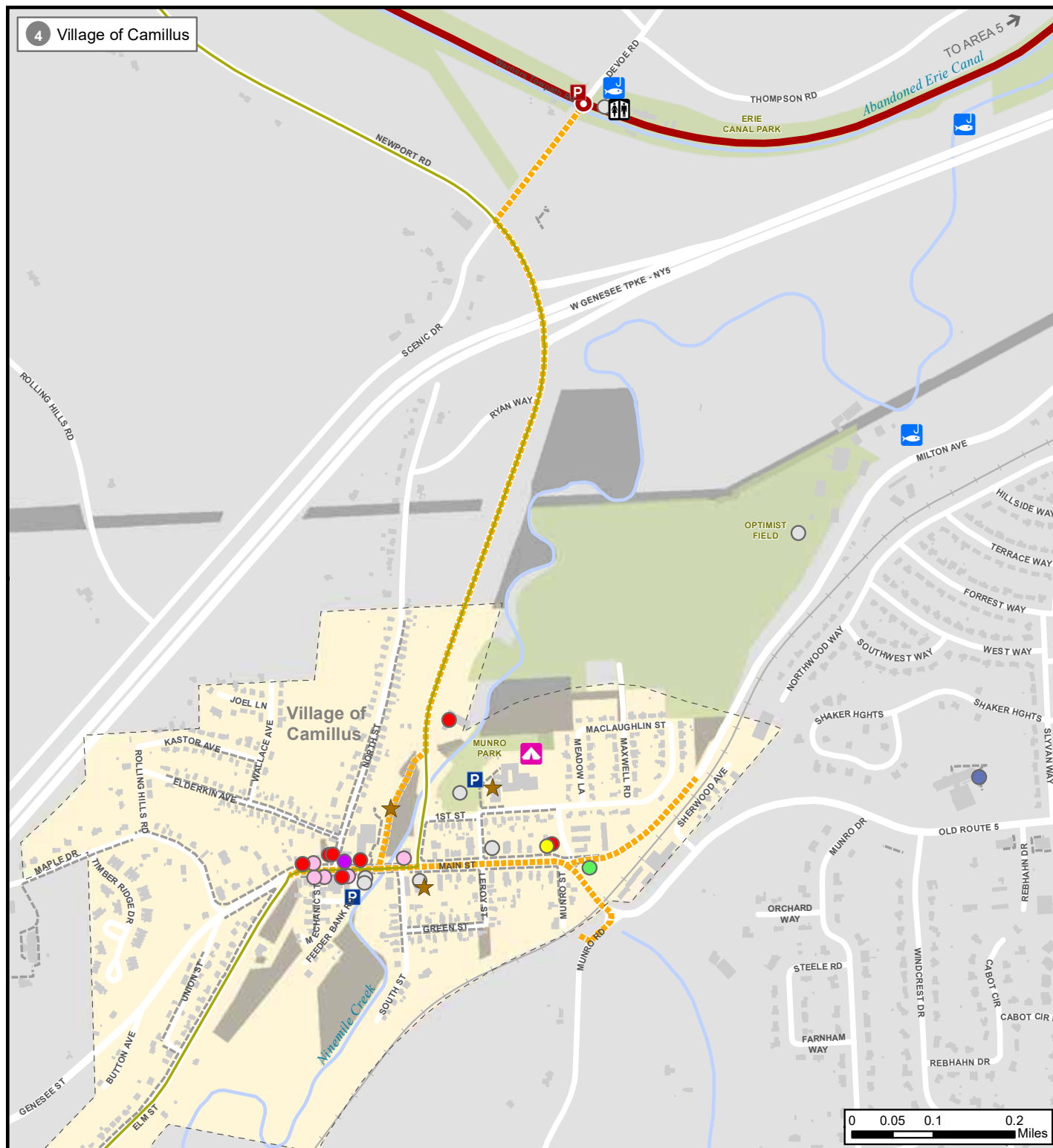
Racks



Repair Station



Trails



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Empire State Trail
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 Proposed Connections
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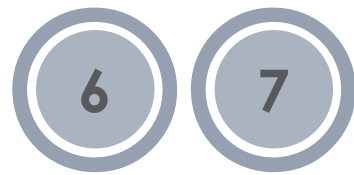
Vacant Commercial & Industrial w/Minor Improvements
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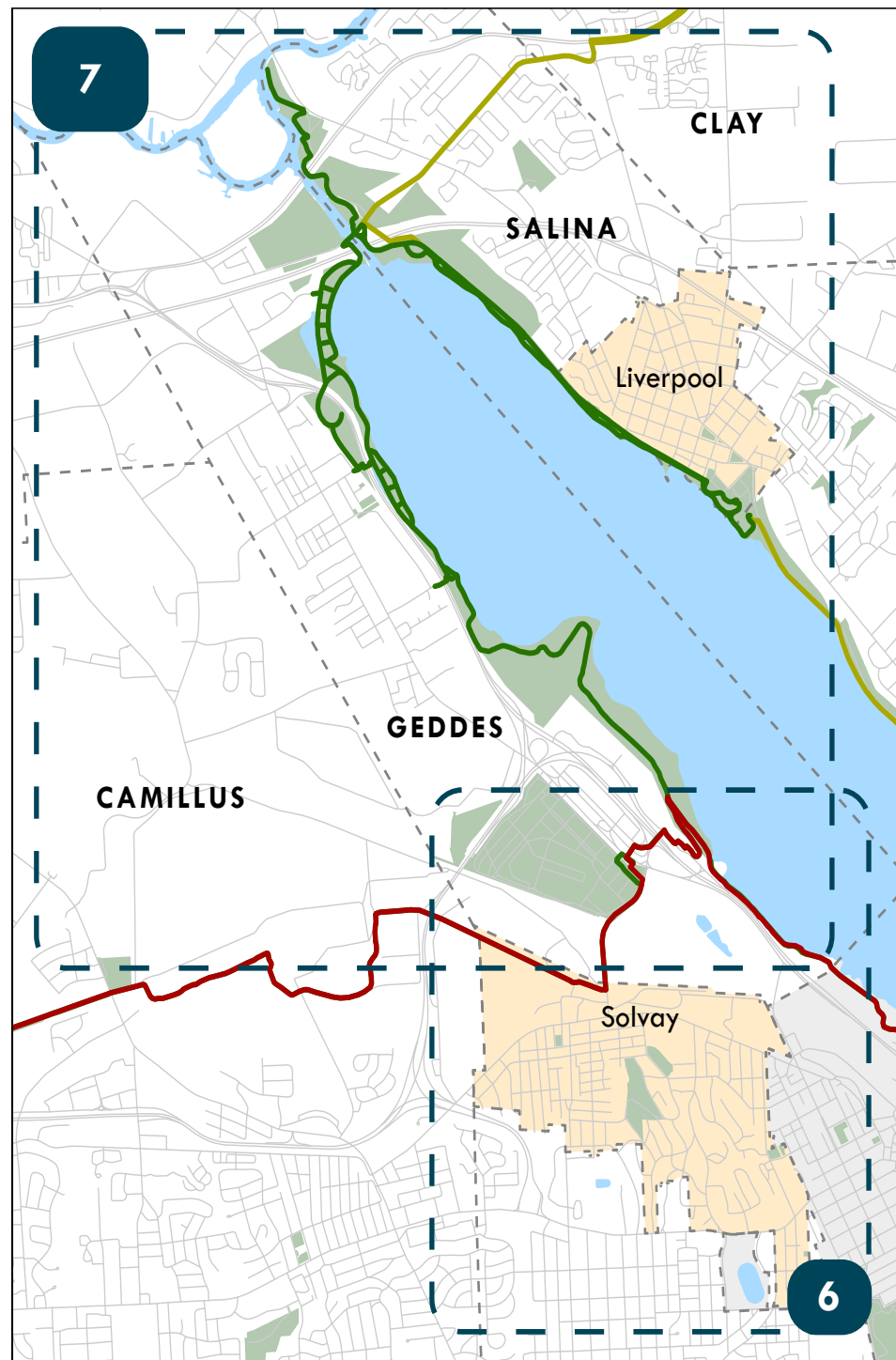
Empire State Trail Town & Village of Camillus Resources & Services

Areas 4&5
See Map for Scale

Map 6



Village of Solvay Town of Geddes



Facilities Recommended for Improvements

Milton Avenue - 1.7 miles (Local)
Bridge Street - 0.1 Miles (NYSDOT)
Matthews Ave - 0.2 Miles (Solvay)
Woods Road - 0.4 Miles (Solvay)
State Fair Blvd - 2.5 Miles (OCDOT / NYSDOT)
Beach Road - 0.2 Miles (Local)
Pleasant Beach Road - 0.3 Miles (Local)
Alhan Parkway - 0.1 Miles (Local)
Long Branch Road - 0.2 Miles (OCDOT)

Existing Resources and Visions

Onondaga County recently implemented impressive streetscape upgrades in the Village of Solvay, including a wide multi-use path extending from the NYS Fairgrounds into the Village, new decorative street lights, and street trees. Bike lanes and sharrows cross the Village along with bike racks a along Milton Avenue. The Village is planning a new park and gazebo near Lamont Avenue.

Woods Road, although a steep climb up from Milton Avenue, is considered the Village's "Main Street," with the school, library, and Village and Town Halls located there. Woods Road is the current focus of needed planning and design efforts by Village leaders. Pedestrian and bicycle connectivity on Woods Road is desired. Desired trail access points include State Fair Boulevard and Belle Isle Road.

Places to visit in Geddes include Onondaga Lake Park, St. Joseph's Health Amphitheater at Lakeview, New York State Fairgrounds, Long Branch Park and Lakeland Park. The new bridge over Interstate 690 includes an additional trail connection to the St. Joseph's Health Amphitheater at Lakeview and the Loop the Lake Trail. A new DEC boat launch is now open near Exit 7 on Interstate 690. Lakeland Park has a little league field pavilion and picnic area with restrooms, picnic tables, a playground, and grills, and could be improved to incorporate

Recommendations



Infrastructure



Signage



Racks



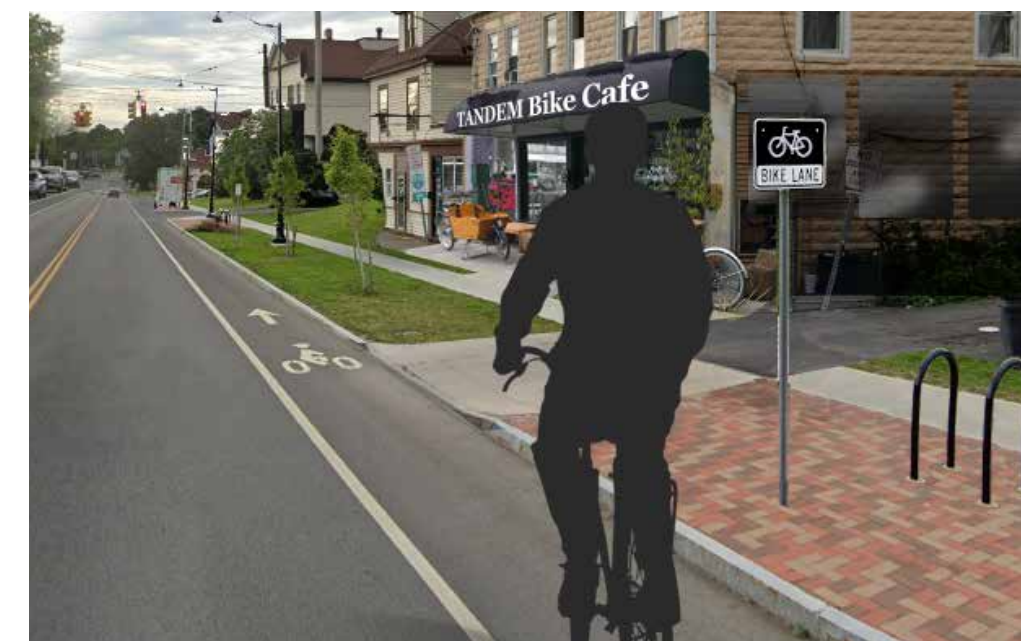
Tent Sites

bike camping for thru-cyclists.

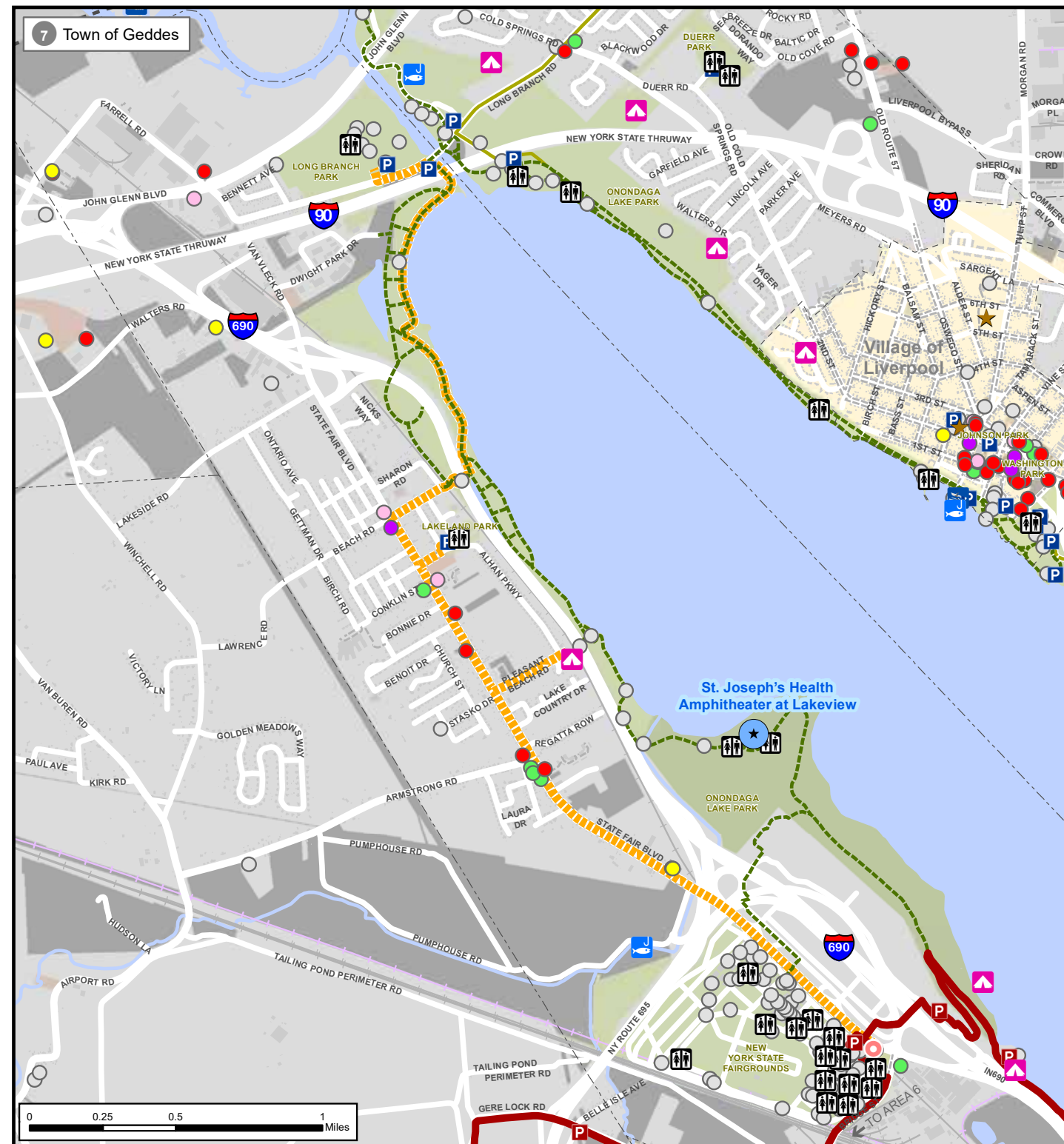
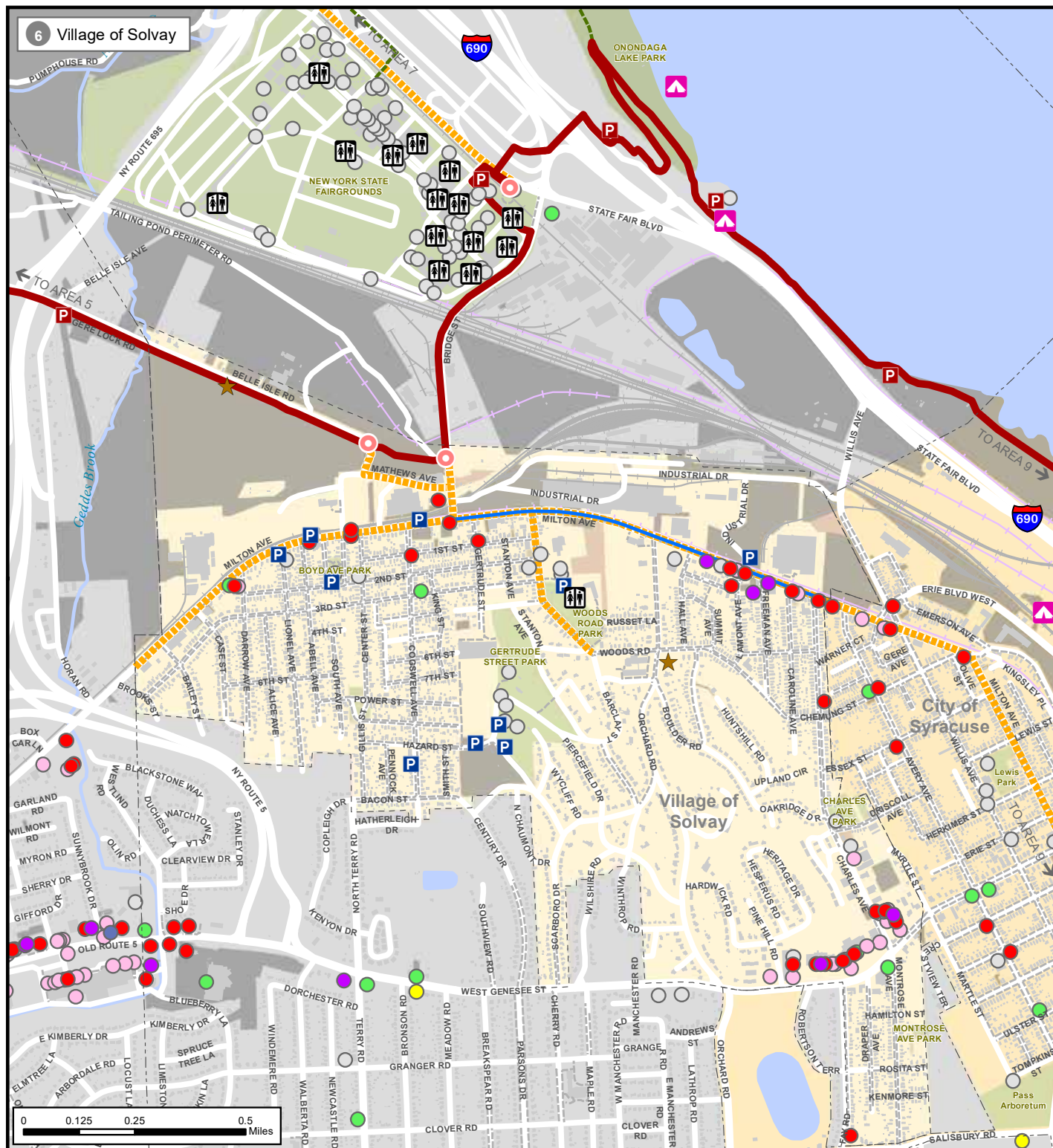
There are multiple formal and informal trails connecting to Onondaga Lake Park and the Loop the Lake Trail from neighborhoods and dead end streets.

Potential Recommendations

With restoration efforts having made a positive impact on Onondaga Lake and surrounding lands, there is new potential to expand cyclist services at Long Branch Park to offer a bike camp for tenting cyclists traveling the EST in the tree-lined area at the lake outlet area of the park. Long-distance cyclists need and look for attractive, comfortable, and affordable places to stay, often carrying their camping equipment with them. Developing a few pleasant bike-in camping sites along the scenic lake outlet in Long Branch Park would attract visitors who might extend their stay in the Syracuse area.



The bike lane on Milton Avenue in Solvay.



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Empire State Trail

- Existing
- Proposed Connections
- Access Point
- Access Point w/ Parking
- Parking

Other Trails

- Existing On-Road
- Existing Off-Road
- Proposed On-Road
- Proposed Off-Road

Accommodations and Services

- Eat/Drink Establishments
- Hotel/Motel/B&B/Campground
- Grocery/Convenience/Pharmacy/Gas
- Sporting Goods Stores
- Health Facilities
- Banks/Credit Unions
- Retail/Shopping Centers
- Other Resources & Services
- Parking Lots/Garages
- Bike Racks
- Transit Hub

Public Restrooms

- NY SHPO National Register of Historic Places
- Agritourism
- Boat Launch
- Festival, Event, or Farmers Market
- Fishing Access
- Heritage Resource or Museum
- Natural Area

Vacant Commercial & Industrial w/Minor Improvements

- Vacant Commercial/Industrial/Utility Lands
- Parks
- Building Footprints
- Sidewalks
- Railroads
- Abandoned railroads

Bike Infrastructure

- Lanes/Sharrows

Opportunity Areas

- 1 Village of Jordan
- 2 Hamlet of Jack's Reef
- 3 Village of Elbridge
- 4 Village of Camillus
- 5 Town of Camillus
- 6 Village of Solvay

- 7 Town of Geddes
- 8 Town of Salina
- 9 Tipperary Hill
- 10 Lakefront/Inner Harbor
- 11 Downtown Syracuse
- 12 Syracuse Southside

- 13 University Hill
- 14 Eastwood & Erie Blvd
- 15 T. DeWitt & V. E. Syracuse
- 16 Hamlet of Jamesville
- 17 Village of Minoa
- 18 V. Fayetteville & V. Manlius

Empire State Trail

Village of Solvay

Town of Geddes

Resources & Services

Areas 6&7

See Map for Scale

Map 7



Erie Canalway and Empire State Trail sign near NYS Fair Gate 12.



Potential bike campsite at Longview Park.



