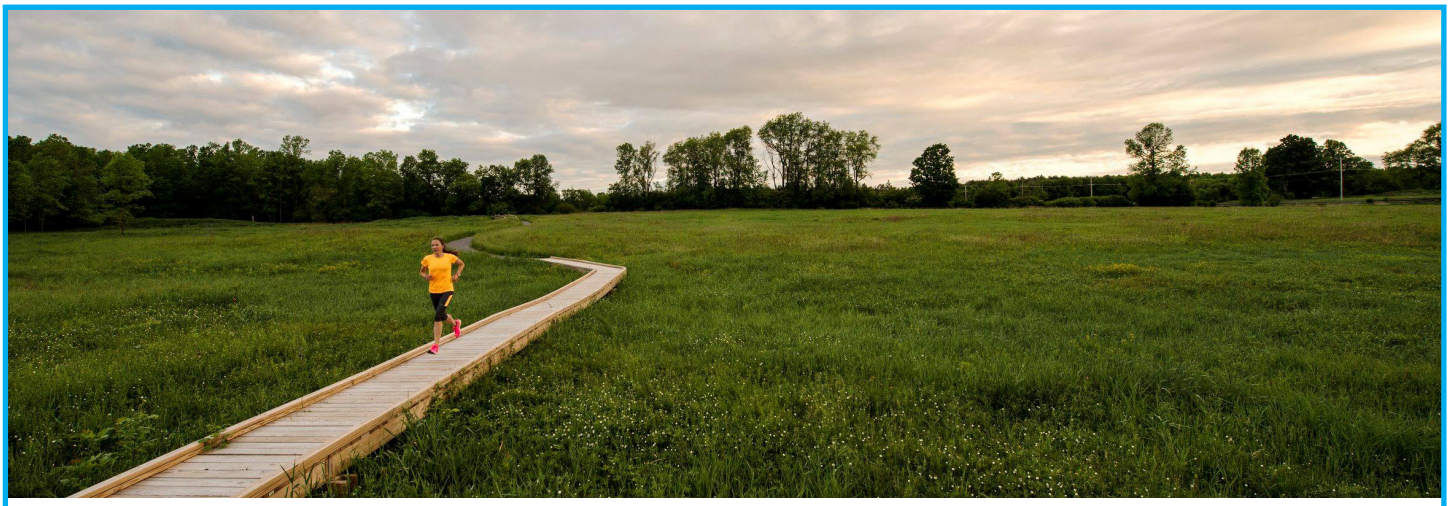

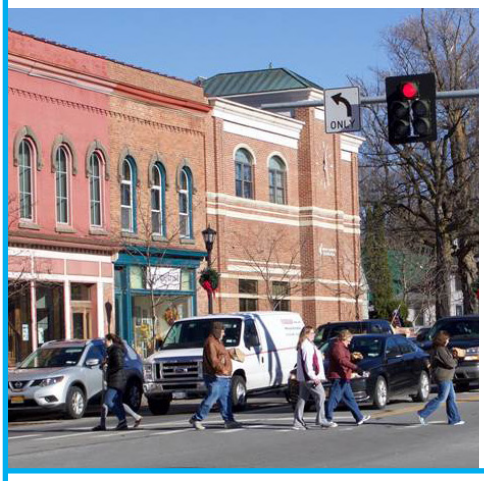

- DRAFT -

TOWN AND VILLAGE OF CANTON, NEW YORK

CANTON MASTER TRAIL PLAN

April 2018

This plan was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund.

ACKNOWLEDGMENTS

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RIVER STREET PLANNING & DEVELOPMENT

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SECTION 1. INTRODUCTION: CANTON AT A GLANCE

Located in the northern reaches of New York State, just north of the Adirondack Mountains and south of the St. Lawrence River, Canton is a vibrant college town with beautiful natural resources and abundant opportunities for outdoor recreation. Traversed by a mix of state, county, and local roadways and surrounded mostly by rural farmland, Canton is one of the principal communities of New York's North Country, and the St. Lawrence County Seat. The community of Canton consists of the Villages of Canton and Rensselaer Falls, and includes the hamlets of Crary Mills, Morley, and Pyrites.

Kip Tract Trail.

A small rural town of about 6,000 residents, Canton is home to two universities - SUNY Canton and St. Lawrence University - adding more than 5,000 people when school is in session. Many who live in Canton are from families who have been here for generations, while others have come to pursue careers in education, healthcare, government, and agriculture. Some were attracted to the environment and quality of life; many choose to remain here in retirement. Remote and relatively far from major cities – 130 miles north of Syracuse, 100 miles west of Plattsburgh, and 360 miles from New York City – Canton is only 75 miles south of Ottawa, the capital of Canada, and a beautiful 80-mile drive from Lake Placid in the Adirondack Park. The Grasse River, rich in history and recreational opportunities, winds through Canton.

Goals and Priorities of the Master Trail Plan

Canton's Master Trail Plan (MTP) is a blueprint for further development of the multi-use non-motorized network of trails and pathways connecting to key infrastructure and recreational assets in the Canton community.

- Development of this network will inspire people to choose non-motorized means of travel, providing substantial health and environmental benefits.
- The network will promote recreational activities such as walking, hiking, bicycling, rollerblading, skiing, snowshoeing, and roller skiing.
- The plan will integrate different people and locations in the Village and Town of Canton (including the village of Rensselaer Falls and the hamlets of Crary Mills, Morley, and Pyrites); new and improved facilities will enhance encounters among vehicles and trail users, creating a more pleasant experience for all involved.

The MTP is consistent with and supportive of the Complete Streets resolutions adopted in 2016 by the Canton Village Board of Trustees and the Canton Town Council. The intent of Complete Streets and the task force that oversees it is to plan, design, operate, and maintain roadways, sidewalks, and paths to ensure safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. For more information about Canton's Complete Streets program visit www.cantonny.gov/community/complete-streets.

Crossing the US 11 Bridge.

The MTP Committee focused on several key areas in discussions about planning and developing a multi-use trail network:

Health and Safety

Both the Canton Community Action Plan and Canton's Complete Streets resolutions address the priority of making Canton a healthy and safe place to live, work, learn, and play. The Local Waterfront Revitalization Plan highlights the potential of our waterways and waterfronts to enhance both transportation and recreation opportunities. The MTP aims to develop and promote a network of multi-use pathways that will offer all users a variety of safe and satisfying options.

Linkages and Connectivity

An impressive array of roads, paths, trails, and waterways already exists in the community; the MTP aims to add routes and improve and increase the connectivity among them all. Providing a network that can safely link users to downtown, residential neighborhoods, the schools and universities, commercial areas and business districts, and parks, recreation, and rural areas will be a great benefit to Canton residents and families while making it attractive as a recreation destination for visitors. An added benefit of an enhanced network with increased opportunities for non-motorized travel will be the reduction of vehicle congestion and decrease in energy use and environmental degradation.

Community Development

Canton's trail network is a valuable asset to the community. Residents can enjoy it for safe and healthy transportation and recreation, and visitors may be attracted by the rich and varied opportunities it affords. A carefully conceived and connected trail network will offer extraordinary options for recreation and outdoor activity, from hiking and paddling with friends and family to participating in organized events like the Frozen Foote, Summer Sunset, and the Maple Run races and the renowned Canton Canoe Weekend.

Marketing and Promotion

Finally, the MTP recognizes the importance of promoting the trail network and educating users about safe and appropriate uses of the entire system, on the trail network itself, online, through community events, and in printed materials for general distribution.

Group Ride on Shoulder.

For more than 20 years, interested Canton residents and municipal officials have been exploring and pursuing ways to connect roads, paths, and trails in our community. This report represents an expansion of many of those ideas and plans. With the recent adoption of Complete Streets policies by the Village and Town, this MTP allows us to move forward with the priority ideas identified above. This is not just a blueprint for the four or five areas identified, but part of larger framework for safety and connectivity in and around the Town of Canton and its village and hamlets.

Relationship to Existing Planning Initiatives

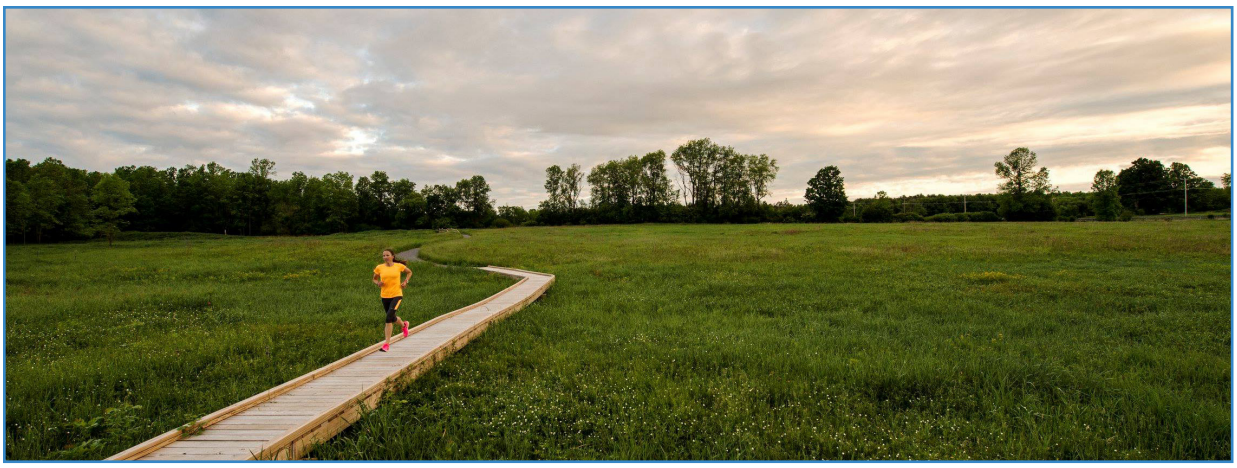
The MTP builds on goals and recommendations from other planning initiatives developed by the Canton community and supports and enhances regional on and off-road trail networks, bike routes, and scenic byways. An existing trails map is available on the community's website and in front of the Town and Village office building to promote usage.

This planning and design effort is clearly supported in the *Canton Community Action Plan* (CCAP) *Update* (2015), a five-year planning initiative of the Village and Town of Canton that first began in 1998, setting goals (pillars) and actions for economic and community development. The CCAP is intended to serve as a guide to economic and community development activities and to the grant writing and fundraising to be done to accomplish those activities. The first pillar of the 2015 plan is to "Ensure Canton is an Attractive, Safe, Convenient, Healthy Place to Live, Learn, Work, and Play." Recommendations to support this goal include: "promote the enhancement and safety of all modes of transportation including highways, railroad, pedestrian, and bicycling, including the development of a Complete Streets policy for the Village and Town; and update community recreational resources for all groups and all seasons."

The Town and Village of Canton developed the *Canton Grasse River Waterfront Revitalization Plan (2010)* for the Grasse River, which runs 19 miles through the Town from south to north and through the Village of Canton. The plan addresses a variety issues and opportunities including a focus on developing efficient pedestrian - and bicycle - friendly transportation access within the community and to waterfront amenities.

The Town and Village of Canton are participating in the *New York State Department of State Brownfield Opportunity Area (BOA) Program,* which is designed to assist communities in addressing the reuse and revitalization of vacant, underutilized, or blighted properties that are impacted by brownfields (real or perceived). A Pre-Nomination Study was completed in 2011 and the Village has applied to the State for "Step 2" funding to continue to develop ideas for redevelopment and revitalization with a focus on walkability and enhancing quality of life amenities. The Canton MTP supports this vision and some direct goals of the BOA including: "*expand and enhance the land trails network and pedestrian linkages within and to the waterfront area*." Recommended actions to support this goal include conducting a transportation/access management study to identify options for improving pedestrian, bicyclist, and motorist mobility at the Main Street (US Route 11) and Miner Street intersection.

The *North Country Byway Corridor Management Plan (2012)* proposed that US Route 11 through Canton be added to the Military Trail Scenic Byway (to be renamed the North Country Scenic Byway). This byway already includes the Village of Massena and would then extend south to include a portion of US Route 11 that would incorporate Potsdam and Canton. The proposed changes are based on the recognition of Canton and Potsdam as "economic and education centers, with rich and diverse attractions for travelers," and the appropriate inclusion of the Grasse River, which supports the theme of the byway: "bountiful north flow waters." Incorporating US Route 11/Main Street into a scenic byway increases heritage and eco-tourism promotion of the region and provides opportunities for collaboration on projects with other byway communities. A key opportunity related to the Canton MTP may be cycling the byway. The ability to safely navigate Canton by bicycle will be important for the byway experience, as will showcasing Canton as having places to stop and rest and amenities and conveniences such as bike racks, restrooms, picnicking areas, and eateries. Wayfinding signage or easily accessible information kiosks would help with navigation and direction.



Saddlemire Trail.

SECTION 2: EXISTING TRAIL NETWORK INFRASTRUCTURE

Canton has a number of paths creating safe loops for recreating and connecting key destinations within the community. These can be separated into categories of trails, designated bicycle lanes, paved shoulders, and wide outside land-shared roadways. In addition to the typical non-motorized forms of transportation, there is also heavy utilization of roadways by Amish horse and buggy drivers. Although there are a large number of existing paths, some are fragments in need of connection and others are inadequate in terms of safety.

Trail Loops and Networks

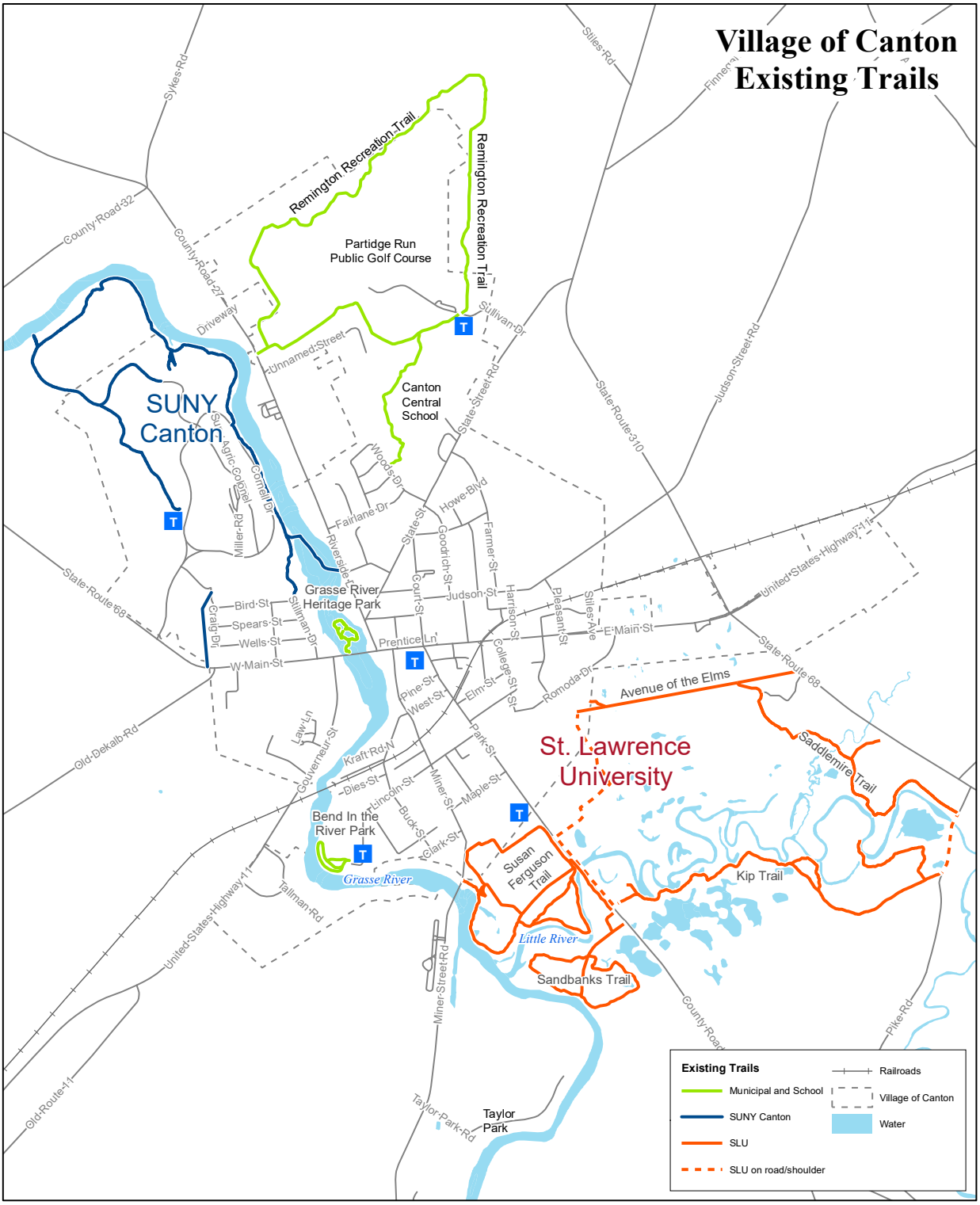
Trails provide a path entirely separated from motor vehicle traffic and are for the exclusive use of non-motorized recreation and transportation (pedestrians, cyclists, rollerbladers, cross country skiers, etc.). They are generally intended for all abilities and ages and many are handicapped accessible. The trails have different surface types – some, like the Remington Trail, are paved, while others are stone dust or hard-packed soil and other natural materials. Existing trails are depicted on the map on the following page and include:

- **The Remington Trail** – A 5K paved year-round fitness trail around the Partridge Knoll Golf Course, designed for bicycles, roller blades, walking, jogging, or cross-country skiing.
- **Canton Central School Cross-Country Trails** – A network of short, hard-pack soil trails that link the Remington Trail to the school's athletic field complex.
- **SUNY Canton Trails** – A trail network around and through the campus, including the cross-country trail. Trails also connect the campus with the Village of Canton: a trail and footbridges connect to Riverside Drive and the Martin Tract trails connect to Main Street via Stillman Drive and Hammond Drive.

Existing Trail Map at Municipal Building on Main Street.

Bike Parade on the Remington Trail.

EXISTING TRAIL NETWORK INFRASTRUCTURE



Map Prepared by St. Lawrence University Libraries GIS Program
Data Sources: SLU GIS, NYS GIS, ESRI
Projection: UTM NAD83 Zone 18N Date: 12/15/2017

- **Heritage Park Trail on Falls Island** – A well-maintained stone dust trail encircling Falls Island, once the site of several mills. The trail includes scenic vistas of the Grasse River, former mill sites, and interpretive signage of mill ruins and Village history, plant, and wildlife.
- **St. Lawrence University Campus and Trails -** The University's walking campus includes pedestrian paths that connect and integrate well with the village and are bicycle friendly. The recreation trail network is easily accessible from campus and composed of six primary trails: Susan Ferguson Trail, Cross Country/Woods Trail, Avenue of the Elms, Saddlemire Trail, Kip Trail, and the Sandbanks Trails. These trails have varied surface types, including cinder, gravel, hard-pack dirt, and wood chips. These trails are popular with pedestrians, bicyclists, and nordic skiers because of the relative flat layout and their alignment along rivers, through forests, and over fields.

Biking on the Kip Tract Trail.

Designated Bicycle Lanes

Designated bicycle lanes may be either separated "protected" lanes or a portion of a roadway that is designated by striping, signing, and a pavement marking for the preferential or exclusive use by bicyclists. At the writing of this plan, the American Association of State Highway and Transportation Officials (AASHTO) 2012 Bike Guide is being updated. It is expected that there will be changes to recommendations for bike lane standards with a recognition that protected bike lanes (lanes separated by a physical feature) will likely be recommended where possible. Within Canton there are two street where designated bike lanes meeting MUTCD standards once existed with bicycle lane symbol pavement markings:

- Riverside Drive between the intersection with Fairlane Drive and the entrance to the Remington Trail. The bike lane width was eight feet in both directions.
- State Street between the sidewalk ending at the Canton Central School campus entrance and the entrance to the Remington Trail. A ten-foot bicycle lane was designated on the west side of the street.
- Park Street from the railroad tracks to the Augsbury field house on the SLU campus.

