

Village of Sodus Point Active Transportation Plan

February 2020









PREPARED FOR

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Acknowledgments

Village Trustees

- Mayor Dave McDowell
- William Kallusch, Jr. Deputy Mayor & Trustee
- Maxine Appleby, Trustee
- Joan Eckberg, Trustee
- Robert DeWolf, Trustee

ATP Steering Committee

- Maxine Appleby, Village Trustee
- Kathleen Berretta, Sodus Point Planning Board
- Bret DeRoo, Wayne County Planning
- Lynn Carlyle, Village Resident
- Lora Leon, NYSDOT Region 4
- Sharon Lilla, Village Resident
- Gay Mills, Genesee Land Trust
- Joe O'Toole, Sodus Bay Lighthouse Museum
- Karen Shughart, Village Resident
- Denise Washburn, Village Resident
- Bob Williams, GTC

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1. Executive Summary

The Village of Sodus Point's Active Transportation Plan is a planning document that identifies strategies to improve the quality of walking and biking in the Village through physical infrastructure. The Plan looks at the characteristics of existing bicycle and pedestrian infrastructure, identifies needs and opportunities for improved facilities, and establishes design guidance for recommended facilities. In addition, the Village recognizes the importance of programmatic outreach and education opportunities for residents that may lead to increased levels of active transportation in the Village.

Given the auto-centric nature of roads in the Village, much like the rest of the country, it is crucial to take time to consider the circulation of pedestrians and bicyclists and how they interact with the vehicular transportation system. This in-depth analysis of the non-motorized transportation options in Sodus Point will help improve public awareness of the benefits and issues of active transportation, reduce conflicts between motorists and non-motorists, and increase road safety in the Village. This plan will guide the Village in development and maintenance of active transportation infrastructure, and the incorporation of such into capital improvement projects such as road and sidewalk development and repair.

The purpose of this study is to look beyond one-off, isolated improvement projects, and develop a strategic plan for creating improvements that build off each other and create a cohesive active transportation network. The result will be a Village-wide network that allows residents and visitors to access all major points of destination in a safe and efficient manner while reducing vehicledependency. The following sections are included in this Plan:

Introduction & Summary

This section sets the context and background for why an Active Transportation Plan is necessary for Sodus Point, and how the Village can stand to benefit from addressing active transportation in their community. The public participation that occurred as a part of this planning process is also summarized in this section, as well as the existing plans that help set the stage for this Active Transportation Plan.

Existing Conditions

This section takes a comprehensive look at the existing active transportation facilities in the Village, as well as many community characteristics that can either help support or detract from the active transportation user's experience. This includes a demographic analysis; an inventory of sidewalks, trails, and shoulders; a safety analysis; and the results of a community assessment offered to residents regarding active transportation behaviors and attitudes. In addition, a bicycle and pedestrian level of service (LOS) model was run on a select network of streets in Sodus Point to determine the existing suitability of these roads for pedestrians and bicyclists. A time-lapse camera analysis is also included, which studies the frequency and direction of pedestrian and bicycle crossings at three key intersections in the Village.

Alternatives Toolkit

This section presents a multitude of strategies and facilities that the Village could consider to enhance the active transportation environment in Sodus Point. These are broken down into three categories: on-street alternatives, off-street alternatives, and policy and programs. Each strategy has a short description, an example photo, and anticipated effects to specified user groups and the environment.



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Facility Recommendations

This section utilizes the strategies listed in the alternatives toolkit to develop recommendations for the Village regarding active transportation improvements. The recommendations in this section are broken into four categories: on-street recommendations, off-street recommendations, policy and program recommendations, and priority intersection recommendations.

Facility Design Guidance

This section is a valuable ongoing resource for the Village of Sodus point as new bicycle and pedestrian facilities are constructed, including many of those identified in the Plan. Based on relevant Federal and State of New York sources and standards, the Plan's design guidance covers many established and emerging facility types including sidewalks, curb ramps, bike lanes, Shared Lane Markings, bike boulevards, midblock crossings, and shared use paths.

Zoning & Development Regulations Assessment

The policies and regulations contained within the Village Code have significant ramifications for the design and functionality of the Village's physical environment, including the transportation network. This section contains an analysis of the Village Code to help determine how the existing code either facilitates or hinders active transportation activity.

Outreach & Education Recommendations

Conducting outreach and education programs is another important aspect of the active transportation planning process. The Plan's associated recommendations seek to increase the number of bicyclists and pedestrians while improving safe and appropriate behavior by bicyclists, motorists, and pedestrians. One highlight of this section is a focus on connecting with local and regional partners to maximize the effectiveness of existing resources, programs, and materials.



Funding & Implementation Strategy

The Active Transportation Plan includes recommendations for ongoing strategies to pursue relevant funding resources, both traditional and innovative, that are available to the Village as they seek to implement this Plan. Each of these resources is described, including federal, state, regional, and private sector resources that provide grants for both facilities and programs.

Follow On Activities

The final report highlights a wide range of needed improvements that were identified by residents during the planning process. However, there are follow on activities that were not included within the plan's original scope/ budget. The Sodus Point Active Transportation Plan does not identify all of the specifics required to construct every recommended project. These follow on activities can be addressed by the Village and/or stakeholders on an ongoing basis as implementation takes shape.

2. Introduction & Summary



2.1 Background & Purpose

This report summarizes the analysis, planning, and design efforts involved in the creation of the Village of Sodus Point's Active Transportation Plan. This Plan shows the Village's commitment to accommodating active transportation by providing a community-based, data-driven framework for guiding future decisions and investment regarding bicycle and pedestrian infrastructure. The Plan contains recommendations regarding sidewalk networks, on-road bicycle facilities, and off-road trails that will improve the safety and ease of moving around the Village by walking or biking. This plan will aid the Village in becoming a more walkable and bike-friendly community, and enhance the perception of the Village as an attractive, vibrant community that is a great place to live, work and play.

Residents and stakeholders were solicited as a part of this process in order to determine the key issues and opportunities within the Village for improving pedestrian and bicycle accessibility. Two public meetings were held as a part of this process, as well as a community assessment to help determine what infrastructure improvements are most crucial to Sodus Point's success as a walkable and bike-friendly community. The public input process was crucial to the success of this study. By allowing civic leaders, business owners, and residents to have true input on the parameters and outputs of this study, it provides ownership of the plan to the Community. It will be a combination of public support and civic initiative that will allow the recommendations of this plan to come to fruition and have transformative results.

The Village of Sodus Point is located on the shores of Lake Ontario and Sodus Bay, which provides a unique coastal character that has a great sense of place. In addition, the Village has a traditional village road network, which is laid out in a grid-like pattern that lends itself to walking and biking activity. All of these characteristics make Sodus Point an ideal setting for an active transportation planning initiative, and ultimately a great place to live.

Village of Sodus Point Active Transportation Plan



2.2 Active Transportation Benefits

This Plan aims to increase the viability of biking and walking as transportation and recreation options for residents and visitors of Sodus Point. The Plan has a forward-thinking approach, considering not only the needs of residents and visitors of today, but more importantly the necessary improvements for the active transportation needs of future residents and visitors. The rise in active transportation users comes from a need to develop alternative travel options from the privatelyowned vehicle (POV). This is partly due to rising costs of fuel prices, environmental issues, as well as human health concerns related to inactivity. This plan will help ensure that the Village is making sustainable choices in regards to its transportation system, and will help catalyze systematic change that will enhance the long-term economic, environmental, health, and social benefits of active transportation.

People People Pe Transportation accounts for nearly 30% of greenhouse gas emissions in the United States (EPA, 2017). Although this percentage has declined moderately over the past decade, POVs remain the dominant form of transportation in the United States. However, biking and walking are alternative transportation options that provide a cost effective, sustainable, and way of going about daily activities. Promoting and enhancing these options helps contribute to the Village's triple bottom line, with societal, environmental, and economic benefits.



Benefits for People

The benefits for people can be divided into two general categories: health benefits and social benefits. Health benefits are some of the most obvious benefits of active transportation, as it involves people undertaking physical activity to get to their destinations. However, the importance of these benefits cannot be understated. Heart disease, respiratory disease, and diabetes are some of the leading causes of death in the United States; all of which are heavily influenced by the amount of physical activity an individual undertakes (CDC, 2017; 2019).

Shifts in technology over the past two centuries have allowed for Americans to become increasingly sedentary. For instance, the rise of the automobile allowed decision-makers in American cities to create low-density development that resulted in many trips being infeasible via foot or bike, and as a result many American do not get daily physical activity as a result of going about profit: reduce spending on we daily tasks. It has been shown that incorporating exercise into daily activity is an effective way of reaching the recommended weekly level of physical activity (CDC, 2018).

Therefore, by improving the built environment to facilitate walking and biking, the Village is promoting increased physical health bv opportunities providing for residents and visitors to reduce sedentary behavior and live a fuel, taxes, healthcare healthier lifestyle.

Planet: reduce emissions, increase resiliency and air quality



The benefits of active transportation from a societal pointof-view are numerous. An estimated 9% of Americans do not own a vehicle (<u>US Census Bureau</u>). These individuals must rely on alternative modes of transportation, such as walking, biking, and transit. By investing in infrastructure to help facilitate these modes of transportation, the Village is increasing non-car owners' mobility and access to employment and services.

Increasing active transportation facilities in the Village will also help increase safety on the roadways, as all users will have increased dedicated space, thus reducing the potential for collisions between walkers and drivers, as an example.

In addition, increased levels of active transportation also can help reduce stress levels. Research shows that both being outdoors and performing physical activity can help reduce stress by reducing levels of the body's stress hormones such as adrenaline and cortisol, while stimulating endorphins (<u>Harvard Health, 2018;Harvard</u> <u>Health, 2018</u>).

Lastly, active transportation can help increase levels of social capital. Social capital can be defined as "social networks and interactions that inspire trust and reciprocity among citizens" (Leyden, 2003). By spending time in the public sphere, moving along at a much slower pace than one would in a private vehicle, there is an increased potential for social interaction, fostering community cohesion. Active transportation reduces isolation, which in turn fosters social capital, which creates a more welcoming, attractive environment to live in.

Benefits for the Planet

In addition to being beneficial for humans, active transportation is also beneficial for the environment in which we live. Increased active transportation for daily activities translates into less automobile trips, which reduces the greenhouse gas emissions produced by the transportation sector. Reduced automobile trips also help improve local air quality and reduce congestion.

Benefits for Profits

There are also economic benefits to promoting active transportation. Individuals who walk or bike to commute or perform daily errands reduce their cost of ownership of a vehicle, including fuel costs, maintenance, and car insurance. In addition, such individuals are also improving their health; reducing the need for expensive health care costs for health issues related to inactivity.

An environment more amenable to bicycling and walking will also increase access to retail, service, and entertainment destinations such as Downtown Sodus Point. If residents and visitors can easily walk or bike along these corridors, they will be more likely to stay and patronize more of the businesses than they would have had they parked their car, walked directly into a business, and got back into their cars immediately after. In addition, the number of people biking can be a good indicator of a community's livability and desirability, attracting new residents, businesses, and visitors that will help stimulate the Village economy. By encouraging active transportation, Sodus Point's economy would capture these potential savings and keep visitors and residents centrally located, resulting in increased community investment.



Village of Sodus Point Active Transportation Plan

Climate Change + Active Transportation

There are important links between active transportation, climate change, and the environmental challenges facing Great Lakes communities like Sodus Point.

Impacts of climate change include increasing frequency and intensity of severe storm events. Over the last 50 years, much of the U.S. has seen increases in prolonged periods of high temperatures, heavy downpours, and in some regions, severe floods and droughts. Sodus Point experienced severe storms and damaging flooding in both 2017 and 2019. Extreme lake levels are a continuing concern for the community. In response to the extended pattern of flooding along the shores of Lake Ontario, New York State has budgeted \$300 million for the Resiliency & Economic Development Initiative (REDI) to increase the resilience of shoreline communities and bolster economic development in the region. Several REDI projects are being implemented around Sodus Bay to improve community resilience.

Active transportation is one effective tool for reducing greenhouse gas emissions and the impacts of climate change. One of the most important things individuals can do to reduce climate change is to use alternatives to cars for frequent, short distance trips. Short car trips pollute more per mile because car engines are less efficient during the first few minutes of operation. Substituting walking and bicycling for short car trips provides relatively large energy savings and greenhouse gas reduction. Reducing the burning of fossil fuels for transport will reduce the rate of climate change and the severity climate change impacts on Sodus Point.

Transportation choices also impact the water quality of Lake Ontario and Sodus Bay. Short distance car trips generate particulate air pollutants that deposit in natural water bodies, and cars contribute pollutants that move across impervious surface into lakes and streams in the form of run-off. Categories of pollutants in urban stormwater runoff include:



In Sodus Bay, recent increase of harmful algae blooms is an indication of changing conditions that are impacting water quality. Active transportation can help reduce the pollutants generated by our transportation infrastructure, and improve the resilience of Sodus Point.



2.3 Public Participation

Planning of any kind cannot be done by government officials and consultants alone. In order to truly reflect the goals and values of a community, a plan must be informed by public input. By providing several opportunities for the public to identify issues, provide potential opportunities, and review draft plan documents, the Village can determine the true needs of its residents when it comes to active transportation. Community participation is an objective of the Genesee Transportation Council's Long Range Transportation Plan; the guiding planning document for all transportation planning that occurs in the Genesee-Finger Lakes region.

A project steering committee was created by the Village as a part of this planning process in order to ensure the plan reflected the attitudes of the community as a whole. The committee met quarterly to discuss issues and opportunities, review preliminary deliverables, and steer the overall message and takeaways of the plan in a manner consistent with the views of a wide range of stakeholders in the Village. The following individuals were involved in the Steering Committee:



- Maxine Appleby, Village Trustee
- Kathleen Berretta, Sodus Point Planning Board
- Bret DeRoo, Wayne County Planning
- Lynn Carlyle, Village Resident
- Lora Leon, NYSDOT Region 4
- Sharon Lilla, Village Resident
- Gay Mills, Genesee Land Trust
- Joe O'Toole, Sodus Bay Lighthouse Museum
- Karen Shughart, Village Resident
- Denise Washburn, Village Resident
- Bob Williams, GTC

As mentioned previously, several opportunities for public input were provided as a part of this planning process. Table 2.1 below summarizes the public input opportunities below (for more information see Appendices H & I).

| Date | Meeting/Event | Purpose |
|--|---|--|
| April 25, 2019 | Kick-Off Meeting | To inform the Steering Committee of the project purpose and goals, and identify preliminary issues and opportunities. |
| June 5, 2019 | Steering Committee Meeting #2 | To conduct a walking tour of the Village and discuss barriers to active transportation as seen in the field. |
| July 4, 2019 | Public Information Booth | To inform the public of the project purpose and goals, and solicit input regarding key challenges and possibilities regarding active transportation. |
| September 9, 2019 | Steering Committee Meeting #3 | To review the draft existing conditions and recommendations section of the report |
| September 21, 2019 | Public Open House | To allow the public to review and comment on the draft existing conditions and recommendations sections of the report |
| September 21, 2019 - October 19, 2019 | Presentation of Public Open House Boards at Village Hall | To allow members of the public who could not attend the Public Open House to review and comment on the materials presented at the meeting. |



This plan builds upon previous planning activities and studies in Sodus Point. A review of existing plans that relate to the development of active transportation infrastructure for the Village, Town, County, and Region was conducted to provide context for this plan. The Plan builds on the following plans, studies, and initiatives:

• 2001 Sodus Bay Waterfront Initiative

The Towns of Sodus and Huron as well as the Village of Sodus Point developed an intermunicipal vision and set of goals for Sodus Bay. The vision of this plan includes managing water quality, protecting natural areas, promoting public access to the Bay, and encouraging desired development and land use patterns. The results of this study should align with the vision to enhance the character of the bay while balancing residential, economic, and ecological needs.

• 2007 Downtown Vision Plan

This planning process began to help determine how to maximize the assets of the village, attract and retain businesses, and improve the condition and appearance of the downtown business district. The vision statement highlights the need for a pedestrianscale downtown environment that supports commercial and civic activity. This plan will help support this vision by promoting active transportation improvements to Downtown Sodus Point that will enhance the vibrant character of the Village.

• 2010 Great Sodus Bay Harbor Management Plan

The purpose of this plan "is to provide the vision and tools that will enable local governments to manage the activities on the surface waters of Sodus Bay and the adjacent shoreline in a comprehensive and coordinated manner while providing the flexibility to governments to adapt to changes that may result from climate change." The ATP will help promote the vision of this plan.



This plan was produced to help the County to determine planning objectives for new parks and trails and develop a prioritized list of improvements within the county. A proposed trail connections extending the existing snowmobile trail to Sodus Point Beach Park is identified in this plan, and will be supported in this plan as well.

• 2012 Village if Sodus Point Amended Local Waterfront Revitalization Plan (LWRP)

The Village produced its first LWRP in 2008, which was then amended in 2012. The LWRP is a comprehensive coastal management program that is based on the policies of the New York State Coastal Management Program. It provides a comprehensive framework within which critical waterfront issues can be addressed and waterfront improvement projects can be pursued and implemented. Given the significant flooding events that have occurred in recent years in Sodus Point, it will be especially crucial for this plan to be cognizant of the potential impacts of the proposed recommendations within this plan on water levels and resiliency, and vice versa.

• 2016 Genesee Transportation Council (GTC) Long Range Transportation Plan (LRTP)

The GTC LRTP is updated on a five year basis, and helps determine the transportation needs of the region, how the existing transportation system fits such needs, and identify strategies to help fill the gaps. Some of the identified goals include increasing safety for non-motorized users, and protecting and enhancing the natural environment and community appearance; all of which will be supported through this planning process.



• 2016 Genesee-Finger Lakes Regional Trails Initiative

The vision of this initiative is " provide a wellconnected network of trails that links the region's healthy, thriving communities, builds on the unique assets of the Genesee-Finger Lakes Region, and is safe and accessible for all." The plan identifies the opportunity to link the existing snowmobile trail between Wallington and Sodus Point to other regional trails, which will be considered as well in this plan.

2018 Post-Flood Recovery Workshop

G/FLRPC and New York Sea Grant coordinated a full-day workshop engagement where invited stakeholders can react to the 2017 flood and erosion event; identify past, current, and future challenges and strengths and develop and prioritize actions to improve the community's resilience to future high water levels on Lake Ontario. The ATP will identify areas of concern regarding flooding in the Village, and consider potential recommendations based on this information.



2.5 Plan Summary

The Village of Sodus Point's Active Transportation Plan takes a comprehensive approach to enhancing the Village's current accommodation and promotion of walking and biking. Many of the Plan's recommendations identify and describe specific infrastructure improvements that will improve pedestrian and bicycle travel in the Village. The Plan also recommends non-infrastructure related initiatives to promote walking and biking, such as outreach and education on the benefits and status of active transportation in the Village to increase awareness of residents and business owners. Following this section, the Plan is divided into eight additional parts:

- Existing conditions
- Alternatives toolkit
- Facility recommendations
- Facility design guidance
- Zoning & development regulations assessment
- Outreach & education recommendations
- Funding & implementation strategy
- Follow on activities



3. Existing Conditions

3.1 Community Characteristics

The Village of Sodus Point is within the Town of Sodus, on the shores of Lake Ontario and Sodus Bay. The Village is located at the northern terminus of Route 14, as well as the eastern terminus of Lake Road. The Village has a total of 1.5 square miles, and is surrounded by water on three sides. According to the 2017 American Community Survey, there are 951 residents in the Village, and 439 households. The Village was the site of the first European-American settlement in the Town of Sodus, and before that was Onondaga Nation territory for many centuries. The area became a population vacation resort in the 19th century, but was only incorporated as a Village in 1957.

As mentioned previously, the Village's history of development resulted in the traditional grid-like street network found in the northern part of the Village. However, the western and southern areas of the Village have a more rural character, with some more suburban-type development, such as in the South Shore neighborhood. However, the Village maintains a historic waterfront quality as its predominate character.

The architectural character of the Village varies significantly. Over 40% of homes in the Village were built prior to 1939, many of which were built in the 19th century. However, there was a significant development of suburban-style homes in the 1950s, which account for 16% of the houses in the Village. There are also many marinas and other boating-related facilities, which contribute to the coastal character of the Village. The proximity of the commercial corridor and other major Village destinations to the Village's residential areas makes active transportation a real possibility for Village residents.

Sodus Point has a vibrant downtown corridor along Greig Street, which hosts a variety of retail stores, restaurants, and other waterfront-related businesses. This area is especially vibrant during the summer months, when many tourists and boaters patronize these establishments.

One of the most significant open spaces in the Village is the Sodus Point Beach Park. This is a state-owned park that is located at the Northern-most point of the Village where Sodus Bay reaches Lake Ontario. The park has sandy beaches that attract many visitors during the warmer months. In the off-season, boaters are permitted to use the park as a boat launch. As of 2019, the Genesee Land Trust purchased a significant amount of land along Sentell Street, which will be developed into a conservation area with wetland trails. Another major attraction in the Village is the Sodus Bay Lighthouse Museum. The museum is in a lighthouse constructed in the 19th century.

The proximity of the museum, park, downtown, and other points of interests in Sodus Point provides an excellent environment for creating a connected, comprehensive active transportation network that allows residents and visitors to access many destinations in a safe, practical manner without using a vehicle.



3.2 Transportation Network

There are approximately 13.7 miles of roads in Sodus Point, 80% which are owned and maintained by the Village. The remaining 20% of roads are owned by the New York State Department of Transportation (NYSDOT), which is only NY Route 14. Given the fact that approximately 63% of the Village boundary meets water, there are few regional connections by roadway. Figure 1 depicts the existing road network in the Village by road jurisdiction.

The two major roads in the Village of Sodus Point are NY Route 14 and Lake Road. These two roads are the major routes that lead in and out of the Village. NY Route 14 is a major state route that leads south into Lyons and Geneva, and continues all the way to the Pennsylvania Border. Lake Road also is a regionally significant road, that runs from the Rochester Metropolitan Area in Webster, NY to the Village of Sodus Point. Lake Road in its entirety is a part of the Great Lakes Seaway Trail, a major scenic byway that follows the shores of Lake Erie, the Niagara River, Lake Ontario, and the Saint Lawrence Seaway from the border of Ohio in Pennsylvania to the US/Canada border in Northern New York State. The Average Annual Daily Traffic (AADT) of Route 14 and Lake Road are 1325 and 1244 respectively, which are relatively low compared to the state as a whole, again most likely due to the location of the Village along shores of the lake and bay, which prevents the Village from experiencing most regional traffic.

The remaining roads within the Village can be grouped into three categories: dense lakefront residential neighborhood roads, lower-density suburban-type residential roads, and rural roads. The Village has maximum speed limit of thirty miles per hour (MPH) on all roads in the Village as established in the Village Code. There are no existing bike lanes within the Village limits, nor are there are roads marked with "sharrows," or arrows painted on the roadway to indicate that the road is intended to be shared by vehicles and bicyclists.