Crowds gather at the St. Joseph's Health Amphitheater at Lakeview (Photo Credit: Visit Syracuse)



The Empire State Trail is enjoyed by all types of users.



Views of Onondaga Lake from the Loop the Lake Trail in Geddes.



Empire State Trail bicycle parking and information center at the NYS Fair. (Photo Credit: Parks & Trails NY, www.ptny.org)

Town of Salina



Existing Resources and Visions

The Town of Salina owns the 1.7-mile Bear Trap Creek Bike Trail, which commuters utilize, but is also somewhat difficult to access. The current condition of the trail is satisfactory, with some tree roots that need to be addressed. NYSDOT has jurisdiction over the bridge and fences.

The Town seeks to improve connections to other nearby trails, like the Loop the Lake Trail. Village of Liverpool services and resources are directly linked to the Loop the Lake Trail via

Facilities Recommended for Improvements

- Onondaga Lake Parkway - 1.9 Miles (NYSDOT)
- Seventh North Street - 0.6 Miles (OCDOT)
- Richfield Blvd - 0.7 Miles (Local)
- South Bay Road - 0.6 Miles (OCDOT)
- Col. Eileen Collins Boulevard - 1.4 Miles (OCDOT, Airport Authority)

Vine Street. The Syracuse Hancock International Airport is also accessed through the Town. Few localities can boast a direct connection from an international airport to a world-class cycling region, and the Town of Salina could do that, inviting growth in cycling tourism into Central New York with new bike facilities in the area.

The airport connection is key in the regionally-planned CNY Peace Trail network. Implementing this connection could spur new commercial and mixed-used opportunities from Northern Lights Plaza to Old Brewerton Road, where the Bear Trap Creek Trail links to Richfield Boulevard, Richfield Park and Pool, and the surrounding neighborhoods. Many pedestrian and bike travelers from the surrounding neighborhoods already struggle to navigate the dangerous vehicular area, without the benefit of safe crossing or bicycling infrastructure to access goods and services they need. Improved linkages in this area would benefit the entire community in important ways.

The SMTc agreed to conduct a mobility study for US 11 at the request of the Syracuse-Onondaga County Planning Agency and the Town of Salina. The Town of Salina envisions shops, stores, residences, and workplaces locating close together within a ‘town center’ pattern along US 11 in Mattydale. The Town seeks to improve mobility for drivers, walkers, bicyclists, and bus riders along the corridor.

Potential Recommendations

From the Loop the Lake Trail, which is planned to link to the EST, connections are possible to Park Street, NBT Bank Parkway, the Regional Transportation Center, Tex Simone Drive, Hiawatha Boulevard, and Seventh North Street with appropriate bike facilities and signage.

Currently, the Bear Trap Creek Trail terminates at the old K-Mart Plaza. A clearly-defined and marked bike trail through the plaza is needed, with safe crossing to Brewerton Road and South Bay Road.

From the current Bear Trap Creek Trail, connections are possible to the Syracuse Hancock International Airport via South Bay

Road, the Interstate 81 right-of-way, and Airport Road if new bike facilities are added.

Overall improvements in bicycle infrastructure in the town could be a benefit to potential workers at the new Amazon warehouse, as well as workers at the several hotels along Seventh North Street. Providing safe passages to workplaces via bicycle will increase employment opportunities.



A cyclist navigates a busy stretch of road in Mattydale.



The Bear Trap Creek Bikeway over Interstate 90.

Recommendations



Infrastructure



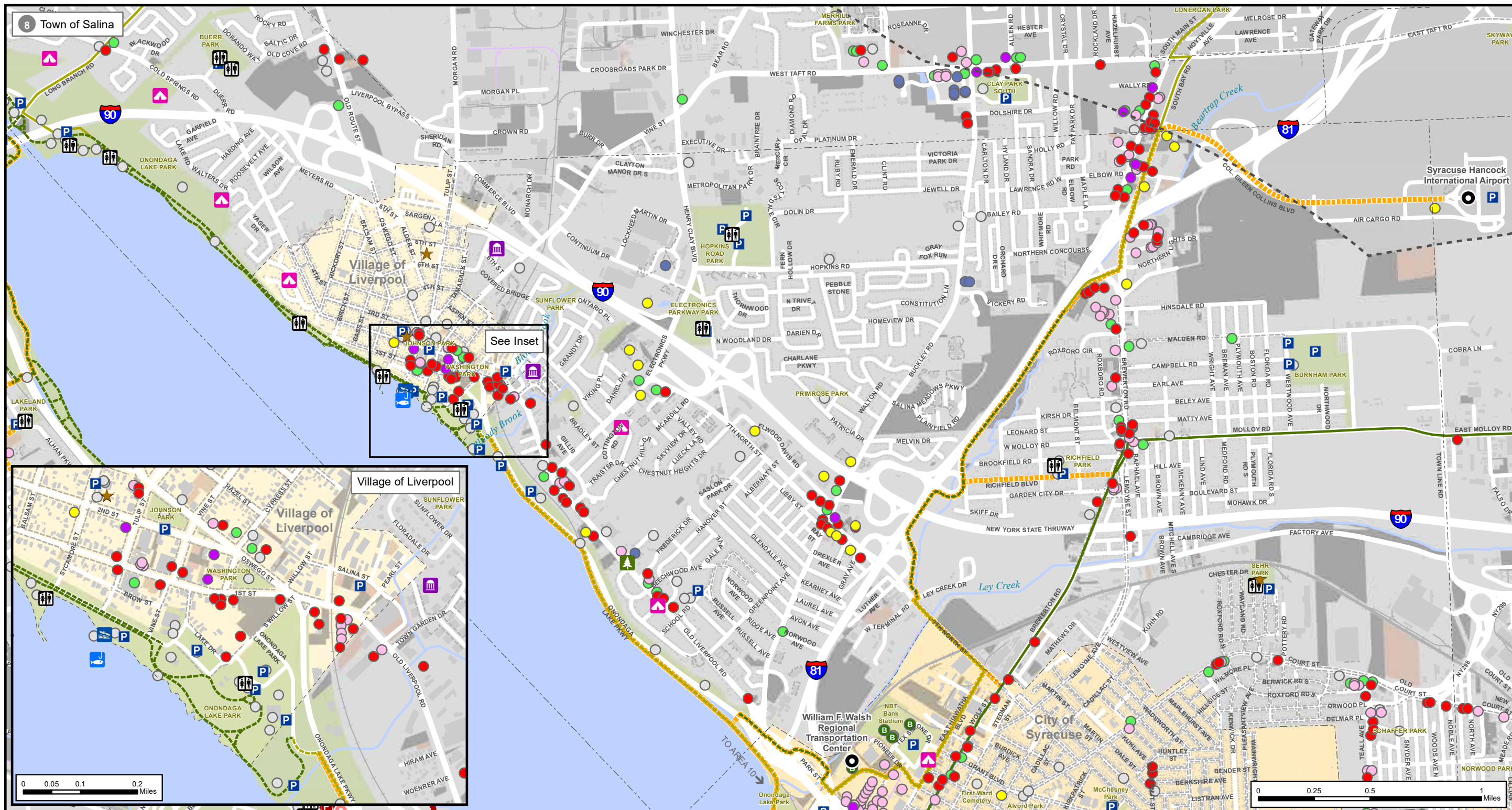
Signage




Racks



Trails



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Central New York Regional Planning & Development Board

Empire State Trail

- Existing
- Proposed Connections
- Access Point
- Access Point w/ Parking
- Parking

Other Trails

- Existing On-Road
- Existing Off-Road
- Proposed On-Road
- Proposed Off-Road

Accommodations and Services

- Eat/Drink Establishments
- Hotel/Motel/B&B/Campground
- Grocery/Convenience/Pharmacy/Gas
- Sporting Goods Stores
- Health Facilities
- Banks/Credit Unions
- Retail/Shopping Centers
- Other Resources & Services
- Parking Lots/Garages
- Bike Racks
- Transit Hub

Public Restrooms

- Public Restrooms
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- Agritourism
- Boat Launch
- Festival, Event, or Farmers Market
- Fishing Access
- Heritage Resource or Museum
- Natural Area

Vacant Commercial & Industrial w/Minor Improvements

- Vacant Commercial/Industrial/Utility Lands
- Parks
- Building Footprints
- Sidewalks
- Railroads
- Abandoned railroads

Opportunity Areas

1 Village of Jordan	7 Town of Geddes	13 University Hill
2 Hamlet of Jack's Reef	8 Town of Salina	14 Eastwood & Erie Blvd.
3 Village of Elbridge	9 Tipperary Hill	15 T. DeWitt & V. E. Syracuse
4 Village of Camillus	10 Lakefront/Inner Harbor	16 Hamlet of Jamesville
5 Town of Camillus	11 Downtown Syracuse	17 Village of Minoa
6 Village of Solva	12 Syracuse Southside	18 V. Fayetteville & V. Manlius

Empire State Trail

Town of Salina

Resources & Services

Area 8

See Map for Scale



Map 8



City of Syracuse: Tipperary Hill Lakefront and Inner Harbor



Existing Resources and Visions

Historic Tipperary Hill is a fantastic stop with many amenities just a short ride away from the Empire State Trail. The area has several restaurants, parks, festivals, and the Rosamond Gifford Zoo. The neighborhood features the famous upside-down

Facilities Recommended for Improvements

Milton Avenue - 1.3 Miles (Syracuse)
Burnet Park Drive - 0.3 Miles (Syracuse)
Tompkins Street - 0.3 Miles (Syracuse)
West Fayette Street - 0.6 Miles (Syracuse)
North State Street - 0.5 Miles (Syracuse)
North Salina Street - 0.3 Miles (Syracuse)
Loop the Lake Trail - 1.3 Miles (OCDOT)
NBT Bank Parkway/Tex Simone Drive - 0.5 Miles (Syracuse)
Hiawatha Boulevard - 0.6 Miles (Syracuse)

traffic light with green on top – a testament to its Irish roots. On top of Irish establishments, the greater area also has Recess Coffee, the BeeKind gift shop, Eva’s Restaurant (serving Polish and Ukrainian food) and Twin Trees Restaurants. The historic Ophelia’s Garden Inn, at Avery Avenue and Salisbury Road, is cycle-friendly.

The Northside of the City offers the Inner Harbor, the CNY Regional Market, the Regional Transportation Center, NBT Bank Stadium, diverse eateries, and a variety of commercial areas. Travelers on the Empire State Trail would be able to take advantage of these many amenities with a few connections.

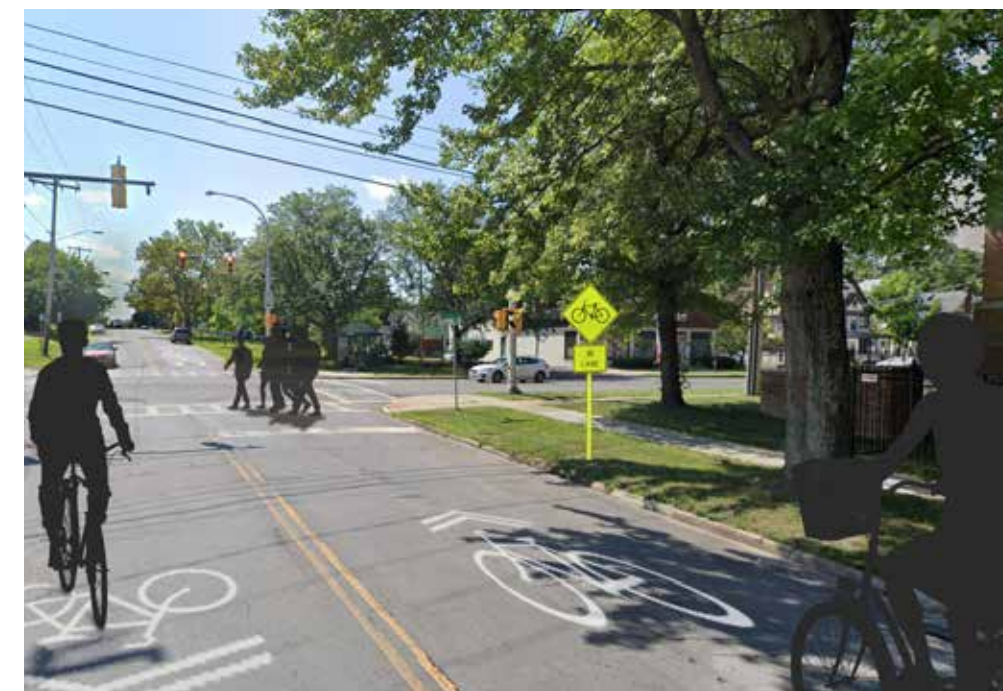
Also on the Northside, the Draft Environmental Impact Statement for the Interstate 81 project indicates that the Community Grid Alternative would include bicycle and pedestrian facilities to improve connectivity between existing and proposed shared-use paths and pedestrian facilities in the area. Streets would be designed in compliance with New York State Complete Streets requirements with an aesthetically unified design and measures to improve safety. Special pavements, planting areas, medians, pedestrian refuge areas, site furnishings, and green infrastructure would be incorporated.

Potential Recommendations

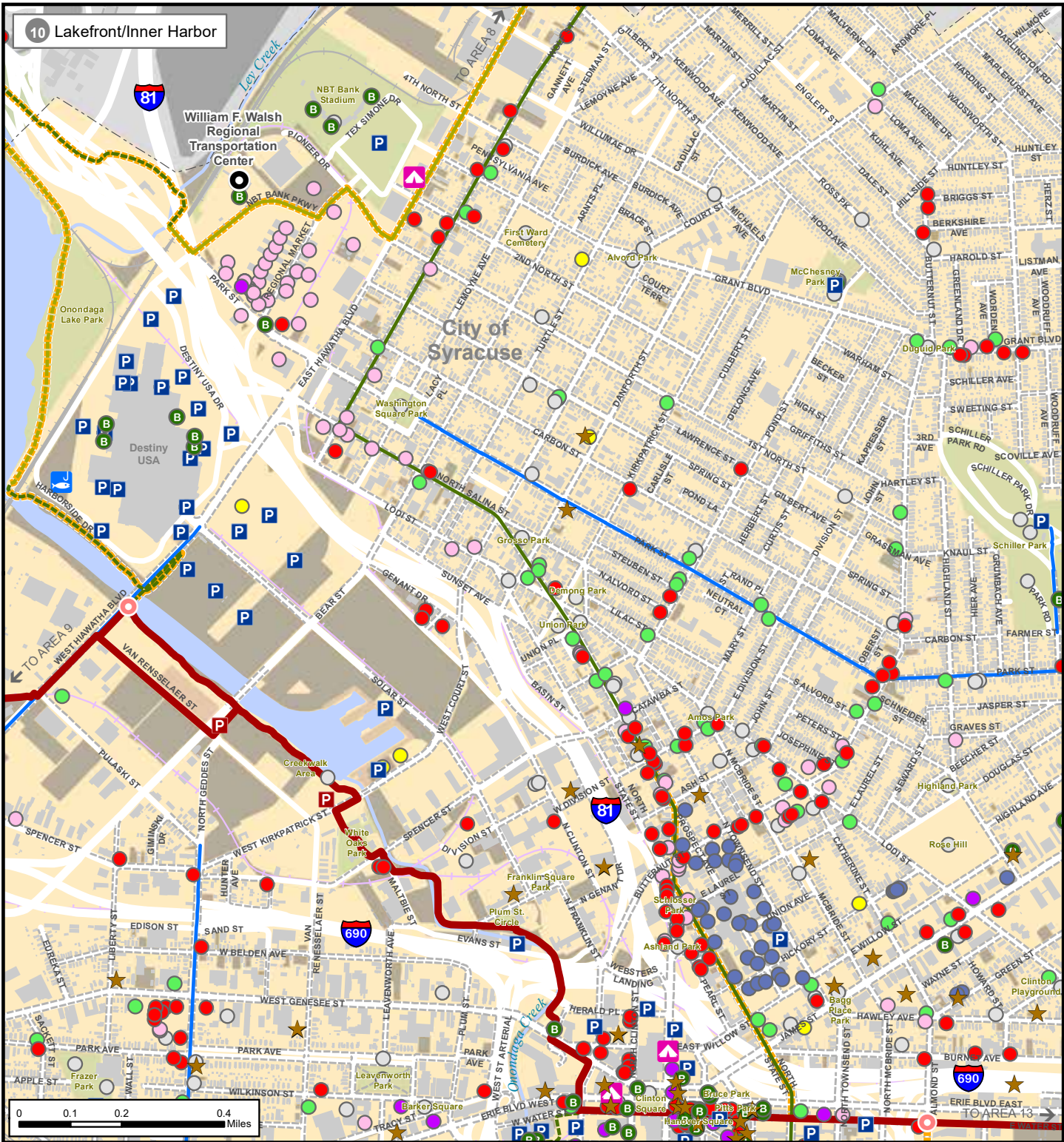
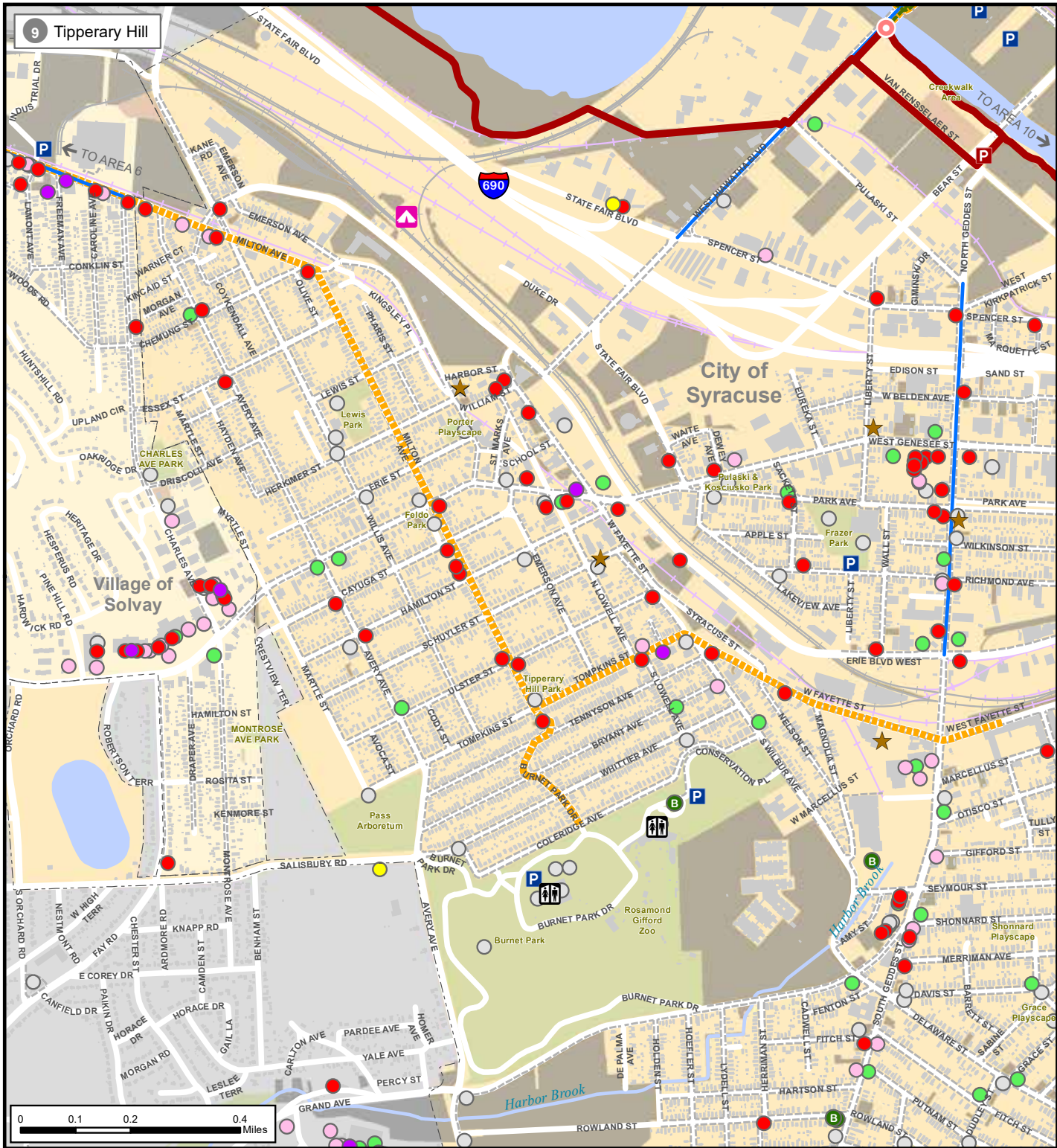
To connect to Tipperary Hill from the Empire State Trail and the Village of Solvay, Milton Avenue has the safest traffic

conditions for accommodating cyclists. At the upside-down traffic light at Tompkins Street, Milton Avenue becomes Burnet Park Drive, weaving uphill to the entrance to Burnet Park, with the Rosamond Gifford Zoo nearby. This route also links cyclists with other visitor services and amenities in the neighborhood. Another potential connection to Tipperary Hill could be made from the downtown location of the Creekwalk at West Fayette Street. The route could travel along West Fayette Street to Lipe Art Park, through the park, by the new Pump Track, and then over the unused Geddes Street railroad bridge. The route could then continue again on West Fayette Street up to Tompkins Street into Tipperary Hill. Additionally, Erie Boulevard West could provide another opportunity for connection with the Creekwalk if a safe bicycle link could be made.

On the Northside, the Syracuse Metropolitan Transportation Council recently completed the RTC/Market Area Mobility Study, which outlines potential bicycle and pedestrian improvements in and around the Regional Transportation Center and Regional Market. This study envisioned several big-picture planning-level mobility improvement options. The study notes that lane consolidation may allow for a reduction in pavement width and excess space could be re-purposed for bike/pedestrian facilities. Including these facilities, such as bike lanes, sidewalks,



Potential sharrows on Milton Avenue in Tipperary Hill.