Over time, the markings have faded rendering the lanes ineffective, although the wide shoulders still exist for relatively safe cycling compared to other locations.

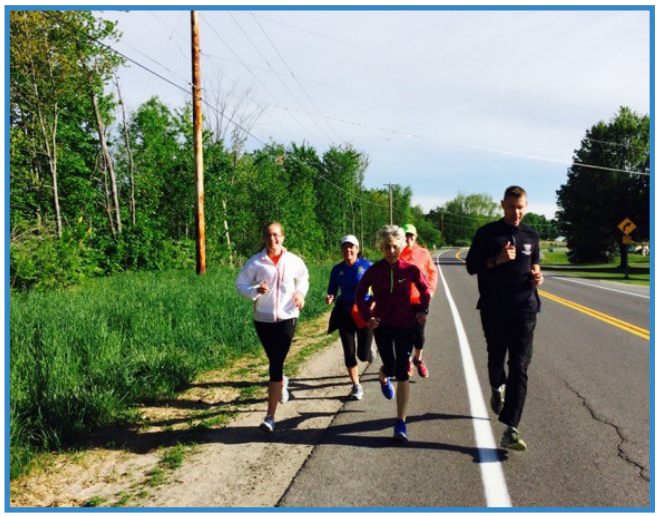
Wide Roads and Shoulders

The most inexpensive opportunities for improving cycling safety or creating multi-use paths are where roads and shoulders already have excess width or underutilized right-of-way. Roads identified with these characteristics include:

- West Main Street (NY Route 68) past the Grasse River bridges until just before the entrance to SUNY Canton, when the shoulder is lost to a left turn lane for the campus
- Park Street extending out to CR Routes 27 and 29
- East side of State Street between the Canton Central School campus and NY Route 310
- NY Route 310
- US Route 11 from the intersection with NY Routes 68 and 310 heading east toward Potsdam

Priority Gaps in the Multi-Use System

The following areas and streets have been identified as requiring priority attention for an integrated, safe, and more usable non-motorized trail system that connects the most people to popular destinations within the Canton community and fills gaps in segments to increase access and use of recreational trail amenities. These priority gaps and corridors for improvement have a range of needs from improving shoulder treatments to significant road reconstruction to meet the goal of offering safe routes for non-motorized transportation.



Road Runners on Pike Road.

Miner Street Road to Taylor Park

Canton's beach is located on Miner Street Road, approximately one mile from the Miner Street Bridge over the Grasse River. The road continues to parallel the Grasse River, passing Jingleville Road, and terminating at the Eddy-Pyrites Road, a total distance of five miles. The road is popular with joggers, and is the start of bicycle routes that include the Jingleville Road loop and trips to Pyrites, Hermon, Rensselaer Falls, and other communities. Some of the residents of Miner Street Road use their bicycles as their primary transportation means into the village.

Despite being a significant corridor for pedestrian and bicycle recreation and commuting, Miner Street Road lacks any improvements to promote the safety of non-motorized users. A jogging fatality in 1982 spurred St. Lawrence University to develop the Ferguson Trail on the campus as a safe option

for joggers. However, no improvements for pedestrians and bicyclists were made on Miner Street Road itself, not even in the short section out to Taylor Park. A very narrow paved shoulder runs from the bridge to the base of the cemetery hill. Beyond that, there are no paved shoulders, and there is limited visibility at this hill.

SUNY Canton Footbridge Connecting to Riverside Drive.

Riverside Drive to the Remington Trail

The Remington Trail is one of the prime recreational resources of Canton. Its 3.2 mile loop accommodates walkers, joggers, bicyclists, and skateboarders. One access to it is from the parking lot of the Partridge Run Golf Course at the end of Sullivan Drive; the other access point is on Riverside Drive (part of County Route 27).

From Main Street to the Remington Trail, Riverside Drive has a mix of commercial, residential, and rural features. It intersects with State Street (see discussion below). On the west side of the street, a sidewalk extends from Main Street to the highrise apartments. On the east side, the sidewalk runs from Main Street to Fairlane Drive.

Starting at Fairlane Drive going north on Riverside Drive, four-foot lanes are marked by painted solid stripe lane delineation on both sides, ending at the entrance to the Remington Trail. They are not marked as bicycle lanes; there are no bicycle symbols painted on the pavement. Instead, they are marked with a "Share the Road" sign heading north, away from the village. Where the lanes end when proceeding south into the village, there is no sign.

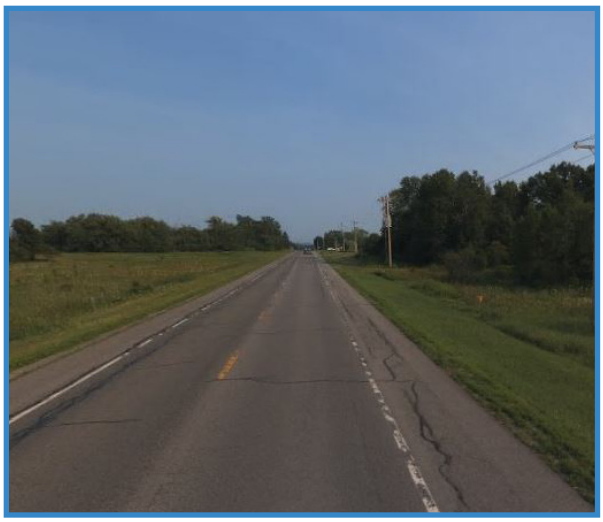
At the bicycle entrance to the Remington Trail is a bicycle sign and a striped crossing, and a driveway entrance to a parking lot a short distance south of the bicycle entrance. Riverside Drive continues as County Route 27 beyond the Remington Trail, a popular bicycle route for trips to Morley, Madrid, and Rensselaer Falls.

State Street extends from Riverside Drive to NY Route 310, passing through a residential neighborhood, the Canton Central School zone, the entrance to Partridge Run Golf Course, Partridge Knoll Senior Living Facility, and the Remington Trail, and Maplewood Skilled Nursing Facility and Assisted Living Center. It is one of the most heavily trafficked and safety-critical thoroughfares in the village. This plan proposes changes at both ends of the street.

State Street Intersection with Riverside Drive
The western end of State Street is a three-way intersection where State Street, Riverside Drive, and Chapel Street come together. The exit from the "highrise," which his home to a subtantial number of senior citizens, is across from the intersection.

The merging of the three streets presents hazardous traffic navigation challenges for motorists, bicyclists, and pedestrians. Turning from Riverside Drive onto State or Chapel Streets requires attention to traffic coming toward Riverside Drive from both of these streets. Turning from Chapel Street onto Riverside Drive requires crossing two or three lanes of traffic to get into the correct turning lane. This presents confusion and potential error to anyone unfamiliar with the area.

State Street from Canton Central School to NY Route 310
From Riverside Drive, there are sidewalks along both sides of State Street until just past the school campus. There are no sidewalks on either side for the rest of the length of the street; paved shoulders marked with solid strip lane delineations are on both sides of the street.


State Street and NY 310.

Students walk or cycle from the school to playing fields located east of the school. Cyclists and pedestrians use the on-road shoulders to walk out to Sullivan Drive and its recreation area and senior housing. State Street is part of popular bike routes, north on NY Route 310 to Madrid and beyond, or south on NY Route 310 to form a loop back into the village.

Given the vital safety issues of getting students safely from the school to the playing fields, and the role of State Street as part of Canton's trail network, it would be an ideal route for an off-road multi-use trail.

Farmer Street
Farmer Street runs from Judson Street north to State Street, ending at the north end directly across from the school. It is a street that is commonly used by students walking or cycling to school. A sidewalk runs the entire length of the street on the east side; on the west side, a sidewalk runs from State Street to Howe Boulevard. There are no painted bicycle lanes; student cyclists tend to use the sidewalks.

Nordic Ski Trail at Taylor Park.

NY Route 310 from State Street to Intersection of US Route 11 and NY Route 68
NY Route 310 is a busy traffic route extending from US Route 11 in Canton northward past Madrid to NY Route 56 south of Massena. There are four-foot painted shoulders on both sides of NY Route 310 for its entire length.

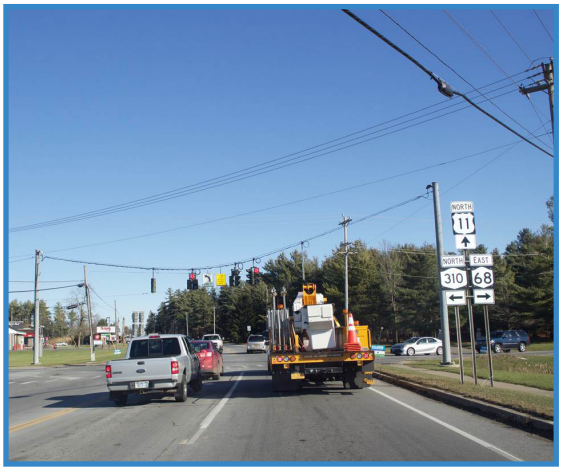
Turning south from where NY Route 310 is intersected by State Street, it passes residential housing, a meadow, the county office building, the Kinney's drug store, and Canton's two main shopping centers, before ending at US Route 11. There are plans for an access road leading from NY Route 310 to St. Lawrence Health System's medical office building, which is currently accessed only from US Route 11. NY Route 310 in Canton is thus a vital corridor for commerce and for health and human services.

The role of NY Route 310 in the Canton community could be significantly enhanced by making it a major corridor for non-motorized travel and a key section of the village's trail loop. This would link recreational facilities on either side of the village, and provide a safe route connecting St. Lawrence University to the Remington Trail.

Village Gateway and the Intersection of US Route 11 and NY Routes 310 and 68

The eastern entrance to the village of Canton is the intersection of US Route 11 and NY Routes 310 and 68. All of these routes are well used, with the traffic on US Route 11 being particularly busy. The traffic lights at this intersection have vehicle sensors, but it is common to have traffic backed up for a considerable distance waiting for the lights to change.

West of the intersection, US Route 11, or outer Main Street, has been marked as a two-lane street with a middle turning lane. Traffic must enter this lane to make left turns from US Route 11 to the shopping center, the motel, the E. J. Noble medical office building, and St. Lawrence University. The turning lane is also used by motorists making a left turn from any of these facilities onto US Route 11/Main Street. Because it is a common experience to turn into the lane just when another motorist is turning into the lane from the other direction, the turning lane has come to be popularly known as the "suicide lane." It is particularly challenging for bicyclists, who must gauge the speed and distance of vehicles going in both directions to pick a safe time to enter the turning lane.



US 11 Looking at the NY 310 & NY 68 Intersection.

Main Street at Park and Court Streets Intersection

This is a major intersection for east-west and north-south travel in the village, for motorists, bicyclists, and pedestrians. The NY Department of Transportation has made efforts to improve traffic flow here, including pedestrian-operated buttons to control traffic lights at each corner. Difficulties continue, particularly for bicyclists. The vehicle sensors should be attuned to recognize bicyclists waiting at the lights, so that the traffic lights turn to allow them to pass through the intersection.

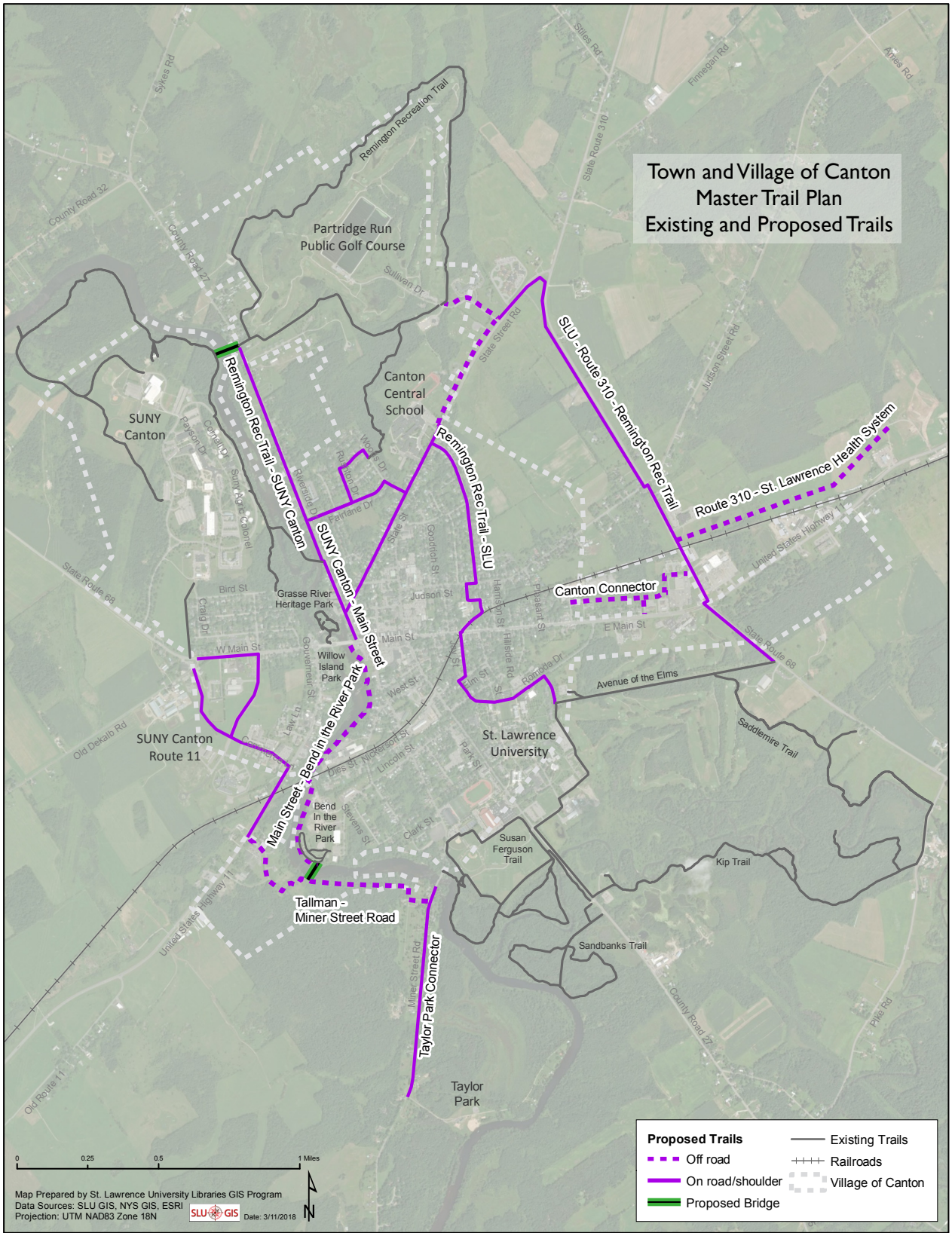
SECTION 3. TRAIL NETWORK ENHANCEMENT STRATEGIES AND PRIORITIES

A number of gaps in safe routes to key destinations have been identified. Some routes are utilized despite these deficiencies, others are generally avoided with no real alternative routes limiting access to recreation, goods, and services without use of a motor vehicle. In Section 2 of this plan, several key corridors are identified as lacking safe bicycle and pedestrian amenities that, if improved, could fill the gaps. Once the critical gaps are filled, the longer-term vision includes additional improvements and trails expanding the network to incorporate the greater Canton community. The MTP map on the following page illustrates how this plan will complete the trail network and provide new safe connections to community amenities.

This trail network enhancement strategy includes some basic design principles for off-road and on-road multi-purpose paths. They are not specific to any particular corridor and are intended to be used as guidance in the future. It should be noted that best practices for bicycle lanes, intersection design, and safety are updated every five years or so, and therefore the most recent design guides from bicycle and pedestrian coalitions, AASHTO, the Federal Highway Administration, should be consulted.

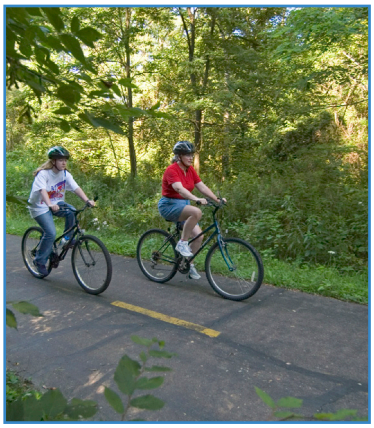
Following the general best practices recommendations are recommendations to develop specific on- and off-road trails and paths to address gaps and safety issues as identified in Section 2 of this plan. Each of these priority areas wa studied for improvements based on specific issues that may need to be addressed: current conditions including access to publicly held land and rights-of-way; existing pavement, shoulder, and physical constraints such as topography, vegetation, utilities, culverts, and drainage areas, intersections; on-street parking; and more. The goal for each improvement was to design the enhancement that would create the safest and most user-friendly option possible for that road condition. Many roads have changing conditions that also required consideration, so the proposed design improvements change with conditions as necessary to achieve the safest practical option.

In addition to providing specific design recommendations for on- and off-road pathways, the plan contains additional conceptual ideas and a vision for improvements to Riverside Drive and the US Route 11 gateway, including a more comprehensive look at the way future land uses, motorized traffic, and non-motorized traffic interrelate and function. Both of these corridor segments are important, presenting challenges to all forms of traffic and opportunities for future development.


Town and Village of Canton
Master Trail Plan
Existing and Proposed Trails
Remington Recreation Trail
Partridge Run
Public Golf Course
Canton
Central
School
SUNY
Canton
Remington Rec Trail - SUNY Canton
SUNY Canton - Main Street
Remington Rec Trail - SLU
SLU - Route 310 - Remington Rec Trail
Route 310 - St. Lawrence Health System
Canton Connector
Grasse River
Heritage Park
Willow
Island
Park
Main Street - Bend in the River Park
Bend
In the
River
Park
SUNY Canton
Route 11
St. Lawrence
University
Avenue of the Elms
Saddlemire Trail
Susan
Ferguson
Trail
Kip Trail
Sandbanks Trail
Tallman -
Miner Street Road
Taylor Park Connector
Taylor
Park
Proposed Trails
Off road
On road/shoulder
Proposed Bridge
Existing Trails
Railroads
Village of Canton
0
0.25
0.5
1 Miles
Map Prepared by St. Lawrence University Libraries GIS Program
Data Sources: SLU GIS, NYS GIS, ESRI
Projection: UTM NAD83 Zone 18N
SLU GIS
Date: 3/11/2018
N

Shared-Use/Multi-Purpose Off-Road Trail

- Recommended Minimum Path Width: 8-10 feet
- Ideal Path Width: 10-12 feet



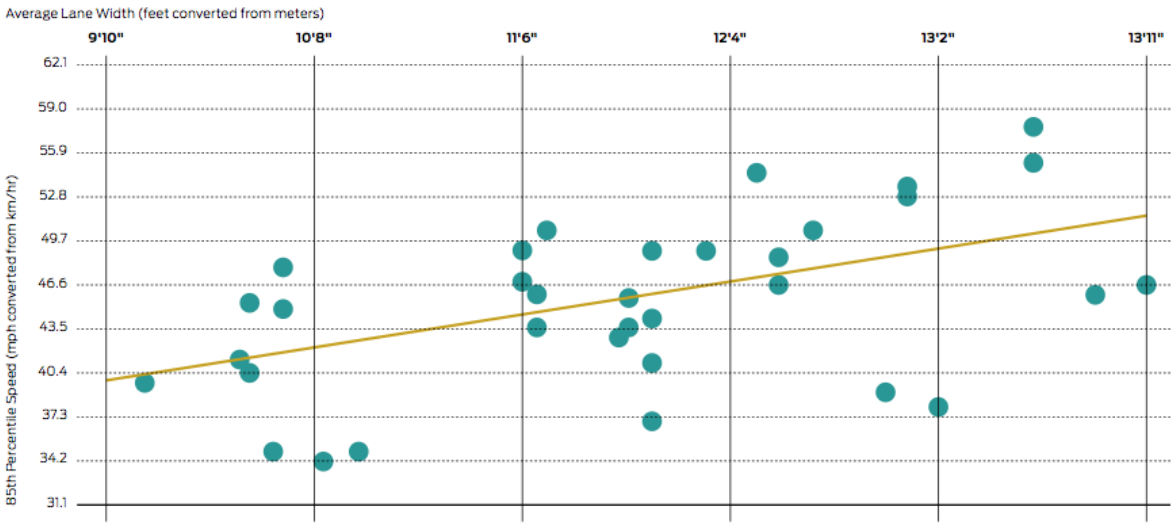
Off-road multi-purpose paths are designed to accommodate two-way bicycle and pedestrian traffic. The minimum width is ideally 8-12 feet. These types of paths often follow old rail beds, creek corridors, waterfronts, or nature trails.