Water +

Active Transportation

One of the most significant assets in the Sodus Point is its extensive waterfront. The access to both Sodus Bay and Lake Ontario can present itself as both an opportunity and a challenge for the Village. The Village should be cognizant of the following opportunities and challenges when considering any future active transportation facilities

Opportunities:

- Water-based active transportation (canoeing, kayaking, etc.)
- Waterfront trails
- Scenic destinations for active transportation users
- Connections between land and water-based active transportation
- Increased access to tributaries and creeks for kayakers/canoers during periods of high water.

Challenges:

- Flood damage to pavement on waterfront pathways
- Lack of access to pedestrian facilities during flooding
- Destruction of benches

 streetlights/other
 pedestrian furniture during
 flooding events

60%

Over

of the Village's borders are surrounded by water.



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Figure 1: Roadway Jurisdictions









Figures 2: PLOS & BLOS Study Network





Village of Sodus Point Active Transportation Plan

Sidewalk Inventory

An inventory of all existing sidewalks was conducted as a part of this study. The presence of sidewalks along a vehicular right-of-way greatly enhances the ability for individuals to choose walking as their mode of travel, due to safety and comfort concerns. Increased pedestrian activity due to sidewalks also contributes to the quality of life within a community due to increased social cohesion and outdoor activity. Figure 4 illustrates the existing sidewalks in the Village, and helps to identify spatial gaps in the sidewalk network in the Village. As seen in the figure, most of the existing sidewalks in the Village are concentrated along the commercial corridors in the downtown area of the Village. Essentially all of the roads outside of this area have no sidewalk on either side. This is most likely due to the rural nature of many of the roads and the low volumes of both vehicles and pedestrians on the roads. However, through input from the public and the stakeholder committee, several gaps in the sidewalk network have been identified, such as between the ballfields and the parking lot on Greig Street, as well as the portion of Wickham Boulevard between North Ontario Street and Bay Street Extension.

"Roadways without sidewalks are **twice as likely to have pedestrian crashes** as roadways with sidewalks on both sides of the street."

- Federal Highway Administration (FHWA)



Trail Inventory

Currently, the Village has only one major trail within its borders. The trail heads southwest from Sentell Street along the Village border, where it continues into the Town of Sodus at Morley Road. The trail is a part of a significant snowmobile trail network that extends across Wayne County and well beyond into the rest of Upstate New York. In the winter, the trail is maintained by the Williamson Driftriders, a not for profit organization in the Town of Sodus that promotes snowmobiling and maintains 63 miles of the trail in the area. However, in the warmer months, the trail is also used for walking and horse riding.

In 2019 the Genesee Land Trust purchased approximately 32 acres of land between Lake Road and Sentell Street. Referred to as Macyville Woods Nature Preseve, the land trust has developed a trail system throughout its wetlands and wooded uplands. This new nature preserve significantly contributes to off-road active transportation opportunities within the Village. Macyville Woods Nature Preserve Trails will be connected to the on-road pedestrian network in order to promote the accessibility of the park by foot or bike.

3.3 Existing Bicycling and Pedestrian Conditions

An important element of any bicycle and pedestrian planning initiative is to gauge how well or how poorly the area's roadways accommodate users of the transportation system. While qualitative characterizations can be made by expert observation or received through public or stakeholder input, an objective and defensible system-wide evaluation is also useful in setting the stage for identifying and prioritizing facility improvements.

An evaluation of existing bicycling and pedestrian conditions was conducted for a study network of arterial and collector roads centered on the Village of Sodus Point, with some extensions into the surrounding Town. This network is comprised of approximately 58 directional segments totaling about 9 centerline miles (with 18 miles of directional analysis) and is depicted in the map in Figure 2.

The analyses used are the Bicycle & Pedestrian Level of Service Models, based on data collected in June 2019. These models, which have been applied on hundreds of thousands of miles of roads throughout the United States, are fundamental performance measures and design tools in the Highway Capacity Manual (HCM 2010). The following sections provide background information and data descriptions for these evaluation tools.

As described below, the analysis results indicate relatively good bicycling and walking conditions for many of the study area segments, but also with some particular local challenges. This generally positive result is likely tied to the fact that Sodus Point is a small and compact community, with generally low traffic volumes (the highest daily traffic reported on the study network is 1,325 vehicle per day on New York State Route 14) and a village-wide speed limit of 30 miles per hour on all roads. Motor vehicle speeds and traffic volumes are among the most significant stressors that influence the model results, and these are relatively low within Sodus Point. The roadways with the highest volume (NYS Route 14, Geneva Rd and Lake Road) typically have paved shoulders (see Figure 3), which provide a separate operating space for bicyclists, while the local roads have very low volumes which allow many bicyclists to comfortably claim the lane. There are just over 1 mile of paved shoulders observed to be consistently 4 feet or wider, which is the minimum width recommended by AASHTO for a shoulder to be considered for marking as a bike lane or otherwise be considered sufficient operating space for a bicycle. There are additional 2.4 miles of paved shoulders that provide less than 4 feet, which people in the community may recognize. While this space can factor into the effective width of the outside lane and reflect positively in the Bicycle Level of Service Results, it is not sufficient for designation as a bike facility (although these roads could be candidates for modification to provide wider shoulders). There are also some examples of graded, but unpaved, shoulders on some roadways (e.g., Lake Road with the Village limits). Unpaved shoulders are neither recorded in the data nor do they benefit the model results; they are noted in the data collection comments as they may be opportunities for future paving or widening of the existing shoulder.

Sidewalks are limited to mostly the major roads, and, when present, are often on one side of the street only (see Figure 4), which contributes to the less favorable results for the pedestrian mode. Pedestrian conditions are generally more favorable close to downtown, where sidewalks are more likely to be found, even if only on one side of the street. There is just under one centerline mile of roadway with full sidewalks on both sides, and another a similar distance with a full sidewalk on one side. A few other segments have partial sidewalk coverage that does not add up to the full length of the segment. (Notethe maps in Figures 3 and 4 show the worse directional results for each segment, so the map shows the result associated with the side with no sidewalk on roads with sidewalk on only one side).

Participants at the walking tour organized in June 2019 as part of this project reported periodic conditions which could impact the results of both models if considered typical for the area. First, during peak tourist season, when many houses in the Village are used for short-



term rentals, the density of on-street parking, or heavily occupied driveways goes up, as many visitors visit in groups with multiple vehicles per house. Seasonal events such as concerts at the lighthouse or even peak beach visitor days will also bring more vehicles to the Village and lead to increased on-street parking, particularly along Lake Street, Ontario Street, and Wickham Boulevard. With the exception of Greig Street, onstreet parking was negligible during the field review and data collection process, so the model results do not directly reflect this perceived characteristic of the local network. (While additional on-street parking will decrease the available operating space for bicyclists, and thus negatively impact the Level of Service result, heavy parking activity on local streets would also likely have the effect of slowing traffic on those roadways, which would be a positive influence on the model results if the running speed data were appropriately adjusted to those conditions.)

Also, while not classified as heavy vehicles per se, vehicles hauling trailers are not uncommon sights in the Village, either to put in at the Beach Park during duck hunting season or parked overnight at rental homes during the summer months. These vehicles complicate operations for vulnerable users such as bicyclists and pedestrians. Parked trailers may block sidewalks or push pedestrians further into the roadway when there is no sidewalk and may also impede visibility in advance of intersections. Moving trailers may increase stress for bicyclists, especially in shared lanes. Again, these conditions were not evident at the time of the data collection effort, and they may not be frequent enough to be considered typical, so, while reported and acknowledged, they are not directly reflected in the model results.

The following sections briefly describe the evaluation procedures and the characteristics they consider, as well as the analysis results.



The Bicycle Level of Service (BLOS) Model and Pedestrian Level of Service (PLOS) Model are objective measures of bicycling and walking conditions of a roadway which provides a modeled approximation of a typical user's perceived safety and comfort with respect to motor vehicle traffic and roadway conditions. These nationally adopted and widely used methodologies quantify the quality of accommodation (or "level of service") for bicyclists and pedestrians that currently exists within the roadway environment. A major benefit of incorporating the BLOS and PLOS is the indication they provide regarding which network segments have the greatest needs. They use the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. These methods are not limited to merely assessing conditions; results can be used to provide a snapshot of existing bicycling and walking conditions, identify roadways that are candidates for reconfiguration for bicycle and pedestrian facility improvements, conduct a benefits comparison among proposed facilities and roadway cross-sections, and to prioritize and program roadways for such improvements.

The BLOS Model is statistically robust and clearly reflects the effect on bicycling suitability or "compatibility" due to variations in the following primary factors:

- bike lane or paved shoulder width;
- traffic volume, speed, and type;
- outside lane width;
- presence of on-street parking; and
- pavement surface condition.

In a similar manner, the PLOS Model incorporates the following primary factors:

- sidewalk presence, width;
- roadway width;
- traffic volume and speed;

Existing Conditions



- presence of buffer, width; and
- presence of barriers (on-street parking, street trees).

The level of service analysis produces, for each study network segment, an objective score and "grade" which measures accommodation on that section of roadway, described in the following table.

| Level of Service | Description |
|------------------|--|
| А | Excellent; optimal conditions |
| В | Good, small number of factors impeding pedestrian safety and comfort |
| С | Fair; provides basic accommodation |
| D | Poor; uncomfortable for new users |
| E | Very Poor; unsuitable for bicyclists/pedestrians |
| F | Failing |

Existing Conditions Analysis Results

Bicycling conditions analysis were performed for approximately 58 directional network segments (each with two distinct directional data rows) based on the collected network data. The distribution of bicycle level of service grades is shown in the chart on the upper right. The vast majority of the roads analyzed for this study were rated as BLOS "A," meaning there are excellent biking conditions. However, it is important to note that due to the low traffic volumes in Sodus Point compared to the nation, these results may not adequately capture the real-world bicycling conditions. These results are mapped in Figure 5, showing the worse directional result for each network segment. Appendix A provides additional information about the BLOS Model, and Appendix B provides the BLOS data sheets for all roadways that were analyzed in the course of the study.



Pedestrian conditions were evaluated for the same study network. The distribution of pedestrian level of service grades is shown in the chart below. As you can see, the vast majority of roadway miles analyzed are categorized as PLOS Level "C," (about 76%) meaning there is generally basic accommodation for pedestrians in the majority of the study network These results are mapped in Figure 6, again showing the worse directional result for each network segment Appendix A provides additional information about the PLOS Model, and Appendix B provides the PLOS data sheets for all roadways that were analyzed in the course of the study.



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Existing Conditions



Sodus Point Active Transportation Plan

Figure 3: Study Network Shoulders









Figure 4: Existing Sidewalks





Village of Sodus Point Active Transportation Plan



Sodus Point Active Transportation Plan

Figure 5: Bicycle Level of Service (BLOS)



Bicycle Level of Service Parks
A
A
Village Boundary
Parcels
C
D
E
F
Segment Not Analyzed
0 500 1,000 2,000
Feet





Figure 6: Pedestrian Level of Service (PLOS)





Pedestrian Level of Service









Village Boundary

Parcels



village of Sodus Point Active Transportation Plan





Figure 7: Road Slope









Figure 8: Crash Density

| | Sodus Point Parcels | |
|----------|-----------------------------------|--|
| | Town of Sodus | |
| | Road Network | |
| | Pedestrian Crash (Non-Injury) | |
| <i>Ś</i> | Pedestrian Crash (Injury) | |
| • | Non-Pedestrian Crash (Non-Injury) | |
| | Non-Pedestrian Crash (Injury) | |

Crash Density:



Village of Sodus Point Active Transportation Plan

3.4 Safety Analysis

An individual's perception of safety is a crucial factor in the decision to walk or bike instead of using motorized forms of transportation. The auto-centric nature of our transportation system often means that vehicles overwhelmingly dominate the right-of-way. The physical takeover of the roadway, as well as the significantly higher speeds at which drivers typically travel often results in an uncomfortable environment for pedestrians and bicyclists. An analysis of road slopes in the Village as well as 5-year crash data was conducted in order to determine the areas in which safety is the most significant concern in the Village.

Longitudinal Road Grade Analysis

The longitudinal grade, or slope, of every road in the Village was also analyzed to determine areas of concern for bicyclists. Steep roads pose safety concerns for bicyclists, as the higher the grade, the harder it is for bicyclists to control their speeds while going downhill as well as their ability to stop promptly. The following list provides a sense of the impact of various grades on bicyclist's ability to travel:

- 0%: A flat Road; easy to ride
- 1-3%: Slightly uphill but not particularly challenging
- 4-6%: A manageable gradient that can cause fatigue over longer distances
- **7-9%:** Starting to become uncomfortable for seasoned riders, and very challenging for new riders
- 10%+: A painful gradient, especially if maintained for longer distances

As shown in Figure 7, as well as the chart to the right, the majority of the roads in the Village have between a 1% and 3% grade. This is most likely due to the proximity of the Village to the lake shore, and suggests that the majority of the roads in the Village are easily bike-able (consistent with the BLOS). The road segments with the most significant grade are relatively short in length, and should not pose significant issues for bicyclists.



Crash Analysis

The GTC provided the Village with 5-year crash data from the Accident Location Information System (ALIS). All crashes, regardless of the type of incident were mapped, and a kernel density analysis was performed to determine where the "hot spots" were located in terms of crash density. There were no crashes involving bicycles, and only three crashes within the last five years that involved pedestrians, which are shown separately in Figure 8. However, it is helpful to analyze all of the crash data, regardless of the type of incident, as any road segment that experiences a high concentration of vehicle crashes has a high likelihood of being unsafe for pedestrians and bicyclists as well. It is also important to note that these crash numbers are from reported crashes only, and do not account for pedestrian and bicyclist incidents that were not reported to the police, or were "close-calls," but not actual collisions.

As seen in Figure 8, the concentration of crashes is located primarily within the Downtown area. This is to be expected, as there is a higher activity level in this area, and the traffic volumes are typically higher. However, it should be noted that only one of the three pedestrianrelated crashes were within this hot spot, and the other two occurred along Margaretta Road. This indicates that pedestrian safety is an issue along that corridor, as 30% of the crashes in that area were pedestrian-related.





Within the downtown crash hot spot, there were 36 crashes over five years, averaging approximately six crashes per year. Of those 36 crashes, 16 (or 46%) of them were at intersections. The type of collision for each of these incidents were varied, and do not present a clear pattern in terms of potential roadway design failures.

The two other concentrations of crashes were along Lake Road between the western Village border and Seaman Street, as well as along Route at the southern border of the Village.

Route 14 in this particular area was also identified as uncomfortable for pedestrians and bicyclists, as several Steering Committee members noted that they have perceived a high frequency of vehicles driving well over the speed limit as they reach the 30 MPH speed zone.

Out of the 62 crashes reported between 2014 and 2018, six (or 10%) of them involved an injury. None of the crashes involved serious injuries or fatalities. Two of such injury-involved crashes were pedestrian crashes. In both instances, it was night time, and the pedestrian



was walking alongside the roadway. Two of the other incidents that caused injuries were due to vehicles colliding with fixed objects along the roadside, and the remaining two were vehicles colliding with each other (one of which was a head-on collision at the intersection of Grieg Street and Bay Street Extension).

The distribution of crashes by type is as follows:

- Collision with Fixed Object: 29%
- Collision with Deer: 15%
- Collision with Pedestrian: 5%
- Collision with Other Vehicle: 51%

Of the 32 collisions with other vehicles, the most frequent type of collision type was a rear end collision (22% of crashes). The second most frequent collision type was sideswiping, potentially due to the narrow roads in the Village and the presence of many boat trailers. The third most frequent collision type was overtaking (16%).





3.5 Community Assessment

In order to further assess the values and goals of the community members of Sodus Point, a community assessment was conducted in order to gauge the level of existing activity and interest in regards to active transportation. The assessment gathered information about current the state of active transportation in the Village, including frequency of activity, major destinations of those using active transportation, attitudes towards active transportation, and barriers to increased active transportation in the Village. The assessment consisted of 27 questions, and was developed in collaboration with the Steering Committee and Village officials. It was distributed through Survey Monkey, and hard copies were distributed at Village Hall and other major points of destination. The survey was open between July -September 2019, and received 198 responses. The results of the assessment are summarized below, and the entire survey can be found in Appendix C.

Assessment Respondents

Of the 150 individuals who responded to the assessment, 42% were full-time residents of the Village, and 44% were seasonal residents. The majority of those who were either full- or part-time residents had lived in the Village for over 11 years (64%). Both the average number of automobiles and bicycles present in the respondents household were two. On average, there was one child (under 18) present in the household, but an average of two seniors (over 62), indicating a relatively older population in the Village.



Commuting Patterns

According to the 2017 American Community Survey, there are 372 workers over the age of 16 in Sodus Point. Based on the representative sample of workers in the assessment, only 14% of those workers' places of employment are within the Village. The remaining 86% of workers must commute elsewhere for their jobs. According to the assessment, the key roadways which workers use to access employment are Route 14 and Lake Road, the two major routes that lead out of the Village.

The vast majority of respondents use their personal vehicle as their means of transportation for commuting, with only seven respondents walking to work, and ten respondents biking on a daily basis.







When asked what mode of transportation they preferred aside from a motor vehicle, 54% of the respondents answered that they prefer a bicycle. For those who bike in the Village, the preferred location for biking was overwhelmingly on-road (54%), and road shoulders were the second most popular location (33%). The majority of respondents also identified as bicyclists with fair experience (58%). A significant amount of respondents never use a bicycle to perform daily tasks, such as getting to work or shopping, but more individuals responded that they bike for physical activity or leisure, especially on a weekly basis.

81% of respondents indicated that winter weather conditions are a significant barrier to bicycling in the Village, which is to be expected due to the relatively harsh climate of Upstate New York. Other frequently mentioned barriers to cycling in the Village include a lack of adequate shoulder space or bike lanes and safety concerns. More than half of respondents mentioned that travel time and travel flexibility have no impact on their interest in biking, suggesting that the compact nature of the Village helps reduce the barrier of additional travel time when traveling by bicycle. In terms of physical infrastructure, bike lanes, shared use paths and trails, bicycle boulevards, and signed bicycle routes were the most desired to increase bicycling activity in the Village. The availability of bike parking and bike share programs were seen to be the least effective ways of promoting bicycling in Sodus Point.

Respondents by Bicycling Ability:





Percentage of Respondents who Walk or Bike at least once a month to access.....





Pedestrian Patterns and Attitudes

An overwhelming majority of residents said that they prefer walking as an alternative mode of transportation to a motor vehicle (87%). In addition, 72% of respondents said they prefer to walk on sidewalks, with on-road being the second most frequent response (11%). It is important to note that less than one percent of respondents mentioned that they do not walk in Sodus Point, where as 25% of respondents mentioned that they do not bike in the Village. This indicates that walking is a common activity, but there are significant mental and physical barriers to biking in the Village. Walking activity is influenced by winter weather, but to a lesser extent that bicycling. Other significant barriers to walking in the Village include poor sidewalk conditions (i.e. cracked pavement), sidewalk connectivity, and a lack of shoulder space along roadways. Safety was also less of a concern to respondents when considering barriers to walking as compared to biking. The presence of well maintained sidewalks was the number one amenity that respondents desired to facilitate increased pedestrian activity in the Village. Pedestrian signals and shareduse roadways were seen as less desirable amenities for increasing walking activity.

Top Destinations for Pedestrians & Bicyclists:



Sodus Point Beach









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Downtown

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Parks



| Where do you prefer to walk? Off-Road/Trails, por | Where do you prefer to bike? |
|--|------------------------------|
| Sidewalk: 72% | Sidewalk: 10% |
| Shoulder: 9% | Shoulder: 33% |
| On Road: 11% | On Road: 54% |
| | |
| | |

3.6 Intersection Time-Lapse Analysis

By enabling a day's worth of data to be analyzed in matter of hours, time-lapse cameras are an important tool for understanding current active transportation patterns on a site-specific level. They provide both quantitative and qualitative information, which can be developed into visuals that detail pedestrian, jogger, and bicyclist movements and usage trends. These findings can clearly highlight needs and illustrate potential recommendations to improve the active transportation infrastructure and facilities at particular locations.

For this project, time-lapse cameras were set up at three priority intersections: Margaretta Road and Route 14; Wickham Boulevard, 8th Street, and Bay Street Extension; and Bay Street and Bay Street Extension. They recorded images at 3-second intervals from 6AM to 9PM on Saturday, July 13th, 2019, a typical summer weekend day with sunny weather and temperatures between 61 °F and 88 °F. Over these fifteen hours, a total of 1,511 pedestrians and 235 bicyclists passed through the three priority intersections; and the following pages display the results of this analysis.

Existing Conditions



Time Lapse Camera Data - Figures 1& 2

Summary

Located just west of Sodus Point Beach Park, this intersection saw a high amount of pedestrian and bicycle traffic on the day studied. In general, most of the users appeared to be residents out for leisure walks with significant others or pets, families walking to the beach, and children playing with friends. Of particular note are the significant amounts of large groups and families that passed through this intersection, with six groups numbering over 10 people.

Overall, with a relatively low vehicular traffic volume, pedestrians and bicyclists seemed to feel comfortable in the roadway, with many pedestrians even opting to walk down the center of the street instead of walking on the shoulder or sidewalk. Other pedestrians, however, particularly those with young children or strollers, typically stayed closer to the edges of the road. This mixed perception of safety, combined with a lack of crosswalks to guide pedestrians, led to the diversity of movement patterns illustrated on the opposite page.

Intersection 1: Wickham Blvd, 8th St, Bay St Ext.



On July 13th:

656

103

bicyclists used this

intersection

pedestrians used this intersection

68% of pedestrians walked with at least one other person

75% of pedestrians still walked in the street when a sidewalk was

available

31%

of bicyclists were riding with at least one other bicyclist

80%

of bicyclists were going to, or coming from, the direction of Sodus Point Beach Park





Village of Sodus Point Active Transportation Plan

Wickham Blvd, 8th St, Bay St Ext. Pedestrian Movement Patterns



Wickham Blvd, 8th St, Bay St Ext. Bicycle Movement Patterns




Summary

The majority of active transportation traffic at this intersection was generated by pedestrians crossing between the parking lot that is located to the southwest and a popular boat launch that is located to the northeast. With the absence of crosswalks, however, pedestrians moved across Route 14 at various locations, and were forced to watch carefully for vehicular traffic. With limited visibility around the curve to the south of the intersection, this crossing was a particularly dangerous maneuver, particularly for those carrying boating gear or supplies.

The majority of bicycle traffic at this intersection was comprised of cyclists passing through this intersection as part of a recreational ride. Though the roadways lack wide shoulders, and the vehicular traffic frequently passed through the intersection, a wide range of ages still biked through. However, uncontrolled pedestrian crossings did pose some conflicts with cyclists who had gathered speed coming down the hill.