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- | | | | |
|---|---|---|---|
| <p>Empire State Trail</p> <ul style="list-style-type: none"> Existing Proposed Connections Access Point Access Point w/ Parking Parking <p>Other Trails</p> <ul style="list-style-type: none"> Existing On-Road Existing Off-Road Proposed On-Road Proposed Off-Road | <p>Accommodations and Services</p> <ul style="list-style-type: none"> Eat/Drink Establishments Hotel/Motel/B&B/Campground Grocery/Convenience/Pharmacy/Gas Sporting Goods Stores Health Facilities Banks/Credit Unions Retail/Shopping Centers Other Resources & Services Parking Lots/Garages Bike Racks Transit Hub | <ul style="list-style-type: none"> Public Restrooms NY SHPO National Register of Historic Places Agritourism Boat Launch Festival, Event, or Farmers Market Fishing Access Heritage Resource or Museum Natural Area | <ul style="list-style-type: none"> Vacant Commercial & Industrial w/Minor Improvements Vacant Commercial/Industrial/Utility Lands Parks Building Footprints Sidewalks Railroads Abandoned railroads <p>Bike Infrastructure</p> <ul style="list-style-type: none"> Lanes/Sharrows |
|---|---|---|---|

- Opportunity Areas**
- | | | |
|-------------------------|---------------------------|---------------------------------|
| 1 Village of Jordan | 7 Town of Geddes | 13 University Hill |
| 2 Hamlet of Jack's Reef | 8 Town of Salina | 14 Eastwood & Erie Blvd |
| 3 Village of Elbridge | 9 Tipperary Hill | 15 T. DeWitt & V. E. Syracuse |
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Empire State Trail
Tipperary Hill
Lakefront / Inner Harbor
Resources & Services

Areas 9&10
See Map for Scale

Map 9

and/or shared-use paths, in the area could provide for safer connections between the Empire State Trail and surrounding amenities.

In addition to connecting to the Empire State Trail, there are opportunities to connect to points further north. One such connection could be made by extending the existing Bear Trap Creek Trail in Salina. The City is interested in making this connection via the existing Interstate 81 right-of-way. The Bear Trap Creek Trail could extend from Old Seventh North Street south along the right-of-way to a proposed shared-use path along Park Street and NBT Bank Parkway. If interested, the road owners (i.e., City, NYSDOT, and the Town of Salina) may choose to collaborate to study this idea further.

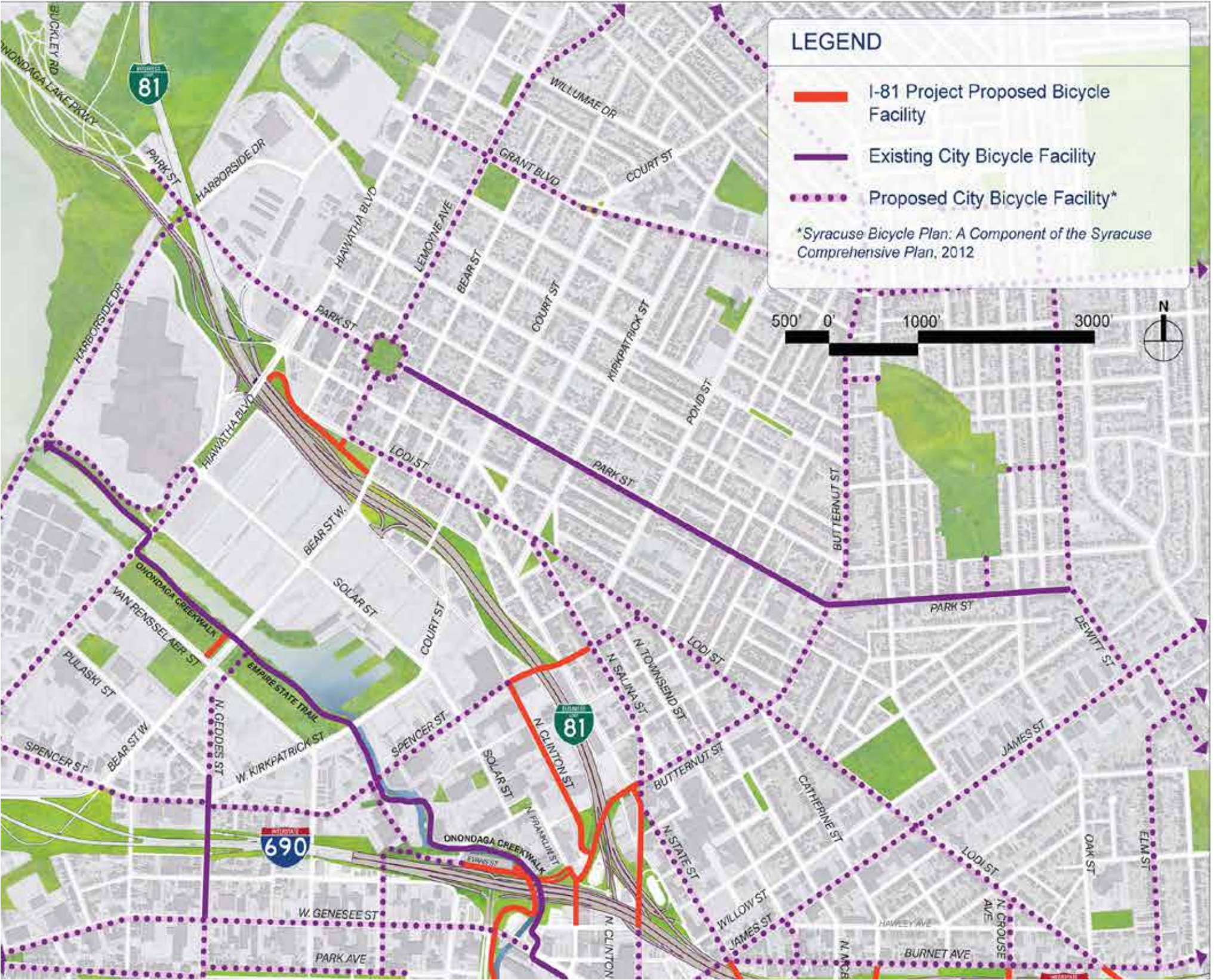
General improvements to the cycling infrastructure in the area can assist in connecting to the future Loop the Lake Trail along the shores of Onondaga Lake. Additionally, a bike repair station at the City Parks Department office on Spencer Street would benefit cyclists on the EST and Creekwalk. A kayak launch is planned at Bear Street on the south side of the Inner Harbor, where there are hotel accommodations.

Under the Community Grid Alternative from the Interstate 81 DEIS, a portion of the parcels bounded by the future Business Loop 81, Bear Street, and Lodi Street would be improved with the addition of a shared-use path that would lead to an overlook with a view of the surrounding region. New sidewalks would be added around the site, providing new pedestrian

connections to Hiawatha Boulevard. The path and overlook would have interpretative signage and would be accessible from Lodi Street, Bear Street, and Hiawatha Boulevard. In addition, sidewalks would be added on both sides of Bear Street between Van Rensselaer Street and Lodi Streets. A new

shared-use path would be constructed on the north side of Bear Street between Van Rensselaer Street and the Onondaga Creekwalk.

An excerpt showing potential new bicycle facilities in the Interstate 81 Draft Environmental Impact Statement (dated July 2021)



Recommendations



Infrastructure



Signage



Racks

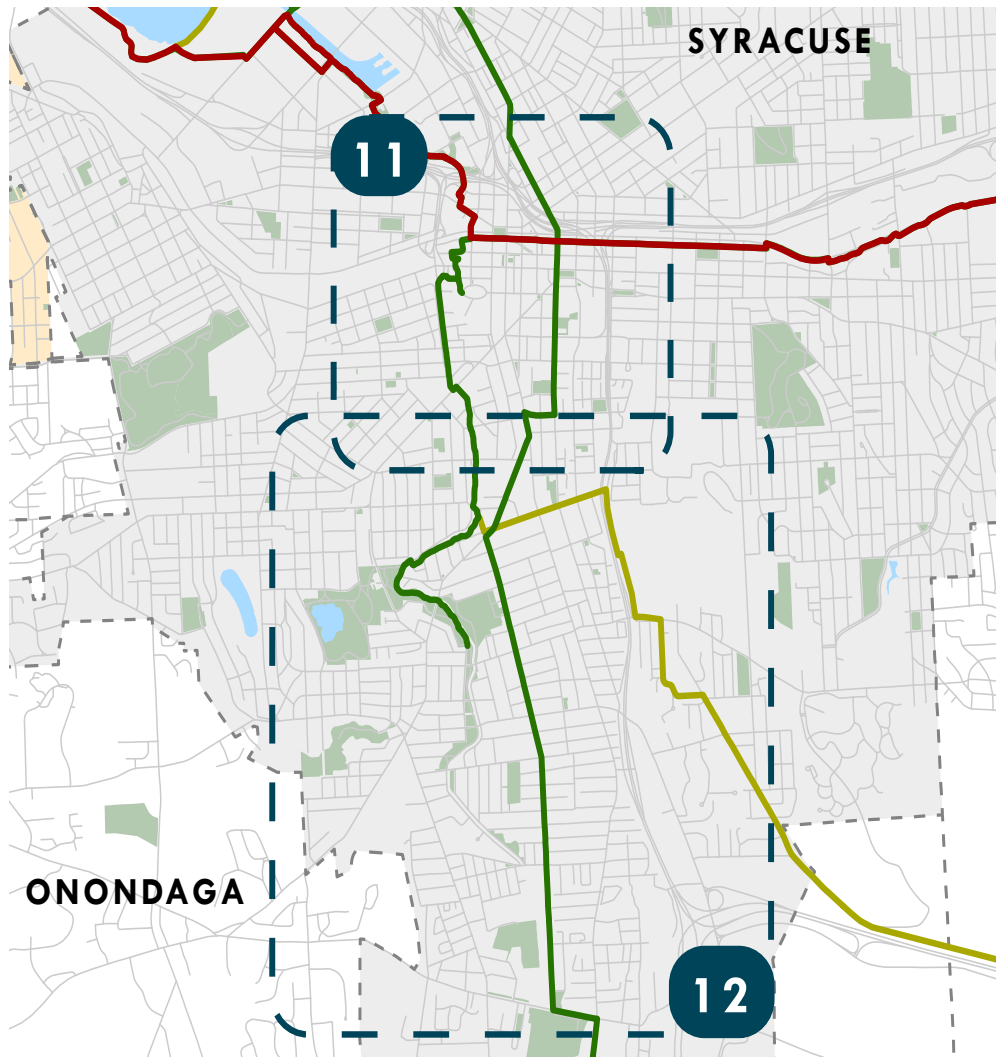


Trails



Repair Station

City of Syracuse: Downtown Southside



Recommendations

Infrastructure

Signage

Racks

Trails

Facilities Recommended for Improvements

- North State Street - 0.5 Miles (Syracuse)
- Almond Street - 0.9 Miles (Syracuse)
- Renwick Avenue - 0.2 Miles (Syracuse)
- I-81 ROW - 0.3 Miles (NYSDOT)
- Oakwood Cemetery - 0.3 Miles
- East Colvin Street - 0.1 Miles (Syracuse)
- Moore Avenue / Smith Lane - 0.5 Miles (Syracuse)
- Jamesville Avenue - 1.3 Miles (Syracuse)
- MLK Boulevard - 0.6 Miles (Syracuse)
- South Salina Street - 0.9 Miles (Syracuse)
- Midland Avenue - 0.1 Miles (Syracuse)

Existing Resources and Visions

As the cultural center of the Syracuse area, Downtown Syracuse offers several amenities and resources which could be utilized by travelers along the EST. With the EST traveling right through Downtown, additional wayfinding is needed to guide visitors to all the neighborhood has to offer. Phase II of the Creekwalk project was recently completed, connecting Downtown to points south. Additionally, new bicycle infrastructure was added to multiple streets as a part of an extensive Downtown repaving project.

The Southside of the City is rich in natural resources, including Onondaga Creek and several large City parks. There are also potential resources for visitors on both South Avenue and South Salina Street. The South Avenue Corridor Study makes detailed recommendations for streetscape improvements, pedestrian amenities, and other important improvements that could be extended to the Almond Street corridor and South Salina Street via Martin Luther King Boulevard.

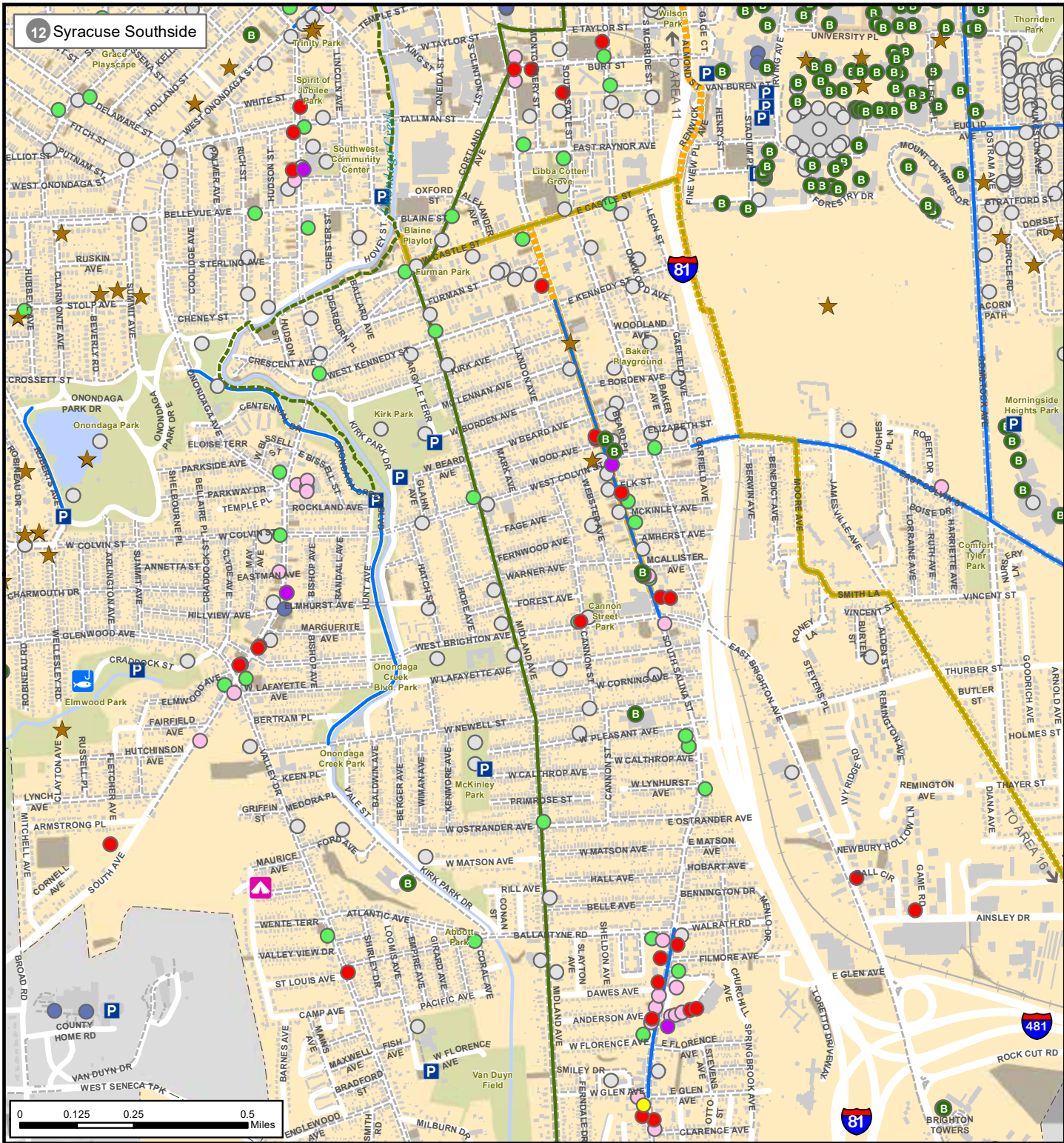
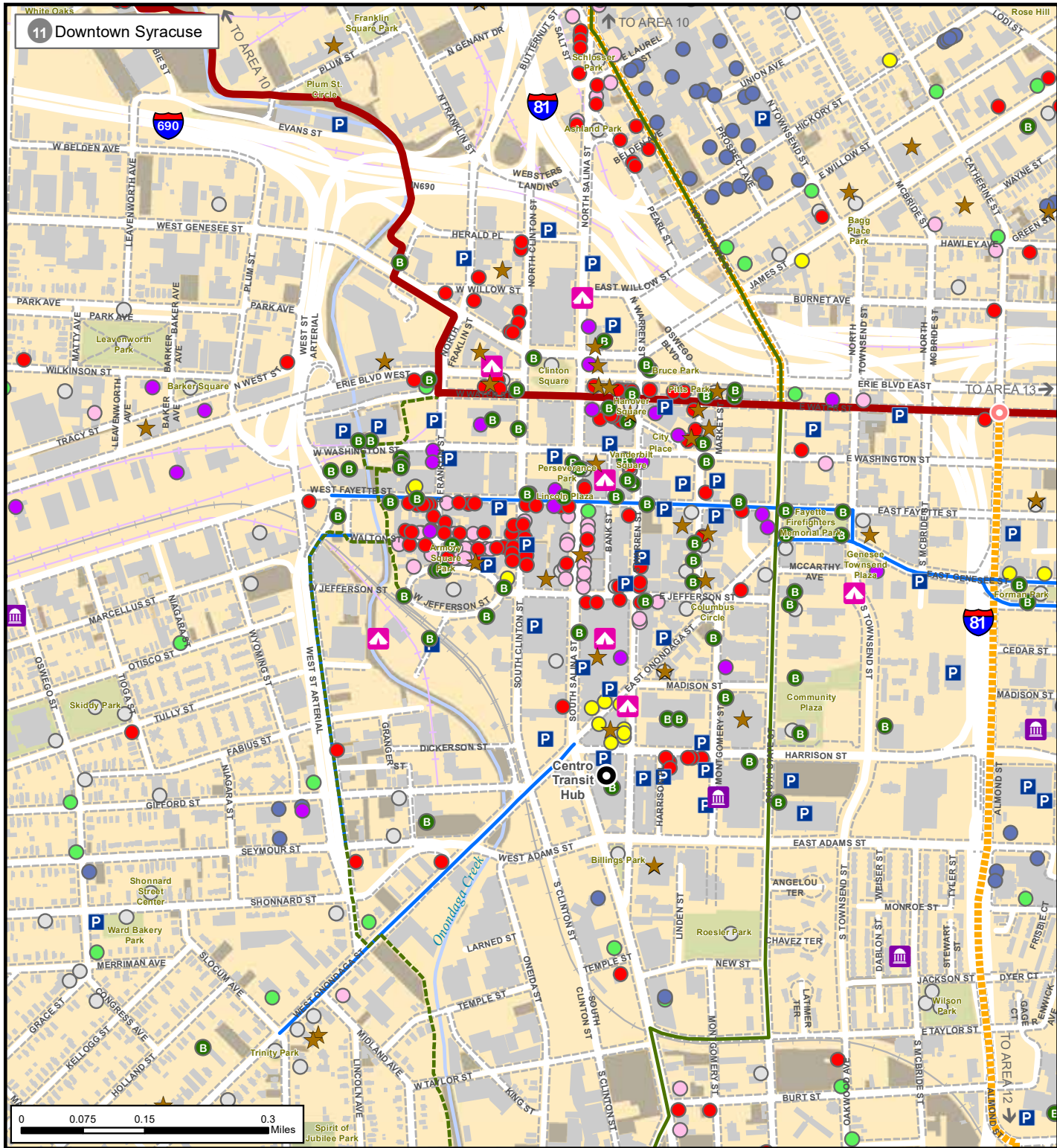
Potential Recommendations

Wayfinding is needed at several locations along the EST through Downtown Syracuse to help link nodes of the City’s many resources and services to EST travelers and visitors. Primary locations for placing such signage near the existing Creekwalk include Hiawatha Boulevard, West Kirkpatrick Street, Wallace Street, Franklin Street, City Hall, and the Downtown YMCA. Covered bicycle parking for visitors from the EST could be developed at the YMCA, allowing cycling visitors to access YMCA services or to explore and visit other downtown sites, events, and businesses.

In the Southside, the Creekwalk will connect to a new Almond Street bike corridor via Martin Luther King Boulevard. Other potential trail connections to the Creekwalk that have been explored include a Kennedy Street and Oakwood Avenue link to a tunnel that could run under Interstate 81, connecting to the historic Oakwood Cemetery gate. A link could be made from Renwick Avenue along the east side of Interstate 81 and the west side of the rail line to the Oakwood gate, crossing through the gate to the east side of the rail line, and continuing to Colvin Street, Moore Avenue, Smith Street, and Jamesville Avenue to Ainsley Drive. From Ainsley, this link could cross



Existing protected bike lane on the Empire State Trail in Downtown Syracuse.



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Empire State Trail

- Existing
- Proposed Connections
- Access Point
- Access Point w/ Parking
- Parking

Other Trails

- Existing On-Road
- Existing Off-Road
- Proposed On-Road
- Proposed Off-Road

Accommodations and Services

- Eat/Drink Establishments
- Hotel/Motel/B&B/Campground
- Grocery/Convenience/Pharmacy/Gas
- Sporting Goods Stores
- Health Facilities
- Banks/Credit Unions
- Retail/Shopping Centers
- Other Resources & Services
- Parking Lots/Garages
- Bike Racks
- Transit Hub

Public Restrooms

- NY SHPO National Register of Historic Places
- Agritourism
- Boat Launch
- Festival, Event, or Farmers Market
- Fishing Access
- Heritage Resource or Museum
- Natural Area

Vacant Commercial & Industrial w/Minor Improvements

- Vacant Commercial/Industrial/Utility Lands
- Parks
- Building Footprints
- Sidewalks
- Railroads
- Abandoned railroads

Bike Infrastructure

- Lanes/Sharrows

Opportunity Areas

- Village of Jordan
- Hamlet of Jack's Reef
- Village of Elbridge
- Village of Camillus
- Town of Camillus
- Village of Solway
- Town of Geddes
- Town of Salina
- Tipperary Hill
- Lakefront/Inner Harbor
- Downtown Syracuse
- Syracuse Southside
- University Hill
- Eastwood & Erie Blvd
- T. DeWitt & V. E. Syracuse
- Hamlet of Jamesville
- Village of Minoa
- V. Fayetteville & V. Manlius

Empire State Trail Downtown Syracuse Southside Resources & Services

Areas 11&12
See Map for Scale

Map 10

Brighton Avenue to the East Glen Avenue bridge over Interstate 81. This bridge will be rebuilt as a part of the Interstate 81 redesign, so this presents an opportunity to add needed bike and crossing facilities to the railroad right-of-way at Brighton Avenue and East Glen Avenue. An off-road woodland hillside trail at the west edge of Loretto could connect East Glen Avenue, Monticello Drive, and Florence Avenue to the Creekwalk. Any of these links between the Creekwalk and Jamesville Avenue offer potential to also connect the Southside community and regional EST travelers with a Jamesville Rail/Trail corridor. This corridor, as a part of the regionally-planned CNY Peace Trail, would ultimately link to Jamesville Beach Park and to further cycling adventures to the east and south of Onondaga County, including Labrador Hollow Unique Area.