Shared-Use/Multi-Purpose On-Street Buffered Path

- Recommended Minimum Path Width: 8 feet
- Ideal Path Width: 10 feet

Portions of a shared-use path may be within the road right-of way but physically separated from the roadway by a barrier or landscaping. The minimum width of these is 8 - 12 feet. The ideal buffer is 5+ feet to accommodate a landscape strip with street trees.

Wider travel lanes are correlated with higher vehicle speeds.



"As the width of the lane increased, the speed on the roadway increased... When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster."

Chart source: Fitzpatrick, Kay, Paul Carlson, Marcus Brewer, and Mark Wooldridge. 2000. "Design Factors That Affect Driver Speed on Suburban Streets." *Transportation Research Record* 1751: 18–25.

On-Street Bicycle Lane

- Recommended Minimum Path Width: 4 feet
- Ideal Path Width: 5-6 feet

On-street bicycle lanes often utilize excessive road shoulders, offering a lane on each side of the roadway. A painted lane delineation and bicyclist symbol is an efficient, low-cost solution to accommodate a safer alternative riding on roadways.

On-Street Buffered Bicycle Lane

- Recommended Minimum Path Width: 4 feet
- Ideal Path Width: 5-6 feet
- Ideal Landscape Buffer Width: Minimum 4 feet
- Preferred Vegetation: Pin Oak, Little Leaf Linden, Honey Locust. Red Oak, Iron Wood, American Hackberry, Birch, Aspen, Kentucky Coffee Tree, Silver Maple, Service Berry, Japanese Tree Lilac.

Where shoulder widths allow, adding a buffer to on-street bicycle lanes is an optimal solution for bicycle lane safety. Options can include a painted buffer, and/or security bollards where a landscape buffer is not feasible.

A common reason for unsafe streets is excessive drive lane widths. By limiting the widths of the roadway appropriately, we are encouraging appropriate operating speeds, allowing drivers to focus more on their surroundings. Minimizing driving lane widths will slow traffic, and allow more width for bicycle and pedestrian paths, enabling safe access for all users.

Precedent Projects

- The Connective Corridor - Syracuse, NY
- The Oneida Rail Trail - Oneida, NY
- Warren County Bikeway - Warren County, NY
- Montreal on Wheels - Montreal, Canada
- Bethlehem, PA

Resources

- Complete Streets
- Smart Growth America
- National Association of City Transportation Officials
- New York State Department of Transportation
- League of American Bicyclists

PRIORITY PROJECTS: CONCEPTS & DESIGNS

The following projects are addressed in the following pages:

1. Main Street at Park and Court Streets Intersection
2. Miner Street Road: At the Cemetery, South of the Cemetery, and Connecting to Taylor Park
3. Riverside Drive: State Street to the Cemetery and the Cemetery to Remington Trail
4. Riverside Drive: Intersection with State and Chapel Streets & the Grasse Riverfront
6. Farmer Street: Howe Boulevard to the School Campus
7. State Street: Northeast of School
8. NY Route 310: State Street to NY Route 310 and State to Judson Streets
9. US Route 11 Gateway (East Main Street Gateway)
10. The Canton Connector: The Village to St. Lawrence University to Canton's Shopping Center

Main Street at Park and Court Streets Intersection

Context map of Main Street at Park and Court Streets Intersection.

Description:
This is a major intersection for east-west and north-south travel in the village downtown, for motorists, bicyclists, and pedestrians. Main Street (US Route 11) running east-west is a major North Country regional transportation route. Park Street is a busy village street connecting to the St. Lawrence University campus. The NYS Department of Transportation has made efforts to improve traffic flow here, including pedestrian-operated buttons to control traffic lights at each corner. Difficulties continue, particularly for bicyclists, as existing vehicle sensors are not attuned to recognize bicyclists waiting at the lights.

Existing Site Photo: Main Street at Park & Court Streets.

Main Street at Park and Court Streets Intersection

Existing Site Photo: Aerial of the Intersection.

Recommendation:

- Adjust or add sensors to recognize bicyclists waiting at the lights so the traffic lights turn to allow them to pass through the intersection.

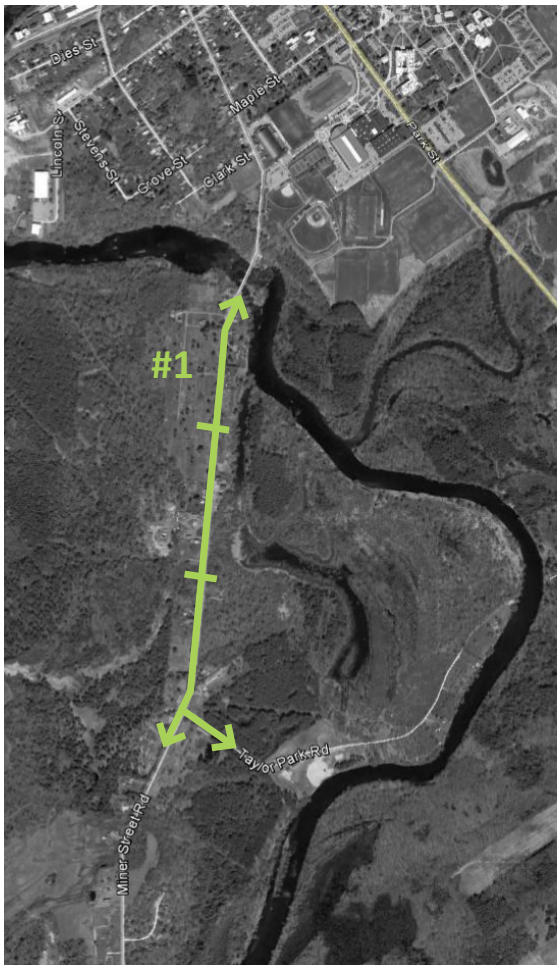
- To indicate the appropriate position for bicyclists to be able to trigger the vehicle sensor, add a sign and painted bicycle boxes marked on the pavement for each direction of traffic.

Photo credit: nacto.org/publication/urban-bikeway-design-guide/

Examples of sensors attuned to recognize bicyclists waiting at intersection signals.

Miner Street Road Segment 1: Existing Condition

MINER STREET ROAD
[SEGMENT 1: AT THE CEMETERY]



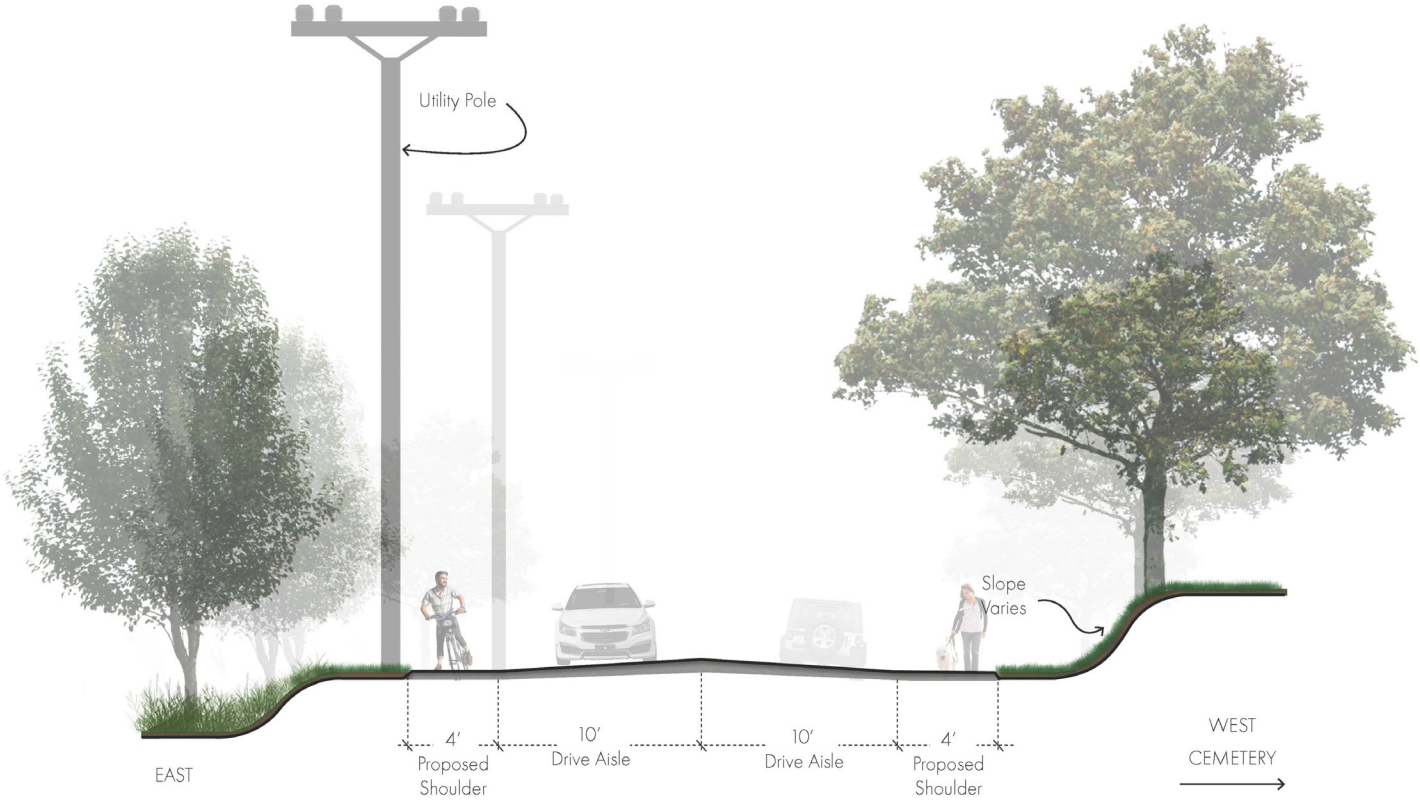
Context Map of Miner Street Road.

Description:

The considerations for Miner Street Road improvements are discussed in three segments reflecting changes to existing road and shoulder conditions. Miner Street Road at the cemetery has appropriate road widths for managing traffic speeds. The cemetery sits atop a slope that starts approximately 8.5 feet from the edge of pavement. On the east side of the street, a 4-foot shoulder expansion would be necessary to fit a bike lane within the edge of pavement and telephone pole distance. Therefore it is not recommended to implement an 8-foot multi-purpose path on the cemetery side to avoid unnecessary crossings at condition changes.

Existing Site Photo: Bottom of Slope at Cemetery.

Miner Street Road Segment 1: Proposed Improvements

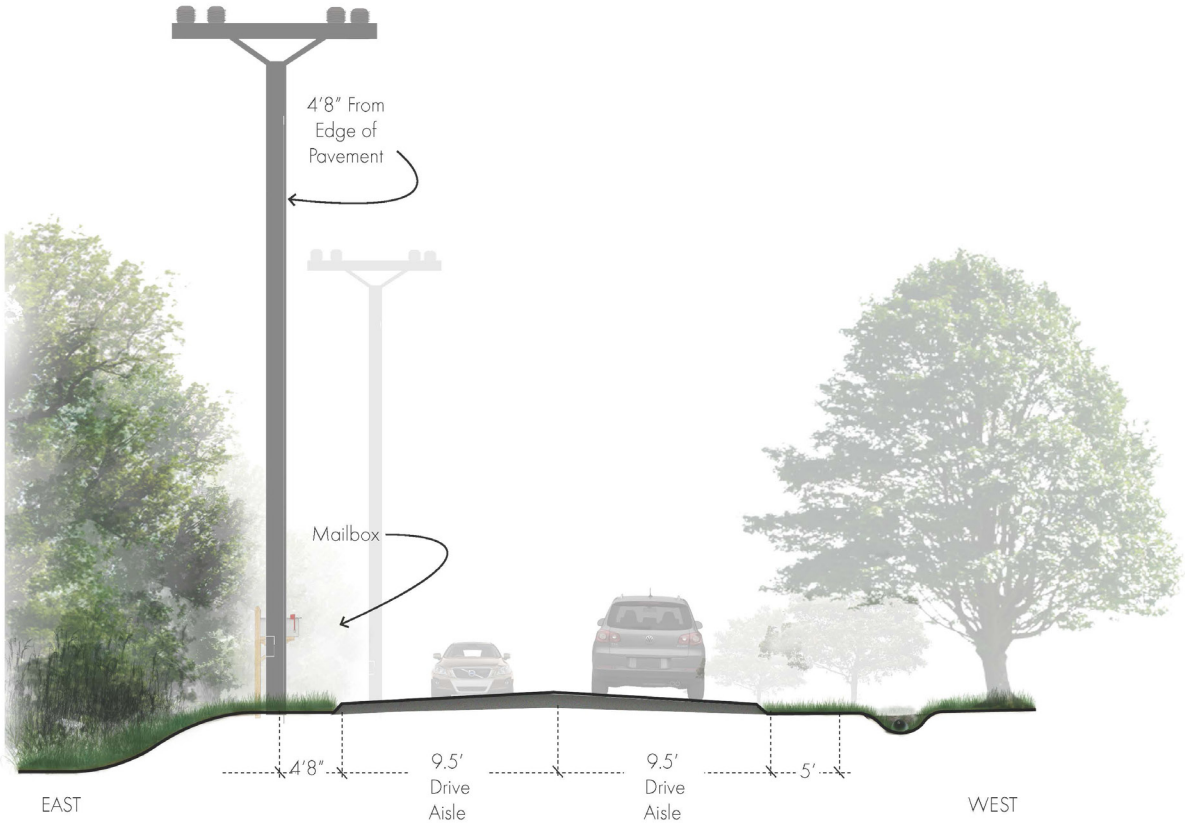


Road Condition: - Rural/Residential
Edge of Pavement to Edge of Pavement: - 20 feet
Recommendation: - 4-5 foot lanes on each side
Notes: - Telephone poles and slope down on east side
- Steep slope up to cemetery with large trees on west side

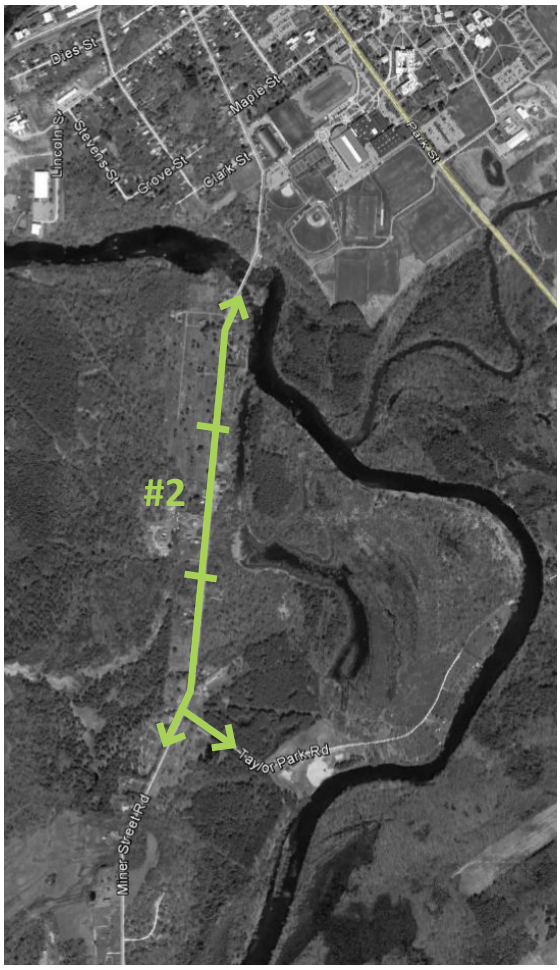
Existing Site Photo: Slope at Cemetery.

Existing Site Photo: Miner Street Road Facing South.

Miner Street Road Segment 2: Existing Condition



MINER STREET ROAD
[SEGMENT 2: SOUTH OF CEMETERY]



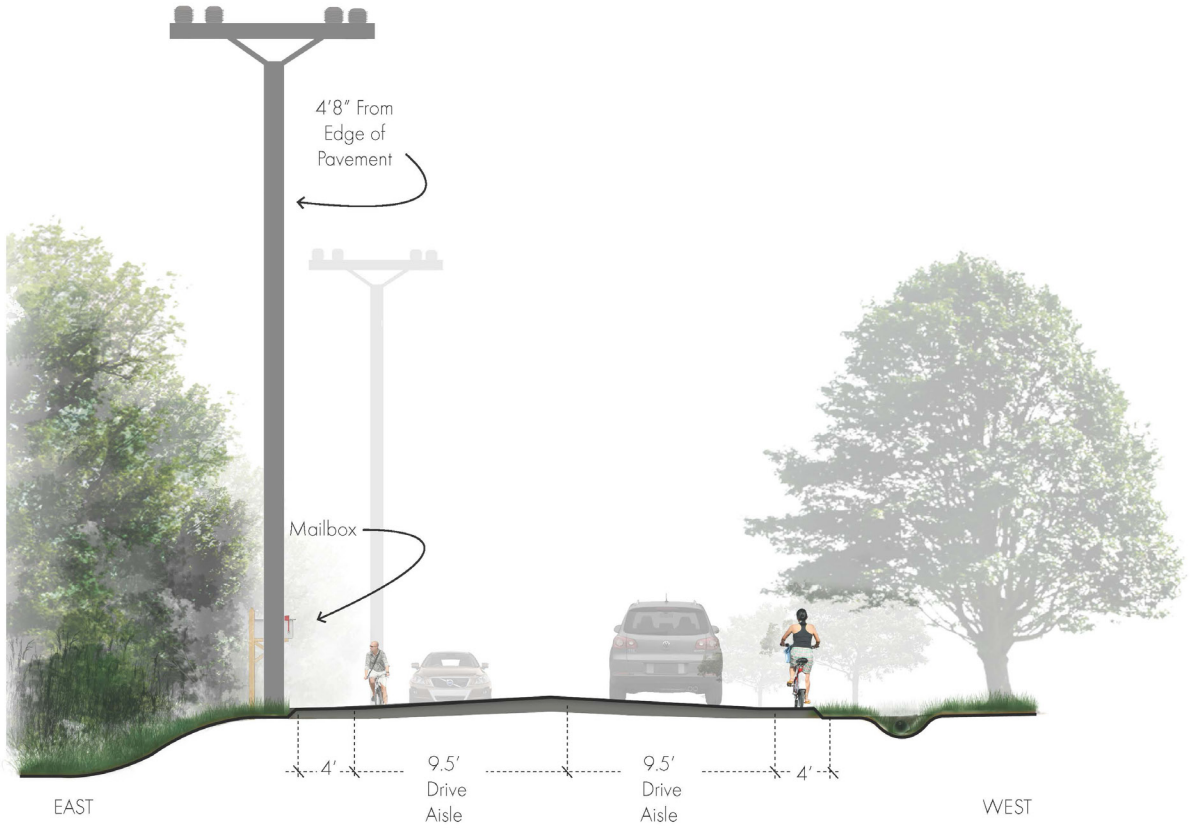
Context map of Miner Street Road.