Intersection 2: Route 14 & Margaretta Road



On July 13th:

192

39

bicyclists used this

intersection

pedestrians used this intersection

74% of pedestrians who passed through this

intersection crossed

Route 14, which lacks

crosswalks

22%

of pedestrians were

with at least one

other person

49% of bicyclists passed by this intersection in the morning

of bicyclists used the paved shoulders instead of the travel lane whenever possible





Existing Conditions

Route 14 & Margaretta Road Pedestrian Movement Patterns



Route 14 & Margaretta Road Bicycle Movement Patterns





Summary

Located one block south of Intersection 1, this intersection saw a similarly-high amount of pedestrians and bicyclists. However, a combination of factors, including a higher volume of vehicular traffic, create a potentially dangerous environment in which pedestrians and bicyclists move in highly varied patterns. For instance, without sidewalks or crosswalks, some pedestrians accessed their cars by walking across the center of the intersection; alternatively, the large curb radii encouraged some pedestrians to cross further away from the intersection, in mid-block areas.

The presence of the popular gas station/convenience store to the northwest of the intersection also encouraged mid-block crossings and created a series of conflict points. In particular, lines caused by vehicles that were pumping gas occasionally forced bicyclists and pedestrians to walk towards the middle of the street to move around them.

Intersection 3: Bay St Extension & Bay St



On July 13th:

653

93

pedestrians used this intersection

35% of pedestrians who used this intersection accessed the convenience store

97%

of pedestrians walked in angled parking spaces when no cars were parked there, instead of walking in the roadway bicyclists used this intersection

51%

of bicyclists passed through this intersection in the morning

41%

of bicyclists were riding with at least one other cyclist





Bay St Extension & Bay St Pedestrian Movement Patterns



Bay St Extension & Bay St Bicycle Movement Patterns



3.7 Conclusion

This analysis performed in this section, in addition to the public engagement process, has revealed several challenges that the Village can address in the recommendations of this plan. Some of the major opportunities identified in this section are summarized below:

- 1. Downtown Sodus Point's historic development pattern lends itself to pedestrian activity. Increasing the non-motorized accommodations in key locations of Downtown will help enhance the existing vibrant corridor.
- 2. In order to enhance active transportation connections to nearby communities and destinations, the Village should focus on improvements along Route 14 and Lake Road.
- 3. Low traffic levels and the Village-wide 30 MPH speed limit lend themselves to adequate pedestrian and bicyclist conditions.
- 4. The Village generally consists of narrow roadways, limiting opportunities for onroad facilities for pedestrians and bicyclists.
- 5. Shoreline flooding is a persistent issue in the Village; it is essential that any new facilities in proximity to the shoreline are resilient to flooding activity and/or help protect natural resources.
- 6. The existing snowmobile trail and the new nature preserve in the Village present opportunities for trail connections to create a cohesive park system in the Village.
- 7. Residents are most interested in active transportation for recreation and/or exercise purposes.
- 8. There are significant fluctuations in pedestrian activity based on seasonal tourism, which should be considered when developing recommendations. During the warmer months, there is a significantly high level of pedestrian activity in Downtown Sodus Point.
- 9. Poor facility conditions and lack of accommodations are two major deterrents for residents when deciding to bike or walk.
- 10. For the three intersections analyzed with time lapse cameras, a lack of dedicated pedestrian crossings results in a wide variation of crossing patterns.

4. Alternatives Toolkit



There are many potential strategies that Sodus Point can utilize to help increase bicycle and pedestrian mobility. This section provides the Village with a "toolkit" of widely used transportation tactics to address bicycle and pedestrian needs. This toolkit was used to consider potential design, program, and policy solutions for the Village, and ultimately create the set of facility recommendations in the following section.

Each of the strategies addressed in the alternatives toolkit presented on the following pages vary in terms of intensity of implementation, and thus cost. Given that the Village has a limited budget, and trade offs must occur between implementing different transportation strategies, it is important to consider the capital resources required to implement each of the recommended solutions.

In addition, each strategy has varying impacts to different user groups in the Village. Each user group will have different expectations, and each strategy will benefit some user groups, while potentially being detrimental to others. It is important to consider these trade offs when selecting the appropriate solutions for Sodus Point. It is also crucial to consider the environmental impacts of each transportation solution presented. Given the increasing impact that climate change has on the built environment, particularly the notable flooding occurring in Sodus Point, it is more important that ever to analyze how any new facility, program, or policy will effect the sustainability and resiliency of the community. The toolkit contains information on the potential negative or positive sustainability and resiliency consequences of implementing each strategy.

It is important to carefully consider all of these attributes before selecting the appropriate solution for the Village's active transportation challenges. The toolkit presents this information in tabular format that makes it easy to compare the varying impacts each strategy may have on the built environment and the many user groups it may influence. The following subsections describe the potential cost, user group, and sustainability impacts presented in the alternatives toolkit developed for the Village.



4.1 Cost Impacts

Impact to the bottom-line is a key consideration for selecting an active transportation alternative for implementation. The cost of implementing alternatives can range depending on cost of material, labor and design. The alternatives toolkit provides a cost estimate range for each alternative considered. Cost estimates are grouped in the following three subcategories:

| \$ | Low Cost | < \$10,000 |
|--------|-------------|---------------|
| \$\$ | Medium Cost | \$10-\$50,000 |
| \$\$\$ | High Cost | > \$50,000 |

4.2 User Impacts

As mentioned previously, the main user groups in the Village will have varying needs and preferences for transportation facilities. A positive change for one user group may translate into a detrimental result for another. For instance, a refuge island, may improve safety for pedestrians or motorists, but may have a negative impact on bicyclists. The different user groups considered for each alternative include: pedestrians, bicyclists, motorists, neighbors, and emergency vehicles. The different user preferences for active transportation alternative are listed below:

Pedestrian Preferences

- Buffering from moving vehicles
- Aesthetically pleasing surroundings and amenities
- Safe environment
- Shorter walking distances
- Access to community facilities and destinations

Bicyclist Preferences

• Well-connected network of bicycling facilities

- Safe travel routes
- Direct routes
- Access to community facilities
- Access to bicycle parking facilities

Motorist Preferences

- Minimal traffic delay and conflicts
- Parking and access to businesses and community facilities
- Consistently designed facilities

Neighbor Preferences

- Neighborhood connectivity
- To feel safe and secure
- Access to property, businesses, and community facilities

Emergency Vehicle Operator Preferences

- Space to operate and maneuver vehicle
- Minimal conflicts and delays
- Safe travel routes

The alternatives toolkit shows the review of each alternative's impact as follows:

| + | Positive Impact |
|-----|----------------------------------|
| | Negative Impact Mixed Impact |
| +/- | Mixed Impact |
| Ν | No Impact |

Alternatives Toolkit





4.3 Sustainability Impacts

Environmental development meets the needs of the present without compromising the ability of future generations to meet their own needs. As a form of development, active transportation improvements can have a positive or negative impact on the community, quality of life, livability, and the environment. Thus, each alternative considered was evaluated by the following environmental measures:

Reduces Energy Consumption by:

- Supporting non-motorized travel,
- Supporting energy efficient movement of people and goods, and/or
- Using resources with lower operations and maintenance requirements

Reduces Consumption of Material Resources by:

- Using recycled materials in construction,
- Requiring less infrastructure in design solution, and/ or
- Increasing durability and life of design solution.

Reduces Impacts to Environmental Resources by:

- Minimizing impact on natural environment,
- Improving outdoor air quality,
- Encouraging and supporting biodiversity, and/or
- Reflecting historical and cultural context.

Supports Healthy Urban Communities by:

- Incorporating features that support community and livability,
- Incorporating features that support public services and adjacent land uses, and/or
- Incorporating features that enhance public health, safety, and security.

Supports Sustainability During Implementation by:

- Supporting local economic, social, and resource management needs during construction, and/or
- Reducing environmental and community impacts during construction. (Bevan, 2007)

The alternatives toolkit lists whether an alternative has a positive, negative, mixed (positive and negative), or no impact using the following symbols:

| + | Positive Impact |
|-----|-----------------|
| - | Negative Impact |
| +/- | Mixed Impact |
| Ν | No Impact |

| • • • • • • • • • • • • • • • • | | | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | • • • • • • • • • • • • | Use | r Group Im _l | pacts |
|---|---|-----------------|--|-------------------------|-------------------|-------------------------|-------------|
| Feature | Description | Image/Example | Estimated Costs | Pedestrians | Bicyclists | Motorists | 。 了 马 |
| On Street Fac | ilities | | | • • • • • • • • • | • • • • • • • • • | • • • • • • • • • | •••• |
| Bicycle Boulevards | Streets with low vehicle speeds and volumes Typically residential roads with little through-traffic Use of signage, markings, and speed management measures to create safe bicycle crossings Give priority to bicyclists as through-going traffic | | \$ | ÷ | + | + | |
| Bicycle Lanes | Provides designated right-of-way for bicyclists on vehicular roads Reduces confusion of motorists in sharing space with bicyclists Can be created by reducing vehicular lane widths Typically uses striping/painting to identify designated bicyclist lane Should be provided on a smooth roadway surface Should include appropriate MUTCD signage | | \$-\$\$\$ | +/- | + | +/- | • |
| Buffered Bicycle Lanes | Bike lanes that are separated from vehicles by an additional buffer, such as additional striping or bollards Creates more comfort and a greater perception of safety for both motorists and bicyclists Provides greater space for bicyclists without making the actual bike lane wider, avoiding motorists using the lane for a vehicle parking or travel lane | | \$-\$\$\$ | +/- | + | +/- | • |
| Cycle Tracks | An exclusive bike facility that provides the on-street infrastructure of a typical bike lane with an off-street user experience Physically separated from vehicular traffic, often by on-street parking or a median Increases perception of safety and comfort for bicyclists May be one-way or two-way in design | 949 1634 949 | \$\$-\$\$\$ | +/- | + | +/- | • |
| Shared Lane Markings ("Sharrows") | Markings that indicate that the roadway is intended to be shared by motor vehicles and bicycles Most appropriate when there is bicycle activity along a roadway but insufficient shoulder/lane widths to accommodate a bicycle lane Enforces the legitimacy of bicycle traffic on the street MUTCD guidelines for sharrow markings are found in section 9C.07 | | \$ | + | + | N | ľ |



| | | 6 6 6 | • | | User | Group Imp | pacts |
|-------------------------------|---|---|---|-------------|------------|-----------|-----------|
| | · · · · · · · · · · · · · · | - - - - - - - - - - - - - - - - - - - | • • • • • • • • • • • • • • • • • • • | Pedestrians | Bicyclists | Motorists | Neighbors |
| Feature | Description | Image/Example | Estimated Costs | Ŝ | 5 | 66 | |
| Signage | Signage and pavement marking used to guide bicyclists along preferred routes and alert motorists of the presence of bicycles on a roadway Include signage such as confirmation a designated bike route, information regarding distance and time, turning indicators, and "share the road" signage Helps to passively market the local bicycle network | | \$-\$\$ | ÷ | + | Ν | N |
| High-Visibility Crosswalks | Should be designed to offer maximum comfort and protection to pedestrians Crossing distances should be kept as compact as possible, facilitating eye contact by placing pedestrians directly in the field of vision of motorists High-visibility ladder, zebra, and continental crosswalk markings are preferable to standard parallel or dashed pavement markings Street lighting should be provided at all crossings Signage indicating motorists of the crossing should be placed in the street as well as at least 8 feet ahead of the crosswalk Can include different paving materials and raised crosswalks to increase visibility of pedestrian crossings | | \$-\$\$\$ | ÷ | +/- | +/- | + |
| Signalization | Can help indicate crossings of roadways by bicyclists and pedestrians Helps to clarify when bicyclists and pedestrians should enter an intersection, and restricts conflicting vehicle movements Examples include rapid flash beacons, pedestrian crossing countdowns, leading pedestrian, user-actuated flashing warning lights and bicycle signal heads used in conjunction with traditional traffic signals Helps to create a more predictable crossing environment | | \$-\$\$\$ | ŧ | + | +/- | + |
| Curb Extensions | Involves narrowing the roadway by extending curbing into the roadway Creates shorter crossing distances for pedestrians Increases the available space for street furnitures/amenities on the sidewalk Can include treatments such as midblock curb extensions, chicanes, bus bulbs, and neckdowns Help tighten curb radii, encouraging slower turning speeds Can be implemented using low-cost, interim materials such as planters, bollards, or traffic cones for trial periods | | \$\$ | + | | +/- | +/ |



| • | | | • | • | • • • • • • • • • • • | Useı | Group Im | pacts |
|-----------------------|-------------------------------|---|---|---|-----------------------------|------------|---------------|--------------------------------------|
| | | | - - - - - - - - - - - - - - - - - - - | • • • • • • • • • • • • • • • • • • • | Pedestrians | Bicyclists | Motorists | · · · · · · · · |
| • • • • • | Feature | Description | Image/Example | Estimated Costs | Ŝ | 55 | GD | 了 別 |
| | Refuge Islands/ Medians | Reduces the exposure time experienced by a pedestrian in an intersection Provides for an enhanced sense of safety for pedestrians Typically implemented in locations where speeds and volumes make crossings prohibitive, or where there are several lanes that make pedestrians feel exposed or unsafe Should be at least 6 feet wide preferably It is preferable to have the crosswalk "cut-through" the median | | \$\$ | + | +/- | ÷ | +, |
| | On Street Parking | Provides parking along the roadway Can shield pedestrians from moving traffic Can pose potential hazard for bicyclists while passengers are opening doors Reverse angle parking puts bicyclist in driver's sight line, but requires more space and buffering than parallel parking | | \$\$-\$\$\$ | + | | +/- | |
| | Raised Medians | Curbed sections that occupy the center of a roadway Can facilitate pedestrian crossing using a "cut-through" Can help reduce motor vehicle speeds Enhances streetscape design and community character Must consider cross-streets to help facilitate turning movements | | \$\$ | + | +/- | +/- | + |
| • • • • • | Small Turning Radii | The measure of the curve at a street corner Smaller radii result in more careful and slower turns by vehicles Can help increase pedestrian visibility and reduce potential for conflicts Must consider emergency vehicle access when determining curb radii | | \$\$ | + | +/- | +/- | |
| | Speed Humps | Parabolic vertical traffic calming devices Intended to slow traffic speeds on low volume, low speed roads Typically 3-4 inches high and 12-14 feet wide with a ramp length of 3-6 feet Reduce speeds to 15-20 MPH Should not be placed in front of driveways or significant access areas | | \$\$ | - | +/- | +/- | |
| | Turn Lanes | Reduces conflicts between vehicles by allowing through traffic to continue along the roadway, particularly for left turns Often used in conjunction with a road diet Using separate turning phases for turn lanes at signalized intersections can help reduce delays | | \$-\$\$ | | +/- | +/- | + |

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| • | • • • • • • • • • • | • • • • • • • • • • • • • • • • • • • | | Pedestrians | Bicyclists | Motorists | · · · · · · |
| Feature | Description | Image/Example | Estimated Costs | Ŝ | 55 | F | 了 L L L |
| Roundabouts Off Street Fa | A circular intersection in which road traffic move in one direction around a central island There are no stop signs or signals Priority is given to the vehicle already in the roundabout, and entering drivers yield Reduce the likelihood and severity of collisions at intersection Increase efficiency of flow and reduces confusion at four way stops | | \$\$-\$\$\$ | + | +/- | + | |
| Bicycle Parking | Secure infrastructure that allows bicyclists to safely store their bicycles at key destinations Needs to be accessible to surrounding land uses Bike lockers are appropriate for long-term storage, whereas bike racks are suitable for short-term parking Covered bicycle parking prevents bicycles from damage due to precipitation, and can be attractive street furniture that enhances the streetscape | | \$-\$\$ | Ν | ÷ | N | |
| Benches and Resting Points | Provide locations for pedestrians to rest along walkable corridors Should be placed at regular intervals Promote walking for less-mobile populations, including those with disabilities and the elderly Should be an adequate distance from the roadway to increase perception of safety | | \$ | + | Ν | N | · · · · · · · · · · · · · · · · · · · |
| Buffer Areas | Provides a space between pedestrian accommodations and vehicular lanes Helps provide a sense of comfort/safety Provides a more attractive streetscape Preferably 6'-8' in width for a planting strip or tree well to be implemented Can reduce motorist speed | | \$-\$\$ | + | + | + | |
| Street Lighting | Provides increased visibility for both pedestrians and motorists Reduces potential conflicts for all transportation users Should be implemented at a pedestrian scale, where appropriate/feasible | Į. | \$\$ | + | | + | |

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Village of Sodus Point Active Transportation Plan

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|---|---|-------------|-----------------------------|------------|------------|------------|
| • • • • • • • • • • • • • • • • • • • | | Estimated | Do Pedestrians | Bicyclists | Motorists | <u>الم</u> |
| : Featu | ure Description Image/Example | Costs | | | | 。 旧 |
| New/ Improved Sidewalk | Provides a separate pedestrian space away from vehicular travel lanes Preferable implemented in conjunction with a buffer area Should be at least 5 feet wide for two people to pass comfortably Should be designed to comply with ADA requirements There should be no obstructions in the sidewalk such as utility poles or street furniture Sidewalk grade should be less than 5% to help facilitate ease of movement | \$\$ | - | Ν | Ν | |
| Pedestrian accommo in off-stree parking ar | Large off-street parking areas should provide distinguished pedestrian avenues Helps to reduce vehicular and pedestrian conflicts Pedestrian accommodations can include sidewalks and pavement markings Should lead directly to building entrances and connect to on-street pedestrian accommodations | \$-\$\$ | + | Ν | ŧ | ſ |
| Sidewalk amenity z | Use where there are high pedestrian volumes Help create an attractive streetscape The pedestrian area between the sidewalk and roadway is recommended to be 8' in width Appropriate amenities include street trees, street lights, benches, fountains, kiosks, and trash receptacles Use pedestrian-scale lighting where possible | \$-\$\$ | + | N | + | |
| ADA Compliar Curb Ram | Allow wheelchair, walker, and motorized scooter users to make use of sidewalk facilities by allowing them to access such facilities from the curb ADA compliant curb ramps must have a minimum width of 3 feet The maximum rise is thirty inches per ramp The slope of the ramp can be no more than 8.33%, and must be uniform Landings are required at the top of the curb ramp, and should be at least five feet long Detectable warning systems are preferred to help indicate the location of curb ramps for visually impaired users | \$\$ | - | N | N | |

Alternatives Toolkit



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| • • • • • • • • | • • • • • • • • | | | | Pedestrians | Bicyclists | Motorists | |
| Feat | ure | Description | Image/Example | Estimated Costs | Ŝ | <i>A</i> | 6 | 了 四 |
| Shared- Trails | Use | Shared right-of-way for pedestrian and bicyclists away from the vehicular roadway Use where high pedestrian volumes are likely and bicycle lanes are not possible Should be 10' in width at minimum Signage should be implemented to alert both pedestrian and bicyclists of the presence of both user groups | | \$\$ | + | + | + | • |
| Trail sigr | nage • | Helps to inform active transportation users of the location of trail heads Can help market the existence of local trails Should be created as part of a unified design scheme Can be implemented along trails to help with wayfinding and alert users of | PHEASANT BRANCH O TRAIL | \$ | + | + | + | • |
| Shared Drivewc | Access iys | Property owners share one access point to parking area Reduces the amount of driveway crossings that pedestrians encounter Reduces amount of built environment dedicated to vehicle storage | | \$\$ | + | + | + | • |
| Street Tr | ees | Helps to provide shade for pedestrians Can slow traffic by providing visual distractions from upcoming road Creates an attractive streetscape and enhances community character Helps reduce stormwater runoff Provides habitat for birds and other wildlife Helps cool adjacent buildings, reducing cooling needs | | \$ | + | + | +/- | • • • • • • • • • • • • • • • • • • • |
| Progr | amming (| & Policies | | | ••••• | | | •••• |
| Zoning | • | Adjust zoning code, site plan review, and subdivision language, standards, and guidance Enhance accessibility and safety for bicyclists and pedestrians | HAR - | \$ | + | + | +/- | |
| Educatio | on & 🏼 🔹 | Develop educational programs for pedestrians, bicyclists, and motorists Design programs to cater to different age groups | Marson A | \$-\$\$ | - | + | + | • |
| Bicycle- Walk -F Commu Designc | and riendly nity ıtions | Offers the opportunity to be recognized for achievements in supporting walking and biking for transportation and recreation Also serves as a benchmark to identify improvements yet to be made in the community | REAL FRIENDLY | \$ | + | + | +/- | |

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|---------------------------------------|--|---------------------------------------|-------------------------------|-----------------------|------------|------------|--|
| | | | | Pedestrians | Bicyclists | Motorists | • • • • • • • • • • |
| Feature | Description | Image/Example | Estimated Costs | Ŝ | 22 | 66 | 了 因 |
| Complete Streets Policy | Part of the Complete Streets Act passed in 2011 by New York State Commits the Village to considering bicycle and pedestrian accommodations in new street construction and reconstruction Shows support of active transportation from local officials | | \$ | - | + | +/- | • |
| Maintenance Programs | Plow and sweep streets regularly Engage residents and businesses to participate in clean-up days Neighborhood plantings or gardens | | \$-\$\$ | + | + | + | • |
| Enforcement Policies | Increase police enforcement for pedestrian, bicyclist and motorist actions Respond to special needs (such as seniors or school areas) | MF200 | \$-\$\$ | + | + | + | |



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Village of Sodus Point Active Transportation Plan

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5. Facility Recommendations



Review and analysis of existing conditions, stakeholder involvement, and extensive public input collectively provide a broad picture of both general active transportation needs (i.e. facility types) in Sodus Point, as well as specific projects that would most improve bicycle and pedestrian accommodation. The recommendations included in this section were developed based off of all of the input and analyses produced (summarized in Appendix D: Issue Identification). General facility types include closure of sidewalk gaps, designated bike lanes, intersection improvements, and bicycle-specific signage and pavement markings (such as Shared Lane Markings and Share the Road signage). The projects range from those that can be implemented quickly and at very low costs to those that would be long term and more costly because of the need for further study prior to design and implementation.

Identification of the facilities in this Plan significantly improves the likelihood of their implementation as opportunities arise. Recommended improvements may be tied to capital improvement schedules and specific opportunities. The recommendations that were produced as a part of this planning process are broken into four categories: on-street recommendations, off-street recommendations, policy and program recommendations, and priority intersection improvements, which are described in more detail below.

5.1 On-Street Recommendations

The on-street recommendations address strategies that would effect the on-road operations in the Village, such as crosswalks, road re-striping, and speed limits. There are ten such recommendations; the majority of which entail some form of traffic calming. These recommendations are geared towards ensuring that both pedestrians and bicyclists can feel comfortable while interacting with the vehicular right-of-way, either through reducing vehicular speeds, or bringing increased awareness to drivers of the presence of non-motorized transportation users. It is important to mention that these recommendations





do not address concept-level designs, and should be considered under a more extensive feasibility analysis prior to implementation.