The Empire State Trail next to Water Street in Downtown Syracuse. (Credit: empiretrail.ny.gov)

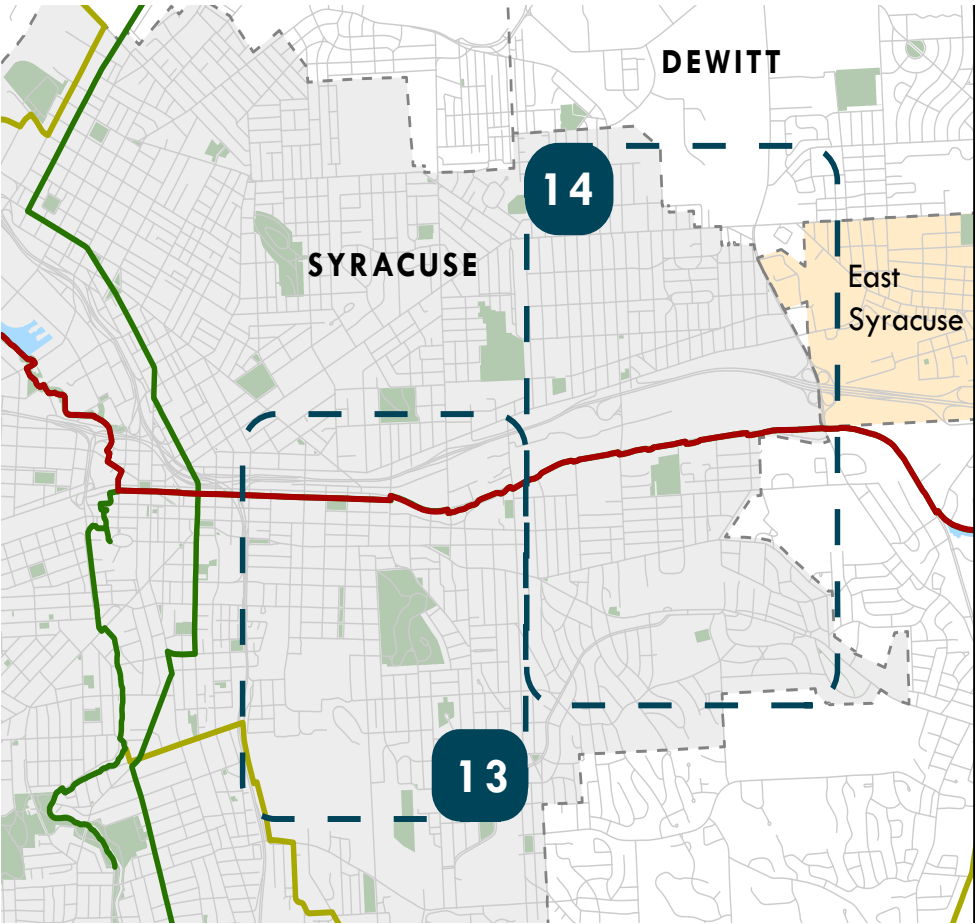


Signage for the EST near the historic National Grid building. (Credit: empiretrail.ny.gov)

13

14

City of Syracuse: University Hill Erie Boulevard / Eastwood





Existing Resources and Visions


University Hill has a unique collection of services and resources. In terms of bicycle services, Melo Velo bike shop and eatery is located at the corner of Walnut and Canal Streets. Anchored by major institutions, the neighborhood sees significant bicycle activity. Much of the area could be affected by the upcoming redesign of Interstate 81, with potential for new Interstate 690 exits at Crouse and Irving Avenues. This rebuild and streetscape improvements could provide bicycle facilities up to Syracuse University.


The Eastwood neighborhood is another center of services and resources. South of Eastwood, Syracuse Bicycle is located at the intersection of Seeley Road with Erie Boulevard. Connecting the EST north to Eastwood via Midler Avenue may be difficult with on-road facilities due to safety concerns - a multi-use path in this section may be more advisable. To the south, a LeMoyne campus master planning effort is currently in progress, which may offer additional opportunities and recommendations for

Recommendations


Infrastructure


Signage


Racks


Trails

Facilities Recommended for Improvements

Almond Street - 0.9 Miles (Syracuse)
Renwick Avenue - 0.2 Miles (Syracuse)
I-81 ROW - 0.3 Miles (NYSDOT)
Oakwood Cemetery - 0.3 Miles
Lodi Street - 0.3 Miles (Syracuse)
Erie Boulevard - 0.2 Miles (Syracuse)
University Avenue - 0.7 Miles (Syracuse)
Midler Avenue / Seeley Road - 0.8 Miles (Syracuse)
Mountainview Avenue - 0.7 Miles (Syracuse)

improved linkage to the EST with gateway improvements from both Erie Boulevard and Genesee Street.

Potential Recommendations

In University Hill, a Transportation Alternatives Program (TAP) award for the Lodi Connector offers the opportunity to link the Hawley-Green and Northside neighborhoods to the EST at Canal Street. From there, further linkage can be made to University Avenue, where existing bike facilities extend to University Hill. NYSDOT is also reviewing options to link the new Almond Street corridor with a bicycle and pedestrian trail on the east side of Interstate 81 along the rail corridor at the



Bicycle lanes on Euclid Avenue.

edge of Oakwood Cemetery. To connect from the Creekwalk to the railroad right-of-way to Jamesville, options include access from the Renwick Avenue spur or potentially a 150-foot bike tunnel under Interstate 81 at Oakwood Avenue to the historic Oakwood Cemetery gate.

Along Erie Boulevard, the EST runs largely through the center landscaped median. Opportunities to connect to Eastwood to the north are limited due to the presence of Interstate 690, wetlands, and a rail line. The only current connections that can be made to the greater Eastwood area from Erie Boulevard are at Teall Avenue, Peat Street, Midler Avenue, and Thomspson Road. A connection could be made along Midler Avenue, which brings riders to the heart of Eastwood, with the installation of additional off-road infrastructure. Peat Street may be a more viable and cost-effective option even though it is further removed from the center of Eastwood. However, bicycle facilities could added along other neighborhood streets to bring you into the Eastwood business district. To the south, a link from the EST can be made on Seeley Road to Homer Wheaton Park, then onto Mountainview Avenue and Audubon Parkway to LeMoyne College.



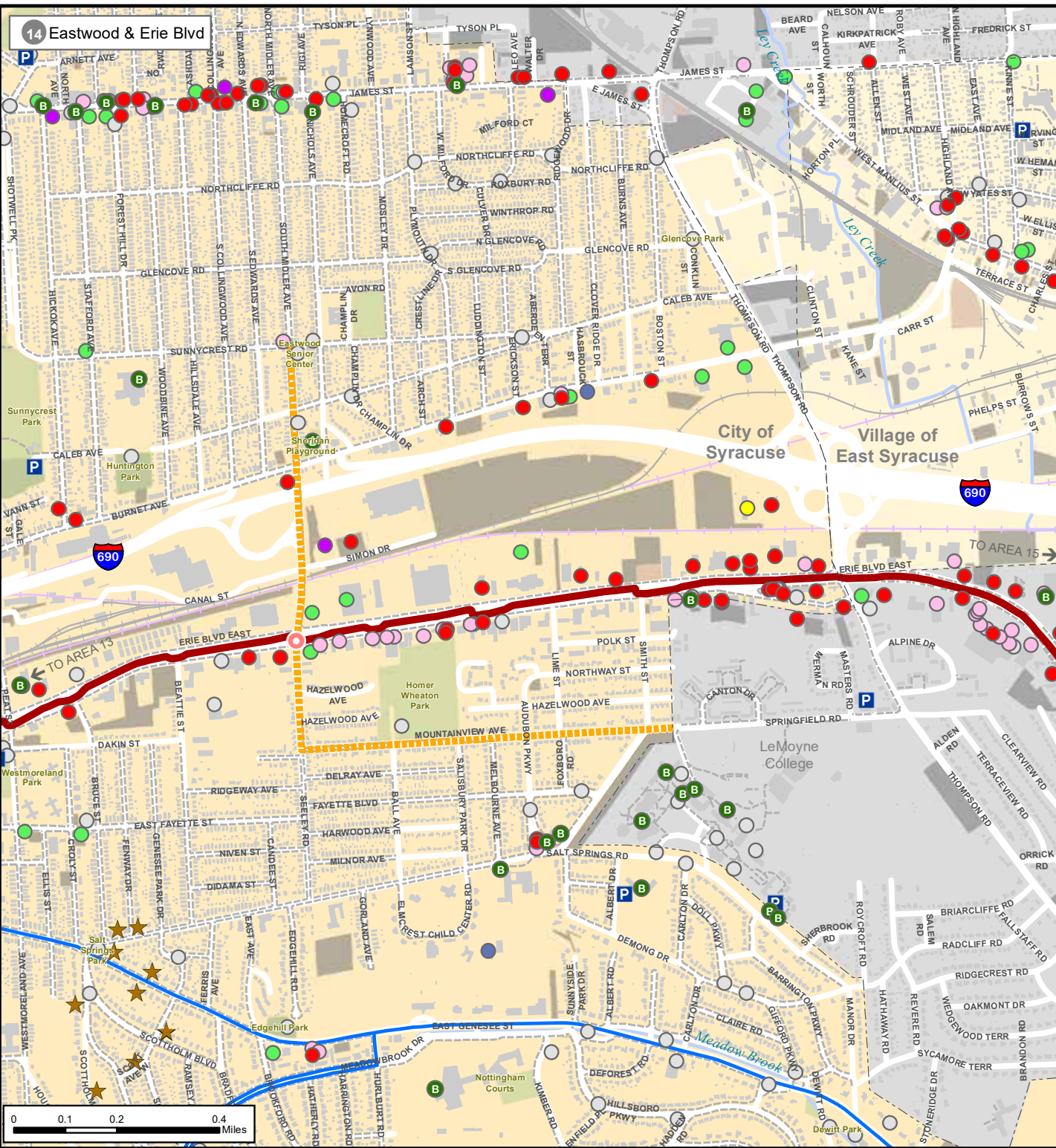
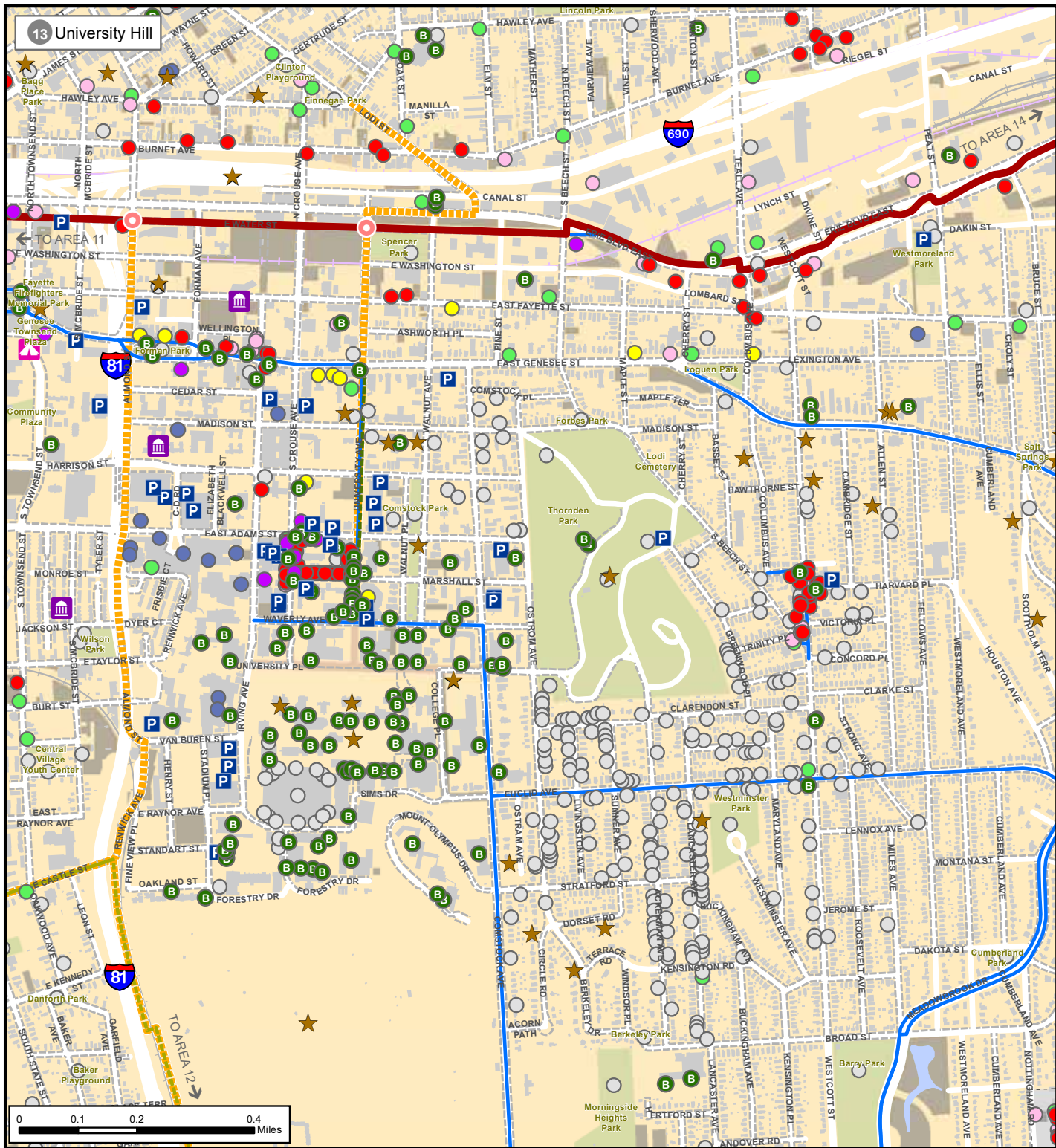
Melo Velo on Canal Street near the EST (Credit: www.mellovelobicycles.com)



Existing protected bike lane near Syracuse University's campus.



Cyclists on the Empire State Trail along Erie Boulevard. (Credit: empiretrail.ny.gov)



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Central New York Regional Planning & Development Board

Empire State Trail

- Existing
- Proposed Connections
- Access Point
- Access Point w/ Parking
- Parking

Other Trails

- Existing On-Road
- Existing Off-Road
- Proposed On-Road
- Proposed Off-Road

Accommodations and Services

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Vacant Commercial & Industrial w/Minor Improvements

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Opportunity Areas

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Empire State Trail University Hill Eastwood & Erie Blvd. Resources & Services

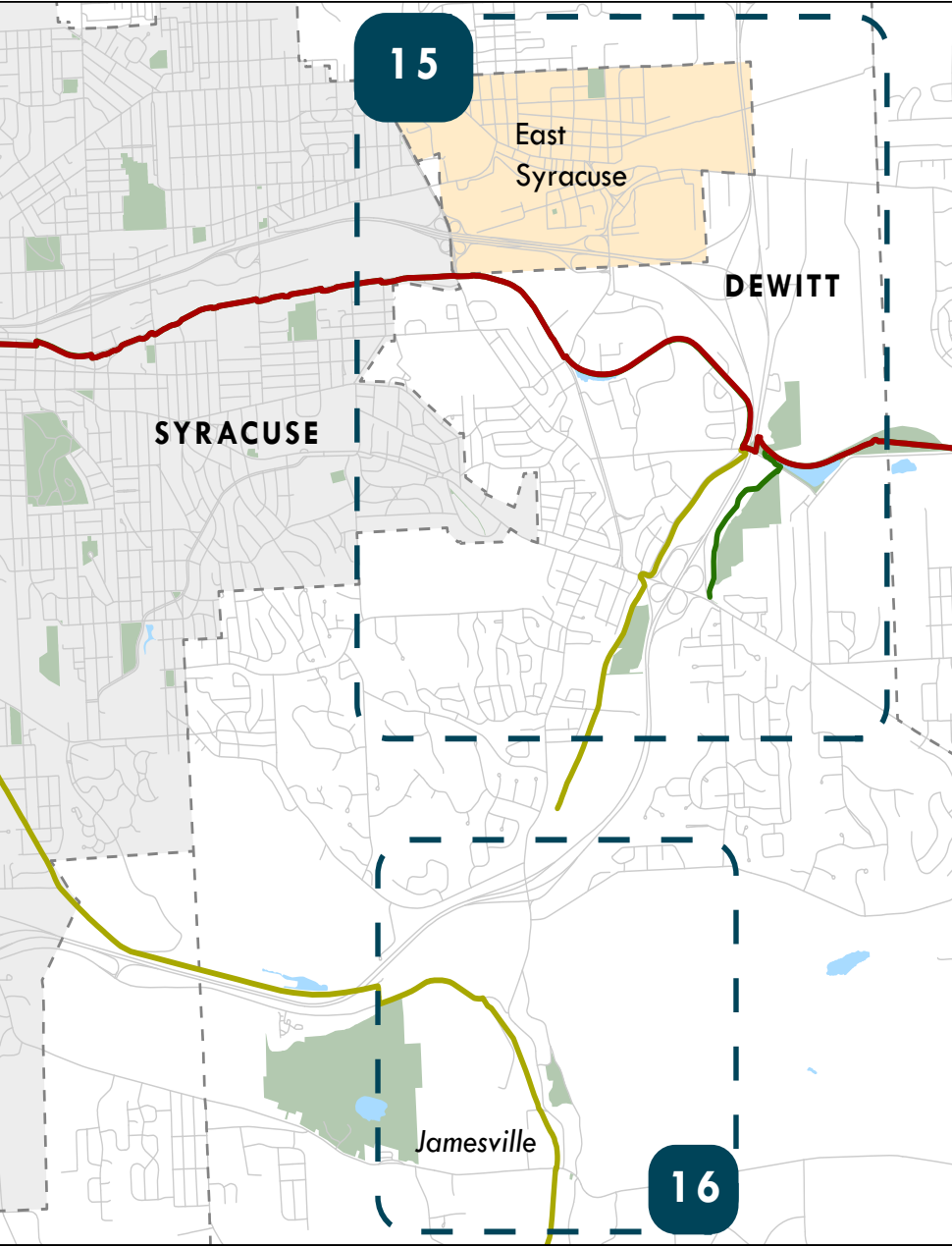
Areas 13&14

See Map for Scale



Map 11

Town of DeWitt and Village of East Syracuse Hamlet of Jamesville



Existing Resources and Visions

Redevelopment of Shoppingtown Mall, with its expansive size and location near the historic center of the Town of DeWitt, has tremendous potential for a mix of uses. Improved connections to the EST from the mall via Shoppingtown Drive and Butternut Drive should absolutely be considered as a part of any future redevelopment plan. The nearby Butternut Creek Trail extends from Ryder Park to the DeWitt Wegmans on East Genesee Street with pedestrian linkages to the Erie Boulevard intersection where several eateries and grocery services are available.

The Village of East Syracuse is linked to the path of the EST by Bridge Street at its east end and Thompson Road at its west end. The Village is interested in a few potential locations for potential bike camp sites. Parcels on Carr Street and on Manlius Street offer possibilities. A bike park could be developed, offering a comfort stop for cyclists with picnic tables and bike racks. This would allow cyclists an opportunity to rest, socialize, and explore the Village by foot.

The Jamesville Hamlet Master Plan, adopted in 2019, emphasizes an interest in expanding access to alternative modes of transportation for recreation and commuting. Extending bike access from the City of Syracuse into the hamlet would help encourage the further expansion of bicycle infrastructure in the area, including connections to Clark Reservation State Park and Jamesville Beach.



Possible bicycle lane on Bridge Street in the Village of East Syracuse.

Facilities Recommended for Improvements

- Bridge Street - 1.1 Miles (NYSDOT)
- East Genesee Street - 0.6 Miles (NYSDOT)
- Railroad ROW - 2.1 Miles
- Rams Gulch Road - 0.1 Miles (OCDOT)
- Jamesville Toll Road - 0.6 Miles (OCDOT)

Potential Recommendations

An East Genesee Street to Kinne Road proposed trail would run approximately 4,250 feet along the Orville Feeder Canal on the west side of Interstate 481. The trail would run in a north-south orientation and provide connections for adjacent neighborhoods and nearby businesses. Access points are planned at East Genesee Street, Drovers Lane, and Kinne Road.

To link from the EST to the Village of East Syracuse, Bridge Street is the preferred route, providing access to Manlius Street with its assortment of eateries, pubs, convenience stores, delis, and the Syracuse Children’s Theater. Bridge Street also has some existing pedestrian infrastructure and safer potential biking conditions. Better connections to Carr Street could also improve cycling in the area.

Connecting Jamesville to the EST would require the use of a railroad right-of-way in two distinct areas; from Jamesville Road to Rams Gulch Road, and from the intersection of Jamesville Toll Road and Ogle Road, where it would follow the existing tracks into the heart of the hamlet at East Seneca Turnpike. This would be part of the proposed Syracuse-Jamesville Rail with Trail (RWT) Bike Corridor as laid out in the hamlet’s master plan.