Description:

The densely residential section of Miner Street Road begins to narrow to 19 feet. The driving lane widths in this situation were not altered. A 4-foot paved shoulder with a painted delineation on both sides is proposed. With culverts and swales on both sides of the road at this point, no more than a 4-foot lane is available.

Existing Site Photo: Culvert and Driveway on West Side.

Miner Street Road Segment 2: Proposed Improvements

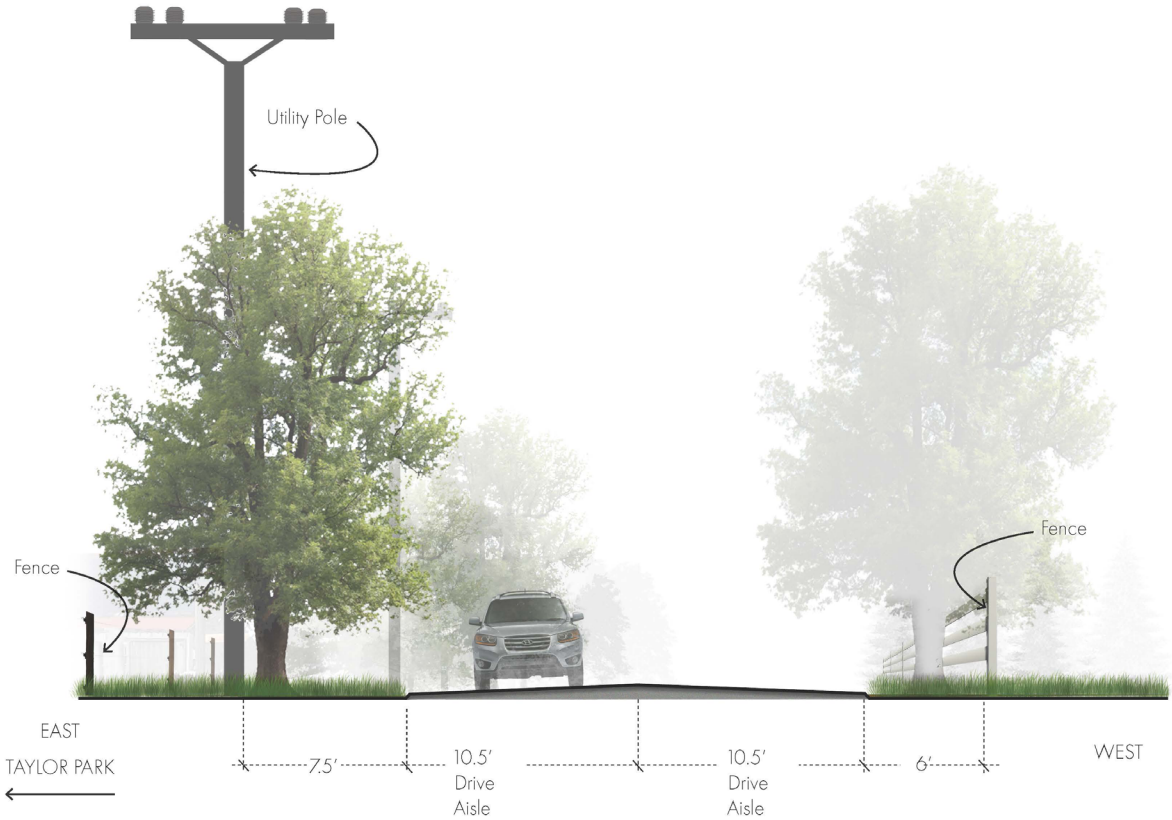


Road Condition: - Rural/Residential
Edge of Pavement to Edge of Pavement: - 19 feet
Recommendation: - 4-5 foot lanes on each side
Notes: - Telephone poles and mailboxes on east side
- Culvert and swale on west side, slope on east side

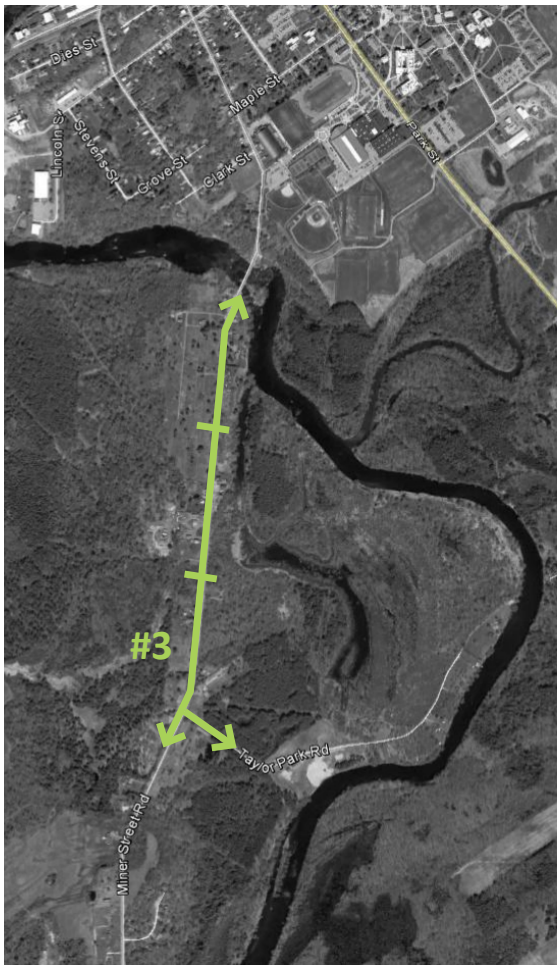
Existing Site Photo: Slope Running Down East Side.

Existing Site Photo: Miner Street Road Facing North.

Miner Street Road Segment 3: Existing Condition



MINER STREET ROAD
[SEGMENT 3: TO TAYLOR PARK]



Context map of Miner Street Road at Taylor Park.

Description:

Promoting a connection to Taylor Park is important for the future use of the site. Although conditions change along Miner Street Road, this particular rural area of the road can accommodate two bicycle/pedestrian lanes. The driving lane widths in this situation were not altered; instead, a 4-foot paved shoulder with a painted delineation on both sides was proposed.

Existing Site Photo: Entrance to Taylor Park.

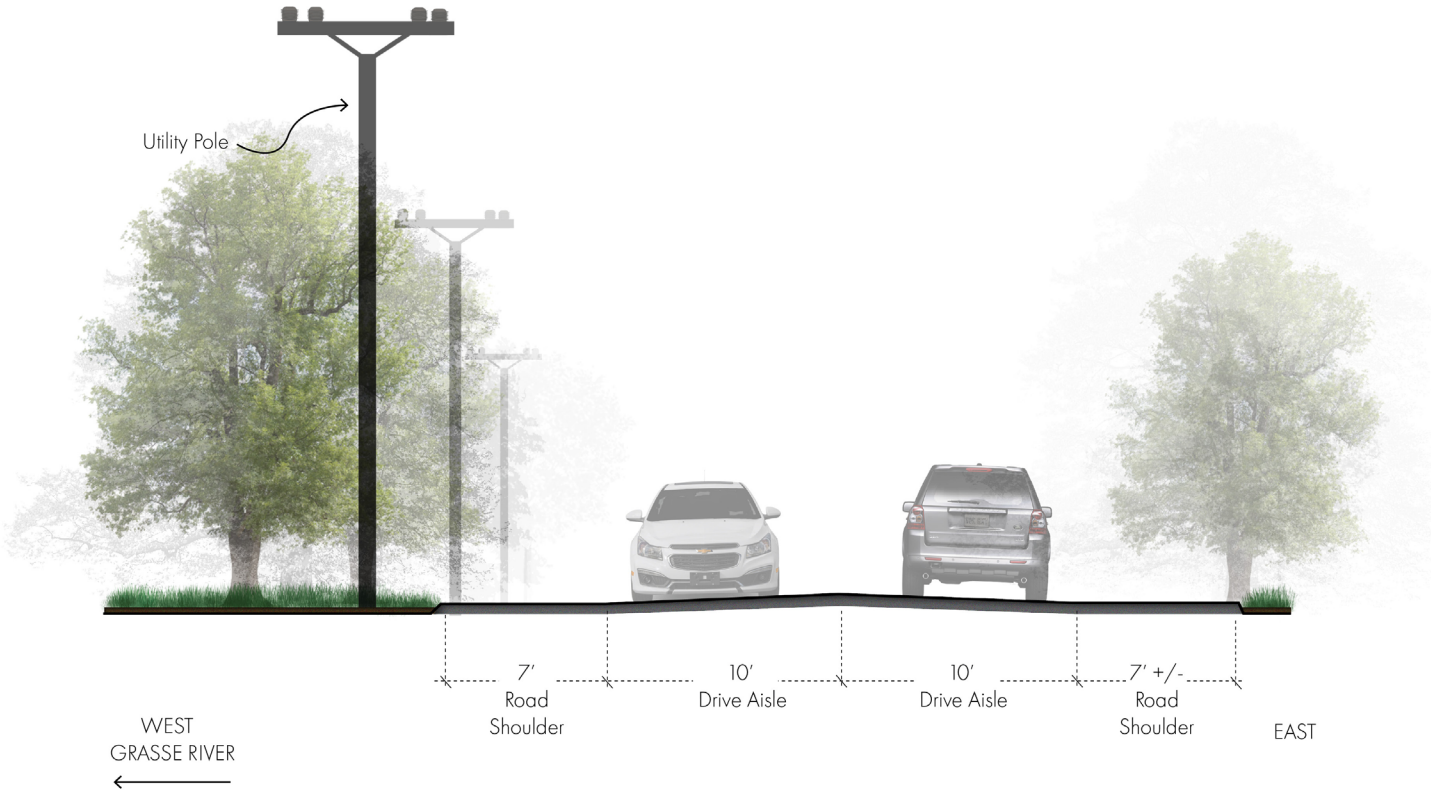
Miner Street Road Segment 3: Proposed Improvements

Road Condition: - Rural
Edge of Pavement to Edge of Pavement: - 21 feet
Recommendation: - 4-5 foot lanes on each side
Notes: - Telephone poles and fence on east side
- Some culverts and obstacles on west side

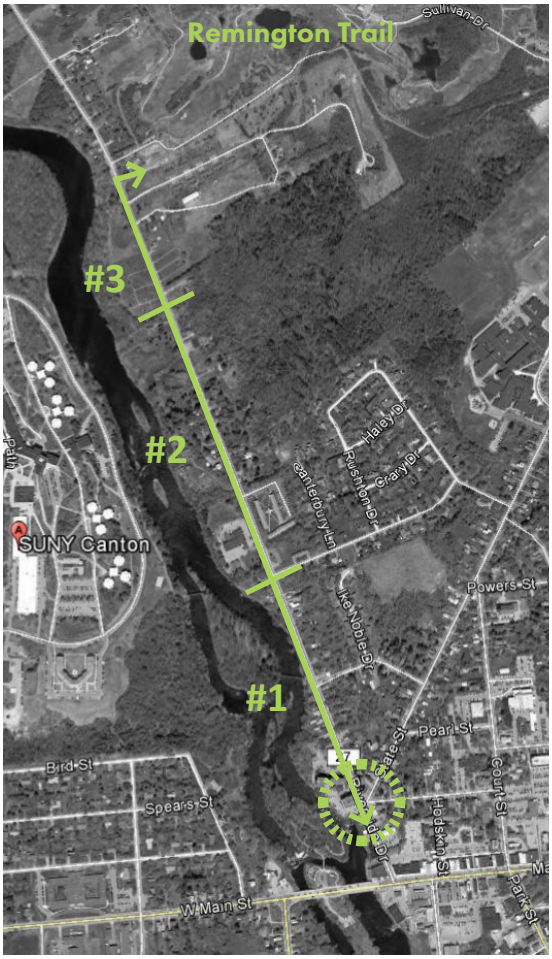
Existing Site Photo: East Side of Miner Street Road.

Existing Site Photo: Miner Street Road Facing South.

Riverside Drive Segments 1 & 2: Existing Condition



RIVERSIDE DRIVE
[SEGMENTS 1 & 2: STATE STREET TO CEMETERY]

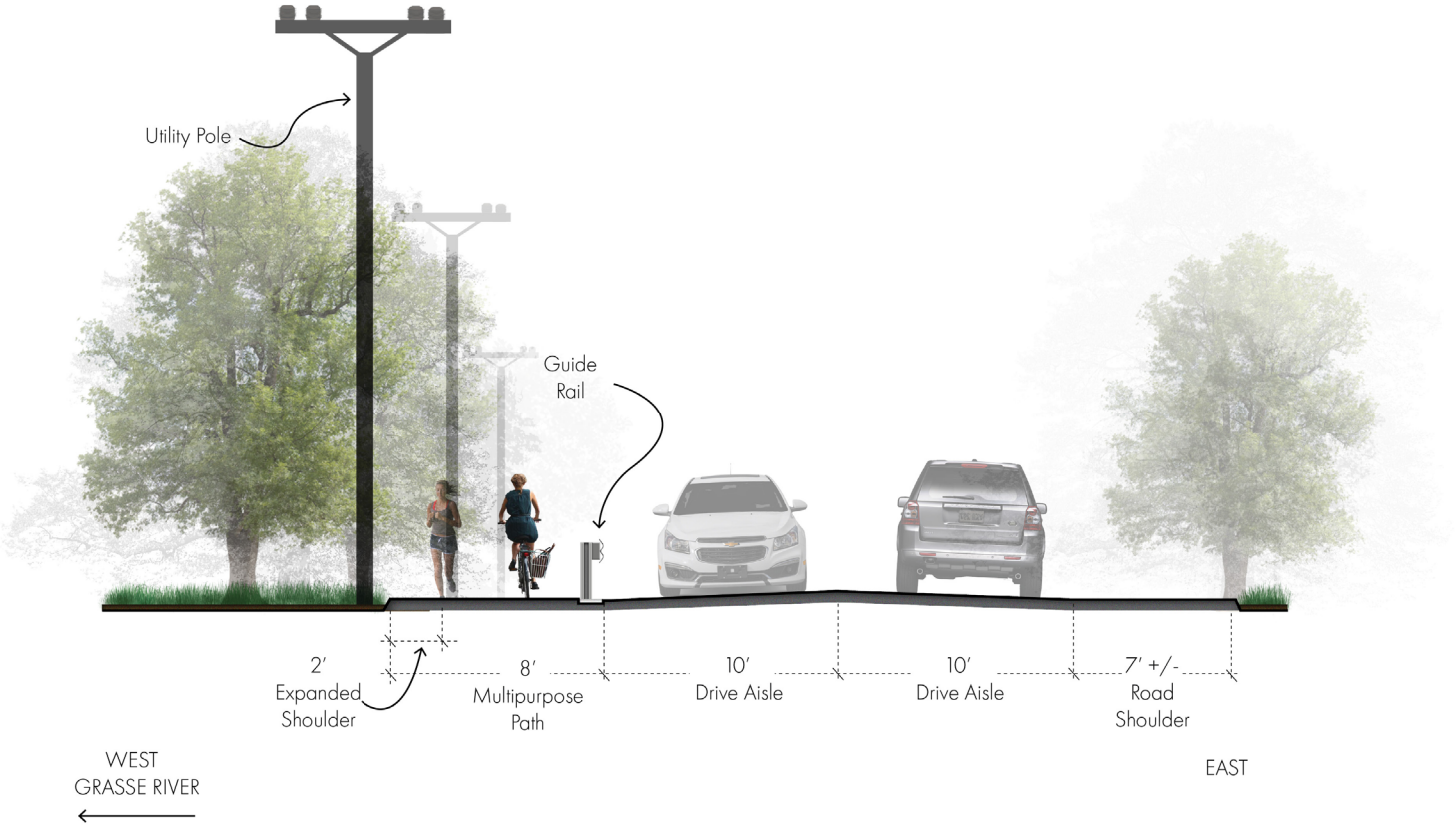


Context Map of Riverside Drive.

Description:

Riverside Drive is an important bicycle and pedestrian corridor with potential traffic from SUNY Canton students via the footbridge, the Remington Trail, and more. It evolves from a more urban-like setting in downtown to rural as it transitions out to Canton, changing conditions that require different treatments. Between Main Street and the area of a proposed riverfront park (Segment #1 on Context Map), the urban condition of sidewalks and parking lanes on both sides of Riverside Drive and buildings tight to the street present challenging bicycling conditions that have no immediate solution. In the vicinity of the proposed park and approaching the State Street intersection (Segment #2), conditions begin to widen allowing for 4-foot on-street bicycle lanes on each side of the road. At Fairlane Drive shoulder widths accommodate an 8-foot multi-purpose path with a 1-foot painted buffer and guiderail on the west side (segment #3). As the trail transitions out of the village, conditions widen further nearing the cemetery allowing for a 3.5-foot landscape buffer option in addition to the guiderail eventually connecting to the Remington Trail head.

Riverside Drive Segments 1 & 2: Proposed Improvements



Road Condition: - Village/Residential

Edge of Pavement to Edge of Pavement: - 20 feet

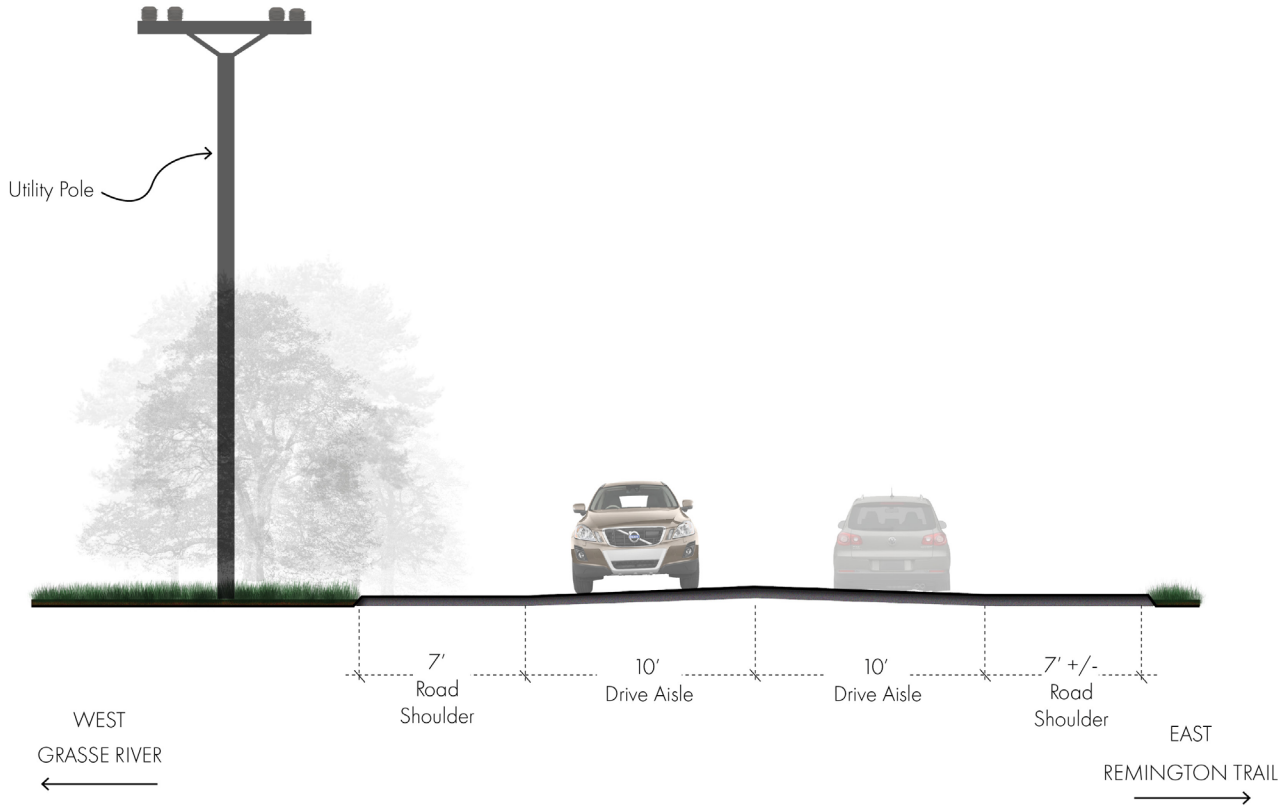
Recommendations : - 4-foot on-street lanes (not shown in section) start just south of the State Street intersection with Fairlane Drive
-8-foot multi-purpose path with painted buffer and guiderail

Notes: - Sidewalks exist on both sides from Main Street, ending before Fairlane Drive
- Telephone poles on east side

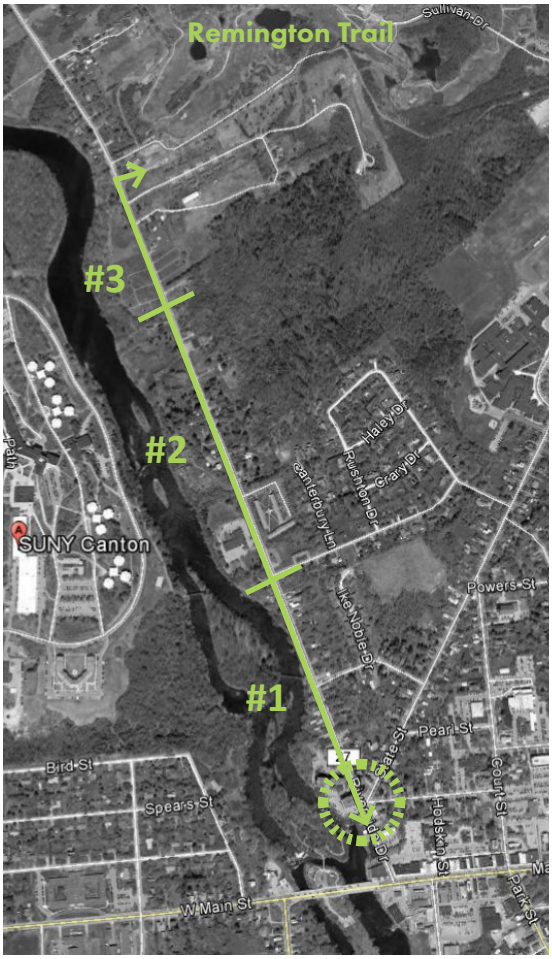
Existing Site Photo: Riverside Drive Facing North.