5.2 Off-Street Recommendations

The 15 off-street recommendations identified do not impact the existing roadways in the Village, and include strategies such as sidewalks, trails, and shared-use paths. The emphasis on considering shared-use paths is a result of the generally narrow right-of-ways that exist within the Village. This means that there is not space for separate bicycle and pedestrian accommodations on many corridors that were identified as lacking infrastructure for both user groups. The consideration of shared-use paths will allow the Village to dedicate a safe space for all non-motorized transportation users within a limited rightof-way. As with the on-street recommendations, each recommendation would need further suitability analysis prior to implementation.



5.3 Policy and Program Recommendations

The policy and programs recommendations are not capital improvement projects, but rather a set of actions the Village can take to help enhance and promote active transportation. These range from standard regulatory recommendations to more creative approaches that the Village can take, such as the implementation of a tactical urbanism project to help illustrate the benefits of certain pedestrian and bicycle accommodations prior to full implementation of any such project.



5.4 Priority Intersection Recommendations

The final set of recommendations takes a more detailed look at five priority intersections, and presents high-level design concepts for the Village to consider implementing. The five priority intersections were identified by stakeholders early on in the planning process as critical intersections to analyze based on traffic volumes, perceived safety issues, or inadequate facilities, and each has an individual set of recommendations.



Sodus Point Active Transportation Plan

Off-Street Facility Recommendations

- Sodus Point Parcels
- Village of Sodus Point
- Traffic Calming Recommendations
- Shared Use Path Recommendations
- Sidewalk Recommendations
- Road Crossing Recommendations
- Trail Recommendations
 - Other Recommendations



Off Street Facility Recommendations

| Map # | Location | Recommended Facility | Notes | Responsible Jurisdiction | Project Type |
|-------|---|--|---|--|------------------|
| 1 | Lake Road | Develop a shared use path along the south side of Lake Road from N. Fitzhugh Street to the Village Boundary | A shared use path would be most appropriate for Lake Road given the limited ROW. The shared use path would necessitate the obtainment of easements from property owners on the south side of the road within the Village. The Village should consider working with the County and the Towns of Sodus and Williamson, as well as the Village of Pultneyville to extend the shared use path between the two villages. A full feasibility study would be necessary before undertaking this project. | Village of Sodus Point, Wayne County Highway Department, Town of Sodus, Town of Williamson, Village of Pultneyville | Shared Use Paths |
| 2 | Various | Create connections between trail systems throughout the Village | The existing snowmobile trail and the new Genesee Land Trust nature preserve both provide excellent active transportation opportunities for Village residents and visitors. A connection between the snowmobile trail and the GLT nature preserve should be created to provide a seamless non-motorized experience between the two assets. In addition, the trails should be connected to on-road pedestrian and bicycle accommodations, including proposed paths along Route 14 and connecting to the sidewalks on Bay Street. | Village of Sodus Point, Genesee Land Trust, NYSDOT | Shared Use Paths |
| 3 | Lake Road | Create connection between the Genesee Land Trust nature preserve and proposed Featherly Drive passive park | The GLT nature preserve is directly across Lake Road from a proposed passive park to be built on Featherly Drive off of the North side of Lake Road. It is recommended that the Village create a pedestrian/bicycle connection between these two parks to create a seamless connection between the wetland and the lakefront. | Village of Sodus Point, Genesee Land Trust | Shared Use Paths |
| 4 | Downtown, Sodus Point Beach Park, Wickham Boulevard | Formalize path between sidewalks that terminate at the baseball fields behind properties on Wickham Boulevard. Replace gravel path with concrete sidewalk along the bay side of Wickham Boulevard, and extend path along the eastern edge of the Park to the Outer Lighthouse | These improvements will help facilitate a seamless pedestrian and bicycle experience between downtown and Sodus Point Beach Park. The formalization of the trail behind the 8500 block of Wickham Boulevard will increase pedestrian and bicyclist comfort and reduce the sense of "trespassing" behind residential homes. The construction of a concrete sidewalk with curbing will help to prevent vehicles from utilizing the pedestrian and bicyclist right-of-way for parking during peak visitor seasons. The reconstruction of the path along Wickham Boulevard has been identified as a part of the LWRP, and includes the installation of a kayak and canoe launch. | Village of Sodus Point, Wayne County Highway Department | Shared Use Paths |
| 5 | Route 14, South Ontario Street, Lummis Street | Create a continual shared us path from the southern Village boundary connecting Arney's Marina, Northwind Harbor, Katlynn Marina, and Downtown Sodus Point | This path will consist of the construction of a shared use path along the bay side of Route 14, starting from Arney's Marina, and continuing to South Fitzhugh Street. This improvement could include road re-striping to narrow the shoulder on the west side of Route 14 to accommodate a 5 foot pathway on the east side of the road while maintaining existing vehicular lane widths. The path should extend into Harriman Park to avoid heavy vehicular traffic at the public boat launch, and a crosswalk should be implemented across the driveway of the boat launch. The Village should consult with Katlynn Marina to discuss the possibility of formalizing the path through the Katlynn boat yard to reach South Ontario Street, and creating route along the northern edge of their property on the east side of South Ontario St to connect with Lummis St. Designs for such a pathway have been identified in the LWRP. The pedestrian path between Lummis Street and the Village public parking lot and Willow Park should also be formalized to create a consistent pedestrian right-of-way between the Village's marinas and the Downtown strip. This would allow pedestrians to avoid the significant vehicular and trailer traffic along Route 14 between South Fitzhugh Street and Greig Street. | Village of Sodus Point, Wayne County Highway Department, Katlynn Marina, NYSDOT | Shared Use Paths |
| 6 | Route 14 | Consider widening shoulders to increase space for bicyclists and pedestrians | While an off-road facility is most desirable for facilitating pedestrian and bicyclist movement along Route 14, widening the shoulders of Route 14 between the southern Village boundary and Arney's Marina could act as a low-cost, interim solution for providing additional accomodations for bicyclists and pedestrians. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Shared Use Paths |
| 7 | 8040 Lake Road | Develop trail system in the wetlands between Lake Road and Sentell Street | The Genesee Land Trust has acquired the eastern parcel of this land to develop a nature preserve. Work has begun on establishing wetland trails on this parcel. The Village should consider acquiring the western parcel of this area or working with community partners to continue the trail system in this area. | Village of Sodus Point, Genesee Land Trust | Trails |
| 8 | Snowmobile Trail between Southern Village boundary and Sentell Street | Enhance snowmobile trail to accommodate additional users, including bicyclists, pedestrians, and other winter sport user groups such as nordic skiers. | This project would help formalize this trail for increased use during all four seasons. Such improvements may include implementing a crushed stone path to accommodate bicyclists, as well as providing signage with information regarding nearby destinations and travel distances/times. The Village should also consider connecting this trail to the proposed shared use path along Route 14 to allow users to access Downtown. | Village of Sodus Point, Williamson Driftriders | Trails |

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Village of Sodus Point Active Transportation Plan

Off Street Facility Recommendations (continued)

| Map # | Location | Recommended Facility | Notes | Responsible Jurisdiction | Project Type |
|-------|--|--|---|---|--------------|
| 9 | Margaretta Road | Install sidewalks along the Northern Side of Margaretta Road | There is currently insufficient shoulder and road width for 5 ft sidewalk installation. The Village would need to consider obtaining easements from property owners to facilitate such improvements. Signage alerting motorists of pedestrian activity should also be installed along this corridor. | Village of Sodus Point, Wayne County Highway Department | Sidewalk |
| 10 | Greig Street | Fill in sidewalk gaps along all of Greig St. | The sidewalk gaps to be addressed are between 8571 and 8633 Greig Street on the north side of the road, and between Irwin Street and 8608 Greig Street on the south side of the road. Given the limited ROW available on Greig St, easements may have to be obtained from adjacent property owners. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Sidewalk |
| 11 | Wickham Boulevard | Install sidewalks on both sides of Wickham Boulevard between North Ontario Street and Bay St. Extension, and install sidewalks on the south side of Wickham Boulevard from Bay St. Extension to connect to the pedestrian path at Fourth Street. | Given the narrow ROW and lack of shoulder on Wickham Boulevard between North Ontario and Bay Street Extension, easements would be required for the installation of sidewalks. This would also be true of the south side of Wickham Boulevard between Bay Street Extension and Fourth Street. | Village of Sodus Point, Wayne County Highway Department | Sidewalk |
| 12 | Bay Street Extension | Install sidewalks along the baseball field to Greig Street across from the entrance of the Village public parking lot. | Given the Village ownership of this land, there should be no easement requirements for this project. The Village may want to reconsider the parking arrangement along Bay Street to facilitate the implementation of sidewalks. | Village of Sodus Point, NYSDOT | Sidewalk |
| 13 | Route 14 @ Village Fire Hall | Fill in sidewalk gap along the front of the Village Fire Department along Route 14. | Additional signage alerting pedestrians of emergency vehicle entering/exiting should be considered as a part of this project. | Village of Sodus Point, Sodus Point Fire Department, NYSDOT | Sidewalk |
| 14 | Lake Street | Implement sidewalks between N. Fitzhugh Street and N. Ontario Street. | Sidewalks along this corridor would help increase pedestrian access to the Lighthouse Museum and connect the passive park on Lake Street to the museum. Given the limited ROW, easements would be required to implement sidewalks. | Village of Sodus Point | Sidewalk |
| 15 | S. Ontario Street | Implement sidewalk between Bay Street and Katlynn Marina | The addition of a sidewalk on the west side of South Ontario Street would help created pedestrian access to the newly installed passive boat launch at the end of South Ontario Street. Green infrastructure should also be implemented to reduce stormwater run-off. | Village of Sodus Point | Sidewalk |
| 15 | South Shore Drive, South Ontario Street, Wickham Boulevard | Create passive boat launches at several locations within the community | There are several proposals for passive boat launches in the Village, including between 8285 and 8277 South Shore Drive, at the end of South Ontario Street adjacent to Katlynn Marina, and along the shared use path on Wickham Boulevard. These projects will help promote increased water-related active transportation in the Village. | Village of Sodus Point | Other |

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Sodus Point Active Transportation Plan

On-Street Facility Recommendations

- Sodus Point Parcels
- Village of Sodus Point
- Traffic Calming Recommendations
- Shared Use Path Recommendations
- Sidewalk Recommendations
- Road Crossing Recommendations
- Trail Recommendations
 - Other Recommendations

On Street Facility Recommendations

| Map # | Location | Recommended Facility | Notes | Responsible Jurisdiction | Project Type |
|-------|---|--|--|--|-----------------|
| 1 | South Shore Drive | Install pedestrian & bicyclist signage | The geometry and slope of South Shore Drive create conflicts between pedestrians, golf carts, and vehicles due to visibility and speed issues. Given the narrow right of way, installing continuous sidewalks is infeasible. The Village should consider installing signage and/or flashing beacons alerting users of potential oncoming traffic at the bend of South Shore Road. The Village could also consider installing speed humps along this corridor. | Village of Sodus Point, Wayne County Highway Department | Traffic Calming |
| 2 | Route 14 | Implement transition speed zone | Public input and stakeholder feedback has identified a perceived issue of vehicles surpassing the 30 MPH speed limit as motorists enter the Village. This is likely due to the roadway geometry, the slope of the road, and the shift in speed limits from 55 to 30 MPH immediately upon entering the Village limits. Given this, the Village should consider implementing traffic calming techniques to slow vehicles down both through policy and physical design. Such techniques could include the development of a transition speed zone to reduce vehicle speeds before entering the Village limits. Design measures that could be implemented include planting street trees along the roadway, narrowing lane widths, and installing radar speed signs. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Traffic Calming |
| 3 | Bay Street at Lummis Street | Extend median and implement pedestrian crossing | Lummis Street has a wide planted median, which terminates at the crosswalk along Bay Street. The roadway widens as it approaches Bay Street to approximately 80 feet, and has a large turning radius. This allows vehicles to quickly turn onto Bay Street, and detracts from the visibility of pedestrians. This intersection should be redesigned to reduce curb radii, implement crosswalks, and investigate the feasibility of extending the median and implementing a pedestrian "cut-through" to reduce vehicle speeds and provide increased pedestrian comfort. | Village of Sodus Point, NYSDOT | Traffic Calming |
| 4 | Route 14 & Sentell Street | Investigate roundabout feasibility | There is a significant amount of underutilized paved areas at the intersection of Route 14 and Sentell Street. There are also very large turn radii, and no pedestrian accommodations or crossings. Given this, the Village should consider the installation of a roundabout or other traffic calming measures to help define this intersection and provide a gateway into Downtown Sodus Point for all user groups. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Traffic Calming |
| 5 | Wickham Boulevard | Implement speed bumps and distinctive pedestrian crossing | Many Village stakeholders expressed a concern with speeding motorists along Wickham Boulevard. The Village should consider implementing speed bumps along Wickham Boulevard to deter motorists from speeding along this corridor. Additionally, the Village should consider the use of color or textured pavement materials for pedestrian crossings. | Village of Sodus Point | Traffic Calming |
| 6 | Greig Street | Implement reduced speed limits, considering parking allocations | Greig Street contains the majority of commercial development within Sodus Point, and is highly active during the warm weather season. In order to create a more pedestrian friendly environment, the Village should consider implementing seasonal speed limits to accounted for increased pedestrian traffic during the summer months. Additionally, the Village should undertake a parking study to determine the occupancy rates of parking spots during the peak season, and consider reducing on-street parking to accommodate additional pedestrian space and/or bike lanes along Greig Street. | Village of Sodus Point, NYSDOT | Traffic Calming |
| 7 | North Ontario Street & Wickham Boulevard | Implement tactile warning strips at intersection | There is an existing sidewalk that extends the length of North Ontario Street. Where the sidewalk crosses Wickham Boulevard, there are no tactile warning strips for visually impaired users to be alerted of the oncoming intersection. | Village of Sodus Point | Road Crossings |
| 8 | Bay Street & John Street | Implement crosswalks | Village should consider implementing crosswalks between Bay Street and John Street to allow pedestrians to cross Bay Street safely. Such improvements could include mid-road signage and flashing beacons to alter motorists of crossing pedestrians. In addition, the Village should consider a smaller turning radius on John Street, and a landscape island on the eastern corner of John Street to separate roadside parking. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Road Crossings |
| 9 | Bay Street & Ontario Street | Implement crosswalks | The Village should consider implementing crosswalks across Bay Street at Ontario Street to allow pedestrians to cross Bay Street safely. Such improvements could include mid-road signage and flashing beacons to alter motorists of crossing pedestrians. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Road Crossings |
| 10 | Margaretta Road | Implemented Shared-use roadway policy on all of Margaretta Road | This includes painting "sharrows" along the roadway to alert motorists of bicyclists also using the ROW. | Village of Sodus Point | Other |

Policy & Program Recommendations

| Recommendation | Notes | Responsible Jurisdiction | Project Type |
|---|---|--|-----------------|
| Implement increased speeding and parking enforcement | Speeding has been noted as a persistent issue within the Village, particularly on Route 14, Lake Road, Wickham Boulevard, and Grieg Street. The Village should work with the County Sheriff and State Police to increase speed enforcement in the Village. In addition, street parking enforcement should also be increased throughout the Village, especially during events at the Lighthouse Museum along adjacent streets | Village of Sodus Point, NY State Police, Wayne County Sheriff Office | Program/Policy |
| Create a maintenance plan for key pedestrian and bicyclist corridors in the Village | Given the limited ROW on many of the roadways in Sodus Point, it is important that the pavement condition of the shoulders and sidewalks on key pedestrian and bicyclist corridors are in good condition to increase the safety and comfort of non-motorized travel. The Village should develop a maintenance plan that commits to resurfacing and repairing roadways and sidewalks in the Village based on the capacity constraints of the DPW and Wayne County Highway Department. | Village of Sodus Point, Wayne County Highway Department, NYSDOT, Genesee Transportation Council | Program/Policy |
| Update zoning code to support pedestrian and bicycle activity | The language of the Village code, in particular the zoning code, can be enhanced to help support active transportation. Key updates include reducing the required block size in subdivision requirements, including bicycle parking as part of off-street parking requirements, including bicycle accommodations in site plan review and subdivision processes, and adding purpose statements to select districts that speak to the walkability and bikeability of the Village. | Village of Sodus Point | Program/Policy |
| Develop education and outreach strategies to promote active transportation in the Village | Increased awareness and understanding of biking and walking in the Village can lead to increased activity. The Village should consider developing a program to get Village stakeholders involved in such activities. Suggested programming includes organized bike rides, festivals and events to promote bicyclist and pedestrian safety, bike tune up programs, and organized walking tours of the Village. | Village of Sodus Point | Program/Policy |
| Bicycle-Friendly Community Designation | The Bicycle-Friendly Community was developed by the League of American Bicyclists. The program gives communities guidance for developing a more bikeable community, and can help promote bicycling activity in the Village. Sodus Point should consider getting involved in the program to improve their biking conditions and highlight the community for regional bicyclists. | Village of Sodus Point, League of American Bicyclists | Program/Policy |
| Walk-Friendly Community Designation | The Walk-Friendly Community program is for municipalities that have shown commitment to improving and maintaining walkability in their community. The program is operated by the University of North Carolina Highway Safety Research Center, and sponsored by Fed Ex. The program would help the village assess their pedestrian infrastructure in a comprehensive manner, receive feedback from a third-party perspective, and provide the Village recognition for their efforts. | Village of Sodus Point, WFC | Program/Policy |
| Develop an open space plan | Sodus Point has many open spaces and parks that enhance the quality of life and character of the Village. These sites should be considered in a comprehensive approach to determine key linkages between such open spaces, and pedestrian and bicyclist accommodations that connect to parks and open spaces. The Village should consider developing a vision for their open space amenities through the development of an open spaces and parks plan. | Village of Sodus Point, Wayne County Planning Department | Program/Policy |
| Create a wayfinding signage program | A comprehensive wayfinding system can help all transportation users navigate throughout the Village and obtain information on key destinations and attractions in the area. The Village should consider the creation and implementation of a branded wayfinding system that helps increase ease of navigation while creating a community brand that helps contribute to the character of the Village. | Village of Sodus Point, Wayne County Highway Department, NYSDOT | Other |
| Identify turn-arounds on dead-end streets | The Village has several dead-end streets, particularly along Wickham Boulevard. Many vehicles use this roadway for accessing the beach park, which results in many vehicles circling this area in search of an appropriate location for turning around. Such opportunities for turning around should be identified via signage to improve traffic flow and avoid vehicles from using private driveways for turning around. | Village of Sodus Point, Wayne County | Other |
| Implement tactical urbanism initiatives to accommodate seasonal pedestrian and bicyclist traffic | The amount of bicycle and pedestrian activity in Sodus Point is significant during the summer months when there are many visitors the Village. However, those activity levels drop significantly when the seasonal population leaves. In order to account for such fluctuation, the Village should consider implementing temporary bicycle and pedestrian accommodations during the summer months to assess their usage and functionality. This can include creating pedestrian and bicyclists paths using traffic cones, free-standing delineators, plastic construction barriers, or other movable materials. If successful, the Village could consider installing permanent but removable delineators that provide active transportation users dedicated space during busy summer months, but can be removed for plowing during the winter months. | Village of Sodus Point, Wayne County Highway Department | Other |
| Consider maintenance responsibilities for Harriman Park | Through the public engagement process, a desire for enhancements to Harriman Park and the public boat launch was identified. In order to provide the Village with more agency to realize improvements to the park, the Village of Sodus Point and the Town of Sodus should consider creating an intermunicipal agreement for maintenance and improvement responsibilities. | Village of Sodus Point, Town of Sodus | Other |
| | | | ••••••••••••••• |

Village of Sodus Point Active Transportation Plan

Priority Intersection #1: Bay Street/Grieg Street (NYS 14) at Bay Street Extension



Other Considerations

Large radii encourage motorists to make faster turns. Parking lot dimensions south of Bay Street are not standard and angle of parking reduces visibility upon exit. Pedestrian and bicycle facilities can be improved. Gas station driveway entrance can be improved for better pedestrian safety.

Recommendations

- Consider adjusting alignment of Bay Street slightly to accommodate standard-length angled parking spaces.
- Consider reverse angle parking along Bay Street and Bay Street Extension to allow for better visibility upon exit to street.
- Consider tightening radii by adding/extending landscape islands on corners of streets and driveways connecting to Bay Street.
- Consider making crosswalk on south side of Bay Street parallel to roadway to allow for better visibility by both pedestrians and motorists.
- Consider adding sharrows/shared lane markings (SLMs) to Bay Street in both directions to alert motorists to cycling activity.
- Extend southeast landscape island easterly along sidewalk to discourage encroachment onto on-street parking.
- Consider removing some parking along Willow Park to facilitate a pedestrian crossing connecting the path to the playground to the gas station.
- Consider widening the parking area on the south side of Bay Street into Willow park to accommodate full-length parking spots and maintain the 4' shoulder for bicyclist use.

Through conversations with stakeholders and residents, several other alternatives were considered for the configuration of this layout. The Village should consider a full feasibility analysis to study the possibility of including the following attributes at the Bay/Greig/Bay Street Extension intersection:

| Description/Benefit | |
|--|--|
| This proposed treatment would replace the existing angled parking on Bay Street adjacent to Willow Park with several motorcycle parking spots. These would be designed as back-in angled parking spots to help promote visibility of pedestrians when motorcyclists are pulling out of the parking space. The provision of these spaces would help pull motorcyclists out of vehicle parking spaces along Greig Street, opening up additional parking for motorists. | |
| The provision of plantings and landscaping along the parking area next to Willow Park would help define this intersection as a gateway to Downtown Sodus Point while buffering the park space from vehicle and/or motorcycle activity. | |
| As seen in the time lapse camera analysis, there is a heavy amount of pedestrian activity that occurs at this intersection. A crosswalk would help increase safety and comfort for pedestrians. Crosswalks could be most beneficial if placed between the gas station and Willow Park, as well as across Bay Street Extension. | |
| A three way stop at Bay Street, Greig Street, and Bay Street Extension would help calm traffic and alert motorists of pedestrians walking along the corridor or crossing at the intersection. An engineering study of this treatment would be required to confirm that such an alteration in traffic control is warranted. | |
| The parking lot adjacent to Willow Park could be reconfigured to be more accommodating to pedestrians. For instance, the planted parking islands could be re-arranged to provide pedestrian accommodations that connect to the sidewalks. Due to the existing parking accident pattern that exists in this area, the redesigned parking spaces should accommodate a parking movement that will not require vehicles exiting or entering the spaces from crossing into the westbound drive lane. | |
| It has been noted that there is a lack of general public knowledge that the parking lot on the south side of Bay Street next to Hots Point is a public parking lot. Signage to inform visitors and residents of the availability of public parking in this lot would help reduce on-street parking congestion. | |
| | |

Facility Recommendations

Priority Intersection #4: Fitzhugh Street (NYS 14) at Lake Road/Bay Street (NYS 14)



Guide/Information Signs directed at NB Fitzhugh Street

| Indicated Destination/Route | Sign Location | Sign Color | |
|--|-----------------------------------|--------------------------|--|
| Seaway Trail (advance left turn) | 200 ft in advance of intersection | Green | |
| Sodus Bay Lighthouse Historic Site (advance right turn) | 100 ft in advance at intersection | Brown | |
| 4 lodging destinations (2 left, 2 right) | Near corner | Blue | |
| Business District (right arrow) | Far Corner | Green | |
| Coast Guard Station | Far Corner | White/Red/USCG emblem | |

Sidewalks from the south do not connect to crosswalks on east and west approaches. Lack of definition at the edge of pavement allows for shortcutting of southwest and southeast corners; lack of definition between the church parking lot and eastbound shoulder also confuse understanding of appropriate movement through the intersection. Proliferation of guide and information signs constrain space for pedestrian connections and may diminish effectiveness of required traffic control.