Recommendations



Infrastructure



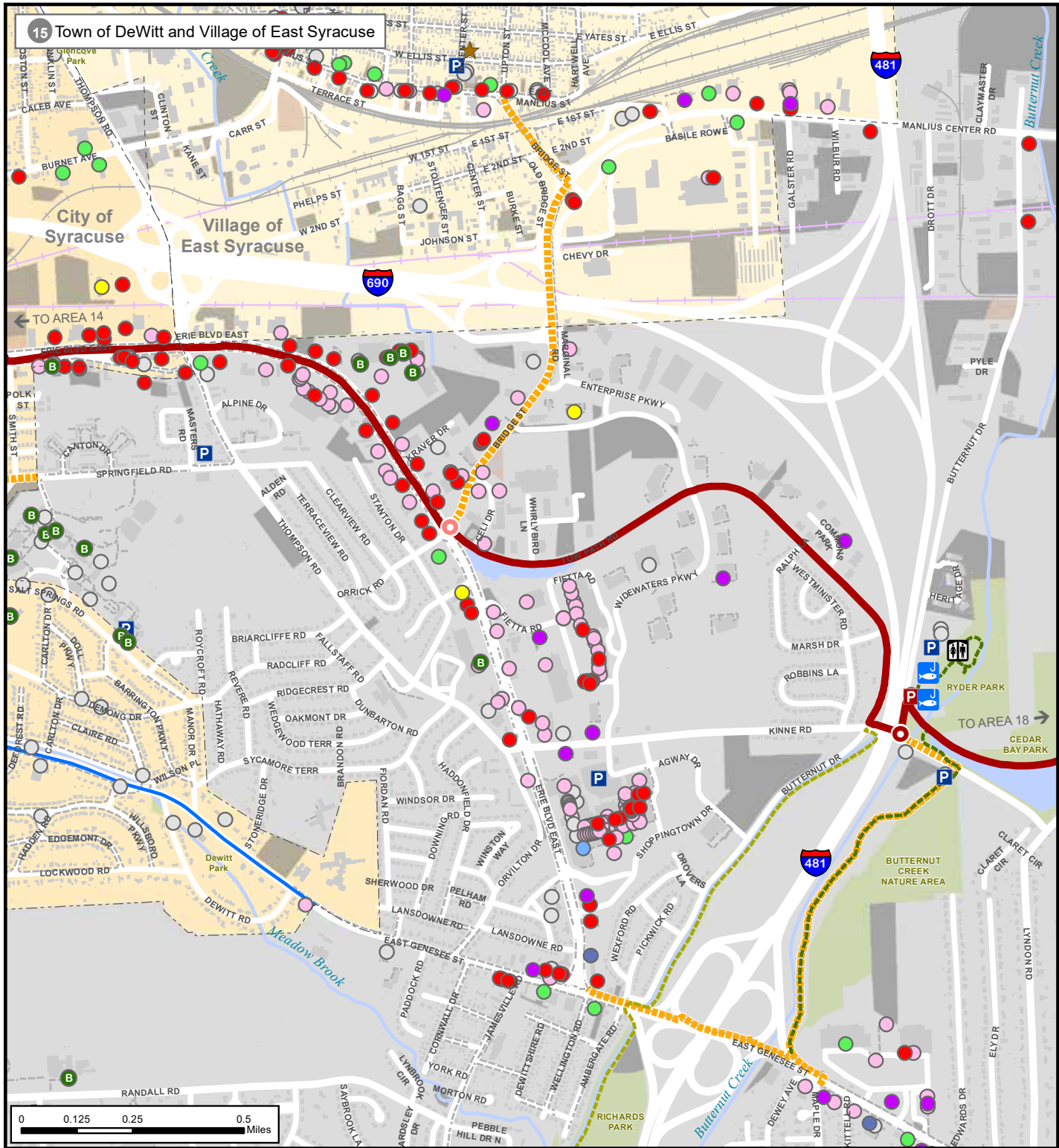
Signage



Racks



Trails



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SMTC
Central New York Regional Planning & Development Board

- Empire State Trail**
- Existing
 - Proposed Connections
 - Access Point
 - Access Point w/ Parking
 - Parking
- Other Trails**
- Existing On-Road
 - Existing Off-Road
 - Proposed On-Road
 - Proposed Off-Road
- Accommodations and Services**
- Eat/Drink Establishments
 - Hotel/Motel/B&B/Campground
 - Grocery/Convenience/Pharmacy/Gas
 - Sporting Goods Stores
 - Health Facilities
 - Banks/Credit Unions
 - Retail/Shopping Centers
 - Other Resources & Services
 - Parking Lots/Garages
 - Bike Racks
 - Transit Hub
- Public Restrooms**
- NY SHPO National Register of Historic Places
 - Agritourism
 - Boat Launch
 - Festival, Event, or Farmers Market
 - Fishing Access
 - Heritage Resource or Museum
 - Natural Area
- Other Features**
- Vacant Commercial & Industrial w/Minor Improvements
 - Vacant Commercial/Industrial/Utility Lands
 - Parks
 - Building Footprints
 - Sidewalks
 - Railroads
 - Abandoned railroads
 - Bike Infrastructure**
 - Lanes/Sharrows

- Opportunity Areas**
- 1 Village of Jordan
 - 2 Hamlet of Jack's Reef
 - 3 Village of Elbridge
 - 4 Village of Camillus
 - 5 Town of Camillus
 - 6 Village of Solvay
 - 7 Town of Geddes
 - 8 Town of Salina
 - 9 Tipperary Hill
 - 10 Lakefront/Inner Harbor
 - 11 Downtown Syracuse
 - 12 Syracuse Southside
 - 13 University Hill
 - 14 Eastwood & Erie Blvd.
 - 15 T. DeWitt & V. E. Syracuse
 - 16 Hamlet of Jamesville
 - 17 Village of Minoa
 - 18 V. Fayetteville & V. Manlius

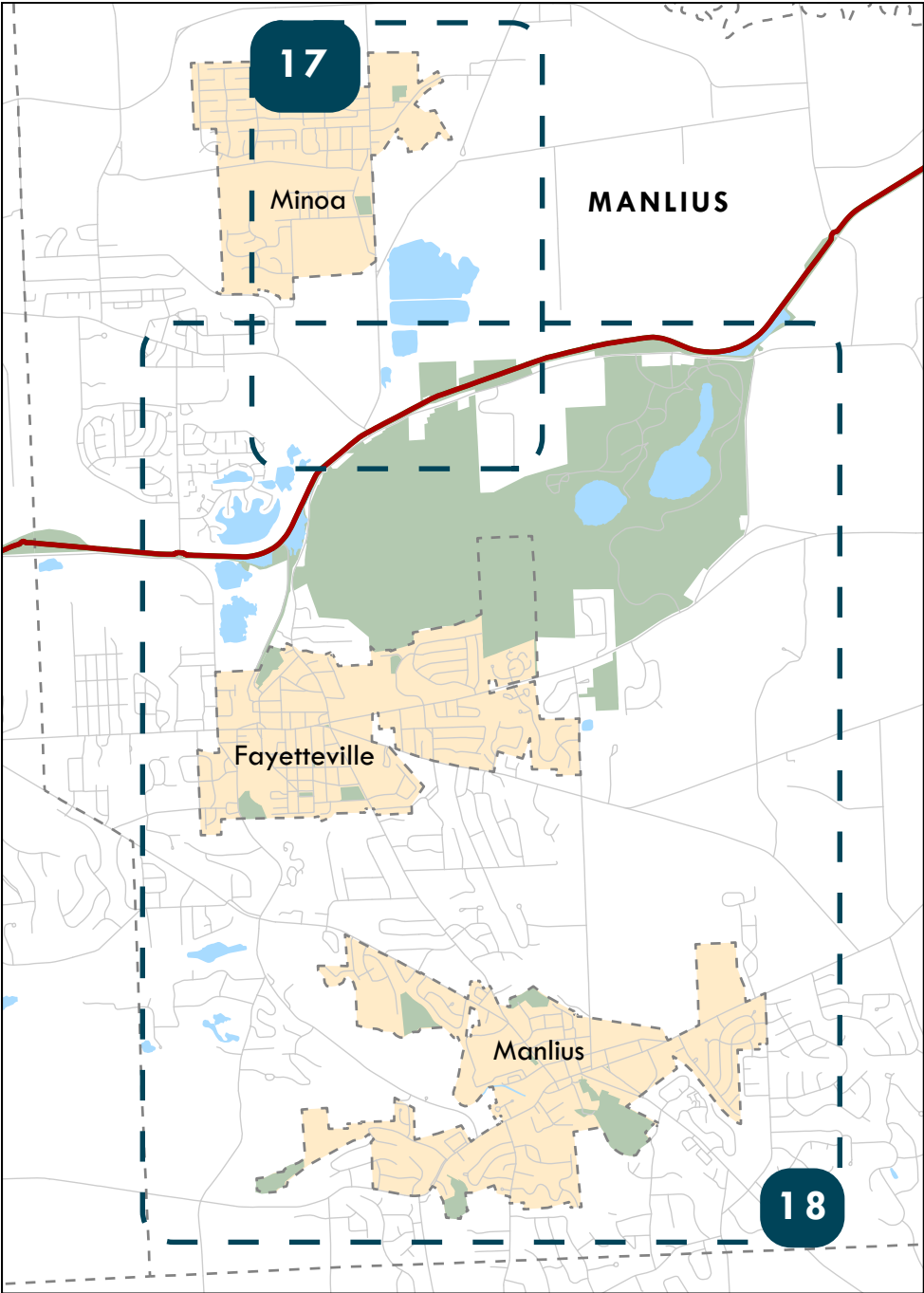
Empire State Trail
Town of DeWitt & Village of East Syracuse
Hamlet of Jamesville
Resources & Services

Areas 15&16
See Map for Scale

Map 12

Village of Minoa

Village of Fayetteville and Village of Manlius



Existing Resources and Visions

Minoa is in many ways a classic Upstate New York rural village: walkable, self-contained, surrounded by woodlands, and bisected by a major section of the CSX and Amtrak Railroad. The Green Bridge in the Village spans high above and over the rail lines and offers pedestrians a safe crossing and a unique perspective on rail activities. Lewis Park in the Village offers public restrooms and a large pole barn with a commercial kitchen where community events are held. The development of a B&B or two would increase the amount of visitor accommodations in the Village and could help capture a larger market share of EST visitors’ spending potential while staying true to the authenticity of Minoa.

The Village of Fayetteville is within easy reach of the EST from both the Old Erie Canal State Park and the Limestone Creek Aqueduct. Travelers on the EST can take the Feeder Canal Trail which links directly to Canal Landing Park, with public restrooms, parking, fitness stations, a playground, and a center of community activity at Limestone Plaza. Several other resources are located in the Village, from historic sites, to parks, eateries, and retail options.

The Village of Manlius offers recreational resources that could be of interest to cyclists traveling the EST. The 40 acre Mill Run

Facilities Recommended for Improvements

- Minoa Road - 1.7 Miles (OCDOT)
- North Burdick Street - 1.1 Miles (OCDOT)
- East Genesee Street (NYS Route 5) - 0.1 Miles (NYSDOT)
- Limestone Plaza - 0.1 Miles (Local)
- Pratt Lane - 0.1 Miles (Local)
- Green Lakes Park Roads - 3.2 Miles (NYS Parks)
- Redfield Avenue - 0.5 Miles (Local)
- Sheffield Lane - 0.4 Miles (Local)
- Fayetteville-Manlius Road (NYS Route 257) - 1.4 Miles (NYSDOT)
- Fayette Street (NYS Route 92) - 0.4 Miles (NYSDOT)



Possible side path on NYS Route 5 in the Village of Fayetteville.

Park offers two sets of public restrooms. The Village-owned park could be an ideal, shovel-ready location for a bike camp for long-distance cyclists.

Potential Recommendations

The Village of Minoa easily connects to the EST off of Manlius Center Road via Minoa Road. The Village is only a two mile, ten minute ride. However, bicycle facilities would need to be added to Minoa Road in order to provide a safe pathway for cyclists desiring to visit the Village’s many unique events and resources.

Connecting to the center of the Village of Fayetteville is already easy and safe via Feeder Canal Trail. Additional bicycle facilities could be added to North Burdick Street to provide an additional entrance to the village.

The most direct route to the Village of Manlius from the EST is through the Village of Fayetteville, with an alternate route through Green Lakes State Park. To reach Manlius, however, both routes must use New York State Route 257, which currently has no bicycle facilities. Adding additional infrastructure will enhance the safety of bicyclists and enhance the connectivity between these two villages.

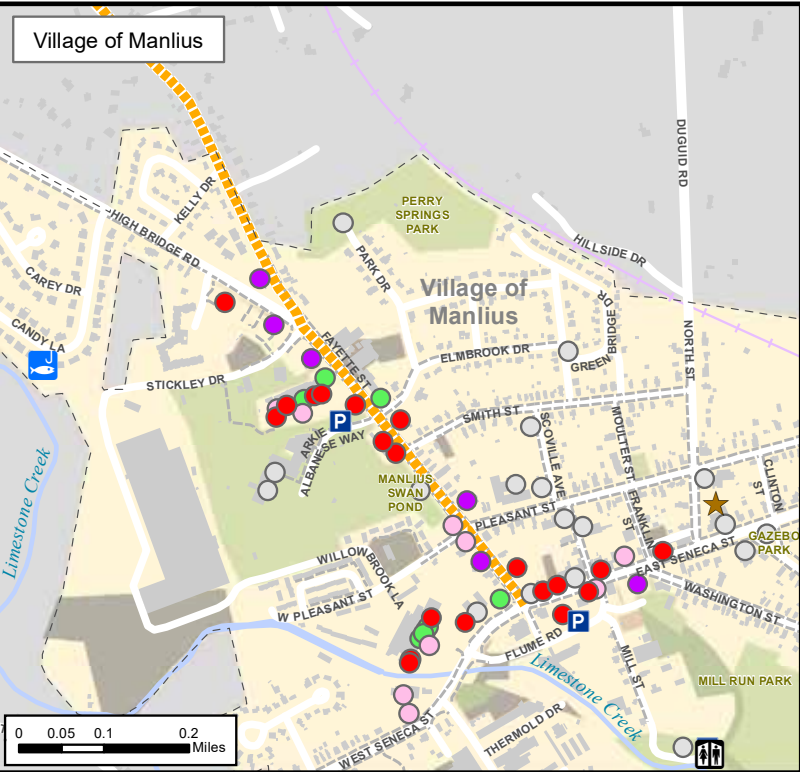
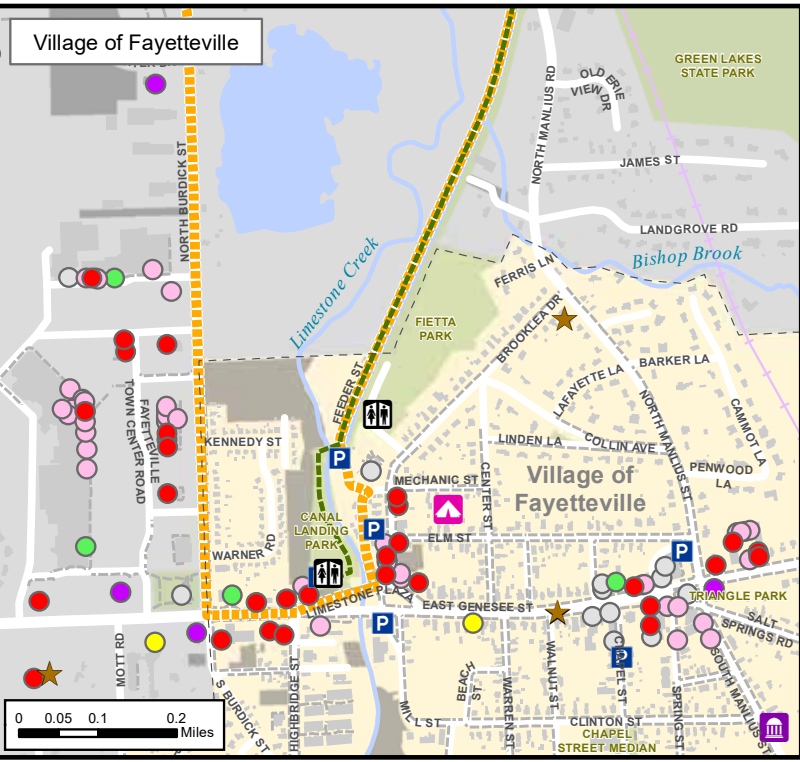
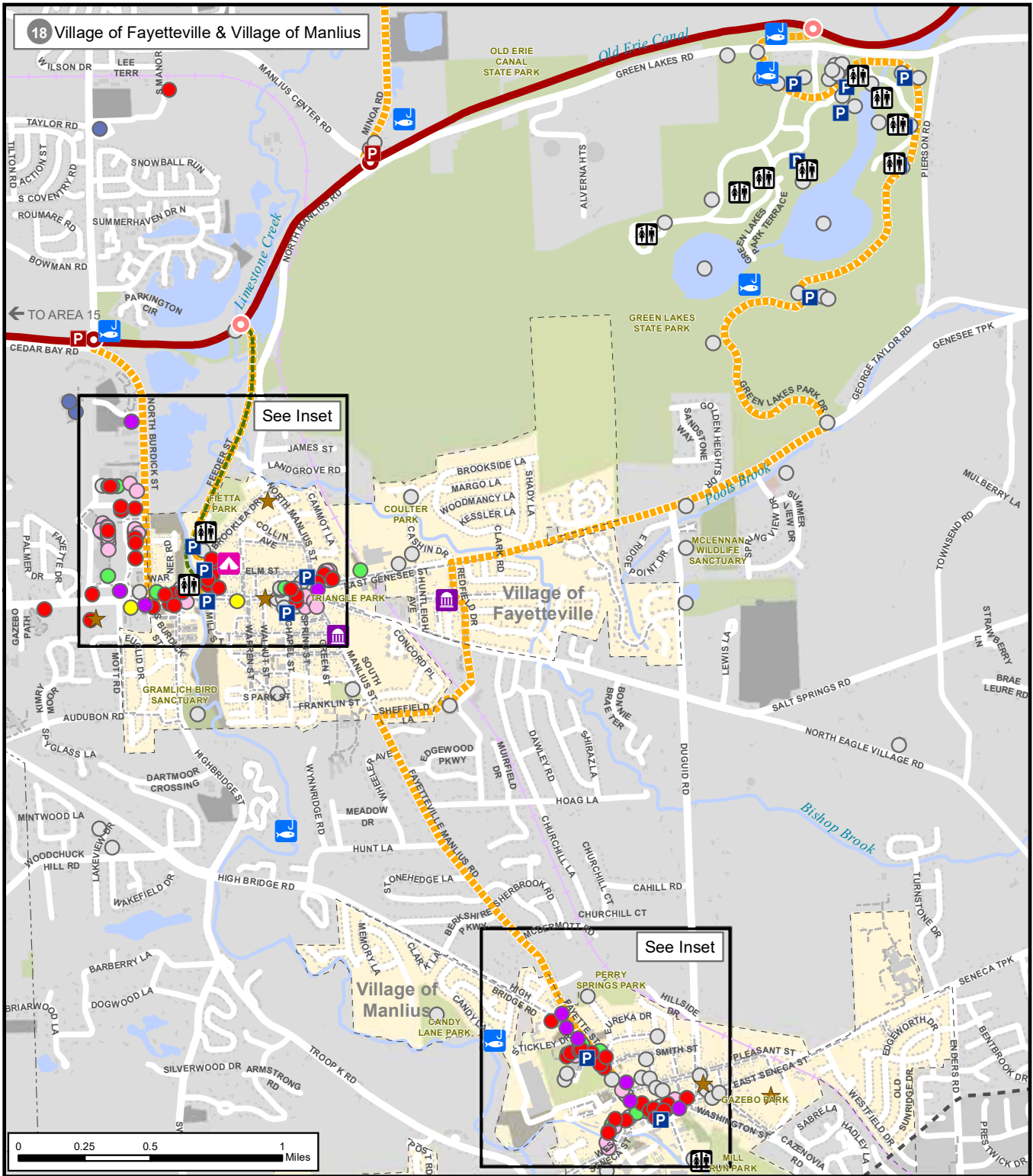
Recommendations

Infrastructure

Signage

Racks

Tent Sites



This map is for presentation purposes only. The SMTC and CNY RPDB do not guarantee the accuracy or completeness of this map. Data sources include SMTC, CNY RPDB, SOCPA, and others. Date: 4/20/22

SMTC
Central New York Regional Planning & Development Board

Empire State Trail
 Existing
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Empire State Trail
Village of Minoa
Village of Fayetteville & Village of Manlius
Resources & Services

Areas 17&18
 See Map for Scale

Map 13

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CONCLUSION

The Empire State Trail Local Economic Opportunities Plan (LEOP) is seen as the beginning of a larger planning and implementation process, rather than a standalone document. This process can be thought of as three distinct phases that build upon one another, resulting in a physical project that meets the needs and visions of the communities involved.

Phase One – The LEOP

The LEOP aims to identify opportunities for municipalities to weave the Empire State Trail into their communities and provide the spark for further economic development from recreational tourism. Opportunity areas were selected based on a review of available resources and gaps along with the identification of key partners within each community. Initial public engagement efforts resulted in the selection of routes and opportunities, but further engagement will be required to refine the plans.

The appendices of this document provide an overview of suggested bicycle and pedestrian treatments, which could be effective in these opportunity areas. Approximate cost estimates are given, but these estimates may vary by location. Additional studies will need to be completed in order to determine the best fit for each opportunity area - it is up to each community to review the information presented within this document and its appendices and decide how best to incorporate these goals into the vision they have for their future.

Phase Two – Refine Projects

The Opportunity Areas identified within the LEOP should begin a conversation of what is desirable, what is feasible, and what should be explored further. Community leaders should work with Onondaga County, the Syracuse Metropolitan Transportation Council, and/or regional planning organizations to review priority corridors in further detail.

Determining design standards and context specific best practices will help shape the vision of the corridors. Open discussions with

community members, local leaders, and the required agencies involved will help refine the vision and make it more practicable, resulting in detailed plans, cost estimates, and reasonable timelines for implementation.