Existing Site Photo: Riverside Drive Facing South.

Riverside Drive Segment 3: Existing Condition



RIVERSIDE DRIVE
[SEGMENT 3: CEMETERY TO REMINGTON TRAIL]



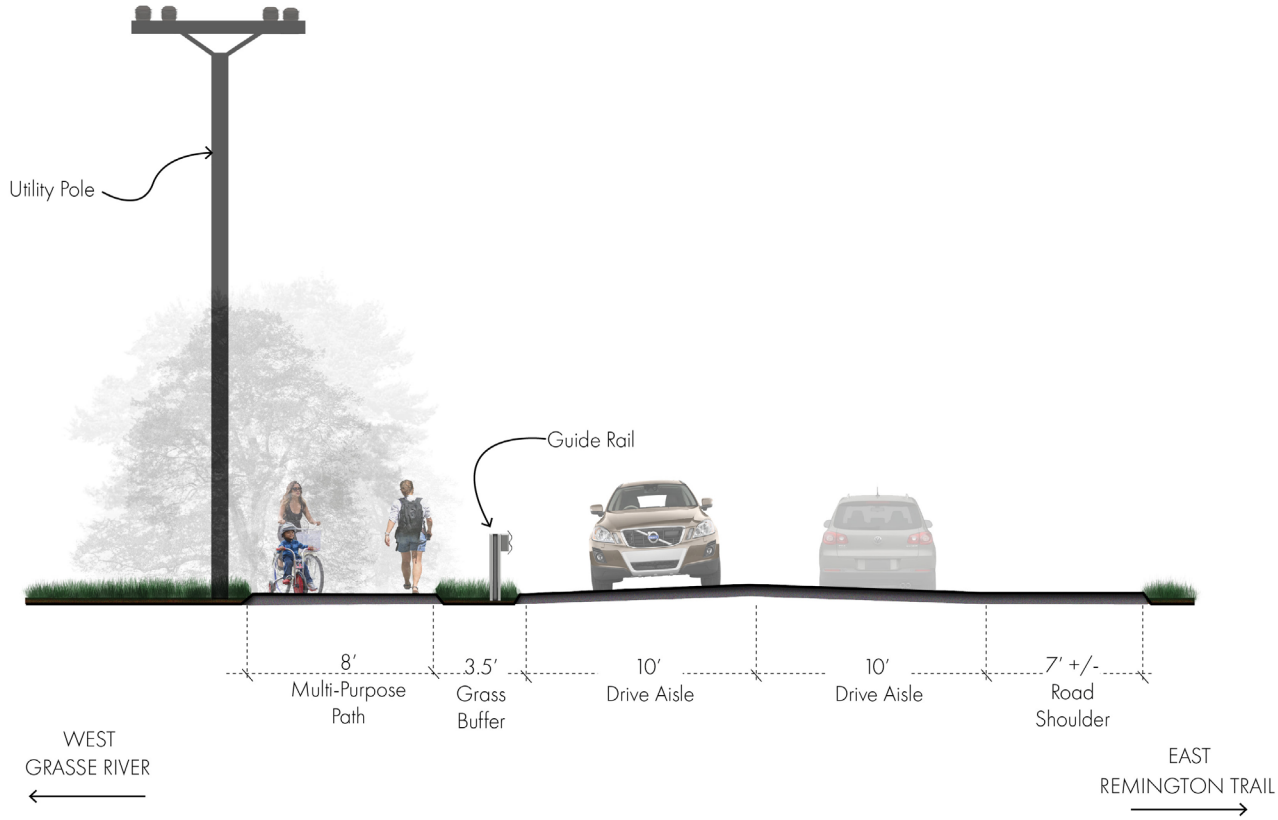
Context Map of Riverside Drive.

Description:

Riverside Drive is a vital corridor connecting Main Street to the Remington Trail and the existing and proposed SUNY Canton pedestrian bridges. The expansive shoulder widths and clear distance from the edge of pavement to any obstacles allows for a buffered multi-purpose path to be implemented. With a paved shoulder addition, a 3.5-foot buffer and 8-foot path can be implemented. The proposed 3.5-foot landscape buffer includes a grass strip with guardrail to provide additional security.

Existing Site Photo: Riverside Drive Facing South.

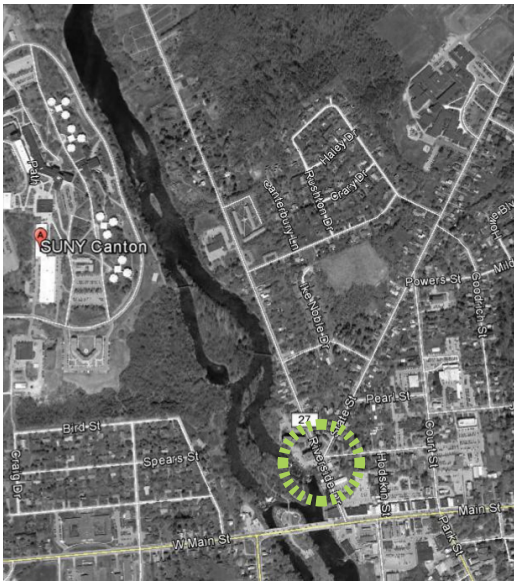
Riverside Drive Segment 3: Proposed Improvements



Road Condition: - Rural/Residential
Edge of Pavement to Edge of Pavement: - 20 feet
Recommendation: - 8-foot multi-purpose path with landscape buffer
Notes: - White line to telephone pole 12 feet at Remington Trail
- Swale starts at cemetery, requiring culvert in order to expand pavement

Existing Site Photo: Riverside Drive Facing North.

Existing Site Photo: West Side of Riverside Drive.



Context Map of Riverside Drive.

Riverside Drive and Intersection with State and Chapel Streets:

The western end of State Street is a three-way intersection where State Street, Riverside Drive and Chapel Street come together. The exit from a senior citizen highrise is across from the intersection.

The merging of the three streets presents hazardous traffic navigation challenges for motorists, bicyclists, and pedestrians. Turning from Riverside Drive onto State or Chapel Streets requires attention to traffic coming toward Riverside from both of these streets. Turning from Chapel Street onto Riverside Drive requires crossing two or three lanes of traffic to get into the correct turning lane. This presents confusion and potential error to anyone unfamiliar with the area.

RIVERSIDE DRIVE
[INTERSECTION WITH STATE & CHAPEL STREETS]

Existing Site Photo: Intersection Looking up Chapel Street (State Street to left of photo).

Existing Site Photo: Intersection Looking up State Street (Chapel Street to the right of photo).

RIVERSIDE DRIVE

[INTERSECTION WITH STATE & CHAPEL STREETS]

Existing Condition Aerial.

Riverside Drive: Riverside and State Streets Intersection Conceptual Enhancement Strategies

Sense of community and safety are two of the most important factors in a healthy neighborhood. The Riverside Drive and State Street intersection is a critical entry into the greater Canton community network, yet currently does not support a safe connection within the neighborhoods or to the businesses on Main Street. The existing Chapel/ State Street intersection acts as an uncomfortable transition to Riverside Drive for both drivers and pedestrians. The proposed plan reorients Chapel Street to meet State Street at a perpendicular angle, thus avoiding the current hazardous condition. The plan also removes one of the turning lanes as State Street meets Riverside Drive, which allows for a shorter pedestrian connection across the intersection. Future potential consideration to

Proposed Conceptual Plan.

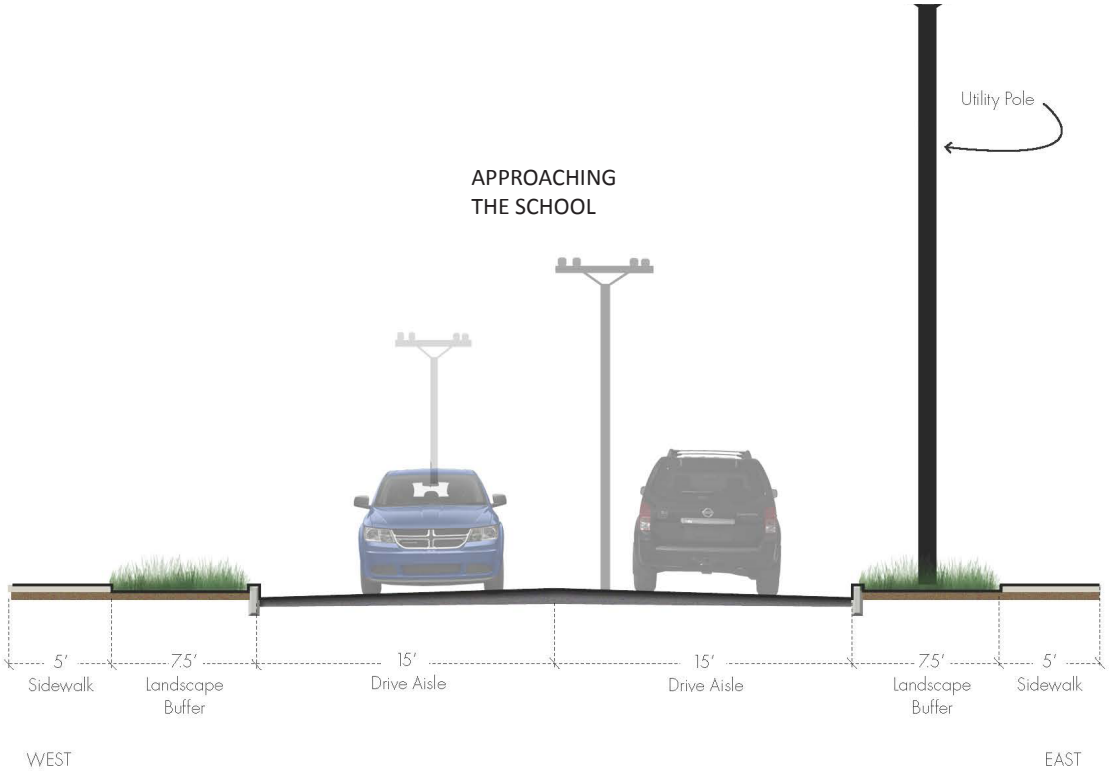
change Chapel Street into a one-way will aid in the safe functionality of the intersection.

The reorientation of State Street and Chapel Street allows for the replacement of excess pavement with a neighborhood pocket park.

Currently, along the river on Riverside Drive is a brownfield opportunity area that has the potential to become a beautiful riverfront park. The plan proposes a multi-use riverfront path connecting downtown to the existing SUNY Canton pedestrian bridge. In addition to the riverfront multi-use path, 4-foot on-street bicycle lanes on each side of the road from the riverfront park to Fairlane Drive will lead bicyclists to the 8-foot multi-purpose path conditions that begin at Fairlane Drive and head north toward the Remington Trail. State Street will also have 4-foot on-street bicycle lanes that will make a vital connection to the school.

Close Up of Intersection in Proposed Conceptual Plan.

Farmer Street West Side: Existing Condition



FARMER STREET
[HOWE BOULEVARD TO THE SCHOOL CAMPUS]

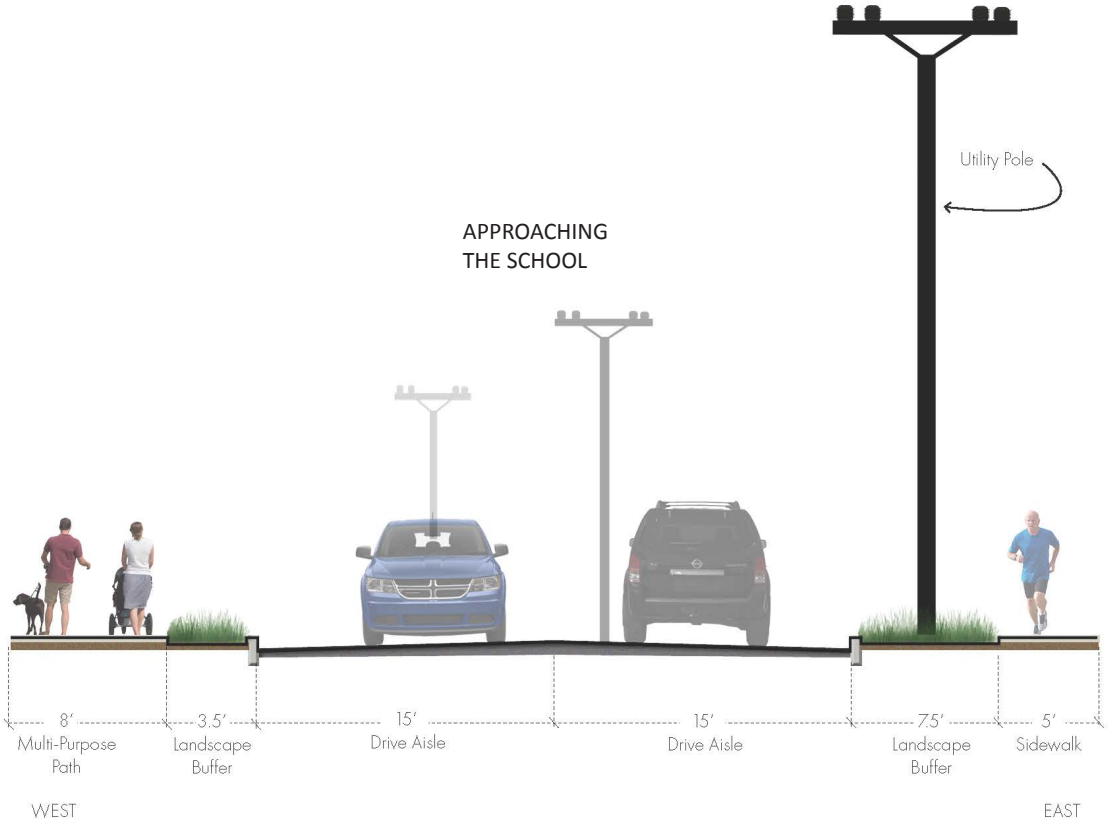
Context Map of Farmer Street.

Description:

Farmer Street is a residential neighborhood street that connects to Canton Central School. The street has existing sidewalks on both sides of the street from the northern top of Farmer Street to Howe Boulevard, where the sidewalk then exists only on the east side to Judson Street The proposed improvement depicted on the facing page is to expand the sidewalk on the northwest side of the street to an 8′-foot multi-purpose path with a 5-foot grass strip. Due to the presence of utilities and tree placement, the 8-foot multi-purpose path will transition to the east side of the street from Howe Boulevard to Judson Street.

Existing Site Photo: Farmer Street at Intersection of Mildon Ave.

Farmer Street West Side Howe Boulevard to School Campus: Proposed Improvements

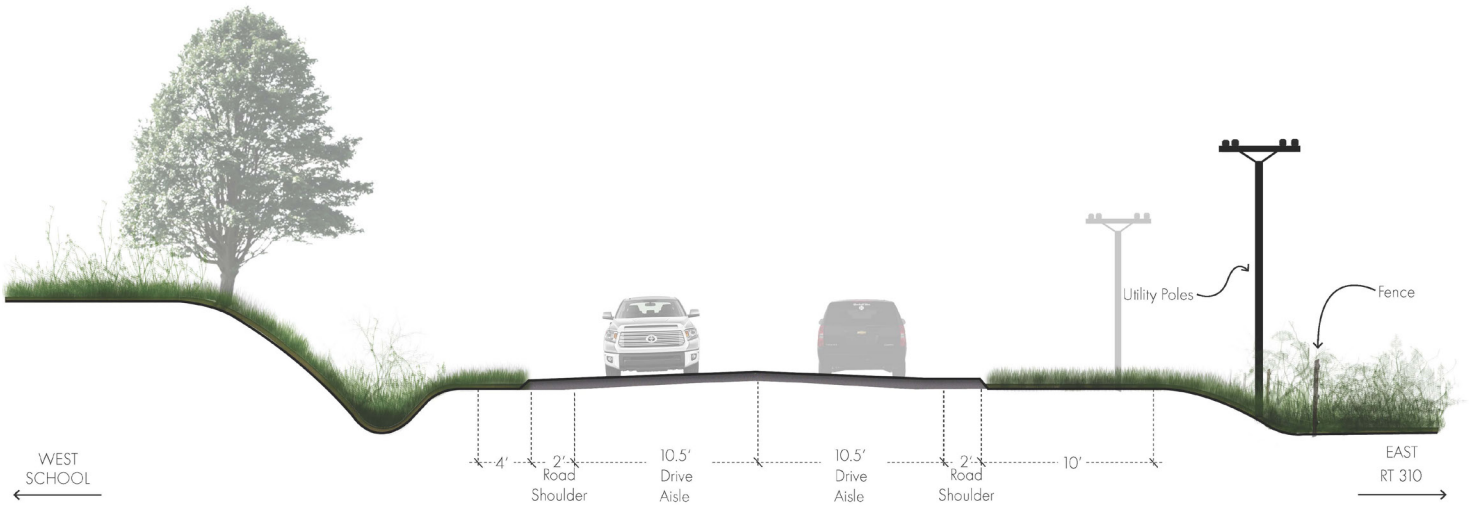


Road Condition: - Residential
Edge of Pavement to Edge of Pavement: - 30 feet
Recommendation: - Multi-purpose path with landscape buffer
Notes: - Existing sidewalks on both sides from Main Street to Judson Street; from Judson Street to Howe Boulevard, sidewalks only on east side; then sidewalks on both sides from Howe Boulevard to the school.