Recommendations

- corners.
- Consider striping the limit of the parking area to better clarify the operating space for bicycles.
- the current 4 and 6 foot shoulders; or mark the existing shoulders as bike lanes.
- adjustments should be made according to the following priorities:
 - R1-1 (STOP) must remain on SE corner:
 - 2D.32.03);
 - 200 feet before the intersection:
 - 5);

 - wayfinding sign as described in MUTCD Section 2D.50.

• Consider sidewalk extensions and curb installations to better define the limits of the roadway on the southwest and southeast

• Consider symmetrically apportioned 5-foot buffered bike lanes (1-foot buffer, 4-foot bike lane) on Bay Street instead of

Sidewalk and curb extensions will likely impact placement of signs directed at NB traffic on Fitzhugh Street. Sign placement

• NYS Route 14 Directional Assembly (NORTH plaque/NYS Rt. 14 marker/ right arrow) must remain at intersection where the route turns (MUTCD 2D.32.01(A)), either at near side (SE corner) or far side (NE corner) (MUTCD

• NYS Route 14 Advance Route Turn Assembly must be added to comply with MUTCD Standard 2D.31.01, at least

• The Bike Route #14 END assembly could be moved to 100 feet in advance of the intersection (MUTCD Figure 9B-

• Consider removal, relocation, co-location, standardization and/or consolidation of the eight other guide/ informational signs presently on approach to or at this intersection to allow space for pedestrian facilities and required signs (see table below for inventory of other signs presently associated with this intersection);

• Consider development of an overall community wayfinding plan for all modes, perhaps based on a community

Priority Intersection #2: Central Avenue at South Shore Road



Public comment and observed conditions suggest that motorists cut southwest corner, allowing them to make turns quickly. The hill on the southwest quadrant impedes visibility at this intersection between eastbound and northbound motorists.

Recommendations

- Make the intersection more compact by reducing the radius on the southwest corner.
- Better define the lanes on approach to the intersection with edge striping and centerline markings.
- Enhance awareness of the stop condition and position motorists for better visibility of approaching traffic with stop lines and "STOP" markings on all approaches.
- Include "rumble stripe" texture on the edge lines through the radii to discourage short-cutting of turns.

Priority Intersection #3: NYS Route 14 at Margaretta Road



There are no existing marked crosswalks and large radii allow higher-speed turns and increase crossing distances. This location sees regular pedestrian crossing activity between the boat ramp on the east side of the road and the parking lot on the west.

Recommendations

- Add a midblock crossing south of intersection along desire line of pedestrians.
- Add sidewalk along southeastern side of NYS Route 14 and connecting areas of interest in vicinity (e.g. parking lot near water).
- Consider adding ramps and landings to allow pedestrians a place to wait when attempting to cross.

Priority Intersection #5: Bay Street Extension at Wickham Boulevard



Stop signs do not enforce stopping at intersection. No crosswalks or landing pads for pedestrian access and safety.

Recommendations

- Consider tightening radii of connecting roads to discourage fast turns.
- Consider including double yellow lines on 8th Street and Wickham Boulevard to delineate lanes.
- Include stop bars at all approaches to Intersection with "STOP" markings preceding each one.
- Add a stop sign west of intersection.
- Include crosswalks in front of each stop bar and connect to landing pads for pedestrian refuge.

Facility Recommendations

6. Facility Design Guidance



The previous section identifies numerous recommended infrastructure improvements that are comprised of a variety of facility types. The design guidelines contained in this section are intended to support the recommendations presented in this Plan, and to serve as an ongoing reference for the Sodus Point community. They are not intended as comprehensive design standards. Rather, they reference existing design standards and provide clarification or supplemental information as necessary. There are eight primary sources of bicycle and pedestrian facility design information that were used to develop the guidelines provided in this section.

American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities

This document is intended to present information on how to accommodate bicycle travel and operations in most riding environments. It is the design guidance upon which most state and local design guidelines are based. In many jurisdictions this document is considered to set the minimum values for bicycle design.

AASHTO Guide for the Planning, Design, and Operations of Pedestrian Facilities

This document is intended to present information on how to accommodate pedestrian travel and operations in (primarily) roadway environments. It is the design guidance upon which most state and local design guidelines are based. In many jurisdictions this document is considered to set the minimum values for pedestrian design.

NY Department of Transportation Highway Design Manual Chapter 17 Bicycle Facilities Design

This document provides guidance for bicycle facilities that are included in Department of Transportation designs. Because of the scope of this document, its design criteria, while they are relevant to local projects, are not required to be met for local projects unless Federal Transportation Funds are used.

Resiliency + Active Transportation

Coastal flooding has presented itself as a significant challenge in the Village of Sodus Point. This has a significant influence on the way that the Village should approach the design and implementation of the recommendations contained in this plan, especially for those projects adjacent to the lake or bay shores. Persistent flooding has the potential to damage the pavement and furnishings of waterfront pathways; and conversely the presence of a paved pathway can contribute to erosion and shoreline destabilization.

The New York City Park's Department has also been considering how to plan and design for flood resiliency, in particular for their many waterfront parks and trails that are significant community assets. They produced a manual entitled "Design and Planning for Flood Resiliency: Guidelines for NYC Parks," which recommends the following best practices for creating resilient waterfront esplanades and greenways:

- Raise elevations of high-cost/high-value amenities, and use topography and landforms to help alleviate flooding impacts and/or protect against storm surge.
- Grade carefully-avoid steep slopes to minimize possible erosion during flood events.
- Investigate existing drainage patterns and groundwater elevation in order to best determine which storm water management strategies to employ.
- Adapt park edges to account for relevant sea level rise projections

The diagram below portrays their approach to stabilizing a pedestrian path along the shoreline:



SECTION: DESIGN FOR FUTURE RECONSTRUCTION OF RIVERSIDE PARK SOUTH SHORELINE

Source: NYC Parks Design and Planning for Flood Resiliency: Guidelines for NYC Parks

Facility Design Guidance



NY Department of Transportation Highway Design Manual Chapter 18 Pedestrian Facilities Design

This document provides guidance for pedestrian facilities that are included in Department of Transportation designs. Because of the scope of this document, its design criteria, while they are relevant to local projects, are not required to be met for local projects unless Federal Transportation Funds are used.

Institute of Transportation Engineers Designing Walkable Urban Thoroughfares: A Context Sensitive Approach

This document's development was supported by the Federal Highway Administration (FHWA). Designing Walkable Thoroughfares helps designers understand the flexibility for roadway design that is inherent in the AASHTO guide A Policy on the Geometric Design of Highways and Streets with a focus on balancing the needs of all users.

Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD)

The MUTCD is the national standard for signing, markings, signals, and other traffic control devices. New York State has also adopted a supplement to the MUTCD that provides New York specific standards.

Federal Highway Administration Separated Bike Lane Planning and Design Guidance

Outlines planning considerations for separated bike lanes (also sometimes called "cycle tracks" or "protected bike lanes") and provides a menu of design options covering typical one-way and two-way scenarios. To encourage continued development and refinement of techniques, the guide identifies specific data elements to collect before and after implementation to enable future analysis across facilities in different communities. It identifies potential future research, highlights the importance of ongoing peer exchange and capacity building, and emphasizes the need to create holistic ways to evaluate the performance of a separated bike lane.



National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

FHWA has issued a memo supporting the use of this document to further develop non-motorized transportation networks, particularly in urban areas. Many of the designs in this document have been used successfully in urban areas. However, care should be exercised when applying the treatments described in this document to suburban or rural areas. Due to the differences in building and population density, some of these treatments may not be necessary or appropriate when considering low-density areas of the Village.

This following pages contain design best practices and guidelines for the following facility types:

- Bike lanes
- Multi-use paved shoulders
- Shared lane markings
- Bike routes
- Bike boulevards
- Bike parking facilities
- Sidewalks
- Shared use paths
- Curb ramps
- Midblock crossings
- Complete streets

The Village should utilize the information contained in this section when developing design concepts for the recommendations included in this plan to ensure that the facilities implemented are consistent with national standards.

6.1 Bike Lanes

A bike lane is a portion of the roadway that has been designated for preferential or exclusive use by bicyclists by striping, signing and pavement markings (the MUTCD does not require signs, but in New York the legal definition of a bike lane requires signs). Bike lanes are intended for one-way travel, usually in the same direction as the adjacent travel lane. Bike lanes should be designed for the operation of bicycles as vehicles, encouraging bicyclists and motorists to interact in a safe, legal manner. Bike lanes should be designated with bike lane markings, arrows, and bike lane signs.

Width

The AASHTO Guide for the Development of Bicycle Facilities provides guidance on the width of bike lanes. The following points summarize this guidance:

- Under most circumstances the minimum recommended width for bike lanes is 5 feet;
- For roadways with no curb and gutter and no onstreet parking, the minimum width of a bike lane is 4 feet;
- Along sections of roadway with curb and gutter, a usable width of 4 feet measured from the longitudinal joint to the center of the bike lane line is recommended (this means that 4 feet of pavement is sufficient when coupled with the gutter pan; it is also conceivable to interpret the guidance as meaning that even narrower pavement can be used as long as a total of 5 feet of ride-able surface is maintained);
- Additional width is desirable on higher speed roadways.

Intersections

At intersections, bike lanes must be designed to encourage legal movements at the intersection; this includes proper positioning of bicyclists and motorists. Bike lane stripes should be dashed on the approaches



Examples of Conventional (above) and Buffered (below) Bike Lanes



to intersections without right turn lanes. Where there are right-turn lanes, through bike lanes must be placed to the left of the right turn lane. Right-turn only lanes should be as short as possible in order to limit the speed of cars in the right turn lane. Fast moving traffic on both sides can be uncomfortable for bicyclists (NACTO). Section 4.8 of the AASHTO Guide for the Development of Bicycle Facilities (2012) provides numerous graphics illustrating bike lane markings at intersections. Bike lanes should be continuous through intersections. For example, if a bike lane is provided to the intersection, a receiving bike lane should be provided on the departure side of the intersection.

Facility Design Guidance



Buffered Bike Lanes

A buffered bike lane is a bike lane that is separated from adjacent through lanes by a striped out buffer area. In some locations it may be desirable to use less than the full space available for a bike lane. Such locations include sections of roadway where a wide bike lane might be perceived as on-street parking or another travel lane. In these locations a buffered bike lane may be considered. A buffered bike lane may also be considered where a bike lane of six or more feet is being provided to meet a minimum level of accommodation.

At mid-block locations the buffered bike lane is separated from the travel lanes by a chevroned buffer. The width of the buffer will vary depending upon such conditions as motor vehicle speed, percent heavy vehicles, roadway cross slopes, and desired level of accommodation of bicycles. At intersections, buffered bike lanes must be striped to allow for right turning motorists. Typically this is done by eliminating the buffer on the approach to intersections and striping the area as one would a regular bike lane.

6.2 Multi-Use Paved Shoulders

In terms of Bicycle Level of Service, designating bike lanes is secondary to simply providing delineated space that can be used by bicyclists. Roads with paved shoulders where no other active transportation facilities exist are shared by more than one type of user (bicyclists, pedestrians, in-line skaters and vehicles for emergency use). Design of new or retrofit of existing paved shoulders should comply with AASHTO standards; "on uncurbed cross sections with no vertical obstructions immediately adjacent to the roadway, paved shoulders should be at least 4 ft wide to accommodate bicycle traffic. Shoulder width of 5 ft is recommended from the face of a guardrail, curb, or other roadside barrier to provide additional operating width..." Areas with expected higher bicycle use should have increased shoulder widths as necessary in addition to areas where motor vehicle speeds exceed 50 mph or are used by trucks and buses.



Sodus Point may want to sign some roadways with paved shoulders to either guide bicyclists to destination or to alert motorists to the presence of bicyclists. The sign would be supplemental to simply providing space for bicyclists within the shoulder. If the subject roadway is along a designated bicycle route, then bike route guidance signs can be used to alert bicyclists to the presence of the interregional or state route.

If the Village, or others based on the jurisdiction of the road, determines it is appropriate to warn motorists of the potential presence of bicyclists along a section of roadway with paved shoulders, then special signing, if approved by NYSDOT, would be required. The Bicycle Warning sign (W11-1) alone could be used as it is to alert road users to locations where unexpected entries into the roadway by bicyclists could be expected.

The NYSDOT MUTCD section 1A.03 Design of Traffic Control Devices states:

Option 03A

Highway agencies may develop word message signs to notify road users of special regulations or to warn road users of a situation that might not be readily apparent. Unlike symbol signs and colors, new word message signs may be used without the need for experimentation.

Standard 03B

Any change to a word message sign that can be considered more than a minor modification (see next Option) shall be approved by the New York State Department of Transportation before it is implemented.

Option 03C

With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved. Such minor revisions may include making a word plural or singular; changing the hours listed on a sign; word deviations such as "road" for


"street" on a sign; etc. Although the standard design of symbol signs cannot be modified, it may be appropriate to change the orientation of the symbol to better reflect the direction of travel.

6.3 Shared Lane Markings

Traffic lanes are often too narrow to be shared side by side by bicyclists and passing motorists. Where parking is present, bicyclists wishing to stay out of the way of motorists often ride too close to parked cars and risk being struck by a suddenly opened car door (being "doored"). Where no parking is present bicyclists wishing to stay out of the way of motorists often ride too close to the roadway edge, where they run the risks of:

- Being run off the road;
- Being clipped by motorists who do not see them off to the side or misjudge passing clearance; or
- Encountering drainage structures, poor pavement, debris, and other hazards.

Riding further to the left avoids these problems, and is legally permitted where needed for safety (Consolidated Laws of New York, Vehicles and Traffic, § 1234 (a). However, this practice can run counter to motorist expectations. A Shared Lane Marking (SLM) is a pavement symbol that indicates it is legal and appropriate for bicyclists to ride away from the right hand edge of the roadway, and cues motorists to pass with sufficient clearance.

Research suggests that SLMs:

- Alert motorists to the lateral location bicyclists are likely to occupy within the traveled way,
- Encourage safe passing of bicyclists by motorists,
- Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- Reduce the incidence of wrong-way bicycling, and



• Where on-street parking exists, to assist bicyclists with lateral positioning in a shared lane with on-street parallel parking to reduce the chances of a bicyclist impacting the open door of a parked vehicle.

SLMs are not to be used on shoulders or in designated bike lanes. MUTCD guidance suggests SLMs not be placed on roadways that have a speed limit above 35 mph. While this does not preclude the use of SLMs on higher speed roadways, no research is available as yet to suggest how effective they may be on such roadways.

SLMs encourage good lane positioning by bicyclists, and discourage them from riding too close to the pavement edge, curb, or parked cars. Riding away from the road edge allows bicyclists to avoid road edge hazards like drainage structures, poor pavement, and debris. It also places the bicyclist more directly in the motorist's field of vision which, along with proper SLM treatments, encourages the safe passing of bicyclists by motorists.

Consequently, on roadways with on-street parking, the MUTCD requires that SLMs be placed with the centers of the markings at least 11 feet from the face of curb. On other roadways, the centers of the markings are required to be placed at least four feet from the edge of pavement. On December 9, 2013, the New York State Department of Transportation's Office of Traffic Safety & Mobility





approved a Shared Lane Marking (SLM) Policy (TSMI 13-07) which requires SLMs to be placed in the middle of the travel lane. According to the NYSDOT policy:

- SLMs should only be used to indicate the presence of a narrow lane; a narrow lane is a lane that is less than 14' wide... In a narrow lane, motorists and bicyclists must travel one after the other rather than side by side, and a motorist must leave the lane to safely pass the bicyclist.
- SLMs are sometimes used at the ends of bike lanes or shoulders to inform motorists that bicyclists no longer have a separate space and will be sharing the main travel lane.
- SLMs should be installed strategically and judiciously to ensure that their value is not reduced by overuse. When used, SLMs should be placed after each intersection and then periodically on spacings not exceeding 250 feet between markings.

The previously referenced NYSDOT Shared Lane Marking (SLM) Policy includes a Narrow Lane sign assembly. It is a Bicycle Warning sign (W11-1) and an "In Lane" plaque (NYW5-32P). When used, the Narrow Lane assembly should be placed with the first SLM, then repeated as deemed appropriate within the section. It is neither necessary nor desirable to supplement every SLM with a sign assembly.

6.4 Bike Routes

During the public input process, it was identified that residents are interested in designated bike routes that connect major destinations along Lake Ontario, such as the Hamlet of Pultneyville. Bike routes are not an actual facility type. A bike route is a designation of a facility, or collection of facilities, that links origins and destinations that have been improved for, or are considered preferable for, bicycle travel. Bike routes include a system of route signs that provide at least the following basic information:



NYS Route 14 is currently designated as a signed State Bike Route that terminates in Sodus Point, making the Village a potential end destination for bicyclists across the State.

- Destination of the route
- Distance to the route's destination, and
- Direction of the route.

Bike routes can be designated in two ways: General Routes and Number Routes. General Routes are links tying specific origins to specific destinations. Number Routes form a network of bike routes that do not necessarily connect specific destinations, but serve as general travel routes through an area.

General Routes connect users to destinations within a community. Typical destinations include the following:

- Attraction Areas (i.e. libraries, parks, etc.)
- Neighborhood Areas (i.e. historic neighborhoods, etc.)
- Trail Networks or Trailheads (i.e. GLT Preserve).

Village of Sodus Point Active Transportation Plan



Bicycle Guide (the D11 series in the MUTCD) signs may be provided along designated bicycle routes to inform bicyclists of bicycle route direction changes and to confirm route direction, distance, and destination. Typical signs that convey the basic way-finding information for general routes can be designed for Sodus Point. The MUTCD provides a number of different types of signs that can be used to provide guidance along bike routes. Some communities implement bike routes with unique designations (numbers or names). These routes should be designated using Bike Route signs. Shared use paths have design criteria for many of the same parameters as roadways. These include widths, horizontal clearances, design speed, horizontal alignment, stopping sight distance, cross slopes, grades, vertical clearance, drainage, and lighting. The AASHTO Guide for the Development of Bicycle Facilities should be consulted for design values.

6.5 Bike Boulevards

A bike boulevard is a local street or series of contiguous street segments that have been modified to provide enhanced accommodation as a through street for



bicyclists while discouraging through automobile travel.

Bike boulevards usually make use of low volume, very low speed local streets. Often, streets are made more accommodating for bicyclists by significantly keeping motorists' speeds and volumes low. Often bike boulevards include bicycle friendly traffic calming treatments (speed pillows, mini traffic circles, chicanes with bike bypass lanes, etc.) to reduce speeds of motor vehicles along the roadway. While local motor vehicle traffic is maintained along the bike boulevard, motor vehicle traffic diverters may be installed at intersections to prevent through motor vehicle travel while having bypasses for bicyclists to continue on along the bike boulevard. Bike boulevards can be facilitated by connecting the ends of cul-de-sac roadways with shared use paths. At intersections the bicycle boulevard should be given priority over side streets.

Because of low motor vehicle speeds and volumes, bike lane markings are often not necessary along bike boulevards. SLMs may be used along bike boulevards. Alternatively, larger than normal bike symbols supplemented with the text **BIKE BLVD** have been used to designate bike boulevards.



The City of Rochester completed a bicycle boulevard Master Plan in 2015, which calls for 50 miles of bike boulevards across the City. Although effective in the context of bike boulevards, It is important to note that sharrows have a limited capacity for enhancing bicyclist safety, and should be used sparingly as a design element.



In some communities, bike boulevard networks begin as a "one-off" system of bike ways. When a primary arterial roadway cannot be improved to a point where most cyclists feels safe and comfortable using the facility, a parallel roadway - often one street off the main road (or "one-off") - may be improved with bicycle facilities and traffic calming features to provide an enhanced cycling street. By paralleling the main road, the "oneoff" network provides access to the businesses along the arterial using a pleasant cycling roadway. A "oneoff" roadway can be improved in stages: initially with signage and shared lane markings and then into a bike boulevard by instituting more substantial features such as traffic calming and diverters.

Since bike boulevards typically serve as bike routes, wayfinding signage should be provided. This signage should include destination, direction, and distance (or travel time) information to attractors throughout Sodus Point. Wayfinding adds to the utility of bike boulevards because it educates cyclists that there are safe, comfortable ways of accessing Sodus Point by bike.



Bike Parking can also act as public art in the Village, contributing community character and Village branding.

6.6 Bike Parking Facilities

It is recommended that bicycle parking is provided at major destinations throughout Sodus Point. Bicycle parking, at its most basic level, encourages people to ride. Bicycle parking should be provided on a firm stable surface with convenient connections that are ADA accessible.

Well designed and properly executed bicycle parking can provide the benefits below.

- Bicycle parking not only invites cyclists in, but shows the business values sustainability, which is an increasingly important factor in the decisions of consumers.
- Good bike parking benefits the disabled. By providing adequate, well-planned bike parking, business owners or property managers can ensure that hand rails and ramps intended for accessibility purposes are not clogged with bicycles looking for a bike parking spot.
- Pedestrians also benefit when orderly and aesthetic bike parking is provided. Not only does it improve the appearance of the area, it ensures that sidewalks and benches intended for pedestrians are not cluttered by bikes that do not have a designated parking space.
- In this way, bike parking can also prevent damage to other street furniture like garbage cans, posts, benches and trees.
- Covered shelters: provide protection from weather, promoting year round use.



6.7 Shared Use Paths

Shared use paths are facilities separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or an independent right-of-way. They are open to many different user types and are often used by bicyclists, pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Motor vehicles are not allowed on shared use paths except for maintenance and emergency vehicles in specific circumstances. Most shared use paths are twoway facilities.

Shared use paths have design criteria for many of the same parameters as roadways. These include widths, horizontal clearances, design speed, horizontal alignment, stopping sight distance, cross slopes, grades, vertical clearance, drainage, and lighting. The AASHTO Guide for the Development of Bicycle Facilities should be consulted for design values.