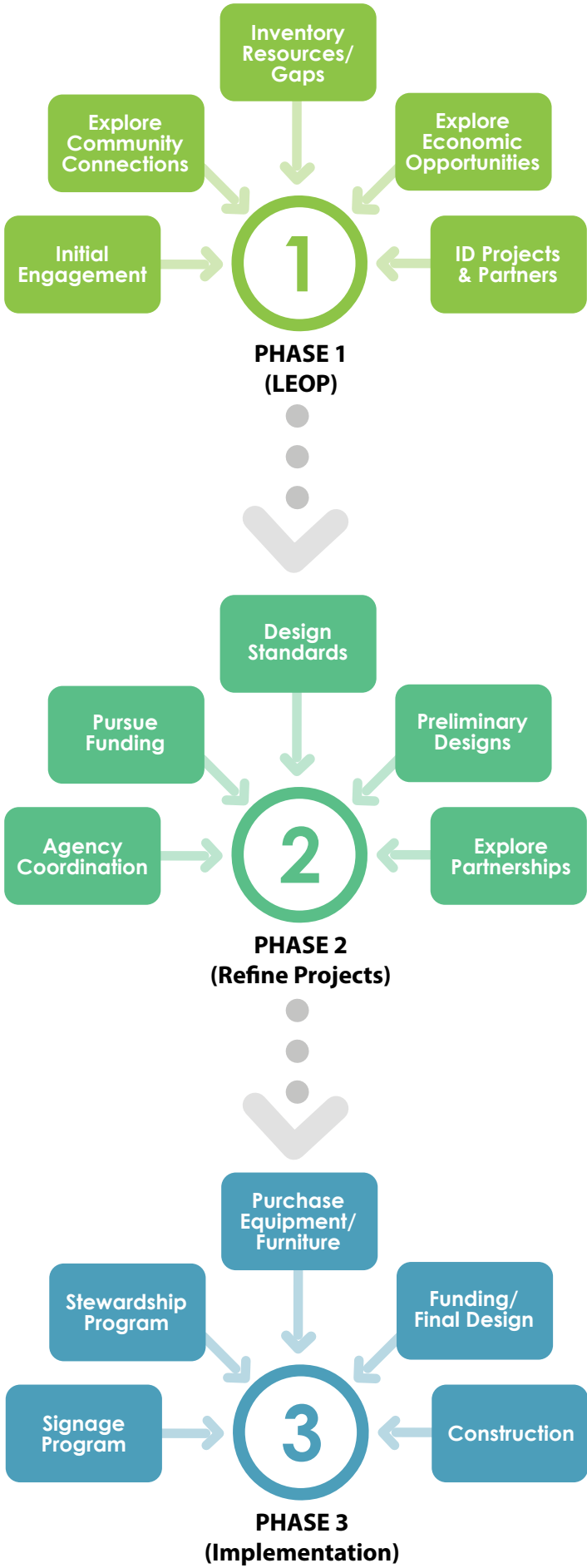
Implementing any connection to the Empire State Trail will require both financial and community support. It will also require the support of the facility owners, which include owners of the rights-of-way that will be utilized as well as adjacent properties needed for amenities. New links should share system-wide branding so that travelers across the state are aware of these connections, no matter the community that they are in. Building this support early and including these stakeholders within the design process will help increase the likelihood of final implementation.

Phase Three - Implementation

Signage and maintenance programs should be developed as the final project designs are selected. While a brand-new trail will be a boost to any community, ensuring that it is well maintained throughout its lifespan and clearly marked for visitors is vital to ensuring its continued growth and economic impact.

Federal and state grants/funds, along with local funding streams, private partnerships, and “Friends of the Trail” groups will need to be reviewed to find the appropriate ways to pay for *and maintain* each improvement. Once designs and funding are in place, communities should look to implement the chosen routes in a timely fashion, providing access to residents and visitors as portions of the project finish.

The LEOP offers a road map to integrating the Empire State Trail into our communities, but it is up to each community to decide if, when, and how they will move forward. Reaching out to SOCPA or the SMTC on how to proceed is a great first step on this journey.



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EMPIRE STATE TRAIL LOCAL ECONOMIC OPPORTUNITIES PLAN

Onondaga County, NY

APPENDIX A



APPENDIX A - BICYCLE & PEDESTRIAN FACILITIES DESIGN TREATMENTS AND CONSIDERATIONS

Bicycle and Pedestrian Treatments

The following appendix serves as a glossary of sorts, to define and describe a number of different bicycle and pedestrian facilities which have been referenced and/or recommended in the Local Economic Opportunities Plan. The following descriptions also offer basic, planning-level guidance on the applicability of each treatment, based on a number of factors such as road type and speed, community type, users, and right-of-way availability.

Treatments described herein are subject to federal, state and/or local regulation, and significant study has gone into ensuring their safety. Often, a variety of applications may be appropriate or feasible in a particular location, and selection of the best facility for a particular location can be difficult. Selection often depends on available space, community planning goals, safety considerations and cost.

It is recommended that communities consider accommodations within communities that are above all safe, but also consistent with Empire State Trail expectations for design, accessibility and aesthetics to the extent possible.

The following section provides basic details on usage and design for a variety of on- and off-road bicycle and pedestrian facilities. **Additional treatments, design considerations and regulation citations may be found in the Empire State Trail Design Guide, found at empiretrail.ny.gov/documents-resources.**

Common Bicycle and Pedestrian Treatments

Shared Use Paths

Side Paths

Bike Tracks

Bicycle Lanes

Sharrows

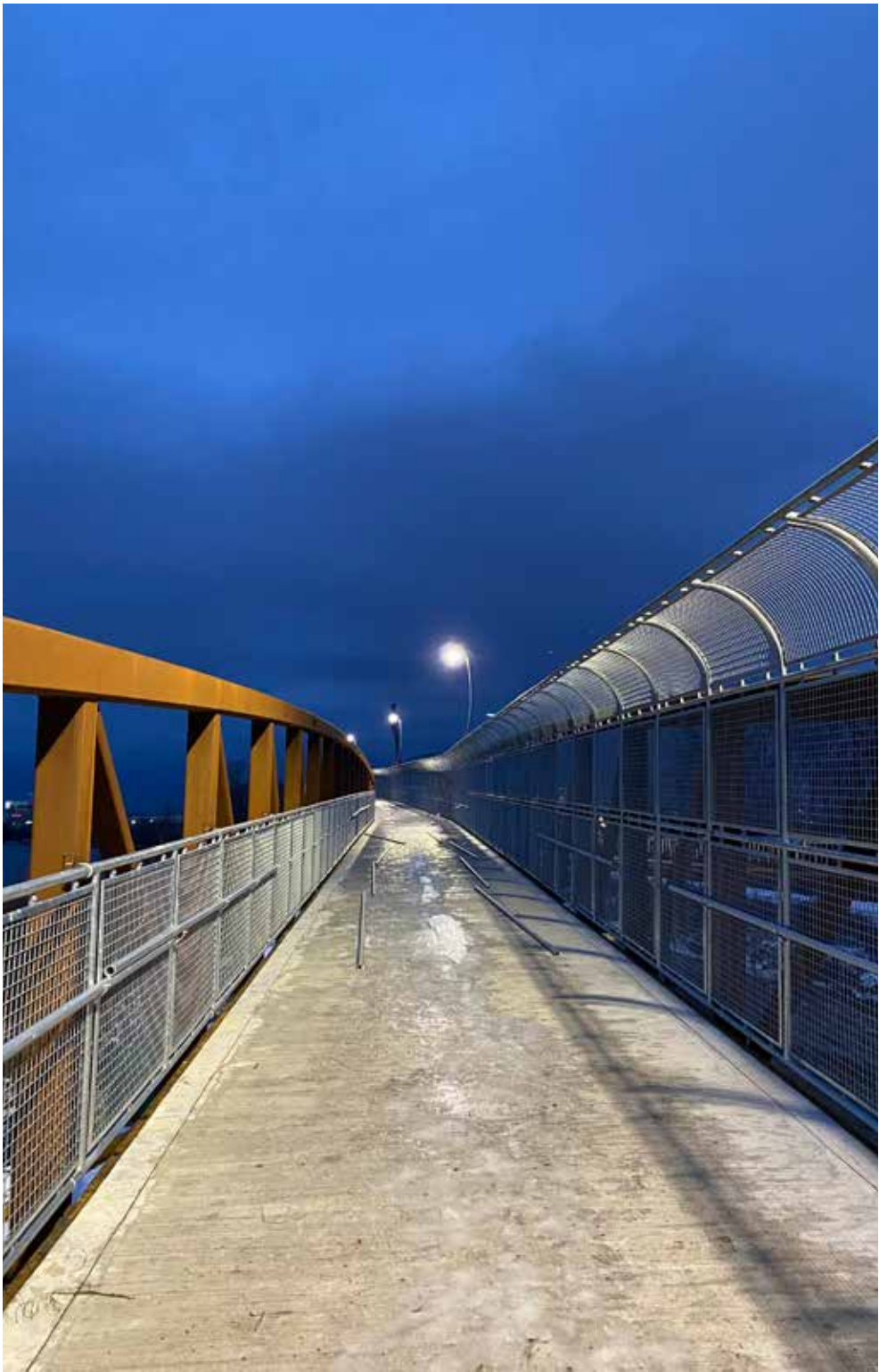
Paved Shoulders

Traffic Calming

Cost Estimates*



*Cost estimate details can be found in Appendix B.



A new Loop the Lake bridge under construction near Onondaga Lake.

APPENDIX A - BICYCLE & PEDESTRIAN FACILITIES DESIGN TREATMENTS AND CONSIDERATIONS

Design Guidance & Resources

The [Empire State Trail Design Guide](https://empiretrail.ny.gov/sites/default/files/2021-09/EST%20Design%20Guide%20Oct%202017_0.pdf)¹ (October 2017) provides a comprehensive review of the standards and design guidelines that can be used by Empire State Trail communities across the state to create and/or improve the experience of trail users along the corridor. The guide offers community partners with design information regarding:

- Branding & Logo Usage
- Signage Standards -Wayfinding, Community, Directional, Historical Markers, etc.
- Context and Hierarchy of Trail Design
- Trail User Amenities
- Facility Selection Process
- Facility Types & Trail Crossings
- General Design Practices

The different types of bicycle and pedestrian accommodations described in the Design Guide and in the following pages draw from the latest standards and approaches for accommodating bicyclists, pedestrians, and other types of users on trails, and offers design details for typical applications and design features for on- and off-road trail connections.

The following is a list of the many primary sources for design standards, recommendations and design requirements for trail system development. Once projects are advanced to the detailed design and engineering phases, these documents will be integral to the process:

- The **Manual on Uniform Traffic Control Devices (MUTCD)** which outlines the standards for all traffic control devices across the country. There is also a New York State supplement to the national MUTCD that provides additional guidance for roadways in New York State. Both manuals must be referred to when installing any traffic devices on any public roads.
- The **New York State Highway Design Manual (HDM)** is the main source of state level geometric design guidance, including on-street bike lanes and shared-use paths.
- The **American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities** (2012) includes details on the design and planning of both on- and off-road bicycle facilities, as well as the maintenance of such facilities.
- The **National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide** (2014) includes some of the latest practices for cities to develop complete streets that are safe for bicyclists.
- The **Federal Highway Administration's (FHWA) Separated Bike Lane Planning and Design Guide** (2015) specifically focuses design guidance on implementing facilities associated with separated bike lanes (also referred to as protected bike lanes or bike tracks).
- The **Federal Highway Administration's Small Town and Rural Multimodal Networks** (December 2016) was developed as a resource to help smaller towns and rural communities support and promote multimodal networks and active travel.



Construction of a new Onondaga County Loop the Lake Trail bridge.



Cyclists enjoy the Empire State Trail.

¹ https://empiretrail.ny.gov/sites/default/files/2021-09/EST%20Design%20Guide%20Oct%202017_0.pdf

APPENDIX A - BIKE AND PED TREATMENTS

Off-Road Shared Use Paths

A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers and other users. These pathways can follow alongside established vehicular transportation corridors or be standalone facilities.

Design Notes:

- Off-Road Shared Use Paths are often located in parks, along rivers, beaches, and in greenbelts or utility corridors where there is ample space and few interactions with motorized vehicles.
- While these pathways can offer the a high level of comfort and safety, off-road shared use pathways often require significant right-of-way widths or easements on privately held land, which can limit feasibility in more densely developed locations.
- These paths accommodate a variety of users - bicyclists, pedestrians, those using mobility devices, strollers, and sometimes equestrians, snowmobilers, skiers, etc.
- 10 feet of width is recommended in most situations and will be adequate for moderate to heavy use. 2-foot shoulder should be provided on each side of the path.
- Under most conditions, center line markings are not necessary.
- Shared use paths, as with any facilities in the public realm, should be constructed in compliance with the Americans with Disabilities Act (ADA) and the Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 4-3.
FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 4-5.
FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 4-8.

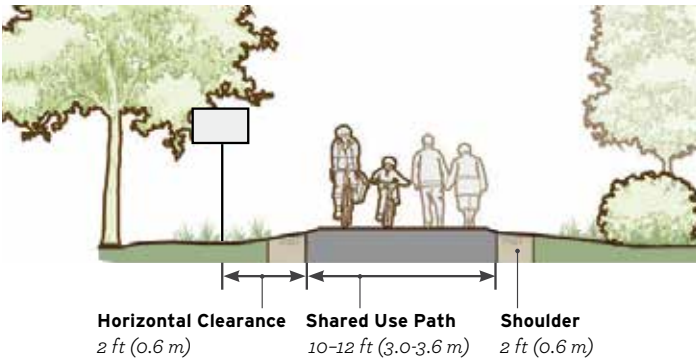


Figure 4-1. Shared Use Path Dimensions



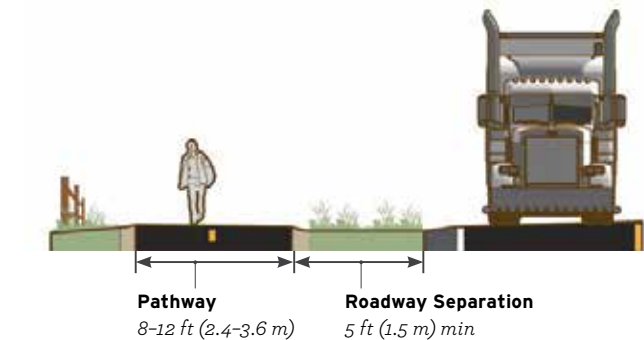
Off-Road Side Path

A side path is a bi-directional shared use path located immediately adjacent and parallel to a roadway, usually in the roadway right-of-way. They function similarly to shared-use paths, but are more often found in urbanized areas. Side Paths are designed to accommodate bicyclists, pedestrians and users of mobility devices.

Design Notes:

- In heavy traffic environments, side paths can provide a higher quality experience for users as compared to on-roadway facilities can allow for reduced roadway crossing distances, and help to maintain community character.
- The minimum width of a two-way side path width is 10 ft. , with a standard of 12 feet for mixed pedestrian and bicyclist activity.
- A minimum separation width of 5 feet between the roadway and the path is recommended. If greater separation cannot be provided, use of a barrier should be considered, such as delineator posts, guiderails, jersey barriers, and/or railings.

4.) FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 4-11.
5.) Alta Planning + Design, C&G Partners, Starr Whitehouse, Empire State Trail Design Guide, 2017, p. 5-68.
6.) NYSDOT, Highway Design Manual, Bicycle Facility Design, p. 17-15.
7.) AASHTO, Guide for the Development of Bicycle Facilities, 2012, p. 5-11.



APPENDIX A - BIKE AND PED TREATMENTS

Separated Bike Lanes (Bike Tracks/Protected Bike Lanes) \$ \$ → \$ \$ \$ \$ \$

A separated bike lane is “an exclusive facility for bicyclists that is located within or directly adjacent to the roadway and that is physically separated from motor vehicle traffic with a vertical element.” On-road separated bike lanes are also known as bike or cycle tracks, or protected bike lanes. They can be built as one-way or two-way facilities. Unlike side paths, these facilities accommodate bicyclists only.

Design Notes:

- Separated bike lanes work well where conventional bike lanes may cause bicyclists to feel stress due to multiple lanes, high motor vehicle traffic volumes and speeds.
- The preferred minimum width for one-way bike lanes is 7 feet to allow for safe passing, but can be as narrow as 5 feet. For bi-directional bike lanes, 10-12 feet is recommended. A minimum width of 8 feet in constrained, short segments may be allowable.
- Separation width from vehicular traffic depends on the physical separation method, which may include flexible delineator posts, curbing, on-street parking, etc.
- Separated bike lanes function best on streets with few conflicts such as driveways or cross streets.

8.) FHWA, Separated Bike Lane Planning and Design Guide, May 2015, p. 13.
9.) Alta Planning + Design, C&G Partners, Starr Whitehouse, Empire State Trail Design Guide, 2017, p. 5-74 – 5-77.

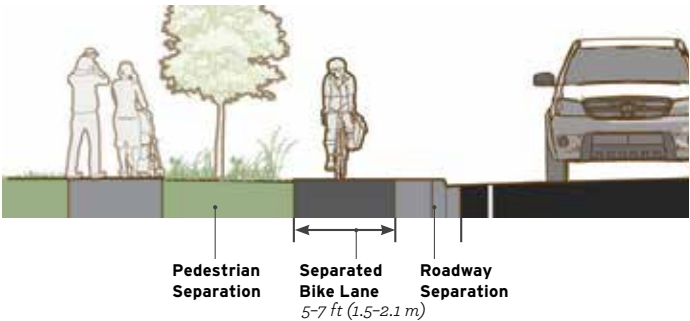


Figure 4-17. Separated bike lanes are exclusive facilities for bicyclists that are distinct from the sidewalk and physically separated from motor vehicle traffic with a vertical element.



Bike Lanes \$ → \$ \$

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. They are located directly adjacent to motor vehicle travel lanes and follow the same direction as motor vehicle traffic. Bike lanes are one-way facilities and work in both urban and suburban areas.

Design Notes:

- The preferred width of a bike lane is 6.5 feet, to allow for cyclists to pass without leaving the bike lane; 4 feet may be allowable when no curb and gutter is present or 5 feet when adjacent to a vertical curb, guardrail, other vertical surface, or on-street parking. Widths of 7 feet or wider may encourage motor vehicle use of the bike lane.
- Bike lanes can be enhanced with a marked optional buffer area, if space allows, generally 1.5-4 feet wide.
- Bike lanes can also be enhanced with a specific green paint treatment to better delineate bicycle lanes from vehicular lanes.

FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 3-11.
FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 3-13.
FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 3-13.

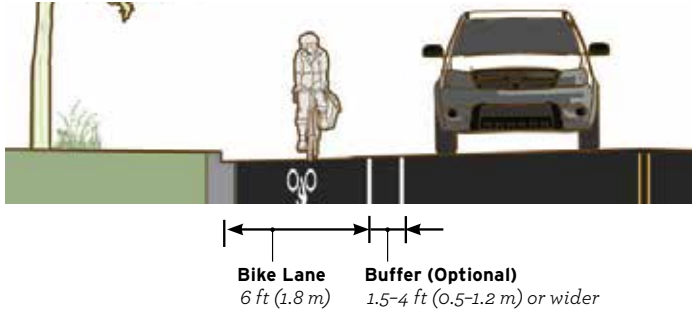


Figure 3-7. Bike lanes establish an area for exclusive bicycle use outside the path of motor vehicles.



APPENDIX A - BIKE AND PED TREATMENTS

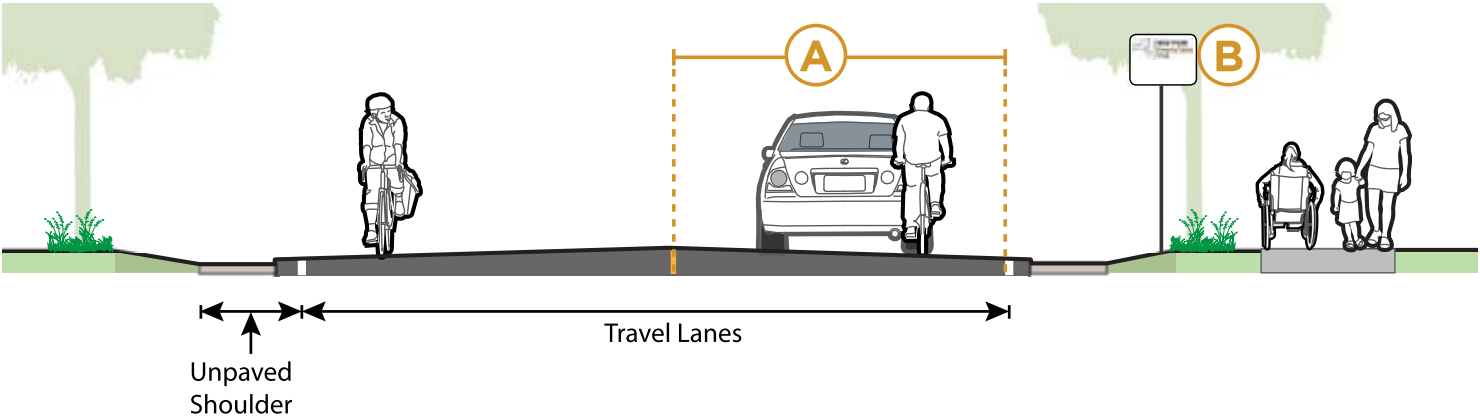
Shared Lane Markings (Sharrows) \$

Shared lane markings (also known as “sharrows”) are useful in locations where there is insufficient width to provide bike lanes. Sharrow markings can also alert motorists to the lateral position that a bicyclist is likely to occupy along a road, which can encourage safer passing practices.

Design Notes:

- Sharrows are generally used on roadways with more than 3,000 vehicles per day.
- The AASHTO Bike Guide recommends wide, curbed lanes with widths between 12 and 13.5 feet. Beyond this width, bike lanes or shoulders may be provided.
- Sharrows should not be used on roadways with a speed limit of 40 mph or higher.
- Placement of the markings in the center of the effective travel lane will reduce marking wear and encourage bicyclists to occupy the lane outside of the potential door zone for parked cars.

AASHTO, Guide for the Development of Bicycle Facilities, 2012, p. 4-4.
NYSDOT, Traffic Safety and Mobility Instruction 13-07, Shared Lane Marking (SLM) Policy, December 2013, p. 2.



On-Road Paved Shoulders \$



Paved shoulders, either marked or unmarked, on the edge of roadways can serve as an alternative for accommodating bicyclists and pedestrians in the absence of other facilities with more separation. According to FHWA’s Small Town and Rural Multimodal Networks, paved shoulders are “appropriate on roads with moderate to high volumes and speeds and on roadways with a large amount of truck traffic; they can be applied on networks serving long-distance and regional travel.” Paved shoulders are most appropriate outside built-up areas where there is expected pedestrian and bicycle activity, but inadequate right-of-way for off-road facilities. A note, however, that wide shoulders may also have the unintended consequence of raising vehicular speeds, and may not be the most comfortable environment for pedestrians. Use of wide shoulders should take into consideration induced higher speeds, desired pedestrian volumes, and impacts to community character.