Existing Site Photo: Farmer Street Facing NW.

Existing Site Photo: Top of Farmer Street Facing School.

State Street: Existing Condition



STATE STREET [NORTHEAST OF SCHOOL]

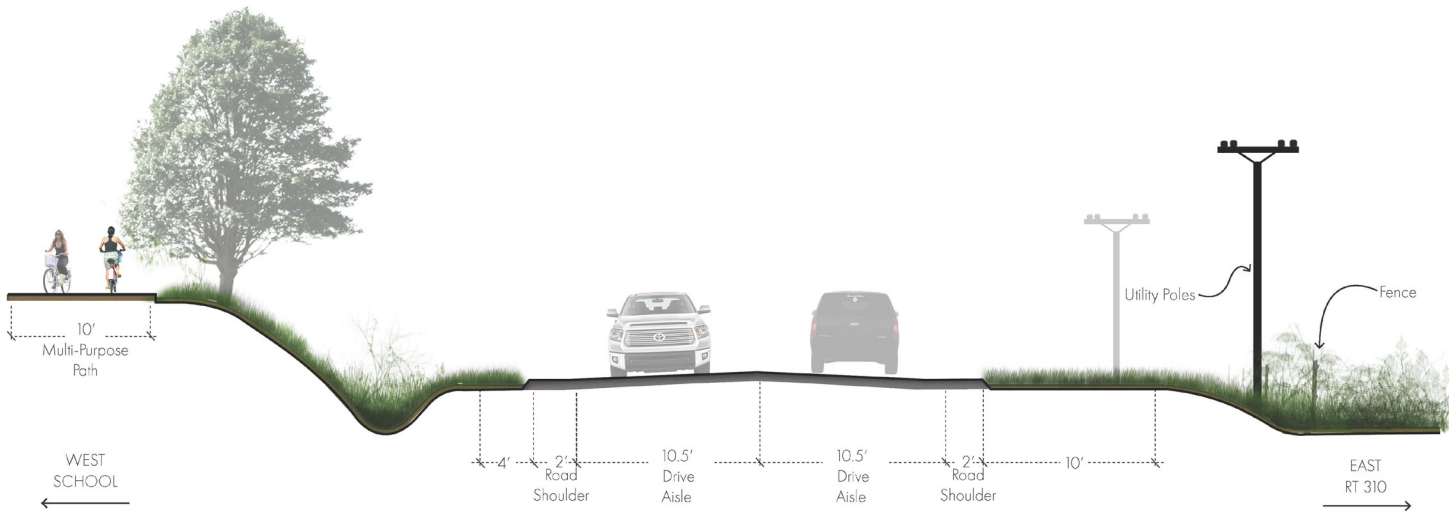
Overall Context Map of State Street to NY 310.

Overview

State Street from the Canton Central School campus to NY Route 310 is an important connection that closes the overall network loop, including the school campus, Maplewood Health Care and Rehabilitation Center, and Partridge Knoll Independent Retirement Home. The off-road multi-purpose path on the east side of the road connects to NY Route 310 where it continues as a multi-purpose path to the intersection of East Main Street and Route 310.

Context Map of State Street.

State Street: Proposed Improvements



Description

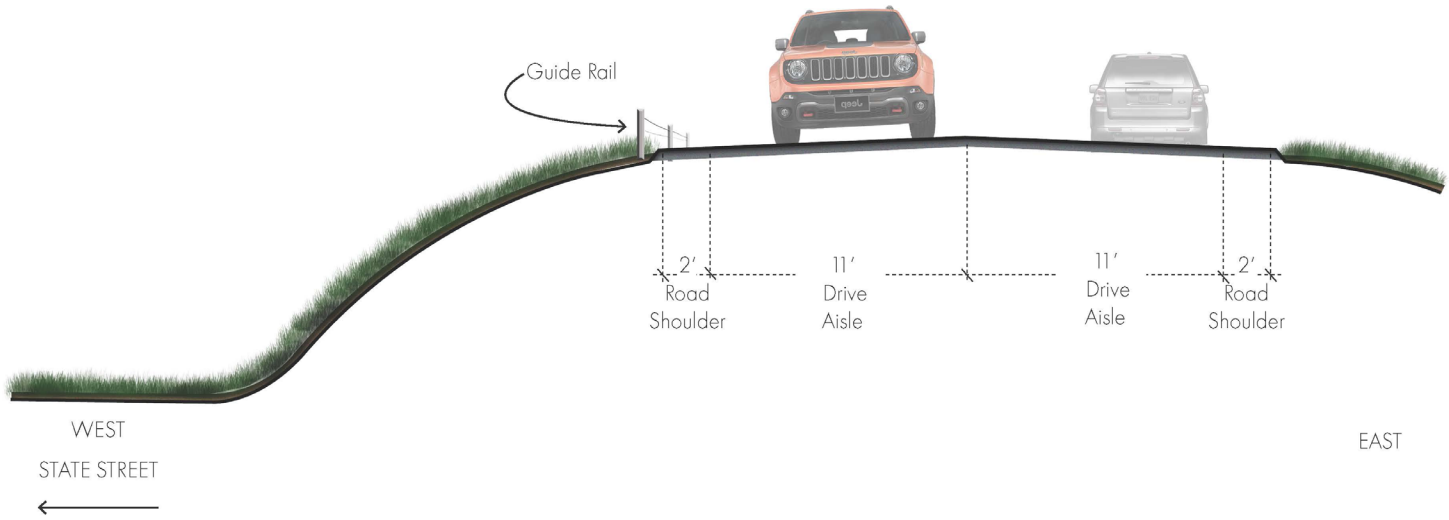
The southern, residential portion of State Street has the opportunity to extend the sidewalk on the east side to accommodate an 8-10-foot multi-purpose path. To save existing trees, two on-street 4-foot bike lanes would be proposed. The bike lanes would transition to the multi-purpose paths at the school campus.

Existing Site Photo: State Street Facing North.

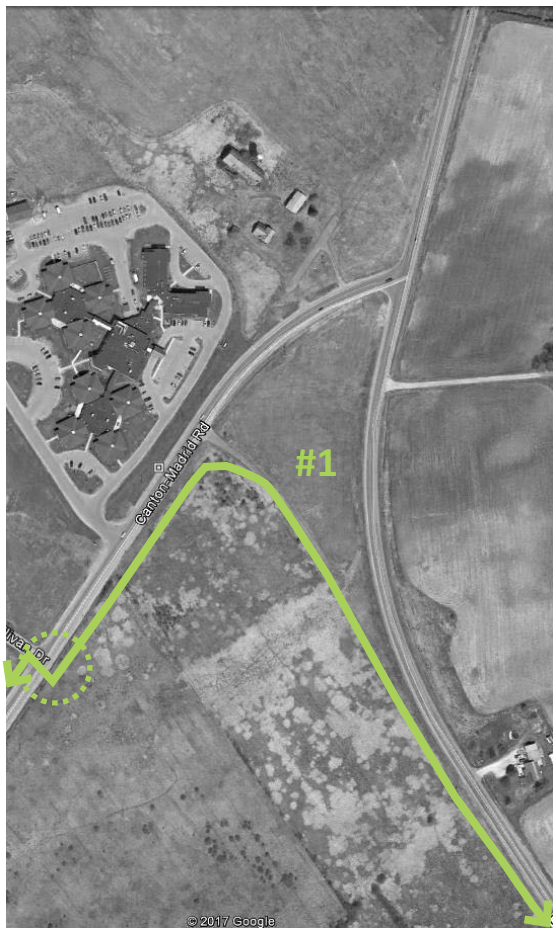
Road Condition: - Residential/Rural
Edge of Pavement to Edge of Pavement: - 22 feet
Recommendation: - 2 off-road multi-purpose paths
Notes: - Slopes on either side of road

Existing Site Photo: Slope on East Side of Road.

Existing Site Photo: State Street Facing North.



NY ROUTE 310
[SEGMENT 1: STATE STREET TO NY ROUTE 310]

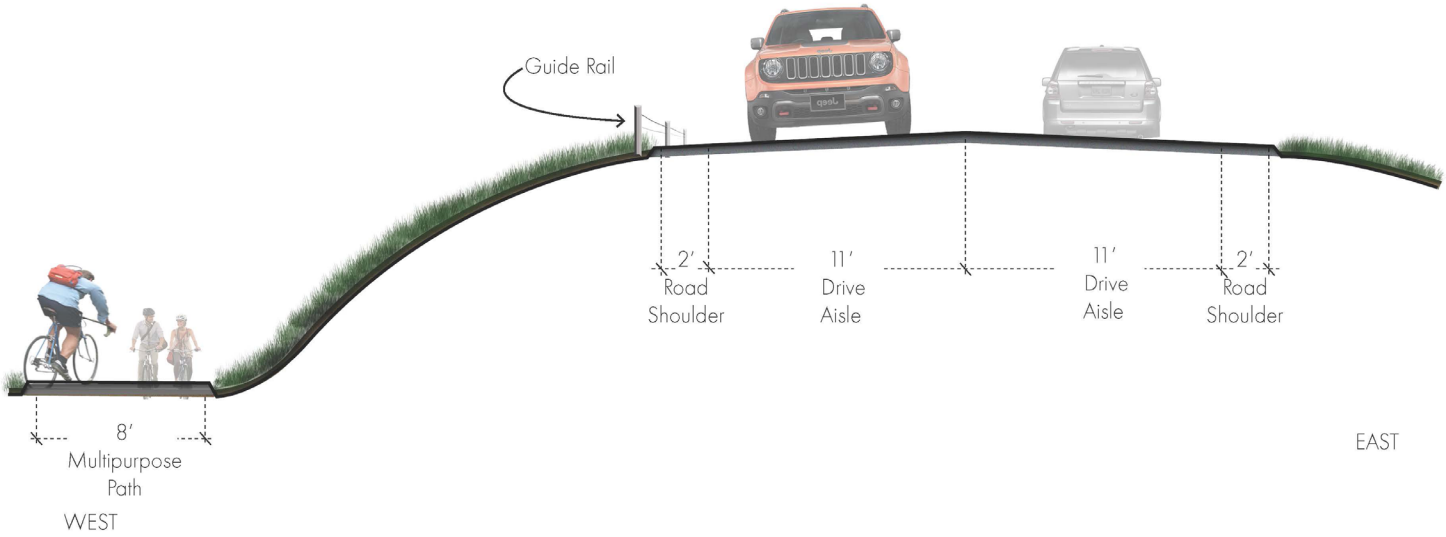


Context Map of NY 310 to State Street.

Description:

The off-road multi-purpose path on the eastern side of State Street transitions to an off-road multi-purpose path on NY Route 310, following the junction of the two roads. Once the trail meets NY Route 310, the user will be at the bottom of roughly a 10-foot slope. Upon following NY Route 310, the trail gradually follows the transitional slope up to meet grade with NY Route 310 until it is no longer an off-road tail. The path eventually returns to a multi-purpose trail with a landscape buffer.

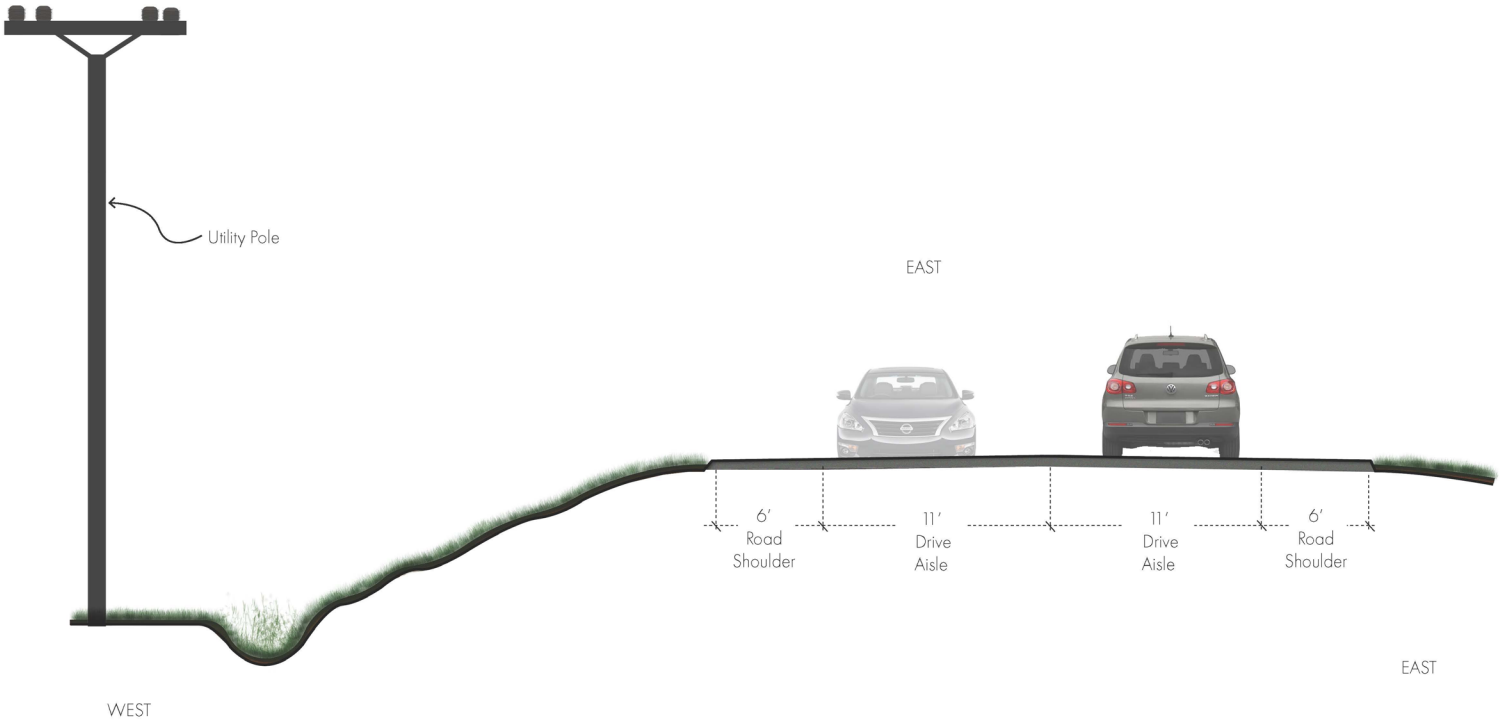
Existing Site Photo: NY 310 Facing South/Southeast.



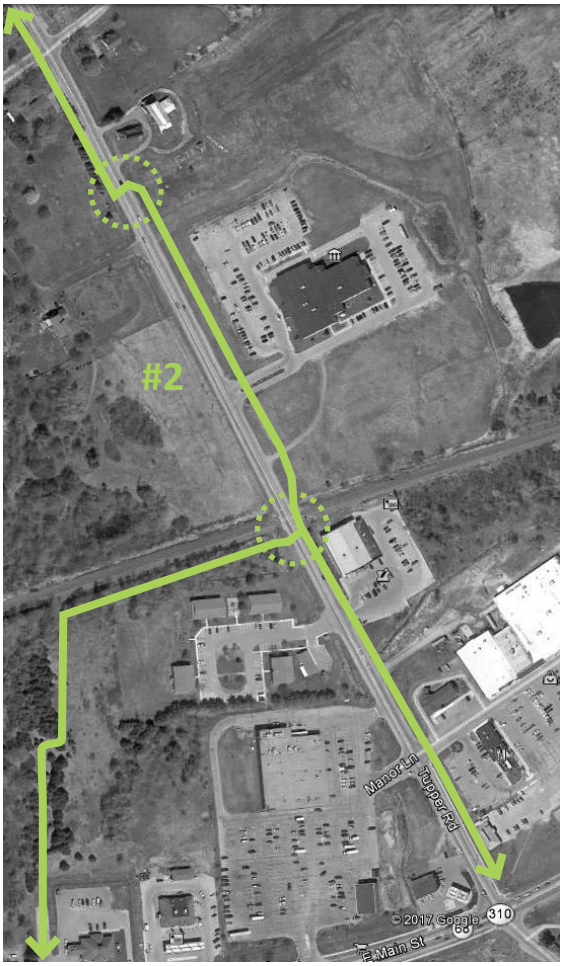
Road Condition: - Rural
Edge of Pavement to Edge of Pavement: - 22 feet
Recommendation: - Off-road multi-purpose path
Notes: - Slope works itself up to grade proceeding south. Trail to follow up to grade.

Existing Site Photo: Intersection of State Street and NY 310.

NY Route 310 Segment 2: Existing Condition



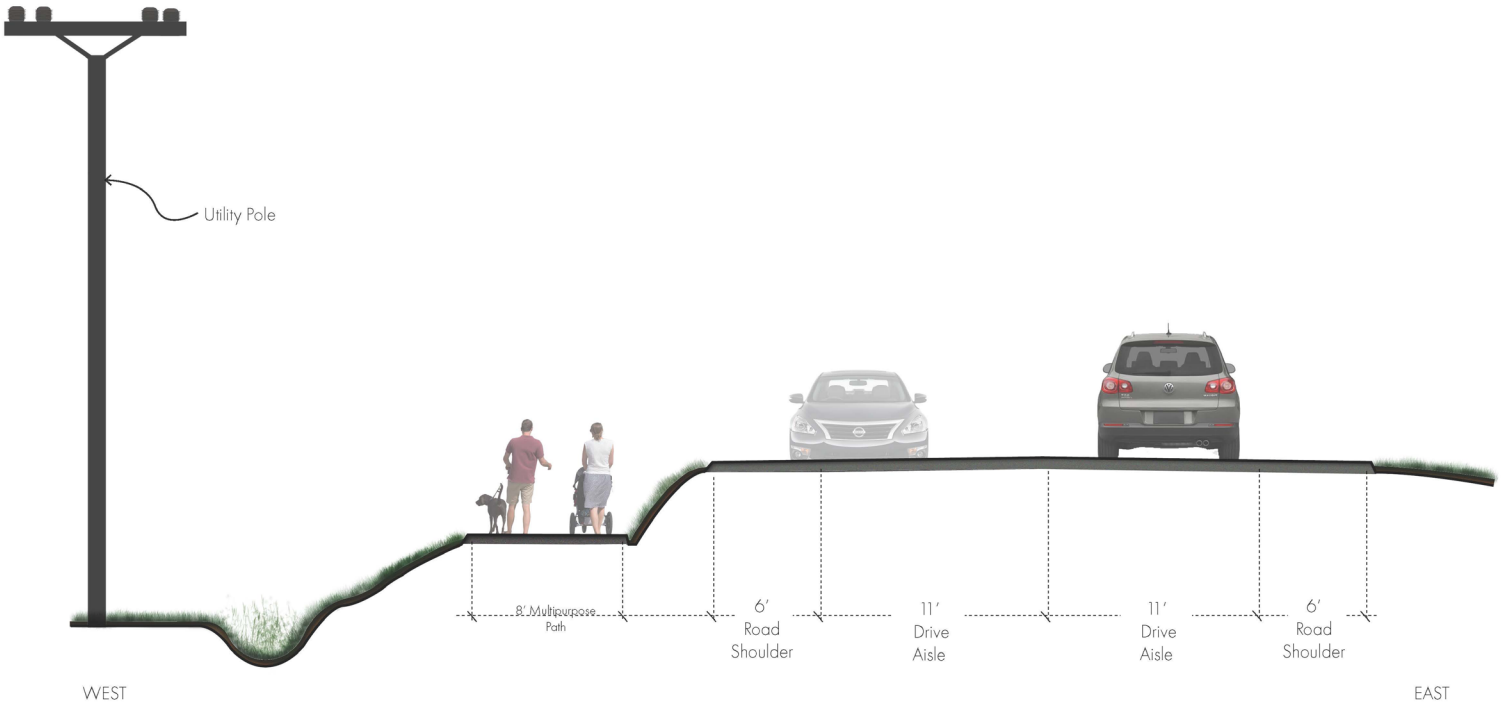
NY ROUTE 310
[SEGMENT 2: STATE TO JUDSON STREETS]



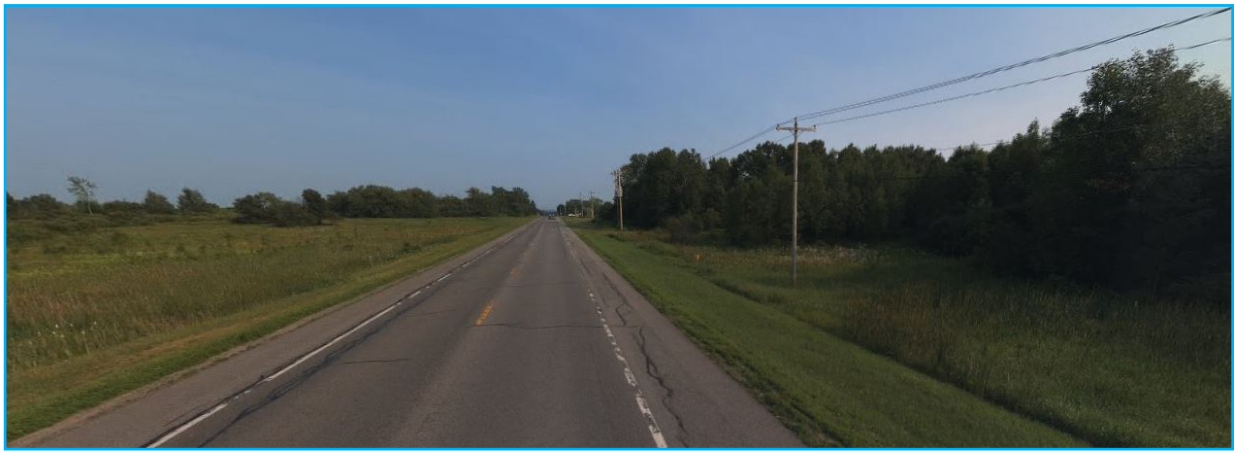
Context Map of NY 310.