The MUTCD provides the standards for signing, striping, and markings shared use paths. In most cases, the signs and markings use on shared use paths are smaller versions of those used on roadways. Many shared use paths are separated from the roadway network. Consequently, street name signs should be provided at intersecting roadways to help users orient themselves to the roadway network. Wayfinding signs should be used on paths and to potential destinations along the path such as locations where users can access water fountains and restrooms. At trailheads and rest areas, the distance and direction to the next trail head should be posted.

Most shared use path projects will be paved. Asphalt and Portland cement concrete are the two most common surfaces for shared use paths. In areas where path use is expected to be primarily recreational, unpaved surfaces may be acceptable for shared use paths. Materials should be chosen to ensure the ADA requirements for a firm, stable, slip resistant surface are met. Even when meeting ADA criteria, some users such as in-line skaters, kick scooters, and skateboarders may be unable to use unpaved shared use paths.

The geometric and operational design of shared use paths is guite similar to that of roadways. However, additional considerations such as aesthetics, rest areas, amenities, and personal security are also important to ensure the maximum number of potential users are encouraged to use the path for both utilitarian and recreational purposes. Sometimes local resistance to implementing shared use paths and other trail facilities exists because of perceived potential negative impacts to neighboring communities, usually in terms of property values and crime or vandalism. A valuable resource in discussions of these matters is a summary of national research conducted for a state department of transportation. The studies cited collectively suggest that property values frequently increase following the construction of shared use paths while crime rates are sometimes found to decrease. See Appendix E: Community Impacts of Trails.



There should be adequate warning for motorists and non-motorists alike when shared use paths cross vehicular right-of-ways.

6.8 Sidewalks

For the purposes of design, the term sidewalk means a smooth, paved, stable and slip-resistant, exterior pathway intended for pedestrian use along a vehicular way. All sidewalks constructed within the Village should be compliant with the Americans with Disabilities Act Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (July 26, 2001) or most recent ADA standards for public rights of way. Sidewalks should be provided on both sides of all public roadways.

Sidewalk Width

The preferred minimum sidewalk width is 5 feet. AASHTO's A Policy on the Geometric Design of Highways and Streets and the AASHTO Guide for the Planning, Design, and Operations of Pedestrian Facilities recommend sidewalks at the back of curb be at least 6 feet wide.

Location of Sidewalks

On roadways with curb and gutter, sidewalks should be located six feet from the back of curb. This minimizes the encroachment of curb ramps and driveway cuts into the sidewalk width. On roadways without curb and gutter sidewalks should be separated from the roadway as shown by the following criteria, which are given in a sequence of desirability:

- At or near the right-of-way line (ideally, 3 feet of width should be provided behind the sidewalk for access, construction, and maintenance),
- Outside of the minimum required roadway clear zone, or
- As far from the edge of the driving lane as practical.

Sidewalk alignments, which are set back from the roadway, should taper for alignment closer to the roadway at intersections. This will allow for coordinated placement of crosswalks and stop bars.



In conjunction with sidewalk installation, the Village should consider implementing tree lawns and street furniture to create a more comfortable and aesthetically pleasing environment for pedestrians.



Sidewalk Slopes

The maximum cross slope on a sidewalk is 2%. This maximum cross slope must be maintained across driveways and crosswalks. Sidewalks may follow the grade of the adjacent roadway. However, on new structures the grade of the sidewalk cannot exceed 5%. If a grade of more than 5% is required on a new structure, an ADA compliant ramp must be provided.

6.9 Curb Ramps

A curb ramp is a ramp that cuts through or is built up to the curb. A blended transition is a relatively flat area where a sidewalk meets a roadway. Curb ramps and blended transitions are primarily used where a sidewalk meets a roadway or driveway at a pedestrian crossing location. Blended transitions include raised pedestrian street crossings, depressed corners, or similar connections between pedestrian access routes at the level of the sidewalk and the level of the pedestrian street crossing that have a grade of 5% or less. Accessibility requirements for blended transitions serve two primary functions. First, they must alert pedestrians that have vision impairments to the fact that they are entering, or exiting, the vehicular area. Second, they must provide an accessible route for those using wheelchairs or other assistive devices. Ideally, a separate ramp should be provided for each crossing of the roadway.

6.10 Midblock Crossings

Intersections are generally the best and most direct place for pedestrians to cross a roadway and are the most common pedestrian crossing locations. Still, more than 70 percent of pedestrian fatalities occur away from intersections, so it is critical to design midblock crossings that both increase drivers' awareness of the crossing and expectation of encountering pedestrians and encourage pedestrians to cross in the designated location. While drivers may not expect to encounter pedestrians at midblock locations as much as they do at intersections, midblock crossings have fewer conflict points between



vehicles and pedestrians which is an important safety advantage over crossings at intersections.

Midblock crossings are different from intersection crossings in three important ways: there are many more potential crossing locations at midblock than at intersections, motorists are less likely to expect pedestrians crossing at midblock, and pedestrians with visual impairments have fewer audible clues for determining the best time to cross.

Each of these differences leads to important design considerations for midblock crossings:

- Make the crossing location convenient for pedestrians - Midblock crossings are provided in locations where crossings at intersections are not available or are inconvenient for pedestrians to use. Midblock crossings must be placed in convenient locations to encourage pedestrians to use them rather than other, more convenient, unmarked midblock locations.
- Make pedestrians aware of the opportunity to cross - Provide aids for pedestrians with visual impairments to recognize the presence of a midblock crossing and the best opportunities for crossing. Auditory and tactile information should be provided for pedestrians with visual impairments since clues present at an intersection crossing are not always available at a midblock crossing (such as the sound of traffic stopping and starting).
- Make drivers and pedestrians aware of their responsibilities and obligations at the crossing and provide opportunities to meet these responsibilities/obligations - Use MUTCD guidance to establish a legal crossing. Vehicle approach, pedestrian approach, and traffic control design should provide pedestrians with clear messages about when to cross and drivers about where to yield. Where necessary, a refuge area should be provided for pedestrians to complete the crossing in stages. Traffic control devices can be used to create gaps in traffic for pedestrians to cross.



• Make drivers aware of the crossing as they approach it - Drivers should be warned of the pedestrian crossing in advance of the crossing location, and the midblock crossing should be highly visible to approaching drivers. Drivers should have clear lines of sight to the crossing so that pedestrians at the crossing are visible. The approach to the crossing should encourage drivers to reduce their speeds prior to the crossing. Drivers should be given plenty of time to recognize the presence of a pedestrian and stop in advance of the crossing.

Pedestrian Approach

The pedestrian approach is the area near the crossing where pedestrians wait on the side of the roadway and away from traffic until they are able to cross. It is often part of the sidewalk, if the sidewalk is adjacent to the curb line, or an extension or spur of the sidewalk that provides a path from the sidewalk to the crossing, if the sidewalk is not immediately adjacent to the curb. The pedestrian approach design should accomplish the following:

- Encourage pedestrians to cross at the marked crossing. The approach design should discourage pedestrians from crossing away from the marked crossing. The path to the crossing should be as direct and easy to navigate as possible.
- Keep pedestrians visible to approaching drivers and oncoming vehicles visible to pedestrians. Pedestrian furniture, traffic control devices, planters, and other objects should be located so they do not block



The Village should consider installing pedestrian refuges as a part of midblock crossings in order to help increase a sense of safety for pedestrians with mobility issues or while crossing a high-speed road.



pedestrians from the sight of approaching drivers. Also, on-street parking should be restricted near the crossing so that parked vehicles do not limit sight lines.

- In areas with high volumes of pedestrians, there should be sufficient space for pedestrians to queue as they wait for an appropriate time to cross. Pedestrian storage should be designed to prevent crowds of pedestrians from spilling onto the roadway. Pedestrian storage area design can be especially important at bus stops, and care should be taken so that children can wait a safe distance from the roadway while waiting for a school bus. Midblock curb extensions are a common and effective treatment at midblock locations and have many benefits.
- Make pedestrians, especially those with visual impairments, aware of the crossing location. In complex pedestrian environments, wayfinding signs may be appropriate to guide people to their desired destination. Auditory and tactile cues can be provided with traffic control devices adjacent to and in the sidewalk to direct pedestrians toward the crossing.
- Direct pedestrians to the proper location to activate a pedestrian signal (if present) and wait for an appropriate time to cross. Pedestrian-activated traffic control devices should be accessible to pedestrians with visual impairments and those using wheelchairs, scooters, and walkers. The approach design should make clear where pedestrians should stand while waiting to cross.

Motorist Approach

As noted in the discussion about locating a midblock crossing, care should be taken to avoid locations where horizontal or vertical alignment of the roadway limit drivers' sight distance, view of the pedestrian approach to the crossing, or view of the crossing itself. Consideration should be given to how trees, shrubs, poles, signs, and other objects along the roadside might



limit a driver's view of the crossing. On-street parking should be prohibited near the crossing using either signs and markings or physical barriers such as a curb extension, since a pedestrian who steps out into the road between parked cars can be blocked from the view of oncoming drivers.

Signing and markings on and along the motor vehicle approach to a midblock crossing should be designed in such a way as to make drivers aware of the crossing in time to notice and react to the presence of a pedestrian, and to enhance the visibility of the crossing. Advanced warning signs should indicate any special traffic control used at the pedestrian crossing. Refer to the AASHTO Guide for the Development of Bicycle Facilities for examples of midblock control treatments for shared use paths.

Traffic calming devices and other measures to prevent high vehicle speeds should be considered along routes with midblock pedestrian crossings. More than 80% of pedestrians die when struck by vehicles traveling at greater than 40 mph versus less than 10% when cars are traveling at 20 mph or slower. In addition, vehicles traveling at lower speeds require less distance to come to a complete stop when braking.



The Village should also consider using traffic calming elements, such as speed bumps, to lower motorist speeds when approaching a crossing.



6.11 Complete Streets

According to the National Complete Streets Coalition (NCSC), complete streets are roadways designed and operated to enable safe, attractive, and comfortable access and travel for all users (NCSC, 2016). Pedestrians, bicyclists, motorists and public transport users of all ages and abilities are able to safely and comfortably move along and across a complete street. Complete streets also create a sense of place, improve social interaction, and generally increase land values of adjacent properties. Complete streets look different in different places. They must fit with their context and to the transportation modes expected (Laplante & McCann, 2008). Although no singular formula exists for a complete street, an effective one includes at least some of the following features:

- Sidewalks
- Bus pullouts
- Bike lanes
- Special bus lanes

- Wide shoulders
- Pedestrian scale lighting
- Raised crosswalks
- Plenty of crosswalks
- Audible pedestrian signals
- Refuge medians
- Sidewalk bump-outs (bulbouts)

These features make a street safer and more pleasant for pedestrians and vehicles. A Federal Highway Administration safety review found that designing a street for pedestrian travel by installing raised medians and redesigning intersections and sidewalks reduced pedestrian risk by 28% (NCSC, 2016). The practice of complete streets is not only about allocation of street space, but also about selecting a design speed that is appropriate to the street typology and location, and that allows for safe movements by all road users (Laplante & McCann, 2008).



The configuration of complete streets will vary based on existing rightof-way widths, but generally accommodate all transportation user groups using facilities such as sidewalks, cycle tracks, and ample crosswalks.

7. Zoning & Development Regulations Assessment

The policies and regulations contained within the Village Code have significant ramifications for the design and functionality of the Village's physical environment, including the transportation network. Village code, and in particular zoning code, can provide supportive language for the provision of appropriate pedestrian and bicycle accommodations and help create regulatory requirements that will implement the Village's vision of a more robust active transportation network. An analysis of the Village Code was undertaken to help determine how the existing code either facilitates or hinders active transportation activity, and where there are opportunities for improvement to help strengthen the Village's position in supporting and providing pedestrian and bicycle facilities throughout the Village. The analysis focuses primarily on the Chapter 190 (Zoning) of the Village Code, but also incorporates Chapter 161 (Streets and Sidewalks). The results of this analysis are summarized below.

7.1 Pedestrian Accommodation

There is existing language within the Village Code that promotes the accommodation of pedestrians, specifically within Articles IX and X in Chapter 190, and in Chapter 161. One of the factors for consideration for the Planning Board during site plan review is the "adequacy and arrangement of pedestrian traffic access and circulation, including separation of pedestrians from vehicular traffic, walkway structures, [and] control of intersections with vehicular traffic and pedestrian convenience" (§190-49(D)(1)(b)). Pedestrian accommodations within offstreet parking areas are also considered as a part of an application during site plan review.

In addition, sidewalks and other pedestrian accommodations are referenced in Article X: Subdivision of Land. Sidewalks are required as a part of street design, and the Article references the potential requirement for 20 foot-wide easements for pedestrian facilities where there are large blocks or dead-end streets. However, the length requirement for street blocks in the subdivision article do not support a walkable built environment. According to Article X, blocks must be between 400 feet and 1200 feet in length. However, it is generally accepted that blocks should be no more than 400 feet in length in order to provide appropriate connectivity for pedestrians.

Off-street parking requirements (§190-23) require separate pedestrian ways for parking lots for commercial uses exceeding 20 spaces. This requirement could be expanded to require all off-street parking arrangements to consider pedestrian access. In addition, the number of



Street Network Patterns by Level of Pedestrian Connectivity



parking spaces required by use are generally higher than what is required in modern zoning codes. For instance, parking requirements for retail or service businesses are currently one per 200 square feet of customer floor area, but it is typically recommended to provide 3 spaces for ever 1,000 square feet. An excess of off-street parking detracts from the walkable nature of a community, therefore any reduction in the overall number of parking spots in the Village can help promote a higher-density environment that supports travelers regardless of mode.

Chapter 161 (Streets and Sidewalks), prohibits the obstruction of sidewalks and streets in the Village by buildings, personal property, or vehicles, which helps ensure that both pedestrians and bicyclists can easily navigate along their right-of-way. In addition, the Village requires property owners to maintain their landscaping and vegetation as to not obstruct sidewalks. However, there are no requirements within this chapter to directly address the improvement of circulation for nonmotorized travelers. Other notable sections of Chapter 161 pertaining to pedestrians:

- Protect the Village from civil action related to defective or out of repair streets and sidewalks unless the Village was given prior notice of the alleged defect (§ 161-3);
- Prohibit unlicensed excavation on streets and sidewalks (§ 161-4);
- Prohibit littering (§ 161-5);
- Require keeping sidewalks clear of vegetation at heights less than 8 feet (§ 161-6); and
- Prohibit the posting of bills (§ 161-7).

It is recommended that the Village consider clarifying that the "interruption of public travel" prohibited by license holders in § 161-2 includes any temporary condition that violates compliance with accessibility guidelines required under the Americans with Disabilities Act (ADA).The Village should also consider adding a 48-inch horizontal clearance, and other criteria for an accessible Pedestrian Access Route, to the requirements



of § 161-6, to be kept clear of furniture, planters, or other objects people may be inclined to place on a sidewalk.

Chapter 175: Vehicles and Traffic also pertains to pedestrian accommodation in the Village. Sections establish a 30-mph speed limit throughout the Village (§ 175-4) and designate certain streets as one-way (§ 175-5), and also indicate which intersections and approaches thereof will have STOP signs (§ 175-7). § 175-8 contains parking regulations, including a general prohibition against parking in crosswalks, which are defined by the projection of the lines of "any sidewalks approaching the intersection." Parking regulations are contained



Sodus Point has a gridded street network in some areas of the Village (above), but also some dead-end streets and culde-sacs (below) that detract from the connectivity of the Village.





within Article 2, Section 1202 of the New York Vehicle and Traffic Law, and generally prohibit parking in areas that would overlap with Sodus Point's ban on crosswalk parking, including:

- Within an intersection (32.1202.1.c);
- On a crosswalk (32.1202.1.d);
- Within 20 feet of a cross walk at an intersection (32.1202.2.b); and
- Within thirty feet of a flashing signal, stop or yield sign, or side-mounted traffic signal (32.1202.2.c).

Each of these state codes allow for local variation when "permitted by official signs, markings, or parking meters."

The Village should consider modifying crosswalk parking prohibition to protect areas near intersections without constructed sidewalks, perhaps by revising the definition to match or reference the definitions of both crosswalk and sidewalk in Title 1. Article 1 of the New York Vehicle and Traffic Law, which allows for an understanding of a sidewalk, and thus a crosswalk, where one is not constructed but which is "that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians." (NYS Vehicle and Traffic Law, §144). If the Village Code's more permissive stance than the state law is desired, and the village wishes to permit parking at places other than at crosswalks as defined by the presence of constructed sidewalk (approaches to and within intersections and in the more broadly defined crosswalks of the state definition), then consider posting those permissions to clarify the conflict with state law. If the requirements of the state law are desirable and sufficient, consider repealing the Village code and allowing the state law to be operative without conflict.

7.2 Bicycle Accommodation

One of the most apparent gaps in the Village code is the lack of reference to bicyclists and bike facilities through the entire code. Bicycle circulation is not referenced in



the off-street parking and loading section (§190-23), site plan approval (Article IX), or the subdivision of land (Article X). Chapter 161 also does not contain any language referencing bicyclist accommodations.

The only article that contains reference to bicyclists is Article 134: Parks. Bicycles are prohibited from being ridden "upon the lawns of the Village Parks" in § 134-10 , and are otherwise subject to all regulations described for vehicles, found in § 134-12 (not to operate but where authorized; subject to State traffic laws, not while intoxicated; park only where authorized). It is recommended that the Village consider clarifying if bicycles may operate on walkways within parks, or other places where motor vehicles are reasonably prohibited, but bicycles may access. Any regulation permitting bicycles to operate on walkways should also stipulate that they shall yield to pedestrians when doing so.

Future site plan review and subdivision regulations should incorporate the requirement or preference for installing bicycle accommodations with future investment in the Village to help support a connected active transportation network. In addition, off-street parking requirements should include the provision of bike parking, for instance based upon a percentage of total vehicle parking spaces.

7.3 Conclusion

The Village Code recognizes the need for pedestrian facilities in several sections. However, the code is significantly lacking language involving bicycle facilities, which should be consider for inclusion upon a code update or revision. With the exception of the waterfront commercial district, the purpose statements and intent of the zoning districts do not mention anything about the promotion of a walkable Village, which would help inform applicants and give direction to relevant Village boards when considering increased active transportation accommodations as a part of development activities in Sodus Point. In addition, the development of design standards for some or all of the districts would help heighten the standards for pedestrian and bicycle infrastructure in key areas of the Village.

8. Outreach & Education Recommendations

A successful bicycle and pedestrian network allows users to safely, appropriately and frequently utilize the network. To assist in creating an effective, safe bicycle and pedestrian network, outreach and education will be necessary to promote the use of non-motorized transportation options and to inform residents and stakeholders of the appropriate manner to operate within the Village's active transportation facilities. Educating roadway users (bicyclists, pedestrians and motorists) about the rules of the road and safe bicycling and walking behavior is essential, while at the same time, encouraging more people to get outside and walk and ride their bikes. The goals of the outreach and education recommendations in this section are to increase the number of bicyclists and pedestrians while improving safe and appropriate behavior by bicyclists, motorists, and pedestrians. The network will attract users of different skill levels and ages, as well as provide opportunities for interaction with motorists and pedestrians. Education and outreach programs must consider all of these different user groups.

The 1999 version of AASHTO's Guide for the Development of Bicycle Facilities recommended that an education plan address the following four groups:

- Young bicyclists;
- Adult bicyclists;
- Parents of young bicyclists; and
- Motorists.

This Plan recommends that the following groups be addressed as well:

- Senior pedestrians and bicyclists;
- Low income pedestrians and bicyclists;
- Visiting pedestrians and bicyclists; and
- School-age pedestrians and bicyclists.





3/166 people were killed in 2017 due to districted driving.

(NHTSA, 2019)

Informational Material Elements

It is important to make sure each group is addressed in multiple and suitable ways. For example, programs for young bicyclists should use age-appropriate curriculum and age-friendly language to explain concepts and

issues. In addition, language barriers should be considered as educational materials are developed. The Village should ensure that all parts of Sodus Point not only geographically, but also demographically, have equal access to active transportation information and facilities.

One of the key things to keep in mind when planning outreach and education efforts is not to "reinvent wheel". Many successful the programs, campaigns and resources are available. There are many national resources, such as materials provided by FHWA and the League of American Bicyclists. Other communities throughout the U.S. and Canada have also already developed tools that can be adapted and modified for the Village. This adaptation is important in order to effectively localize the educational



campaigns. Locally created campaigns that include materials with a local feel have been shown to have a more noticeable influence on motorist and bicyclist behaviors than generic FHWA-produced materials.

Bike and pedestrian education and outreach are vitally important in light of the growing number of distractions that motorists, pedestrians, and bicyclists face while traveling. The use of cell phones while operating a vehicle, bicycling, and driving has often been recognized as just as dangerous of an activity as drunk driving (Strayer et al, 2006). Fortunately, the number of fatal distractedaffected crashes has decreased between 2015-2016, but distraction-affected crashes still account for 9% of total fatal crashes in the US (NHTSA, 2019). Current trends, such as this, are important factors in designing bicycle/ pedestrian safety, education and outreach programs. The framework for these recommendations was crafted with all this in mind.



The Village should take advantage of nationally- and locallyproduced informational materials for local educational programs.

8.1 Develop Partnerships and Leverage Existing Resources

Connect partners to maximize the effectiveness of existing resources, programs, and materials. A list of potential partners has been developed, and their existing programs and partnerships have been inventoried to identify opportunities for new partnerships and enhanced use of resources. Some of these partners are already working together, but there are new partnerships that can be nurtured and developed, and new ways for existing educational materials to be used. Not all of the potential partners are specifically focused on bicycle/ pedestrian-related issues, but may still be a useful partner for their ability to communicate with a certain segment of the population. Some examples of education and outreach programs are suggested here:

Coordinate with different organizations

to see ways they can support each other and maximize existing resources. Organizations include the Town of Sodus, Injury Free Coalition for Kids, the Cornell Cooperative Extension of Wayne County, and the Wayne County Public Health Office and Sheriffs Department.



Create bicycling events, locate volunteers for bicycle rodeos and bicycle repair programs, and distribute information about bicycling to young adults in the region in coordination with regional organizations.

Coordinate with the Sodus Central School

District on projects such as bike safety and maintenance

workshops, bike fix-it stations at schools, or field trips related to active transportation.



Create a Walking School Bus Program. A Walking School Bus is a parent guided walking route with specific stops at specific times. Walking School Bus routes help families who live nearby to feel confident about letting their kids walk to school.

Learn from successful outreach and education examples in other active transportation-friendly communities. Many successful programs, campaigns and resources are already available. Other communities throughout the U.S. and Canada have already developed tools that can be adapted and modified for use by the Village of Sodus Point.



Recognize those who commute by bike and encourage people to become new bicycle commuters or increase their trips by bike during the season when the weather improving is through National Bike Month in May. This program features a month long calendar of events

offering organized rides for different ages and abilities, bike-handling skills and maintenance workshops,



and a Bike to Work Day Commuter Challenge. The program is most successful when led by a community based organization with financial support from local government and the greater business community.