Design Notes:

- Paved shoulders can reduce pedestrian “walking along roadway” crashes and/or “bicyclist struck from behind” crashes in areas where other facilities are not available.
- A minimum width of 5 feet is recommended for paved shoulders when a curb, guardrail, or other barrier is present; 4 feet on uncurbed roadways. Increased width is recommended where higher bicycle usage is expected, when vehicular speeds exceed 50 mph, when heavy vehicle use is prevalent, or if static obstructions occur at the road edge.
- Edgeline rumble strips can reduce severe crashes – rumble strips are an FHWA proven safety countermeasure for reducing roadway departure crashes. Strips should be located as close as possible to the travel lane, and include a “bicycle gap” pattern of 12 feet gaps every 60 feet to allow bike access as needed.
- Walkable shoulders should be provided along both sides of country roads and highways routinely used by pedestrians.

FHWA, Small Town and Rural Multimodal Networks, December 2016, p. 3-6.

NYSDOT, Engineering Instruction 16-014, RUMBLE STRIPS - REQUIRED INSTALLATION OF SECONDARY HIGHWAY AUDIBLE ROADWAY DELINEATORS (SHARDS), 2016

Alta Planning + Design, C&G Partners, Starr Whitehouse, Empire State Trail Design Guide, 2017, p. 5-66.

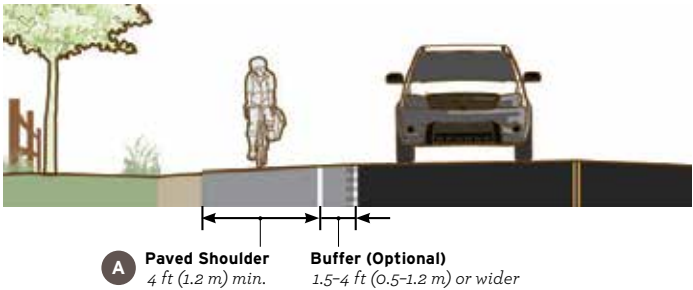


Figure 3-1. When adequate width is provided, shoulders can serve bicycle trips along roads too busy for comfortable shared roadway travel.

APPENDIX A - BIKE AND PED TREATMENTS

Traffic Calming \$ \$ → \$ \$ \$ \$

Traffic calming is a term used to describe a variety of creative design elements within and along roadways and particularly intersections that serve to “reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.” Typical traffic calming elements often seek to slow vehicular speeds in sensitive areas such as Main Streets and reduce crossing distances for pedestrians.

Design Notes:

- Traffic calming measures can include treatments such as speed bumps/humps, raised or highly visible pedestrian crossings, curb-bump outs or curb extensions, pedestrian “refuge” islands in the middle of the roadway, lane narrowing or reductions in the number of lanes, and roundabouts.
- Traffic calming is most often used in high pedestrian areas such as downtowns and village main streets, neighborhood centers, or shopping areas.
- To create preferred conditions for bicyclists operating in the roadway, the desired vehicle operating speed is 15-25 mph. Treatments for creating these conditions are generally reserved for use on local neighborhood streets, and include vertical and lateral shifts, medians, and pinch points. At higher speeds, traffic calming may be used to reduce vehicle operating speeds to 25- 35 mph. Treatments for creating these conditions are less physically restrictive and emphasize change in ambiance.
- Some traffic calming treatments can create maintenance challenges for snow plows or other maintenance vehicles, as well as large vehicles such as tractor trailers.

Alta Planning + Design, C&G Partners, Starr Whitehouse, Empire State Trail Design Guide, 2017, p. 5-78.



Mini Roundabout

Cost Estimate Summaries		
Category	Cost Estimate	Description
Off-Road Shared Use Paths	\$ \$ \$	An unpaved multi-use trail (ex. stone dust trail) which requires minimal leveling and improvements.
	\$ \$ \$ \$	A paved multi-use trail (ex. asphalt) with some minor leveling and improvements required for use.
	\$ \$ \$ \$ \$	A multi-use trail that utilizes wide sidewalks in place of asphalt trails. Potentially larger upgrades including lighting and fencing.
Off-Road Side Path	\$ \$	A two-way path that utilizes flexposts and painted buffer striping to separate bicycles and pedestrians from vehicle traffic.
	\$ \$ \$	A two-way path that utilizes low profile, pre-fab concrete barriers (ex. Jersey barriers) and painted buffer striping to separate bicycles and pedestrians from vehicle traffic.
	\$ \$ \$	A two-way path that utilizes concrete planters and painted buffer striping to separate bicycles and pedestrians from vehicle traffic.
	\$ \$ \$ \$ \$	A two-way path that utilizes built out concrete medians to separate bicycles and pedestrians from vehicle traffic. Medians can be fully concrete or furnished with grass and vegetation.
Separated Bike Lanes (Bike Tracks / Protected Bike Lanes)	\$ \$	A one- or two-way path that utilizes flexposts and painted buffer striping to separate bicycles from vehicle traffic.
	\$ \$ \$	A one- or two-way path that utilizes low profile, pre-fab concrete barriers (ex. Jersey barriers) and painted buffer striping to separate bicycles from vehicle traffic.
	\$ \$ \$	A one- or two-way path that utilizes concrete planters and painted buffer striping to separate bicycles from vehicle traffic.
	\$ \$ \$ \$ \$	A one- or two-way path that utilizes built out concrete medians to separate bicycles from vehicle traffic. Medians can be fully concrete or furnished with grass and vegetation.
Bike Lanes	\$	A bike lane that utilizes a 4-inch wide white stripe along with bike and arrow pavement markings.
	\$ \$	A buffered bike lane that utilizes a 2-foot hatched buffer which includes a 6-inch wide stripe on the bike lane side and a 4-inch wide stripe on the opposite side.
Shared Lane Markings (“Sharrows”)	\$	A bicycle symbol with double chevron marking above that is placed every 250 feet or less.
On-Road Paved Shoulders	\$	Signage indicating bicycles are allowed to use the shoulder, about four signs per mile.
Traffic Calming	\$ \$	Lane reductions, including re-striping for center turn lanes, striped curb extensions, and bike lanes.
	\$ \$	Speed humps placed along the roadway at intervals up to 500 feet or less to achieve speeds of 25-35 mph.
	\$ \$ \$ \$	Mini-traffic circles at appropriate intersections with “sharrow” markings and signage directing traffic on how to utilize the shared intersection

APPENDIX A - BIKE INTERSECTION TREATMENTS

Bicycle Treatments at Intersections

- Combined Bike Lane / Turn Lane
- Through Bike Lanes
- Bike Boxes
- Two Stage Turn Queue Boxes
- Dedicated Intersections
- Protected Intersections
- Rectangular Rapid Flash Beacons
- Bicycle Signal Heads

Cost Estimates*

- \$Up to \$5,000 / intersection
- \$ \$Up to \$10,000 / intersection
- \$ \$ \$Up to \$20,000 / intersection
- \$ \$ \$ \$Up to \$50,000 / intersection
- \$ \$ \$ \$ \$ Over \$50,000 / intersection

*Cost estimate details can be found in Appendix B



Combined Bike Lane / Turn Lane \$

A combined bike lane/turn lane places a suggested bike lane within the inside portion of a dedicated motor vehicle turn lane. Shared lane markings or conventional bicycle stencils with a dashed line can delineate the space for bicyclists and motorists within the shared lane or indicate the intended path for through bicyclists. This treatment includes signage advising motorists and bicyclists of proper positioning within the lane.

Design Notes:

- Width of the combined lane should be 9-13 feet. Any lane wider 14 feet or wider can accommodate a through bike lane and a dedicated turn lane
- Within the combined lane, the bicycle area width should be 4 feet minimum
- A dotted 4 inch line and bicycle lane marking should be used to clarify bicyclist positioning within the combined lane without excluding cars from the suggested bicycle area.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



APPENDIX A - BIKE INTERSECTION TREATMENTS

Through Bike Lanes \$

Through Bike Lanes enable bicyclists traveling on a conventional bike lane to correctly position themselves to the left of right-turn lanes or to the right of left-turn lanes, helping to reduce conflicts with turning vehicles. They provide bicyclists guidance on preferred travel paths, making them more predictable as they approach the intersection.

Design Notes:

- The dotted bike transition lane and through bike lane should be 4-6 feet in width.
- The MUTCD states that dotted lines should begin at least 50 feet before the intersection and at least 100 feet before on high speed / volume roadways.
- It is recommended that the dotted through lanes allow bicyclists to proceed straight through the merging area to reinforce right-of-way.
- Vehicle turn lanes should maintain a width of at least 9 feet.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



Bike Boxes \$ \$ → \$ \$ \$

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase. For bicyclists, this reduces delay at the signal and provides better positioning for left turns, while reducing the likelihood of a right-hook conflict with turning vehicles. It also allows for bicyclists to group together and clear the intersection quickly, minimizing impacts on other forms of traffic.

Design Notes:

- Bike boxes are typically 10-16 feet deep, with deeper boxes experiencing less encroachment by vehicles. It is recommended that colored paving be used to further define the space.
- The MUTCD notes that stop lines should be used to indicate where vehicles must stop at the traffic signal.
- In places that permit right turns on red signals, “No Turn on Red” signs shall be installed to prevent vehicles entering the bike box.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



APPENDIX A - BIKE INTERSECTION TREATMENTS

Two Stage Turn Queue Boxes \$

Two-stage turn queue boxes offer bicyclists a safe way make left turns at multi-lane signalized intersections from a right side cycle track or bike lane, or right turns from a left side cycle track or bike lane. Two-stage turn queue boxes may also be used at unsignalized intersections to simplify turns from a bicycle lane or cycle track, as for example, onto a bicycle boulevard. At mid-block crossing locations, a two-stage turn queue box may be used to orient bicyclists properly for safe crossings. Multiple positions are available for queuing boxes, depending on intersection configuration.

While two stage turns may increase bicyclist comfort in many locations, this configuration typically results in increased delay for bicyclists. Bicyclists now need to receive two separate green signal indications (one for the through street, followed by one for the cross street) to turn.

Design Notes:

- The queue box must be placed in a protected area, typically within an on-street parking lane or between the bike lane and the pedestrian crossing.
- Pavement markings include a bicycle stencil and a turn arrow to clearly indicate proper bicycle direction and positioning. It is recommended that colored paving be used to further define the space.
- In places that permit right turns on red signals, “No Turn on Red” signs shall be installed to prevent vehicles entering the bike box.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



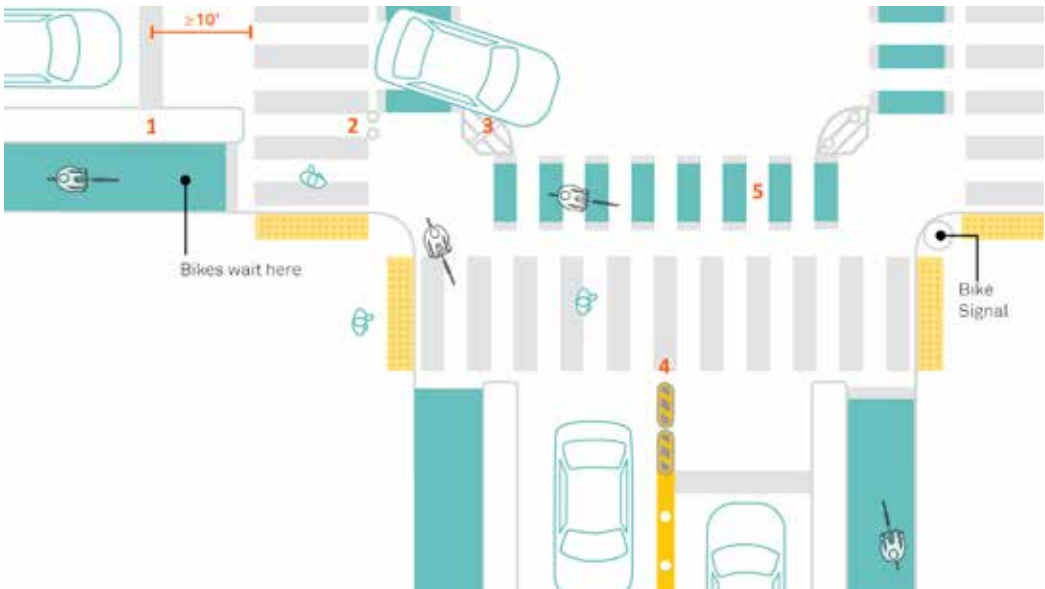
Dedicated Intersections \$\$\$

To reduce conflicts between bikes and turning vehicles on busy streets, turn speed reduction techniques and new signal phasing patterns can complement the design of the dedicated bike intersection. These techniques include corner wedges, which feature a modular speed bump or similar element over which vehicles are permitted to turn at low speeds. Where the bikeway is on a two-way street or intersects with one, the speed of left turns across the bikeway can be reduced with centerline hardening or pedestrian safety islands. Dedicated intersection geometry should be considered where there is not enough space to set back the bikeway from mixed traffic at the intersection. This condition often arises when a protected bike lane runs close to mixed traffic lanes without a parking or loading lane between them.

Design Diagram Notes:

1. Buffer or Curb - A marked, painted, or raised buffer provides people on bikes with a defined travel zone at the approach to the intersection.
2. Crosswalk Separator - A raised element such as mountable curb or a pair of flexible delineator posts discourages turning vehicles from cutting across the bikeway when turning right.
3. Corner Wedge & Speed Bump - Speed reduction devices, such as modular speed bumps, help prevent high-speed turns and are expected to improve driver yielding. They can extend over the space used by turning vehicles but not over the bikeway or crosswalk.
4. Centerline Hardening - Modular curbs with or without vertical delineators reduce the speed of turns across the bikeway and shorten the conflict zone.
5. Crossbike / Bike Lane Line Extensions

NACTO, Don't Give Up at the Intersection, 2019, p. 21-25



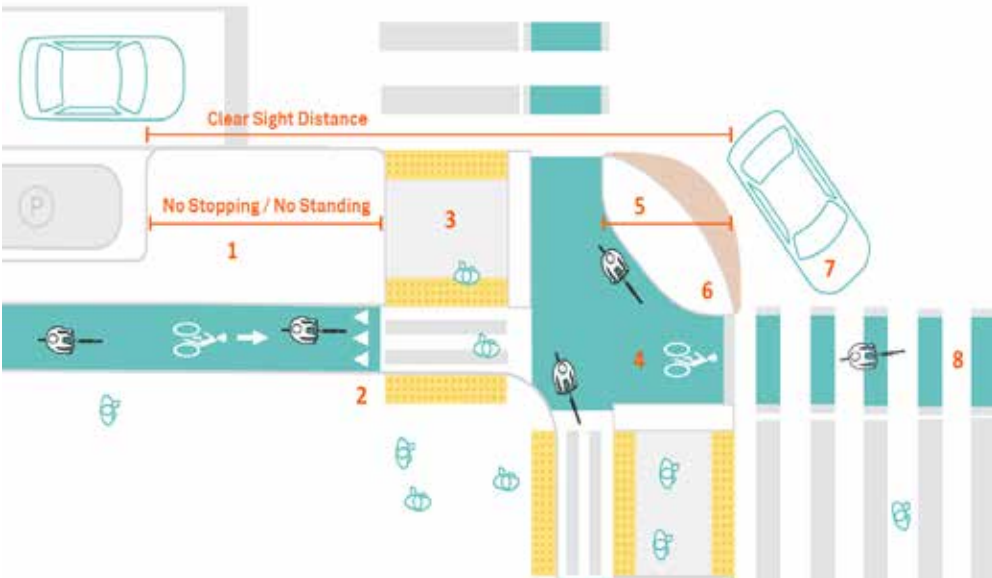
APPENDIX A - BIKE INTERSECTION TREATMENTS

Protected Intersections

At protected intersections, the bikeway is set back from the parallel motor vehicle traffic. Unlike at conventional bike intersections, people biking are not forced to merge into mixed traffic. Instead, they are given a dedicated path through the intersection, and have the right of way over turning motor vehicles. They are most commonly found on streets with parking-protected bike lanes or buffered bike lanes.

Design Diagram Notes:

1. No Stopping / No Standing Zone - Motor vehicle parking and stopping are prohibited on the approach to the intersection.
2. Bike Yield Line (optional)
3. Pedestrian Islands - Reduce crossing distances and improve visibility by keeping the intersection clear. Wider islands support high volumes of people walking and biking, raising the capacity of the intersection.
4. Bike Queue Area - People biking can wait ahead of the crosswalk for a green signal or a gap in traffic. This shortens crossing distances, and accommodates the natural positioning of people biking.
5. Bikeway Setback - Determines how much room will be available for drivers to wait and yield, and the angle at which they cross the bikeway. Larger setbacks provide better visibility.
6. Corner Island - Separates bikes from motor vehicles, prevents motor vehicles from encroaching on the bikeway, and creates a protected queuing area for people on bikes waiting to turn.



7. Motorist Waiting Zone - Space between the motor vehicle lane and the crossbike provides a place for motor vehicle drivers to wait before turning across the bike's path of travel.

8. Crossbikes / Intersection Crossing Markings - Provide conspicuousness and directional guidance to bikes in the intersection. They are marked with dotted bicycle lane line extensions.

NACTO, Don't Give Up at the Intersection, 2019, p. 9-19

Rectangular Rapid Flash Beacon (RRFB)

Active warning beacons are user-actuated amber flashing lights that supplement warning signs at unsignalized intersections or mid-block crosswalks. Beacons can be actuated either manually by a push-button or passively through detection. Rectangular Rapid Flash Beacons (RRFBs) use an irregular flash pattern similar to emergency flashers on police vehicles and can be installed on either two-lane or multi-lane roadways. Active warning beacons should be used to alert drivers to yield where bicyclists have the right-of-way crossing a road.

Design Notes:

- Active warning beacons shall be installed on the side of the road. If center islands or medians exist, providing secondary installations in these locations marginally improves driver yielding behavior.
- Beacons shall be unlit when not activated.
- If intended for use by bicyclists, push button actuation shall be provided, and should be located so bicyclists can activate the signal without dismounting. Push buttons should have a supplemental sign facing the bicyclist's approach to increase visibility.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



APPENDIX A - BIKE INTERSECTION TREATMENTS

Bicycle Signal Head \$ \$ \$ \$ \$

A bicycle signal is an electrically powered traffic control device that should only be used in combination with an existing conventional traffic signal or hybrid beacon. Bicycle signals are typically used to improve identified safety or operational problems involving bicycle facilities or to provide guidance for bicyclists at intersections where they may have different needs from other road users (e.g., bicycle only movements, leading bicycle intervals). Bicycle signals help to simplify bicycle movements through complex intersections and potentially improve operations or reduce conflicts for all modes.

Design Notes:

- The bicycle signal head shall be placed in a location clearly visible to oncoming bicycles.
- If the bicycle phase is not set to recall each cycle, bicycle signals shall be installed with appropriate detection and actuation.
- An adequate clearance interval (i.e., the movement’s combined time for the yellow and all-red phases) shall be provided to ensure that bicyclists entering the intersection during the green phase have sufficient time to safely clear the intersection before conflicting movements receive a green indication.
- Bicycle signal heads are generally the preferred option over installing a sign instructing bicycles to use pedestrian signals. While instructing bicyclists to use pedestrian signals is a low-cost option, the length of the pedestrian clearance interval (typically timed at 3.5 feet per second) is usually inappropriate for bicyclists.

NACTO, Urban Bikeway Design Guide, Second Edition, 2014



Cost Estimate Summaries		
Category	Cost Estimate	Description
Combined Bike Lane / Turn Lane	<div><div>\$</div></div>	Painted dotted white lines beginning 50-100 feet before the intersection. Bicycle symbol pavement markings on each approach.
Through Bike Lane	<div><div>\$</div></div>	Painted white lines with a dotted transition lines that begin 50-100 feet before the intersection. Bicycle symbol pavement markings on each approach.
Bike Box	<div><div>\$</div><div>\$</div></div>	Painted white box outline with a bicycle symbol pavement marking on one or more approaches.
	<div><div>\$</div><div>\$</div></div>	Painted green box with a bicycle symbol pavement marking on one approach.
	<div><div>\$</div><div>\$</div><div>\$</div></div>	Painted green box with a bicycle symbol pavement marking on multiple approaches.
Two Stage Turn Queue Boxes	<div><div>\$</div></div>	Painted green box with left turn and bicycle symbol pavement markings.
Dedicated Intersections	<div><div>\$</div><div>\$</div><div>\$</div></div>	Painted or raised buffer approaching the intersection, bollards separating the crosswalk from turning traffic, centerline hardening via modular curbs or delineators, speed bumps at the corner, along with painted bike paths through the intersection.
	<div><div>\$</div><div>\$</div><div>\$</div><div>\$</div></div>	Concrete curb extensions leading up to the intersection, a corner island (preferably concrete) to force drivers into wider, slower turns, and extended painted bike paths through the intersection.
Rectangular Rapid Flashing Beacon (RRFB)	<div><div>\$</div><div>\$</div></div>	Two RRFBs, one located on either side of the roadway.
	<div><div>\$</div><div>\$</div><div>\$</div></div>	On roadways with a center median/island, two RRFBs in each direction, four total, with two on the center median.
Bicycle Signal Head	<div><div>\$</div><div>\$</div><div>\$</div><div>\$</div><div>\$</div></div>	Installation of bicycle signal heads on one or more approach with integrated timing and sensors.

EMPIRE STATE TRAIL LOCAL ECONOMIC OPPORTUNITIES PLAN

Onondaga County, NY

APPENDIX B



APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Planning-level Cost Estimates

Developing accurate cost estimates for connections from the EST to various economic centers and municipalities is difficult, as there are several options for routing these connections, and several factors that need to be considered: is the connector segment on-road, or off-road? If off-road, will the connection be constructed of stone dust or asphalt? Would such as connection require property acquisition or easements? Are new/additional traffic signals needed to accommodate a connector in certain locations? Are any new ADA-compliant curb ramps and street crossings needed? Is curbing required? And so on.