Description:
As the trail moves toward the intersection of NY Route 310 and East Main Street, the slope flattens. The multi-purpose path must accommodate culvert driveways. The multi-purpose path transitioning from State Street to NY Route 310 remains on the southwest side of NY Route 310 until it transitions to the northeast side between Judson Street and the St. Lawrence Health System facility. Challenging areas may be at the intersection of Judson Street Road and NY Route 310, the railroad crossing, and traffic from the St. Lawrence Health System.

NY Route 310 Segment 2: Proposed Improvements



Road Condition: - Rural
Edge of Pavement to Edge of Pavement: - 22 feet
Recommendation: - Off-road multi-purpose path
Notes: - Swale on bottom of slope on west side, culverts under driveways
- Road crossing and railroad crossing



Existing Site Photo: Intersection of State Street and NY 310.

Context Map of NY 310 and US 11.

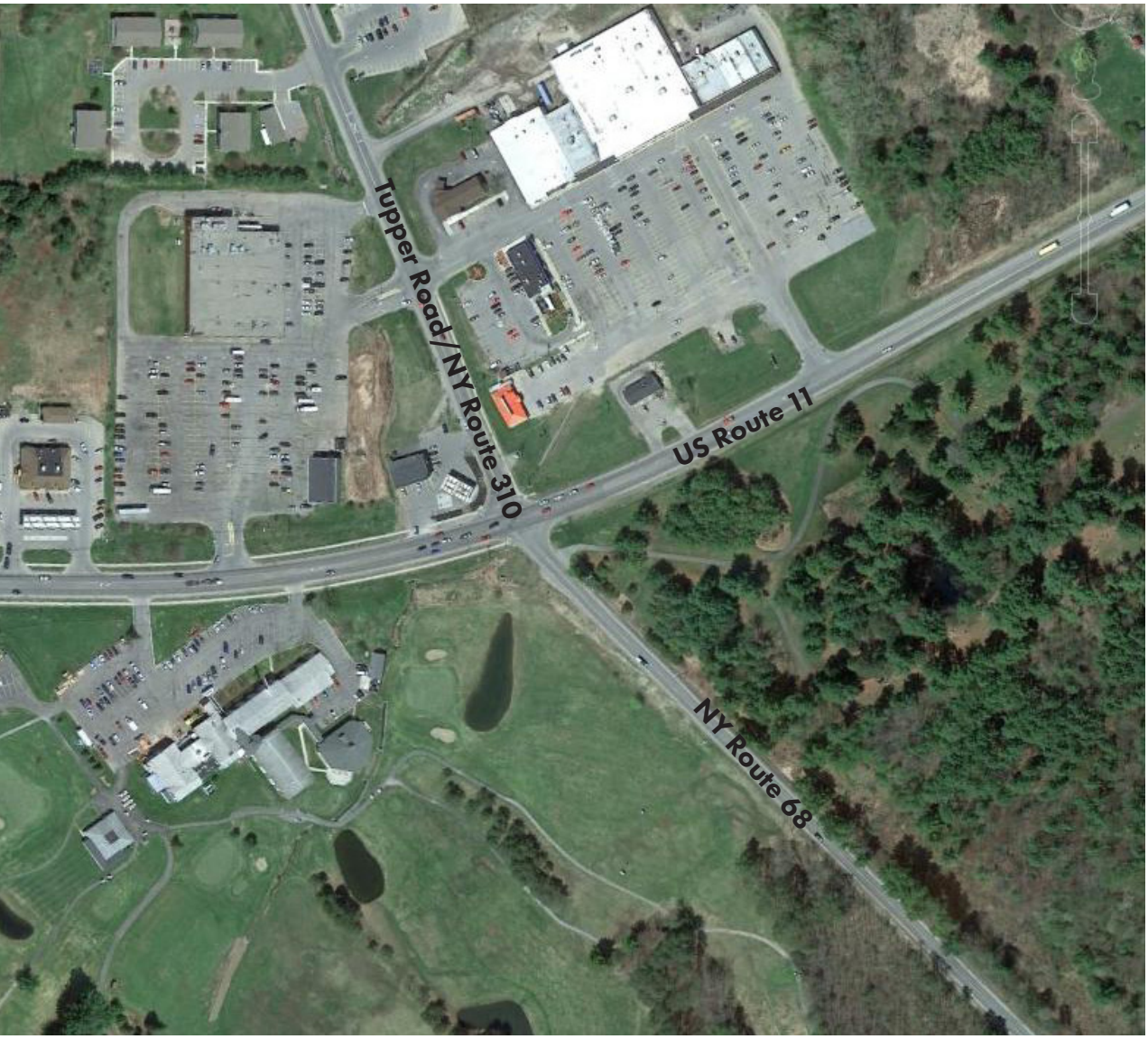
NY Route 310 and US Route 11 Gateway Intersection Overview:

The intersection at NY Route 310 and East Main Street (US Route 11) is one of the busiest intersections in Canton. US Route 11 is a major east-west transportation corridor across northern New York State, carrying significant truck and automobile through traffic, and the Canton-Potsdam corridor serves as the local hub of larger retail and commercial services. It is also a major gateway into the community and the first impression of Canton for most visitors, students, and parents of the local universities. Although Canton's transition into downtown has exemplary characteristics, the NY Route 310/US Route 11 intersection has the opportunity to become not only a safer place for vehicles, bicyclists, and pedestrians, but also a grand entrance to the Village of Canton.

Existing Condition Aerial.

Existing Site Photo: Intersection from NY 68.

Existing Site Photo: Intersection from NY 310.

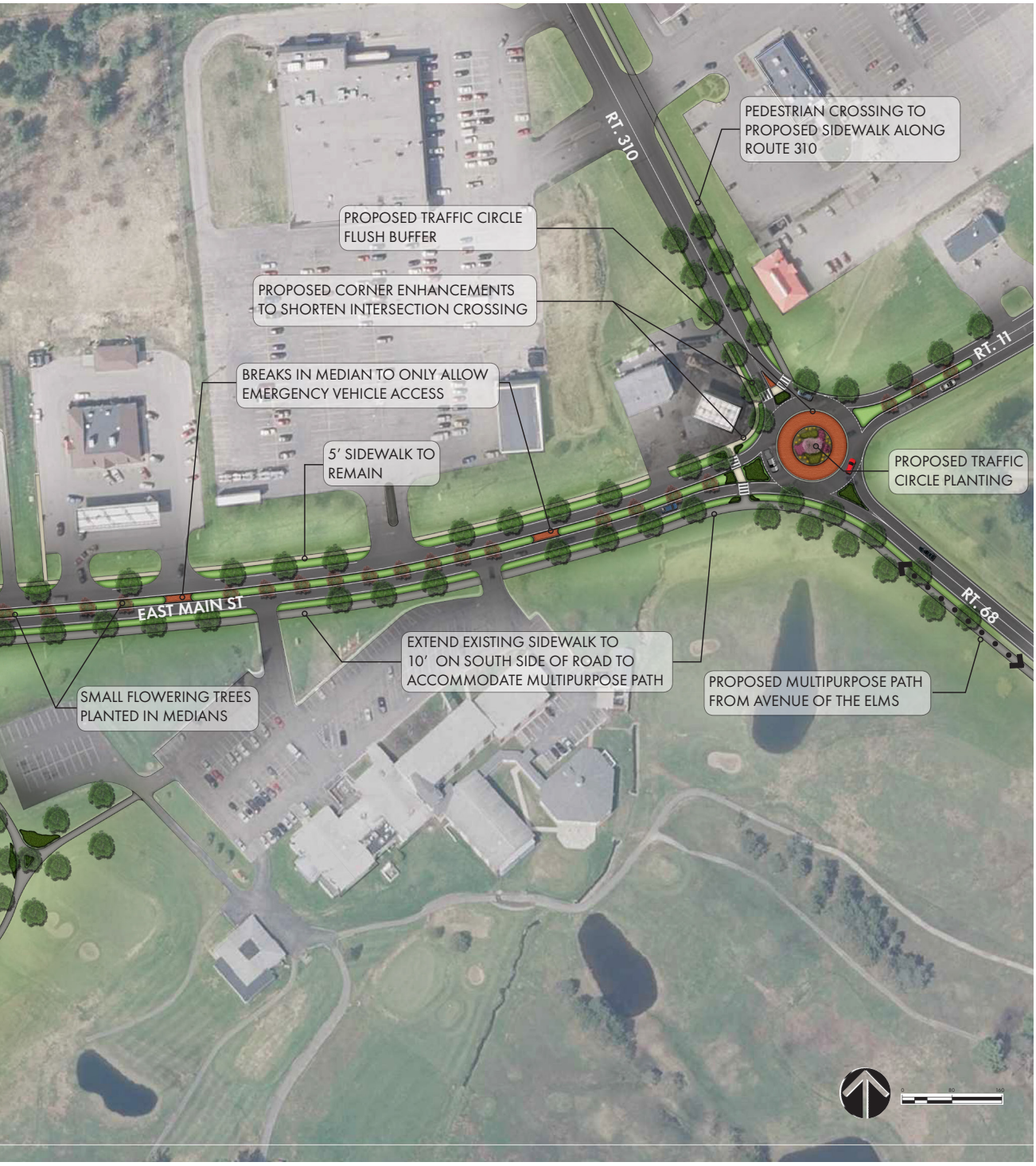


Conceptual Design for Potential US Route 11/East Main Street Gateway Improvements

To create a sense of arrival into the Village of Canton, the concept of a landscaped boulevard treatment of US Route 11/East Main Street is proposed to improve the aesthetic appeal of the corridor's gateway. Promoting pedestrian safety without compromising the function of the busiest roads in the area is difficult to balance, but the introduction of two roundabouts (traffic circles) can provide the critical organizational feature to accomplish that goal. The intersections at each

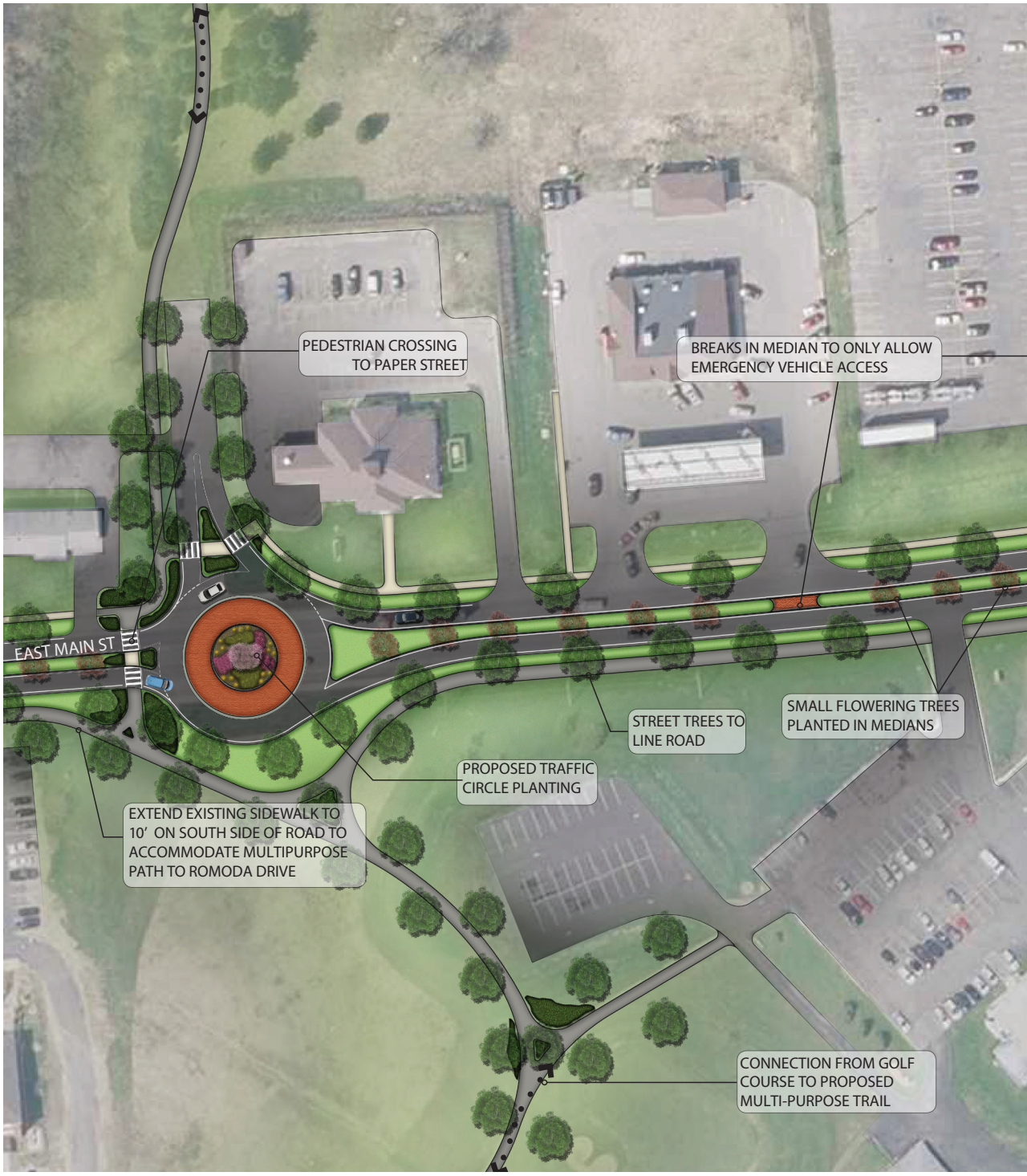
Proposed Conceptual Plan.

traffic circle allow for tighter, safer crossings, creating a more pedestrian-friendly environment and they work together to eliminate the existing suicide lanes, allowing for constant circulation to and from business entrances. Breaks in the landscape median were designed only to allow access for emergency vehicles. The tree-lined boulevard accompanied with welcome signage at the traffic circles will show visitors headed to Canton that they have reached their destination.

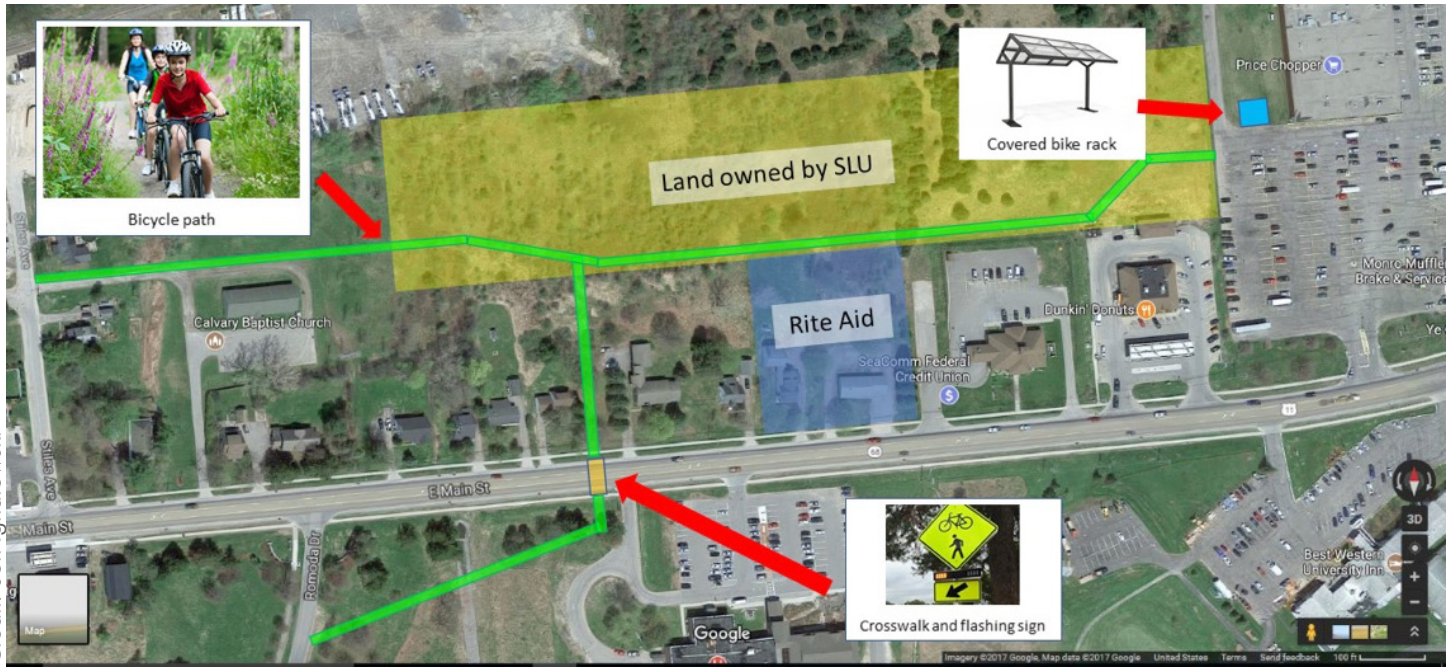


US ROUTE 11 GATEWAY
[EAST MAIN STREET GATEWAY]

Close-up of Proposed Conceptual Boulevard Treatment and Traffic Circles



US ROUTE 11 GATEWAY
[EAST MAIN STREET GATEWAY]



Credit: Jon Ignatowski

Conceptual Plan for the Proposed Canton Connector.

The Canton Connector: A Proposed Path to Link the Village, St. Lawrence University, and Canton's Shopping Center.