Create a team of at least two **bicyclist ambassadors** encourages an increase in bicycling by engaging the general public to answer questions about bicycling and teaching bicycle skills and rules of the road. Ambassadors attend community-based events throughout peak cycling season to offer helmet fits, route planning, bike rodeos and commuting 101 workshops. Community members also may request an appearance by a team of ambassadors at businesses, schools or a conflict zone location along the bikeway system.

Create a **bike light campaign.** Given the days becoming shorter, fall is a good time of year to remind cyclists that proper equipment is required when riding at night. A bike light campaign also offers the opportunity to introduce cyclists to bicycle shops and strengthen partnerships between the community and retailers. This program could offer discounts on bicycle headlights and rear red reflectors and lights. It is recommended that the campaign be rolled out in September with the return of students to school. The campaign should expire before peak holiday season when bike shops are busy and less interested in offering discounts.



Become a **Bicycle Friendly Community.** The Bicycle Friendly Community (BFC) program created by the League of American Bicyclists (LAB) offers the opportunity to be recognized for achievements in supporting bicycling for transportation and recreation. It also serves as a benchmark to identify improvements yet to be made.

Certified Apply for **League** Instructor training course scholarships. The League of American Bicyclists offers certification courses to train those interested in teaching others to ride their bike safely and legally as a form of transportation. League Certified Instructors (LCIs) are a valuable asset to the community and can offer a variety of workshops for adults lacking confidence to ride in traffic as well as children learning to ride for the first time. LCI training courses require a two and a half day commitment and are offered through the LAB. To facilitate a cadre of cyclists to become LCIs, this program coordinates with the LAB to schedule training course offerings in the community and provide scholarships.



Expand the **Safe Routes to School (SRTS) program.** SRTS is a national program that addresses barriers that inhibit students from walking and biking to school. The Genesee Transportation Council produced a Safe Routes to School Guidebook for the region in 2009. The Village should work with the Sodus Central School District consider how the program could be used to assess barriers at all local schools. Increasing the number of children that can safely walk and bicycle to school as well as protecting the safety of those that already do so requires a holistic approach. SRTS programs need to be

Conduct public safety announcements on following the rules of the road. For motorists, this campaign could

cooperative efforts involving the Village of Sodus Point,

the Town of Sodus and the various schools or districts.



address the need to look left prior to turning right, and provide clear passing space. For bicyclists, this campaign could address bicycle lights and lack of visibility when not riding in the road. For pedestrians, this campaign could address crossing at designated crossing facilities, and walking on the sidewalk in all seasons.



Become a **Walk Friendly Community**. Walk Friendly Communities is a national recognition program developed to encourage towns and cities across the U.S. to establish or recommit to a high priority for supporting safer walking environments. The WFC

program will recognize communities that are working to improve a wide range of conditions related to walking, including safety, mobility, access, and comfort.

Distribute a Bike Map. The Wayne County Office of Tourism created a regional bike map that identifies four bike trails in the County, one of which goes from the Town of Lyons to Sodus Point. The map is free and available to print on the tourism office's website. Providing this map in the Village Offices and other community locations would help promote bicycling activity both within Village limits and in the region as a whole.

Create an **active transportation wayfinding program** that includes identification of routes and signing plans (destination, distance, direction) as well as assessments of potential improvements along the proposed routes.

Adapt Oregon program "Bike Wheels to Steering Wheels." The program helps youth better understand the relationship between bicycle/ pedestrian safety and motion, and ultimately gives students a better understanding of safety when traveling by all modes of transportation, in which the laws of physics are applied without exception. The concepts are learned through normal math, science, or physics curriculum in schools. Institute a **"Sunday Parkways"** ride once per month involving closing select road segments on weekends and holidays for traffic-free biking and walking on a network of selected streets.



Consider Colorful Sidewalks and Crosswalks at unsignalized intersections around the Village and **incorporate opportunities for play into street network** per HealthiKids Coalition, an initiative of the Finger Lakes Health Systems Agency.



Create a **Commuter of the Year Contest.** This contest recognizes those who choose to bike, walk, or ride transit. An aim is to encourage others to reduce their drive alone motor vehicle trips. Nominated by



their peers, contestants may be employees, residents, or students in the community and could be asked to provide an inspirational story about their transportation choice and habits. Based on nominations, categories could recognize Youth, Student, Senior, and Family Commuters. Winners also should be encouraged to serve as role models and participate in events throughout the year to mentor others and help them set goals to reduce their drive alone trips.

Support the creation of a **Business Pool Bike Program.** Offering employees the opportunity to check out and ride a bike to meetings, lunch or run errands is a great benefit. Pool bikes are a form of bike



sharing where an employer manages a fleet of bikes for this purpose. This program offers subsidies for the purchase and ongoing maintenance of bikes as part of an agreement to track use and achieve the goal of reducing vehicle miles traveled and greenhouse gases. Employees sign up, make reservations and log their trips using a web-based management tool.

Conduct **pedestrian and bicycle counts** on a seasonal basis to track whether there is an increase in pedestrian and bicycle activity, exploring new methods as suggested by the public, FHWA, and the League of American Bicyclists.

Put together **Bicycle Rodeo Kits.** Children learning to ride should be confident with their bike-handling skills before riding in traffic. A Bike Rodeo is an interactive and controlled environment where cyclists practice a new skill at a series of stations. The number and difficulty



of skills can be tailored based on attendance and number of instructors available to staff the event. This initiative will create a self-service bicycle rodeo kit that



can be reserved by League Cycling Instructors (LCIs), Bike Ambassadors and community members. It contains instructions, diagrams and props necessary to host a bike rodeo. A programmatic collaboration with the Wayne County Sheriffs Office should be explored.

Attend Active Transportation Conferences and Workshops. Participate in local conferences and events pertaining to active transportation planning to share best practices with other local professionals and learn current trends and opportunities in the active transportation realm.

Utilize the AARP Network of Age-Friendly Communities Toolkit. This toolkit can be adapted



by municipal and local governments, nonprofit organizations, community partners and volunteers to guide and support age-friendly initiatives that make 'Livable Communities" great places for all ages.

8.2 Appoint a Bicycle/ Pedestrian Committee

Appoint a public bicycle/pedestrian committee to promote non-motorized transportation and to actively engage with citizens, planning committees, and boards to expand commuting and recreational paths for walkers and cyclists. Such a committee could:

- Promote safe routes to school, greenways and connected corridors with adjacent towns,
- Publish and maintain cycling and walking maps,
- Review proposed development for active transportation considerations,
- Recommend amenities to enhance safe walking and cycling.

8.3 Create a Public Information Campaign

Coordinate an ongoing public information and enforcement campaign regarding safe sharing of the roadways for pedestrians, bicyclists and motorists.

Pedestrians: Law enforcement departments can take a leading role in improving public awareness of existing traffic laws and ordinances for motorists (e.g. obeying speed limits, yielding to pedestrians when turning, traffic signal compliance, and obeying drunk-driving laws) and pedestrians (e.g. crossing the street at legal crossings and obeying pedestrian signals). Many local law enforcement agencies have instituted annual pedestrian awareness weeks when they issue tickets to motorists who disregard pedestrian laws and warn pedestrians to follow the laws as well.

Bicyclists: A campaign should be designed keeping in mind the League of American Bicyclists' recommendation that communities make connections between the bicycling community and law enforcement. Sporadic enforcement will not result in significant improvements



- Riding at night without lights;
- Violating traffic signals;
- Riding on sidewalks; and
- Riding against traffic on the roadway.

These four behaviors were chosen for two reasons. First, they represent particularly hazardous behaviors which result in many crashes. Secondly, and very importantly, the enforcement of these behaviors is easy to justify to the public. When coupled with (and in fact preceded by) a large-scale education campaign, the public will understand the importance of the campaign and consequently will accept the enforcement activity.

8.4 Create a Maintenance & Improvement Schedule

Schedule regular maintenance and facility improvements to keep bike lanes and walkways well-marked and free of snow and debris. The availability of bicycle and pedestrian facilities is one of the components that can lead to increased riding and walking in a community. However, facility improvements do not end at construction; facilities also need to be maintained to be useful. Maintenance needs require planning and budgeting. Sample maintenance activities include keeping roadways and bike lanes clean and free of debris, identifying and correcting roadway surface hazards, keeping signs and pavement markings in good condition, maintaining adequate sight distance, and keeping shared-use trails in good condition. Maintenance is an area where planning and attention can provide significant benefits for bicyclists and pedestrians at relatively modest additional cost.



Identification of maintenance needs for active transportation facilities, and institutionalization of good maintenance practices are key elements in providing safe facilities for bicyclists and pedestrians. Winter snow removal and year-round debris removal will be key maintenance concerns in the Village. The importance of good planning and initial design cannot be overstated with respect to long-term maintenance needs. It is easier to obtain outside funding for facilities construction than for on-going maintenance, so planning and building correctly at the outset will reduce future maintenance problems and expense. Residents and businesses can be engaged in clean-up days, or help with snow removal.

Program Effectiveness Measures

Program effectiveness measures can be used to determine if the recommended strategies meet their objectives, discover any areas that need change, justify funding, and provide guidance for similar programs. Baseline data is required prior to implementing recommendations. The Village could observe the outcomes or contract with a consultant to measure effectiveness on their behalf. Observable outcomes include:

- Number of crashes, injuries and fatalities;
- Behaviors;
- Number of citations issued;
- Number of people walking or bicycling;
- Knowledge, opinions and attitudes;
- Changes in organizational activity;
- Traffic volumes; and
- Traffic speeds.

The effort to enforce the traffic laws as they relate to bicycle and pedestrian safety should be addressed in an overall, county-wide, coordinated enforcement campaign. Targeted enforcement initiatives result in everyone following the rules of the road.



The Five E's:

Essential elements for communities to become great places for bicycling:



Engineering: Creating safe and convenient places to ride and park



Education: Giving people of all ages and abilities the skills and confidence to ride



Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling



Enforcement: Ensuring safe roads for all users



Evaluation & Planning: Planning for bicycling as a safe and viable transportation option

9. Funding & Implementation Strategy

responsible for implementing this Plan's Those recommendations should monitor capital improvement plans to identify specific opportunities, coordinate the available outreach and education programs identified in the previous section, coordinate improvements with adjoining municipalities, and identify and follow through on relevant grant opportunities. In general, the costs associated with constructing the bicycle and pedestrian facilities recommended in this Plan exceed available Village resources. To help alleviate this deficiency, this section identifies and discusses the numerous sources which can be used to provide monetary assistance for bicycle and pedestrian facilities and programs. Many of these funding sources are available on the federal level, as dictated in the new transportation legislation, Fixing America's Surface Transportation Act, or the "FAST" Act. Many of these federal programs are administered by the New York State Department of Transportation (NYSDOT). Additionally, there are other state and regional funding sources which can be used to help achieve the goals and objectives of this Plan. Finally, a number of private funding sources exist which can be used by local governments to implement bicycle and pedestrian-related programs. The following table includes all of the funding sources that are described subsequently in greater detail.

| Funding Source | Category | Relevant Project Types |
|--|--|---|
| National Highway Performance Program (NHPP) | Federal | Bicycle transportation facilities and pedestrian walkways adjacent to highways in the National Highway System, including interstates (Section 207) |
| Highway Safety Improvement Program (HSIP) | Federal | Intersection safety improvement, pavement and shoulder widening; bicycle/pedestrian/disabled person safety improvements; traffic calming; installation of yellow-green signs at pedestrian and bicycle crossings and in school zones; transportation safety planning; road safety audits; improvements consistent with FHWA publication "Highway Design Handbook for Older Drivers and Pedestrians"; safety improvements for publicly owned bicycle and pedestrian pathway or trail |
| Congestion Management and Air Quality (CMAQ) | Federal funding (administered by NYSDOT) | Bicycle and pedestrian facility improvements; transit improvements; rideshare programs; alternative fueling facilities/clean vehicle deployment; and other transportation projects that reduce vehicle emissions and traffic congestion in areas where air quality does not meet National Ambient Air Quality Standards |
| Transportation Alternatives (TA) (part of the Surface Transportation Block Grant Program) | Federal funding (administered by NYSDOT) | On and off road bicycle and pedestrian facilities; projects that improve non-driver safety, access to transportation and enhanced mobility; conversion of abandoned railroad corridors into non-motorized trails; projects that enable/ encourage children to walk/bike to school; construction of turnouts, overlooks and viewing areas; planning, designing or constructing boulevards in former divided highway right-of- ways |

| Ñ | -72 |
|---|-----|
| | |

| Funding Source | Category | Relevant Project Types |
|---|--|---|
| Better Utilizing Investments to Leverage Development (BUILD) | Federal funding (administered by NYSDOT) | Capital projects that generate economic development and improve access to reliable, safe and affordable transportation for communities, both urban and rural. |
| Surface Transportation Block Grant Program | Federal funding (administered by NYSDOT) | Programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; Safe Routes to School projects; and projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. |
| Recreational Trails Program | Federal funding administered by NYSOPRHP | Trails for both motorized and non-motorized uses, including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or other off-road motorized vehicles; develop trailhead facilities; purchase/lease of maintenance equipment; acquisition of easements/property |
| State and Community Highway Safety Grants | Federal | Federal Safety-related programs and projects (Section 402) |
| HUD Community Development Block Grants | Federal | Public facilities and improvements, such as streets, sidewalks, sewers, water systems, community and senior citizen centers, recreational facilities, and greenways |
| Urbanized Area Formula Grants, Capital Investment Grants and Loans, and Formula Program for Other than Urbanized Area | Federal (FTA) | Bicycle access to public transportation facilities, shelters and parking facilities, bus bicycle racks |
| National Park Service Land and Water Conservation Fund (LWCF) Grants | Federal | A variety of parks and recreation facilities, including trails and greenways. |
| The Community Development Block Grant (CDBG) | Federal | Sidewalks |
| CHIPS (Consolidated Local, State, and Highway Improvement Program) | State | Bike lanes and wide curb lanes; sidewalks |

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| Funding Source | Category | Relevant Project Types |
|--|----------|---|
| Environmental Protection Fund Grant Program for Parks, Preservation and Heritage (EPF) - Parks Program | State | Playgrounds, courts, rinks, community gardens, and facilities for swimming, boating, picnicking, hunting, fishing, camping or other recreational activities. |
| Department of State (DOS) Local Waterfront Revitalization Program (LWRP) | State | Waterfront or waterfront-related economic development projects, infrastructure improvements, public access improvements, brownfield redevelopment, designing and installing natural and nature-based features, designing and constructing innovative projects that reduce risk to vulnerable community assets and infrastructure, mitigating future physical climate risks such as projected sea level rise, open space or parkland acquisition priorities, and habitat restoration or enhancement. |
| The Green Innovation Grant Program GIGP | State | Projects that improve water quality and demonstrate green stormwater infrastructure in New York State. |
| Resiliency and Economic Development Initiative (REDI) Fund | State | Projects that address both immediate and long-term resiliency needs, enhance economic development, protect critical infrastructure, incorporate green, natural, or nature-based features, and will help sustainably rebuild and enhance communities along the Lake Ontario and the St. Lawrence River shorelines. |
| The Greater Rochester Health Foundation | Regional | Community health and prevention projects and programs |
| People for Bikes | Private | Bicycle facilities; end-of-trip facilities; trails; advocacy projects such as Ciclovias |
| National Trails Fund | Private | Hiking trails |
| Robert Wood Johnson Foundation (general) | Private | Various |
| The Conservation Alliance Fund | Private | Land Use |

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9.1 Federal Funding Sources: FAST Funded Programs

The adoption of the FAST Act generally continues the bicycle and pedestrian funding mechanisms of its legislative predecessor, Moving Ahead for Progress for the 21st Century (MAP-21) with minor modifications and at slightly higher funding levels. The most significant structural change, which does not equate to a significant practical difference, is that the MAP-21 Transportation Alternatives Program (host to many of the Federal nonmotorized transportation funding opportunities), is eliminated. Instead, transportation alternatives funding is a set-aside component of the Surface Transportation Block Grant (STBG) program, which is the successor to prior legislations' Surface Transportation Program (STP). Safe routes to school projects and recreational trail projects are among the activities that now fall under this program set-aside.

These and other funding opportunities governed by the FAST Act are briefly described in this section. Itis worth noting that some FAST Act changes related to transportation alternatives funding apply only to urbanized areas with populations greater than 200,000, and therefore may not be applicable to the Village of Sodus Point as an individual applicant. It is also worth noting that the FAST Act introduces some nonmotorized transportation changes, such as language related to Complete Streets concepts, which are not strictly related to funding.

Several of the following resources provide additional information on relevant aspects of the FAST Act:

http://www.fhwa.dot.gov/environment/bicycle_ pedestrian/legislation/sec217.cfm

http://www.fhwa.dot.gov/fastact/factsheets/ transportationalternativesfs.pdf

http://www.bikeleague.org/content/what-knowabout-fast-act

National Highway Performance Program

Funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway in the National Highway System, including Interstate highways.

Highway Safety Improvement Program

Funds may be used for bicycle- and pedestrian-related highway safety improvement projects on a public road that are consistent with a State strategic highway safety plan.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

Established in 1991 and continued in the FAST Act, CMAQ provides funding for transportation projects that help State and local governments reduce vehicle emissions and traffic congestion in areas where air quality does not meet or did not previously attain the National Ambient Air Quality Standards. Projects require a 20 percent local match and the minimum grant amount is \$250,000. For the 2018 funding round, Wayne County was one of only 19 counties eligible to apply for CMAQ funding.

Transportation Alternatives (TA)

The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a setaside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.



Recreational Trails Program

The Regional Trails Program (RTP) funded under the TA umbrella, is administered separately by the NYS Office of Parks, Recreation and Historic Preservation. Funds may be used for all kinds of trail projects. Of the funds apportioned to a state, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination). Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other offroad motorized vehicles.

Highway Safety Section 402 Grants

A State is eligible for these Section 402 grants by submitting a Performance Plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals). Research, development, demonstrations, and training to improve highway safety (including bicycle and pedestrian safety) are carried out under the Highway Safety Research and Development (Section 403) Program.

Highway Safety Section 405 Grants

Under this new NHTSA program, states in which more than 15% of traffic fatalities are bicyclists and pedestrians (including New York) are eligible for nonmotorized safety funding. Eligible activities include safety education and awareness activities and programs, safety enforcement (including police patrols), and training for law enforcement on pedestrian- and bicycle related safety laws.

9.2 Other Federally Funded Programs

Community Development Block Grants (CDBG)

Through the U.S. Department of Housing and Urban Development (HUD), the CDBG program provides eligible metropolitan cities and urban counties (called "entitlement communities") with annual direct grants that they can use to revitalize neighborhoods, expand affordable housing and economic opportunities, and/ or improve community facilities and services, principally to benefit low- and moderate-income persons. Eligible activities include building public facilities and improvements, such as streets, sidewalks, sewers, water systems, community and senior citizen centers, and recreational facilities. Several communities have used HUD funds to develop greenways.

Better Utilizing Investments to Leverage Development (BUILD)

The highly competitive BUILD grant program replaced the Transportation Investment Generating Economic Recovery (TIGER) grants and has funds numerous multimodal and multi-jurisdictional projects. This is an annually administered discretionary grant program distinct from the FAST Act and typically provides grants to projects difficult to fund through traditional federal programs. Awards focus on capital projects that generate economic development and improve access to reliable, safe and affordable transportation for communities, both urban and rural.

Title 49 USC

Title 49 USC allows the Urbanized Area Formula Grants (Section 5307), Capital Investment Grants and Loans (Section 5309), and Formula Program for Other than Urbanized Area (Section 5311) transit funds to be used for improving bicycle and pedestrian access to transit facilities and vehicles. Eligible activities include investments in "pedestrian and bicycle access to a mass transportation facility" that establishes or enhances coordination between mass transportation and other transportation.

National Park Service Land and Water Conservation Fund (LWCF) Grants

This federal funding source was established in 1965 to provide "close-to-home" parks and recreation opportunities to residents throughout the United States. Money for the fund comes from the sale or lease of nonrenewable resources, primarily federal offshore oil and gas leases, and surplus federal land sales. LWCF grants can be used by communities to build a variety of parks and recreation facilities, including trails and greenways. LWCF funds are distributed by the National Park Service to the states annually. Communities must match LWCF grants with 50 percent of the local project costs through in-kind services or cash. All projects funded by LWCF grants must be used exclusively for recreation purposes, in perpetuity. Projects must be in accordance with each State's Comprehensive Outdoor Recreation Plan.

9.3 State and Regional Funding Sources

CHIPS (Consolidated Local, State, and Highway Improvement Program)

Funds are administered by NYSDOT for local infrastructure projects. Eligible project activities include bike lanes and wide curb lanes (highway resurfacing category); sidewalks, shared use paths, and bike paths within highway right-of-way (highway reconstruction category), and traffic calming installations (traffic control devices category). CHIPS funds can be used for TAP grant program local match requirements.

New York State Consolidated Funding Application (CFA)

The CFA is a streamlined resource through which applicants can access multiple financial assistance programs made available through various state agencies. The CFA offers the opportunity for local governments (and other eligible applicants) to submit a single grant application to state agencies that may have resources available to help finance a given proposal. All submitted CFAs are also reviewed by the applicant's Regional Economic Development

Council, which may elect to endorse the proposal as a regional priority project. Several grant resources have been made available that may be appropriate funding opportunities for implementation of active transportation efforts, including the following:

- Environmental Protection Fund Grant Program for Parks, Preservation and Heritage (EPF) - Parks Program
- EPF Recreational Trails Program
- Department of State's Local Waterfront Revitalization Program
- Environmental Facilities Corporation's Green Innovation Grant Program.



Greater Rochester Health Foundation

The Greater Rochester Health Foundation administers a competitive grant program to implement community health and prevention projects. While grant focus topics and cycles may vary from year to year, bicycle- and pedestrian-related projects and programs may frequently be well suited for these opportunity grants.

9.4 Private Funding Sources

There are a number of for and non-profit businesses that offer programs that can be used to fund bicycle and pedestrian related programs and projects. Nationally, groups like Bikes Belong fund projects ranging from facilities to safety programs. Locally, Wegmans and Excellus have a strong track record of supporting healthbased initiatives and may be resources for partnership or sponsorship.

PeopleForBikes

The PeopleForBikes Community Grant Program strives to put more people on bicycles more often by funding important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. Most of the grants awarded to government agencies are for trail projects. The program encourages government agencies to team with a local bicycle advocacy group for the application. Applications for accepted bi-annually for grants of up to \$10,000 each (with potential local matches).

American Hiking Society National Trails Fund

The American Hiking Society's National Trails Fund is the only privately funded national grants program dedicated solely to hiking trails. National Trails Fund grants have been used for land acquisition, constituency building campaigns, and traditional trail work projects. Since the late 1990s, the American Hiking Society has granted nearly \$200,000 to 42 different organizations across the US. Applications are accepted annually with a summer deadline.