Noted within this Appendix are rough cost estimates for constructing paths (trail), bike lanes, and pedestrian overpasses pulled from multiple national and local sources. The estimates on this page come from the following document: Costs for Pedestrian and Bicyclist Infrastructure Improvements – A Resource for Researchers, Engineers, Planners, and the General Public, dated October 2013. The report was prepared by the University of North Carolina (UNC) at Chapel Hill’s Highway Safety Research Center for the Federal Highway Administration and supported by the Robert Wood Johnson Foundation through its Active Living Research program. These figures are assumed to include engineering, design, mobilization, and furnish and installation costs, and are based on 2012 dollars. The estimates do not include right-of-way and/or property acquisition. Also included in the tables of cost estimates are the number of sources and observations that went into the estimates shown.

In the UNC document, paths are defined as multi-use, often accommodating both pedestrians and bikes. Whether paved or unpaved, the costs noted in the table are for paths eight feet wide. Bicycle lanes are assumed to be five feet wide. It was also noted that separated bikeway (8 feet in width) projects typically cost between \$536,664 and \$4,239,320 per mile depending on site conditions, path width, and materials used. In the cost estimates to the right, all sidewalks are assumed to be five feet in width with a thickness of four inches. Pedestrian overpasses

and underpasses completely separate pedestrians from vehicular traffic and provide safe pedestrian accommodation over often impassable barriers, such as highways, railways, and natural barriers such as rivers. Overpasses and underpasses consist of different types of structures, including bridges and are generally very expensive: Overpasses (excluding bridges) have a range from \$150 to \$250 per square foot or \$1,073,000 to \$5,366,000 per complete installation, depending on site conditions.

The numbers in the following table include only the basic planning level cost estimates for a shared-use paths, bike lanes, sidewalks, and pedestrian overpasses. The estimates do not include costs of additional amenities that may be necessary for some connectors, including crosswalks, crossing islands, curb

ramps, curb extensions, lighting, pavement markings, fencing, signals, signage, and/or street furniture, etc. Maintenance and upkeep costs are also not included.



A new Loop the Lake bridge over a rail line.

Cost for Pedestrian and Bicyclist Infrastructure Improvements - UNC Highway Safety Research Center							
Infrastructure	Description	Median	Average	Minimum	Maximum	Cost Unit	Number of Sources (Observations)
Path	Multi-Use Trail - Paved	\$261,000	\$481,140	\$64,710	\$4,288,520	Mile	11 (42)
Path	Multi-Use Trail - Unpaved	\$83.870	\$121,390	\$29,520	\$412,720	Mile	3 (7)
Bikeway	Bicycle Lane	\$89,470	\$133,170	\$5,360	\$536,680	Mile	6 (6)
Sidewalk	Concrete Sidewalk	\$27	\$32	\$2.09	\$410	Linear Foot	46 (164)
Sidewalk	Concrete Sidewalk + Curb	\$170	\$150	\$23	\$230	Linear Foot	17 (24)
Overpass / Underpass	Pedestrian Overpass	N/A	N/A	\$1,073,000	\$5,366,000	Each	5 (5)
Bicycle Parking	Bicycle Rack	\$540	\$660	\$64	\$3,610	Each	19 (21)

APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

As part of their bikeways planning initiative, the Maryland Department of Transportation and the Baltimore Regional Transportation Board’s Bicycle and Pedestrian Advisory Group developed an interactive cost estimating tool. The tool aims to cover many of the common expenses associated with bicycle facility projects, from pavement markings and signage to physical barriers and traffic calming features. The goal of the tool is to provide guidance to municipalities on project design and construction costs associated with various bicycle infrastructure pieces.

Facilities that range from shared streets to protected bike lanes to bicycle boulevards are included within the tool, each with their own worksheet containing their specific requirements and recommendations. Cost estimates are based on the American Association of State Highway Transportation Officials (AASHTO) and Maryland Manual of Uniform Traffic Control Devices (MDMUTCD) standards for facility design, pavement markings, sign placement, and other standards. Based on the facility type, the length of the corridor in question, and other specifics entered by the user, estimated costs are produced, including estimates on the design and permitting costs.

The table on the right includes common facility types along with the unit cost used within the estimating tool. The estimates include generalized costs for asphalt, concrete, grading, drainage improvements, limited utility relocation, pavement markings, signs, and traffic signal adjustments. Construction management, site remediation and ongoing maintenance costs were not included within the tool.

Planning Level Cost Estimating Tool for Bicycle Infrastructure Projects		
Maryland Department of Transportation and the Baltimore Regional Transportation Board		
Category	Facility Type	Cost
Pavement Markings	Bike Lane Symbols	\$500 / Each
	5” White Retroreflective Pavement Marking	\$20 / Linear Foot
	5” White Retroreflective Pavement Making for 3’ Buffer, 10’ Spacing	\$20 / Linear Foot
	5” Yellow Retroreflective Pavement Marking	\$20 / Linear Foot
	Green Pavement Marking	\$20 / Linear Foot
Signs	Bike Signage	\$50 / Each
Separation	Flex Posts (10’ Spacing)	\$50 / Each
	Low Profile, Pre-Fab, Concrete Barrier (10’ Length, 50’ Spacing)	\$1,000 / Each
	Concrete Planters (6’ Length, 25’ Spacing)	\$1,250 / Each
	Raised Concrete Median	\$100 / Square Foot
Signalization	Full Intersection	\$150,000 / Intersection
	Partial Intersection	\$50,000 / Intersection
Traffic Calming Features	Bicycle-Friendly Speed Humps	\$5,000 / Each
	Curb Extensions	\$20,000 / Intersection
	Landscaped Chicanes	\$7,500 / Each
	Raised Crosswalk	\$10,000 / Each
	Raised Intersection	\$50,000 / Each
	Mini-Roundabout	\$50,000 / Intersection
	Bicycle-Friendly Storm Grates	\$7,500 / Each



West Street bikeway in Syracuse.



Empire State Trail identification sign.

APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

A more local source for bicycle and pedestrian cost estimates is the New York State Department of Transportation. To assist applicants with their Safe Routes to School (SRTS) grant applications, NYSDOT had developed the Safe Routes to School Quick Estimate tool . This listing provides per unit costs for a variety of bicycle/pedestrian amenities, as shown in the following table.




The NYSDOT SRTS numbers shown to the right are basic planning level cost estimates for multi-use path, and standard pedestrian and bicycle amenities.

As far as cost ranges are concerned, in general, lower cost bicycle/pedestrian amenities and facilities include striping of bike lanes, installation of curb ramps, and some sidewalks. Medium cost items include pedestrian signals, significant sidewalks, stone dust or asphalt trails (depending on length), and high cost items general involve major road reconstruction.

Unless noted, estimates do not include: moving utilities/mailboxes, incidental alteration of drainage structures, driveway aprons, pruning, clearing and grubbing, maintenance and protection of traffic (M&PT), planting, WTCZ (work zone) costs, incidentals, inflation, contingencies, survey, design and construction inspection.

Abbreviations: LF = Linear Foot; EA = Each; MI = Mile

Source: New York State Department of Transportation Safe Routes to School Quick Estimates (updated May 2018).

Selected Cost Estimates from New York State Department of Transportation Safe Routes to School Quick Estimates, Upstate New York (updated May 2018)		
Item	Unit Price	Notes
5-foot wide sidewalk	\$145/LF	Includes removal of existing sidewalk, saw cutting, excavation, disposal, fill, sub-base material, compaction, and the construction of the new sidewalk with associated curbing, patching and repairs to affected asphalt and concrete, topsoil, establishing turf and finish work. All material and labor required to perform these tasks is included. DOES NOT include required adjustments to utilities.
10-foot wide multi-use asphalt path	\$63/LF	Includes all prep of sub-grade, saw cutting and tack coat, truing and leveling courses. DOES NOT include curbing, grading or turf establishment. NOTE: Prices have been volatile in recent years.
ADA Curb Ramp	\$3,650/EA	Includes demolition, saw cutting, excavation, disposal, fill, sub-base material, compaction, construction of the new curb ramps, landings and associated curbing, detectable warning units, repairs to affected asphalt and concrete, topsoil, establishing turf on disturbed areas, and finish work NOTE: There are significant variations in the complexity and price of curb ramps. This figure represents an average.
Crosswalk (Ladder bar w/standard striping)	\$1200/EA	Assume 700 LF of 4” striping per crosswalk. Includes application, removal and covering of pavement lines, letters, symbols, stop bars, crosswalks and any other markings, and any required cleaning and preparation of the surface to receive the markings.
Concrete Curbing	\$82/LF	Includes demolition, saw cutting, excavation, disposal, fill, sub-base material, landscaping (adjustments and grading of existing ground), compaction, and the construction of new curb, repairs to affected asphalt and concrete as necessary, topsoil, establishing turf (to disturbed areas), finish work. DOES NOT include required adjustment of utilities.
Raised Crosswalk	\$15,000/EA	None listed.
Pedestrian Push Button – Existing Signal	\$250/EA	None listed.
Pedestrian Push Button – New Signal	\$7,000/EA	Includes demolition, saw cutting, excavation, disposal, fill, topsoil, establishing turf on disturbed areas, repairs to affected asphalt and/or concrete as necessary, traffic signal systems, and components (removed and or supplied / installed), traffic signal systems wiring, including vehicle detection (removed and or supplied / installed), furnishing electrical service, finish work, and any required adjustments to utilities.
Wooden bollard	\$250/EA	Includes the cost of excavation and backfill and furnishing all labor, materials, and equipment necessary to complete the work.
White line to delineate bicycle lane	\$3,538/MI	Price is for one 4 in. wide line to delineate bike lane. Any widening or pavement reconstruction must be estimated separately.
Hatched buffer zone to delineate bicycle lane	\$16,236/MI	2 ft wide hatched buffer with 6 in wide stripe on the bicycle lane side of the buffer and 4 in wide stripe on the opposite side.
Bicycle symbol pavement marking	 \$1,575/MI	Bicycle symbols (and, if used, associated markings) are placed at intersections and at 250 ft. intervals.
Shared lane pavement marking (i.e., “sharrow”)	 \$3,675/MI	Price includes the bicycle symbol with a double strip “chevron” above. Refer to NYSDOT TSMT 13-07 - Shared Lane Marking Policy for guidance on use and placement of this pavement marking.
Arrow pavement marking	 \$1,575/MI	Placed at 250 ft. intervals along bicycle lane.

APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Champions

Developing connector routes from the Empire State Trail (EST) into local nodes of services and amenities can present some interesting challenges and opportunities to our communities, one of these being the role of “champion”. The CNYRPDB, SOCPA, and the SMTc are planning agencies and do not implement projects. Connector routes will not manifest themselves unless local and/or state leadership (where it can) step forward (i.e., the city, the county, New York State Department of Transportation, Canal Corporation, etc.).

At the state level, Parks & Trails New York (PTNY) has been part of the process working towards the enhancement and completion of the Erie Canalway Trail/Empire State Trail in and through the Syracuse area for years. As a statewide promoter of the Empire State Trail, PTNY brings a unique perspective to route planning in the Syracuse area. PTNY provides direct services to current and potential EST trail users, both through their CycletheErieCanal.com web site designed to elevate the visibility and reputation of the Erie Canalway Trail as a world-class cycling destination and directly market the trail to the national and international adventure traveler and cycling tourist, and through phone and e-mail conversations where they offer advice on topics ranging from route selection to cycling equipment choices. PTNY’s partnerships with the NYS Canal Corporation and Erie Canalway National Heritage Corridor, and the agency’s experience managing the volunteer Trail Ambassador and Adopt-a-Trail programs, and hosting annual Bicyclists Bring Business events across the state, will be useful in bringing these programs into the Syracuse area. Throughout the route development and completion of the Empire State Trail, PTNY asked to continue to be consulted and thought of as a “Champion” for the EST overall. Our local communities can look to, and lean on PTNY for advice and information related to the EST.

Champions can also emerge at the local level, especially in the case of private property owners that may want to partner

with others to work on creating connections to the EST. Once connections to the EST are in place, the potential for partnerships for trail upkeep and maintenance (Adopt-A-Trail programs) will grow – Rotary Clubs, Boy Scout and/or Girl Scout Groups, and volunteers in general are also trail champions. Locally, the Camillus Erie Canal Park has had a strong volunteer base for years that secured funding and enabled the restoration of an aqueduct along the Erie Canal there.

Funding

There are a handful of great resources that already exist that highlight funding opportunities relating to trails, as well as bicycle- and pedestrian-related amenities.

PTNY offers grants on occasion to assist communities in improving trails, parks and public land throughout the state. PTNY partners with the NYS Office of Parks, Preservation and Historic Preservation (OPRHP) to award NYS Park and Trail Partnership Grants (funded through the Environmental Protection Fund), which are matched with private and local funding, to support projects to strengthen Friends groups and enhance public access and recreational opportunities at state parks and historic sites across the state. In the 2019-2020 round, PTNY awarded \$900,000. The PTNY website also has a page that outlines many funding opportunities – including the Park and Trail Partnership Grant Program, Government Grant Programs, the New York State Consolidated Funding Application (CFA), Non-Governmental Grants, Grants with Multiple Deadlines, as well as other funding and assisting resources. Municipalities should take a look at the programs noted on the PTNY website under “Funding Opportunities” at <https://www.ptny.org/our-work/support/funding-opportunities>.

Additionally, there are numerous bicycle and pedestrian funding opportunities available through the U.S. Department of Transportation Transit, Highway, and Safety Funds. A list of these funding opportunities was updated in August 2018 on the Bicycle and Pedestrian Program page of the Federal

Highway Administration website (https://www.fhwa.dot.gov/environment/bicycle_pedestrian/), and can be found on the following pages. This is another invaluable resource that municipalities should start with. If local municipalities are interested in applying for such funds, contacting the Syracuse Metropolitan Transportation Council (SMTc) is a good place to start. As a transportation planning agency, the SMTc can share with municipalities which federal funds may be available to them, and how to go about applying for such funds.

The table on the following pages indicate potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements that follow, and see program guidance for detailed requirements. Project sponsors should fully integrate non-motorized accommodations into surface transportation projects. Section 1404 of the Fixing America’s Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

Abbreviations
ADA/504: Americans with Disabilities Act of 1990/ Section 504 of Rehabilitation Act of 1973
BUILD: Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
INFRA: Infrastructure for Rebuilding America 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
HSIP: Highway Safety Improvement Program
NHPP: National Highway Performance Program
STBG: Surface Transportation Block Grant Program
TA: Transportation Alternatives set-aside (formerly Transportation Alternatives Program)
RTP: Recreational Trails Program
SRTS: Safe Routes to School Program / Activities
PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
NHTSA 402: State and Community Highway Safety Grant Program
NHSTA 405: National Priority Safety Programs (Non-motorized safety)
FLTPP: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)

APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities															
	U.S. Department of Transportation Transit, Highway, and Safety Funds															
	Revised August 9, 2018															
	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTPP
Access enhancements to public transportation (includes benches, bus pads)	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
ADA/504 Self Evaluation / Transition Plan									\$	\$	\$		\$			\$
Bicycle plans				\$					\$	\$		\$	\$			\$
Bicycle helmets (project or training related)									\$	\$SRTS		\$		\$*		
Bicycle helmets (safety promotion)									\$	\$SRTS		\$				
Bicycle lanes on road	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Bicycle parking	~\$	~\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$				\$
Bike racks on transit	\$	~\$	\$	\$	\$	\$			\$	\$						\$
Bicycle repair station (air pump, simple tools)	~\$	~\$	~\$	\$	\$	\$			\$	\$						\$
Bicycle share (capital and equipment; not operations)	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
Bicycle storage or service centers (example: at transit hubs)	~\$	~\$	~\$	\$	\$	\$			\$	\$						\$
Bridges / overcrossings for pedestrians and/or bicyclists	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Bus shelters and benches	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
Coordinator positions (State or local)						\$ 1 per state			\$	\$SRTS		\$				
Crosswalks (new or retrofit)	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Curb cuts and ramps	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Counting equipment				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Data collection and monitoring for pedestrians and/or bicyclists				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Historic preservation (pedestrian and bicycle and transit facilities)	\$	~\$	\$	\$	\$				\$	\$						\$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	~\$	~\$	~\$	\$	\$			\$	\$	\$						\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Maps (for pedestrians and/or bicyclists)				\$	\$	\$			\$	\$		\$	\$*			
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$			\$*	\$	\$	\$	\$		\$				\$
Pedestrian plans				\$					\$	\$		\$	\$			\$
Recreational trails	~\$	~\$	~\$						\$	\$	\$					\$
Road Diets (pedestrian and bicycle portions)	\$	~\$	\$				\$	\$	\$	\$						\$
Road Safety Assessment for pedestrians and bicyclists							\$		\$	\$			\$			\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety									\$SRTS	\$SRTS		\$	\$*	\$*	\$*	
Safety education positions									\$SRTS	\$SRTS		\$		\$*		
Key: \$ = Funds may be used for this activity (restrictions may apply). ~\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions																

APPENDIX B - COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities															
	U.S. Department of Transportation Transit, Highway, and Safety Funds															
	Revised August 9, 2018															
	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTP
Safety enforcement (including police patrols)									\$SRTS	\$SRTS		\$		\$*	\$*	
Safety program technical assessment (for peds/bicyclists)									\$SRTS	\$SRTS		\$	\$*	\$		
Separated bicycle lanes	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Shared use paths / transportation trails	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Sidewalks (new or retrofit)	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Signs / signals / signal improvements	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Signed pedestrian or bicycle routes	\$	~\$	\$	\$	\$	\$		\$	\$	\$		\$				\$
Spot improvement programs	\$	~\$	\$	\$			\$	\$	\$	\$	\$	\$				\$
Stormwater impacts related to pedestrian and bicycle projects	\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Traffic calming	\$	~\$	\$	\$			\$	\$	\$	\$		\$				\$
Trail bridges	\$	~\$	\$			\$*	\$	\$	\$	\$	\$	\$				\$
Trail construction and maintenance equipment									\$SRTS	\$SRTS	\$					
Trail/highway intersections	\$	~\$	\$			\$*	\$	\$	\$	\$	\$	\$				\$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	~\$*	~\$*	~\$*						\$*	\$*	\$*					\$
Training						\$	\$		\$	\$	\$	\$	\$*	\$*		
Training for law enforcement on ped/bicyclist safety laws									\$SRTS	\$SRTS		\$			\$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Key: \$ = Funds may be used for this activity (restrictions may apply). ~\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions																

Program-specific notes:

Federal-aid funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis.

- **BUILD:** Subject to annual appropriations. See <https://www.transportation.gov/BUILDgrants> for details.
- **INFRA:** See <https://www.transportation.gov/buildamerica/infragrants> for details. Focus on projects that generate national or regional economic, mobility, and safety benefits.
- **TIFIA:** Program offers assistance only in the form of secured loans, loan guarantees, or standby lines of credit, but can be combined with other grant sources, subject to total Federal

assistance limitations.

- **FTA/ATI:** Project funded with FTA transit funds must provide access to transit. See Bicycles and Transit and the FTA Final Policy Statement on the [Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law](#).
 - » Bicycle infrastructure plans and projects funded with FTA funds must be within a 3 mile radius of a transit stop or station, or if further than 3 miles, must be within the distance that people could be expected to safely and conveniently bike to use the particular stop or station.
 - » Pedestrian infrastructure plans and projects funded with FTA funds must be within a 1/2 mile radius of a transit stop or station, or if further than 1/2 mile, must be within the distance

that people could be expected to safely and conveniently walk to use the particular stop or station.

» FTA funds cannot be used to purchase bicycles for bike share systems.

» FTA encourages grantees to use FHWA funds as a primary source for public right-of-way projects.

- **CMAQ** projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. Several activities may be eligible for CMAQ funds as part of a bicycle and pedestrian-related project, but not as a highway project. CMAQ funds may be used for shared use paths, but may

not be used for trails that are primarily for recreational use.

- **HSIP** projects must be consistent with a State’s [Strategic Highway Safety Plan](#) and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem.
- **NHPP** projects must benefit National Highway System (NHS) corridors.
- **STBG and TA Set-Aside:** Activities marked “\$SRTS” means eligible only as an SRTS project benefiting schools for kindergarten through 8th grade. Bicycle transportation non-construction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)).
- **RTP** must benefit recreational trails, but for any recreational trail use. RTP projects are eligible under TA and STBG, but States may require a transportation purpose.
- **SRTS:** FY 2012 was the last year for SRTS funds, but SRTS funds are available until expended.
 - » Maps: System maps and GIS;
 - » Safety education and awareness: for transportation safety planning;
 - » Safety program technical assessment: for transportation safety planning;
 - » Training: bicycle and pedestrian system planning training
- **Federal Lands and Tribal Transportation Programs (FLTTP)** projects must provide access to or within Federal or tribal lands:
 - » Federal Lands Access Program (FLAP): Open to State and local entities for projects that provide access to or within Federal or tribal lands.
 - » Federal Lands Transportation Program: For Federal agencies for projects that provide access within Federal lands.
 - » Tribal Transportation Program: available for federally-

recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.

- **NHTSA 402** project activity must be included in the State’s Highway Safety Plan. Contact the State Highway Safety Office for details: <http://www.ghsa.org/html/about/shsos.html>
- **NHTSA 405** funds are subject to State eligibility, application, and award. Project activity must be included in the State’s Highway Safety Plan. Contact the State Highway Safety Office for details: <http://www.ghsa.org/html/about/shsos.html>

Cross-cutting notes

- FHWA Bicycle and Pedestrian Guidance: http://www.fhwa.dot.gov/environment/bicycle_pedestrian/
- **Applicability of 23 U.S.C. 217(i) for Bicycle Projects:** 23 U.S.C. 217(i) requires that bicycle facilities “be principally for transportation, rather than recreation, purposes”. However, sections 133(b)(6) and 133(h) list “recreational trails projects” as eligible activities under STBG. Therefore, the requirement in 23 U.S.C. 217(i) does not apply to recreational trails projects (including for bicycle use) using STBG funds. Section 217(i) continues to apply to bicycle facilities other than trail-related projects, and section 217(i) continues to apply to bicycle facilities using other Federal-aid Highway Program funds (NHPP, HSIP, CMAQ). The transportation requirement under section 217(i) is applicable only to bicycle projects; it does not apply to any other trail use or transportation mode.
- There may be occasional DOT or agency incentive grants for specific research or technical assistance purposes.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.