This pedestrian corridor project is established with the recognition that pedestrians living in the Village of Canton and on St. Lawrence University's campus do not have safe access to the shopping areas located by the intersection of US Route 11 and NY Route 310. Currently, no safe pedestrian crossings exist between Romoda Drive and NY Route 310, and pedestrians are often seen errantly crossing US Route 11/East Main Street, which is three lanes wide and designated as 40 mph. These unpredictable pedestrian crossings jeopardize not only individual safety but the welfare of motorists as well. Cyclists wishing to access these shopping areas from town are expected to ride on roads that do not offer a safe shoulder, and contend with a curb that prevents them from quickly avoiding hazards. This stretch of US Route 11/East Main is perilous to all forms of pedestrian traffic, and this multi-use path proposal seeks to ameliorate these issues.

Credit: Jon Ignatowski

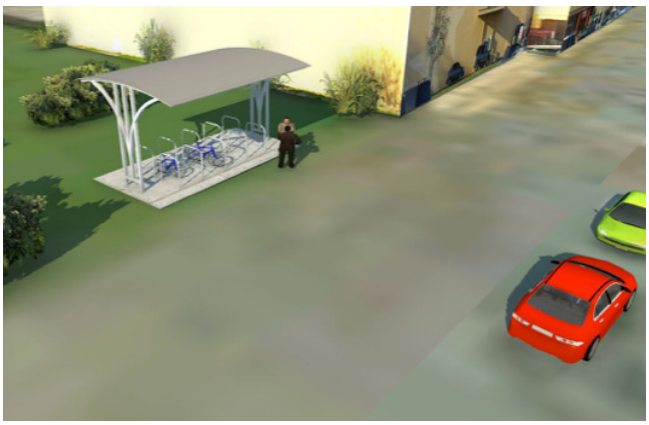
Aerial View: Path Connecting the Mountain Mart and Price Chopper.

Credit: Jon Ignatowski

Aerial View of the Path as it Passes Behind Rite Aid, SeaComm, and the Mountain Mart.

Anticipated Project Benefits:

- **Enhance pedestrian safety**
  Install a crosswalk with LED flashing signs and a multi-use path
- **Connect the residential core to the shopping centers**
  Allow pedestrians to safely bike or walk
- **Provide access to all residents**
  Facilitate pedestrian traffic from both sides of East Main Street
- **Cultivate a pedestrian culture**
  Provide a safe corridor for both walking and cycling
- **Reduce traffic hazard**s
  Concentrate pedestrian crossings and provide a new route for cyclists
- **Increase community health**
  Provide a multi-use trail for safe recreation



Credit: Jon Ignatowski

View of the Proposed Bike Rack at the Price Chopper .

Credit: Jon Ignatowski

View of the Crossing on East Main.

COMPLETING THE VISION: LONG-TERM RECOMMENDATIONS

Longer-Term Projects Expanding the Canton Trail Network

Several other projects, while not immediate priorities, should be considered as opportunities arise to enhance non-motorized travel in the Canton community and beyond in the future. They include multi-use trails or on-road improvements connecting:

- SUNY Canton to Tallman Avenue off US Route 11
- Tallman Avenue. to Miner Street Road
- Miner Street to US Route 11 along the Grasse River
- Sandbanks to Pyrites along the east side of the Grasse River
- Canton to Potsdam alternative to US Route 11
- Off-road trail system on Village property on Waterman Hill
- Potential Trail System on Town Property on the Eddy Pyrites Road

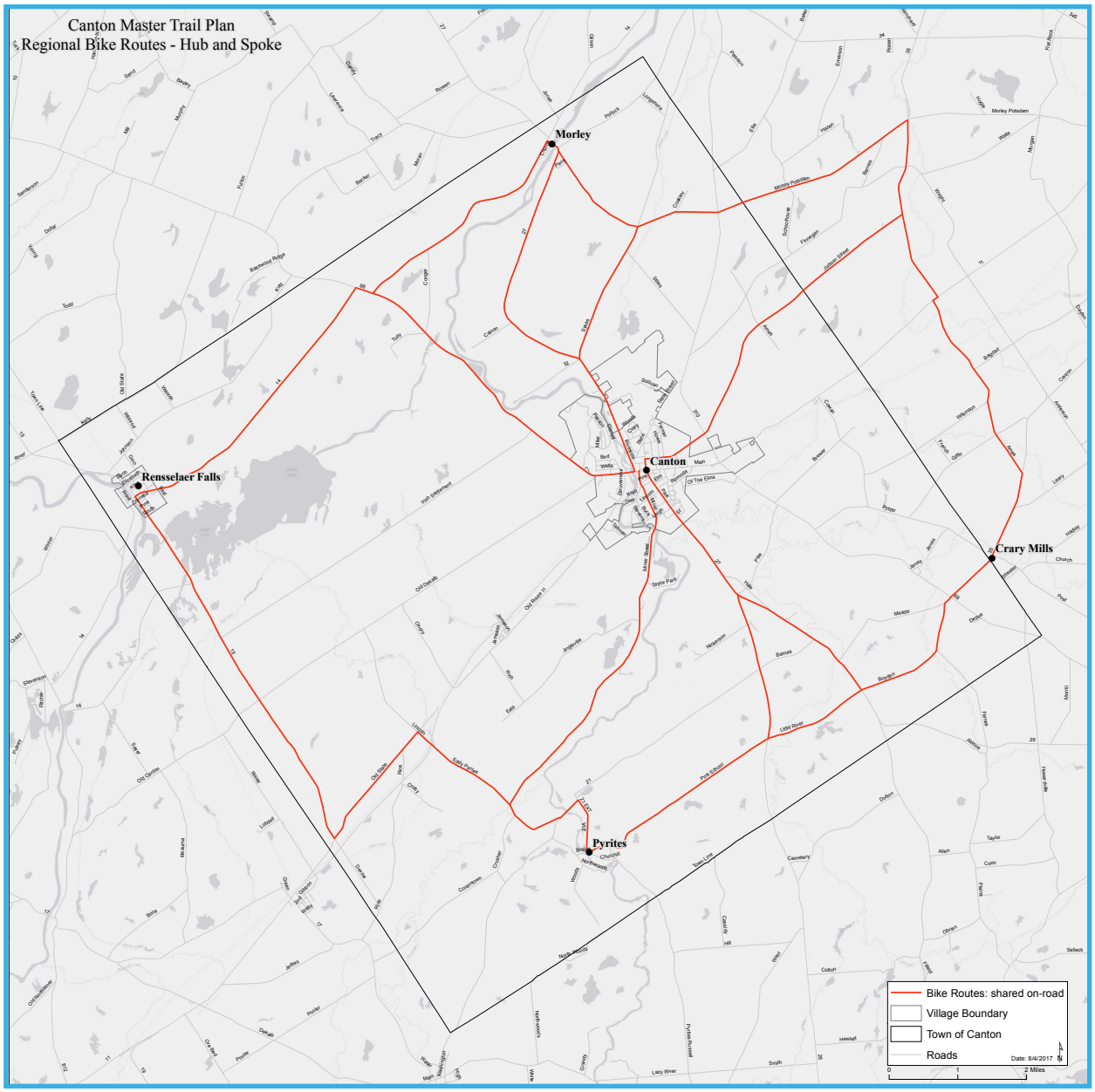
Bicycle Tourism Opportunities

Many existing assets give the Town of Canton and Villages of Canton and Rensselaer Falls a strong foundation on which to build a reputation as a desirable stop and destination for recreational and touring bicyclists. The county seat, with two universities, Canton offers a great deal of services for a town of its size. It is home to many hotels, bed and breakfasts, farm stays, and multiple Airbnb listings, along with informal opportunities through websites such as Warm Showers (which caters to touring cyclists) and Couchsurfing. Cyclists are also served by strategically located bike fix-it stations around the Village and low-key home-based bike repair shops with skilled mechanics.

Multiple waterways, abundant open space, and vibrant agriculture present notable sights to see and places to visit. Canton is a scenic pedal to three remarkable areas: the Adirondack Park to the south, the Thousand Islands to the northwest, and Ontario to the north via the Ogdensburg International bridge. A proposed pedestrian and bike ferry connecting Ogdensburg and Prescott, Ontario, will improve access to both sides of the border.

This mix of services and charming rural roadways makes Canton a model for the county to follow as it develops tourism opportunities for cyclists.

See the opposite page for a map of regional bike routes.


Canton Master Trail Plan
Regional Bike Routes - Hub and Spoke
Morley
Canton
Rensselaer Falls
Crary Mills
Pyrites
Bike Routes: shared on-road
Village Boundary
Town of Canton
Roads
Date: 8/4/2017
0
1
2 Miles

Canton Bicycle Club

Historically the Canton area has been home to a very active, engaged cycling community. For well over 30 years, the Canton Bicycle Club (CBC) has spearheaded activities ranging from creating mapped and cued cycling routes and scheduling weekly group rides to organizing convocations of hundreds of avid cyclists. The CBC has worked with local B&Bs and the St. Lawrence County Chamber of Commerce to promote cycling tourism, as well. In recent years, off-road and mountain biking have emerged as another form of cycling recreation.

The mapped rides, complete with turn-by-turn cue sheets, have used a hub-and-spoke model to make Canton the focus for the routes. There are short, beginner routes that are completely contained within Canton; more advanced routes and multi-day routes cover a substantially larger region of the North Country. Routes are also included that cross the international boundary between the U.S. and Canada.

In 2018, a grant-funded project through the SLC Chamber will improve substantially access to, and accuracy of, the various mapped routes. A major new website is being designed that takes a regional approach to providing up-to-date information about the recreational cycling opportunities available in Canton and St. Lawrence County. The groundwork has been laid by the CBC and other cycling enthusiasts. The Chamber of Commerce is building upon that base, and it expects to launch the new, interactive website during the 2018 cycling season.

Canton Offers Charming Roadways and Local Services for Touring Cyclists.

Bicyle Tourist Traveling from Quebec, Ca to Honduras via Canton.

SECTION 4. IMPLEMENTATION

The implementation of recommended improvements and connections in this plan will require a combination of programmatic considerations, funding acquisition, and integration with development. The MTP recommends a variety of ways to improve non-motorized travel throughout the community, including new traditional off-road trails, multi-use paths, and sidewalks using the public road system's right-of-way, and on-road improvements when no other solution is viable. Therefore, the partnership opportunities are wide ranging including village, town, county, and state highway departments; municipal governments; planning and zoning boards; volunteer steering committees and bicycle and pedestrian organizations; SUNY Canton; St. Lawrence University; the Canton School District; and other land owners and developers.

Identify a Leadership Committee

Identifying an MTP "champion" to spearhead efforts is important as communities have limited staff capacity and often far more projects than a local budget can administer or fund. The committee should have at least one elected official from both the Town and Village. The role of the committee would be to help prioritize projects, identify funding mechanisms and opportunities to collaborate on infrastructure projects (road resurfacing/reconstruction, sewer, water, and utility projects), and work with planning and zoning boards and the development community to implement Complete Streets policies. The Town and/or Village already have in place citizen advisory committees that could fill this role, including:

- Canton Master Trail Plan Committee
- Canton Complete Streets Task Force
- Canton Sustainability Committee

Priority Projects Planning and Implementation

The following steps are recommended to implement the priority projects identified in the MTP. The projects have varying levels of complexity, cost, and feasibility. Priorities may center around the most critical needs but taking advantage of "low-hanging fruit" or opportunities as they arise will require flexibility.

- Identify the projects that can be completed using local resources and without seeking grants or other forms of aid – these may include shoulder widening, share-the-road elements, painting and striping of roads, landscaping buffers, and more.
- Coordinate future road resurfacing projects with the Village department of public works and town, county and state highway departments to include the priorities of the MTP whenever feasible.
- Identify other infrastructure projects such as sewer, water, gas, or other utility upgrades that might require road/sidewalk disturbance and coordinate as feasible to integrate streetscape enhancements with those projects.
- Identify potential funding sources for projects that require hard design, construction documents, and construction funding and submit applications as opportunities arise. Not all projects are eligible for the same funding sources. The next section on funding identifies some potential funding sources and project eligibility.

- Identify possible ideas for "match" as most grant and aid programs require that some percentage of the project be funded locally through in-kind efforts, cash etc. The match for any particular funding opportunity can be critical as high-value match can improve a community's chances of award, and, if planning begins early, it can minimize the out-of-pocket expenses of a community (and taxpayers).

Implementation through Policy, Programming and Development Activities

The MTP provides a blueprint for priority road network enhancements, new off-street connections, and future trail networks. It also provides a general idea of the level of pedestrian and non-motorized transportation infrastructure that is desired by the Village and adjacent areas of the Town. Canton's "Complete Streets" policy directs all municipal levels of government, highway departments, and planners to consider, whenever feasible, accessibility for the pedestrian, disabled, and non-motorized users of all ages when improving or upgrading the street network or building new roads in Canton. This policy can be integrated into the Town and Village codes, directing new development to comply with the Complete Streets policy when an element of a project integrates with a streetscape. The planning boards and other reviewing bodies would be responsible for reviewing and approving proposed site development to ensure every effort is made to comply with the policy and increase or maintain the present level of connectivity and safety.

Another critical opportunity for introducing bicycle and pedestrian improvements and connections is during the development of subdivisions or other larger-scale projects involving multiple acres where new off-road multi-use trail segments can be integrated into development before housing lots and road networks are established and new roads and streets can be developed with Complete Streets elements. Reducing the amount of pavement/road width required for motorized vehicles and integrating a multi-use path instead can be an economically feasible trade-off. The Town and Village planning boards should review every project with the priorities of the MTP in mind.

Funding Opportunities

Several potential funding sources and programs for bicycle and pedestrian infrastructure and trails development are available but are subject to change. At the time of plan development, the New York State Regional Economic Development Council's Consolidated Funding Application is the dominant funding opportunity each year, with many of the grant sources cited in the matrix available through that mechanism. Some funding sources, however, are available as a separate application process and should be researched carefully so opportunities are not missed. The Town and Village should register as part of the New York State Grants Gateway to be apprised of new State grant funding opportunities as they arise each year. A good potential source of funding for any project is through a state or federal legislative representative. These "member items" have not been listed as a source of funding as they could be included under most of these projects.

- **Federal Highway Administration (FHWA) Fixing America's Surface Transportation Act (FAST Act)** – Ten percent of each state's annual Surface Transportation Program (STP) is set aside for transportation-related, community-based projects to enhance surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation. This program replaces previous alternative transportation funding from the Transportation Alternative Program and the Transportation Enhancements Program. Projects eligible for funding include

the provision of facilities for bicycles and pedestrians, provision of safety and educational activities for pedestrians and bicyclists, and preservation of abandoned railway corridors (including conversion and use for pedestrian and bicycle trails). Project applications may be developed by any municipality or non-profit incorporated group; a historic preservation society, for example. This funding is most appropriate for larger-scale multi-use paths, sidewalks, and other larger-scale projects.

- **Consolidated Local Street and Highway Improvement Program (CHIPS)** – A New York State-funded program administered through the NYSDOT to assist localities in financing the construction, reconstruction, or improvement of local highways, bridges, highway-railroad crossings, and other local facilities. Eligible CHIPS bicycle and pedestrian projects include: bike lanes and wide curb lanes, shoulder improvements, roundabouts, new signs, new or upgraded traffic signals, and traffic calming installations. This funding is most appropriate for smaller-scale projects that fit into local road resurfacing and intersection improvements such as the Miner Street Road improvements and State/Riverside drive intersection realignment.
- **New York State Office of Parks, Recreation and Historic Preservation (FHWA Funding)** - Recreational Trails Program – A matching grant program for the acquisition, development, rehabilitation, and maintenance of trails and trail-related projects. Funds are available to non-profit organizations, municipal, state, and federal agencies, Indian tribal governments, and other public agencies and authorities. Funded projects must be identified in, or further a specific goal of, the NY Statewide Comprehensive Outdoor Recreation Plan (SCORP) and must be available to the general public. Source of funds: Federal Highway Administration. This funding is most appropriate for off-road trails and multi-use paths such as the NY Route 310 and Riverside Drive and Grasse River waterfront recommendations.
- **New York State Office of Parks, Recreation and Historic Preservation (Environmental Protection Fund)** – Acquisition – A matching grant program for the acquisition of a permanent easement or fee title to lands, waters, or structures for use by all segments of the population for park, recreation, conservation, or preservation purposes. To be used for all three program areas where acquisition is of more importance than development. This funding may be appropriate for future off-road trail networks that require easements or acquisitions along the Grasse River or for easements through private properties.
- **New York State Office of Parks, Recreation and Historic Preservation (Environmental Protection Fund)** – Parks Program – A matching grant program for the acquisition or development of parks and recreational facilities for projects to preserve, rehabilitate, or restore lands, waters, or structures for park, recreation, or conservation purposes. Funds may be awarded to municipalities or not-for-profits with an ownership interest, for indoor or outdoor projects and must reflect the priorities established in the NY SCORP. This funding may be appropriate for future off-road trail networks that require easements or acquisitions along the Grasse River or for easements through private properties.
- **NYS Department of State Local Waterfront Revitalization Program (Environmental Protection Fund)** – A variety of financial assistance is available to help communities achieve waterfront revitalization goals that include downtown revitalization through streetscape enhancements, enhanced connectivity to waterfronts through trails, pathways and sidewalks, and other bicycle and pedestrian amenities. This funding is most suitable for streetscape projects along Riverside Drive and elsewhere on the Grasse River.

- **Congestion Mitigation and Air Quality (CMAQ) Improvement Program (FHWA Funding)** The CMAQ program provides funding for surface transportation and other related projects that contribute to air quality improvements and reduce congestion. Program funds may be used to construct bicycle and pedestrian facilities intended to reduce automobile travel and/or emissions in areas that have failed to meet air quality standards for ozone, carbon monoxide, and small particulate matter. This funding is most appropriate for completing multi-use path systems that reduce reliance on a car for travel to key destinations within Canton and reducing traffic issues (traffic circles) on US Route 11 where vehicles idle.

Resources for Best Practices

There are abundant resources for communities wishing to plan for and implement streetscape improvements, develop multi-use trails, and install bike and pedestrian amenities. State and federal agencies and other organizations provide design manuals and webpages full of great ideas and the latest in best practices. Below is a list of the most well-known resources and some of their latest materials. In addition, some states are more progressive and aggressive in developing bicycle and pedestrian infrastructure and provide a wealth of information on their state websites. These resources are constantly being updated and adjusted based on data and analysis, particularly as ideas are implemented and their effectiveness evaluated. Therefore, it is important to look for the most recent edition of any particular resource.

American Association of State Highway and Transportation Officials (AASHTO) Website
https://www.transportation.org/

- *Guide for the Development of Bicycle Facilities*
- *Guide for the Planning, Design, and Operation of Pedestrian Facilities*
- *Highway Safety Manual*

Federal Highway Administration (FHWA) Bicycle and Pedestrian Safety Webpage
https://safety.fhwa.dot.gov/ped_bike/

- *FHWA Separated Bike Lane Planning and Design Guide* (2015)
- *FHWA Accessible Shared Streets: Notable Practices and Considerations for Accommodating Pedestrians* (2017)
- *Manual on Uniform Traffic Control Devices* (MUTCD) (2018)

Institute of Transportation Engineers (ITE)
http://www.ite.org/activeliving/index.asp

- *Recommended Design Guidelines to Accommodate Pedestrians and Bicycles at Interchanges* (2014)

National Association of City Transportation Officials (NACTO) Bike Guide Webpage
https://nacto.org/publication/urban-bikeway-design-guide/

NYS DOT Bicycling in NYS Webpage
https://www.dot.ny.gov/modal/bike/ and **https://www.dot.ny.gov/bicycle**

NYS DOT Bicycle and Pedestrian Coordinator, Office of Traffic Safety and Mobility:
(518) 485-0976

Pedestrian and Bicycle Information Center (PBIC) Website
http://www.pedbikeinfo.org/planning/sample.cfm