The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation seeks to improve the health and health care of all Americans. One of the primary goals of the Foundation is to "promote healthy communities and lifestyles." Specifically, the Foundation has an ongoing "Active Living by Design" grant program that promotes the principles of active living, including non-motorized transportation. Other related calls for grant proposals are issued as developed, and multiple communities nationwide have received grants related to promotion of trails and other non-motorized facilities.

Conservation Alliance

The Conservation Alliance is a group of outdoor businesses that supports efforts to protect specific wild places for their habitat and recreation values. Before applying for funding, an organization must first be nominated by a member company. Members nominate organizations by completing and submitting a nomination form. Each nominated organization is then sent a request for proposal (RFP) instructing them how to submit a full request. Proposals from organizations that are not first nominated will not be accepted. The Conservation Alliance conducts two funding cycles annually. Grant requests should not exceed \$35,000 annually.

10. Follow On Activities

This Active Transportation Plan helps chart a course toward a fully inclusive and accessible active transportation system for the community. The project was driven by a consistent and comprehensive flow of input from residents and stakeholders.

The final report highlights a wide range of needed improvements that were identified by residents. Follow-on activities are future endeavors that will help advance the overall objectives of the Sodus Point Active Transportation Plan.

Follow-on activities can be placed into 3 general categories:

- Next steps to advance infrastructure improvements recommended in the Plan;
- On-going coordination and communication to support Active Transportation; and
- Additional plans and studies to advance community objectives.

As a master plan, the Sodus Point Active Transportation Plan does not identify all of the specifics needed to construct every recommended project. Some work still remains to be done. This includes, but is not limited to:

- Additional study and operational analysis is required for each recommended project prior to implementation.
- Consultation with and agreement from facility owners is required prior to implementation.
- Access agreements from landowners and/ or property acquisition are necessary prior to implementation. (Please see Appendix E: Community Impact of Trails for useful information in talking with landowners.)
- Detailed corridor studies are needed in order to provide shared use facilities in select corridors.
- Design development and construction documentation will be necessary for any construction related

projects, such as trails, sidewalks, and other infrastructure improvements.

- Regulatory approvals and permitting will be necessary for many of the recommended projects.
- Environmental permits will be required for trail projects. Some of the program and policy recommendations do not require regulatory approvals. However, changes to Village code will need review and approval by the appropriate municipal boards and would be subject to the SEQR process.

During the planning process, several possible projects emerged that would be beneficial follow-on activities:

Parking Analysis

A a result of discussion with stakeholders, site visits, and internal analysis, it is recommended that the Village take on a comprehensive analysis of existing and future parking demands in Sodus Point, as compared to the existing supply of parking. Such an analysis would help the Village better understand if there is a lack of supply that needs to be addressed through further provision of parking, or if there is excess space in the Village dedicated to parking that could be re-purposed for active transportation use. Such an analysis should entail an inventory of available parking during both the peak and off seasons to better understand the seasonal fluctuations in activity that the Village experiences on an annual basis.

Tactical Urbanism Demonstrations

As highlighted in the policy/program recommendations, the Village should consider implementing tactical urbanism installations in key locations within the Village's transportation network. Tactical urbanism can generally be described as low-cost, temporary interventions that improve local neighborhoods or demonstrate potential future improvements to the built environment. These interventions can be highly successful in introducing active transportation concepts to residents and business



owners, as well as foster support for permanent installation of new transportation facilities. Potential demonstrations could include the creation of a temporary traffic circle at the intersection of Route 14 and Sentell Street, the re-purposing of the parking spaces adjacent to Willow Park for additional park space or motorcycle parking, or any other active transportation facility that the Village wants to test for both internal logistical considerations and public support. Such with the parking analysis, the Village should consider installing such demonstrations in both the peak and non-peak seasons to understand the varying success of the tactic based on varying activity levels.

Wayfinding Analysis

It was identified during a walking tour with the steering committee that a more robust wayfinding system would be desired, and of the existing wayfinding signage conflicts with both pedestrian mobility and existing transportation signage. A new wayfinding system would help improve mobility for both motorized and nonmotorized transportation users, as well as contribute to the character of the Village by using a consistent and attractive branding scheme. The Village should consider developing a wayfinding system after creating a master plan for the design and implementation of such a system.

Pedestrian and Bicyclist Counts

Collecting reliable data on pedestrian and bicycle usage and travel patterns will provide an important tool for advancing Active Transportation in Sodus Point. Without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in these modes, especially when compared to the other transportation modes such as the private automobile. A good follow-on project would be to implement bike and pedestrian counts in selected locations, based on protocols provided by the National Bicycle and Pedestrian Documentation Project (NBPD), and the FHWA Traffic Monitoring Guide.

Ongoing Coordination with NYSDOT and Wayne County Highway Department

There are possible opportunities to collaborate with agencies conducting existing highway/street reconstruction projects to include upgrades to bicycle and pedestrian infrastructure. Coordination at the beginning of the reconstruction project will help to ensure bicycle and pedestrian facilities are studied as part of the inventory phase and carried through construction. Maintain regular communication with NYSDOT and the County Highway Department regarding implementation of plan recommendations.

Village Code Updates

Code updates to achieve active transportation recommendations, especially along major corridors and commercial corridors within the Village, may be necessary to enforce proposed improvements shown within this Plan. The Zoning and Development Regulations Assessment discusses some of the proposed changes. Additional resources can be found in Appendix F, the Genesee Transportation Council Bicycle and Pedestrian Supportive Code Language document.

First Creek / Harriman Park Improvements

The portion of Route 14 that passes over what is known as "First Creek" and Harriman park has been identified as an area of concern due to the presence of anglers and heavy vehicle and trailer traffic. Given the current space constraints, there is limited opportunity for improving the pedestrian accessibility over First Creek. However, the Village should consider developing a concept plan for this area to develop a visual gateway into the Village, and to envision future roadway design alternatives should the bridge need to be replaced in the future.

Appendix A

The Bicycle Level and Pedestrian Level of Service Models

APPENDIX A:

The Bicycle Level and Pedestrian Level of Service Models

A1: Bicycle Level of Service

The statistically-calibrated mathematical equation entitled the *Bicycle Level of Service*¹ *Model (Version 2.0)* was used as the foundation of the evaluation. This *Model* is the most accurate method of evaluating the bicycling conditions of shared roadway environments. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. With statistical precision, the *Model* clearly reflects the effect on bicycling suitability or "compatibility" due to factors such as roadway width, bike lane widths and striping combinations, traffic volume, pavement surface conditions, motor vehicles speed and type, and on-street parking.

The *Bicycle LOS Model* is based on the proven research documented in *Transportation Research Record 1578* published by the Transportation Research Board of the National Academy of Sciences. It was developed with a background of over 100,000 miles of evaluated urban, suburban, and rural roads and streets across North America. It has been adopted by the Florida Department of Transportation as the recommended standard methodology for determining existing and anticipated bicycling conditions throughout Florida. Many urbanized area planning agencies and state highway departments are using this established method of evaluating their roadway networks. These include metropolitan areas across North America such as Atlanta GA, Baltimore MD, Birmingham AL, Philadelphia PA, San Antonio TX, Houston TX, Buffalo NY, Anchorage AK, Lexington KY, and Tampa FL as well as state departments of transportation such as, Delaware Department of Transportation (DeIDOT), New York State Department of Transportation (NYDOT), Maine Department of Transportation (MeDOT) and others.

Widespread application of the original form of the *Bicycle LOS Model* has provided several refinements. Application of the *Bicycle LOS Model* in the metropolitan area of Philadelphia resulted in the final definition of the three effective width cases for evaluating roadways with

¹ Landis, Bruce W. "Real-Time Human Perceptions: Toward a Bicycle Level of Service" *Transportation Research Record 1578*, Transportation Research Board, Washington DC 1997 (see Appendix A).

on-street parking. Application of the *Bicycle LOS Model* in the rural areas surrounding the greater Buffalo region resulted in refinements to the "low traffic volume roadway width adjustment". A 1997 statistical enhancement to the *Model* (during statewide application in Delaware) resulted in better quantification of the effects of high-speed truck traffic [see the $SP_t(1+10.38HV)^2$ term]. As a result, *Version 2.0* has the highest correlation coefficient (R² = 0.77) of any form of the *Bicycle LOS Model*.

Version 2.0 of the *Bicycle LOS Model* was employed to evaluate the roads and streets within the Sodus Point study area. Its form is shown below:

Bicycle LOS = $a_1 \ln (Vol_{15}/L_n) + a_2 SP_t (1+10.38HV)^2 + a_3 (1/PR_5)^2 + a_4 (W_e)^2 + C$

Where:

 Vol_{15} = Volume of directional traffic in 15 minute time period $Vol_{15} = (ADT \times D \times K_d) / (4 \times PHF)$ where: ADT = Average Daily Traffic on the segment or link D = Directional Factor K_d = Peak to Daily Factor PHF = Peak Hour Factor = Total number of directional *through* lanes Ln SPt = Effective speed limit SPt = 1.1199 ln(SPp - 20) + 0.8103 where: SPp = Posted speed limit (a surrogate for average running speed) HV = percentage of heavy vehicles (as defined in the 1994 Highway Capacity Manual) PR₅ = FHWA's five point pavement surface condition rating = Average effective width of outside through lane: We where: $W_e = W_v - (10 \text{ ft } x \% \text{ OSPA})$ and $W_1 = 0$ $W_e = W_v + W_1 (1 - 2x \% OSPA)$ and $W_{l} > 0 \& W_{ps} = 0$ $W_e = W_v + W_l - 2 (10 \times \% \text{ OSPA})$ and $W_1 > 0 \& W_{ps} > 0$ and a bikelane exists where: Wt = total width of outside lane (and shoulder) pavement OSPA = percentage of segment with occupied on-street parking W_l = width of paving between the outside lane stripe and the edge of pavement

W_{ps}= width of pavement striped for on-street parking

 $\label{eq:Wv} \begin{array}{ll} W_v = \mbox{Effective width as a function of traffic volume} \\ and: \\ W_v &= W_t \mbox{ if } ADT > 4,000 \mbox{veh/day} \\ W_v &= W_t (2\mbox{-}0.00025 \ x \ ADT) \\ & \mbox{ if } ADT \leq 4,000 \mbox{veh/day}, \\ & \mbox{ and if the street/road is undivided and unstriped} \\ a_1: \ 0.507 & a_2: \ 0.199 & a_3: \ 7.066 & a_4: \ - \ 0.005 & C: \ 0.760 \end{array}$

(a1 - a4) are coefficients established by multi-variate regression analysis.

The *Bicycle LOS* score resulting from the final equation is stratified into service categories "A, B, C, D, E, and F" (according to the ranges shown in Table 1) to reflect users' perception of the road segment's level of service for bicycle travel.

| LEVEL-OF-SERVICE | BLOS SCORE | | |
|------------------|--|--|--|
| Α | ≤ 1.5 | | |
| В | $>$ 1.5 and \leq 2.5 | | |
| С | $>$ 2.5 and \leq 3.5 $>$ 3.5 and \leq 4.5 $>$ 4.5 and \leq 5.5 | | |
| D | | | |
| E | | | |
| F | > 5.5 | | |
| | | | |

 TABLE 1
 Bicycle Level-of-Service Categories

This stratification is in accordance with the linear scale established during the referenced research (i.e., the research project bicycle participants' aggregate response to roadway and traffic stimuli). The *Model* is particularly responsive to the factors that are statistically significant. An example of its sensitivity to various roadway and traffic conditions is shown in Figure 1.

| Bicycle LOS = a | $a_1 \ln (Vol_{15}/L_n) + a_2$ | SP _t (1+10.3 | 88HV) ² + a ₃ (2 | 1/PR ₅) ² + | a ₄ (W _e) ² | ² + C | |
|---|--------------------------------|-------------------------|--|------------------------------------|---|------------------------|-------|
| a₁: 0.507 | a ₂ : 0.199 | | a₃: 7.066 | | a4: - | 0.005 | |
| C: 0.76 | 60 | | | | | | |
| Baseline inputs | 6: | | | | | | |
| ADT = SP _p = pavement) | 12,000 vpd 40 mph | % HV We | = 1 = 12 ft | L PR₅ | = = | 2 lanes 4 | (good |
| Baseline Bicycl | e LOS Score | | | <u>BLOS</u> 3.98 | - | <u>% Change</u> N/A | |

Lane Width and Lane striping changes (T-statistic = 9.844)

| $\begin{matrix} W_t \\ W_t \\ W_t \\ W_t \\ W_t \\ W_t \end{matrix}$ | = = = = | 10 ft 11 ft 12 ft (baseline average) 13 ft 14 ft 15 ft (W _I = 3 ft) | 4.20 4.09 3.98 3.85 3.72 3.57 (3.08) | 6% increase 3% increase no change 3% reduction 7% reduction 10%(23%) |
|---|------------------|---|---|---|
| reduction W _t reduction W _t reduction | = | 16 ft ($W_1 = 4$ ft) 17 ft ($W_1 = 5$ ft) | 3.42 (2.70) 3.25 (2.28) | 14%(32%) 18%(43%) |

Traffic Volume (ADT) variations (T-statistic = 5.689)

| ADT | = | 1,000 Very Low | 2.75 | 31% decrease |
|-----|---|-----------------------------------|------|--------------|
| ADT | = | 5,000 Low | 3.54 | 11% decrease |
| ADT | = | 12,000 Average (baseline average) | 3.98 | no change |
| ADT | = | 15,000 High | 4.09 | 3% increase |
| ADT | = | 25,000 Very High | 4.35 | 9% increase |

Pavement Surface conditions (T-statistic = 4.902)

| PR₅ | = | 2 | Poor | 5.30 | 33% increase |
|-----------------|---|---|---------------------------|------|--------------|
| PR ₅ | = | 3 | Fair | 4.32 | 9% reduction |
| PR5 | = | 4 | Good - (baseline average) | 3.98 | no change |
| PR₅ | = | 5 | Very Good | 3.82 | 4% reduction |

Heavy Vehicles in percentages (Combined speed and heavy vehicles T-statistic = 3.844)

| ΗV | = | 0 | No Volume | 3.80 | 5% decrease |
|----|---|----|-------------------------------|------|----------------------------|
| HV | = | 1 | Very Low - (baseline average) | 3.98 | no change |
| HV | = | 2 | Low | 4.18 | 5% increase |
| HV | = | 5 | Moderate | 4.88 | 23% increase ^a |
| HV | = | 10 | High | 6.42 | 61% increase ^a |
| ΗV | = | 15 | Very High | 8.39 | 111% increase ^a |

^aOutside the variable's range (see Reference (1))

Figure 1: Bicycle LOS Model Sensitivity Analysis

Data Collection/Inventory Guidelines for Future Updates

Following is the list of data required for computation of the *Bicycle LOS* scores as well as the associated guidelines for their collection and compilation into the programmed database.

Average Daily Traffic (ADT)

ADT is the average daily traffic volume on the segment or link. The programmed database will convert these volumes to Vol_{15} (volume of directional traffic every fifteen minutes) using the Directional Factor (D), Peak to Daily Factor (K_d) and Peak Hour Factor (PHF) for the road segment.

Percent Heavy Vehicles (HV)

Percent HV is the percentage of heavy vehicles (as defined in the 2000 Highway Capacity Manual).

Number of lanes of traffic (L)

L reflects the total number of *through* traffic lanes of the road segment and its configuration. (e.g., D = Divided, U = Undivided, OW = One-Way, S = Center Turning Lane). The programmed database will convert these lanes into directional lanes. The presence of continuous right-turn lanes should be noted in the comments field. In the other direction it will be noted in the comments if there is a different number of through lanes.

Posted Speed Limit (Sp)

 S_p is recorded as posted.

Wt total width of pavement

 W_t is measured from the center of the road, yellow stripe, or (in the case of a multilane configuration) the lane separation striping to the edge of pavement or to the gutter pan of the curb. When there is angled parking adjacent to the outside lane, W_t is measured to the traffic-side end of the parking stall stripes.

Width of pavement is the pavement striped for on-street parking (W_{ps})

 W_{ps} is recorded only if there is parking to the right of a striped bike lane. If there is parking on two sides on a one-way, single lane street, W_{ps} is reported as the combined width of the striped parking.

Width of paving between the outside lane stripe and the edge of pavement (W_l) W_l is measured from the outside lane stripe to the edge of pavement or to the gutter pan of the curb. When there is angled parking adjacent to the outside lane, W_l is measured from the outside lane stripe to the traffic-side end of the parking stall stripes.

OSPA %

OSPA% is the estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking at the time of survey. Record each side separately. If the parking is allowed only during off-peak periods and parking restrictions change widths and
laneage, indicate the geometric changes in the comments field. Note: Indicate any "angled parking" in the comments field.

Pavement Condition (PC)

PC is the pavement condition of the motor vehicle travel lane according to the FHWA's fivepoint pavement surface condition rating shown below in Figure 2.

Designated Bike Lane

A "Y" is coded if there is a bike lane on the segment, otherwise "N" is entered.

Comments

If there is any noticeable difference in the above parameters between two directions (north/south or east/west) on a roadway segment, the data will be recorded for the other direction in the comments field along with the direction. All special conditions and assumptions made during the data collection on the segment will be reported in the comments field.

| RATING | PAVEMENT CONDITION |
|-----------------|---|
| | Only new or nearly new pavements are likely to be smooth enough and |
| 5.0 (Very Good) | free of cracks and patches to qualify for this category. |
| | Pavement, although not as smooth as described above, gives a first |
| 4.0 (Good) | class ride and exhibits signs of surface deterioration |
| | Riding qualities are noticeably inferior to those above; may be barely |
| 3.0 (Fair) | tolerable for high-speed traffic. Defects may include rutting, map |
| | cracking, and extensive patching. |
| 2.0 (Poor) | Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc. |
| 1.0 (Very Poor) | Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface. |

Source: U.S. Department of Transportation. Highway Performance Monitoring System-Field Manual. Federal Highway Administration. Washington, DC, 1987.

Figure 2: Pavement Condition Description

A2: Pedestrian Level of Service

Similar to the evaluation procedure used for the bicycle mode, this is an evaluation of pedestrians' perceived safety with respect to motor vehicle traffic. It identifies the quality of service for pedestrians that currently exists within the roadway environment. This section of the report documents the methodology that will be employed by *Sprinkle Consulting, Inc.* (now known as Landis Evans + Partners) to evaluate the walking conditions, or "level of service" that currently exists on the roadway segments around Sodus Point. This section documents the additional data requirements, data collection and compilation guidelines (other than the items listed in the bicycle portion) and results of the evaluation.

The Pedestrian Level of Service (Pedestrian LOS) Model Version 2.0 was used for the evaluation of walking conditions. This model is the most accurate method of evaluating the walking conditions within shared roadway environments. It uses the same measurable traffic and roadway factors that transportation planners and engineer's use for other travel modes. With statistical precision, the *Model* clearly reflects the effect on walking suitability or "compatibility" due to factors such as roadway width, presence of sidewalks and intervening buffers, barriers within those buffers, traffic volume, motor vehicles speed, and on-street parking. The form of the *Pedestrian Level of Service Model*, and the definition of its terms are as follows:

Ped LOS = $-1.2276 \ln (W_{ol} + W_l + f_p x \% OSP + f_b x W_b + f_{sw} x W_s)$

+ 0.0091 (Vol₁₅/L) + 0.0004 SPD² + 6.0468

Where:

W_{ol} = Width of outside lane (feet)

W₁ = Width of shoulder or bike lane (feet)

f_p = On-street parking effect coefficient (=0.20)

%OSP = Percent of segment with on-street parking

f_b = Buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)

W_b = Buffer width (distance between edge of pavement and

sidewalk, feet)

 f_{sw} = Sidewalk presence coefficient = 6 - 0.3W_s(3)

W_s = Width of sidewalk (feet)

 Vol_{15} = average traffic during a fifteen (15) minute period

L = total number of (through) lanes (for road or street)

SPD = Average running speed of motor vehicle traffic (mi/hr)

The Pedestrian LOS score resulting from the final equation is pre-stratified into service categories "A, B, C, D, E, and F", according to the ranges shown in Figure 3 and reflect users' perception of the road segments level of service for pedestrian travel. This stratification is in accordance with the linear scale established during the research (i.e., the research project participants' aggregate response to roadway and traffic stimuli).

| LEVEL-OF-SERVICE | Pedestrian LOS Score |
|------------------|----------------------|
| A | \leq 1.5 |
| B | > 1.5 and \leq 2.5 |
| C | > 2.5 and \leq 3.5 |
| D | > 3.5 and \leq 4.5 |
| E | > 4.5 and \leq 5.5 |
| F | > 5.5 |

Figure 3: Pedestrian Level-of-Service Categories

The Pedestrian LOS Model is used by planners and engineers throughout the US in a variety of planning and design applications. The Pedestrian LOS Model can be used to conduct a benefits comparison among proposed sidewalk/roadway cross-sections, identify roadways that are candidates for reconfiguration for sidewalk improvements, and to prioritize and program roadways for sidewalk improvements.

Additional Data Collection and Inventory Guidelines

Following is the additional list of data used in the computation of the Pedestrian Level of Service scores. Also described are the associated guidelines for their collection and compilation into the database.

Width of Buffer (Wb)

 W_s is the width of a grass buffer. The width of the buffer is measured from the edge of pavement (including the width of the curb if present) to the beginning edge of the sidewalk. If a sidewalk has trees planted in it, then the horizontal width of the sidewalk occupied by the trees is collected.

Width of Sidewalk (Ws)

 W_s is the width of the sidewalk, measured from either the edge of pavement (including the curb) if a grass buffer is not present. If a grass buffer is present, the width is measured from the edge of the buffer to the backside of the sidewalk.

Sidewalk Percentage

Sidewalk Percentage is the percentage of sidewalk coverage (estimated in increments of 25%) of the segment that is to be collected directionally.

Tree Spacing in Buffer

Tree spacing is the spacing of trees within a buffer, measured from the center (width of spacing between trees). Trees can either be in a grass buffer or in a sidewalk.

Cross-section

Cross-section indicates whether there is a curb and gutter ("C") or an open shoulder ("S"). Any ditches or swales adjacent to the edge of pavement of the segment are indicated in the comments field.

Roadside Profile Condition

Roadside profile condition is collected to assist in determining the lateral area available for bicycle lane or paved shoulder and sidewalk construction. It is the area between the outside edge of the pavement and the right-of-way line. The profile condition will assist in determining the type of facility, hence its cost [i.e., bicycle lane or paved shoulder or bike path]. Roadside profiles were classified as one of the three types illustrated below. Condition 1, buildable shoulder is defined as an area adjoining the edge of pavement with a minimum width of seven feet and a maximum cross-slope of 6%. Condition 2 is a swale. Condition 3 is a ditch or canal. These conditions are illustrated in Figure 4



Figure 4: Roadside Profile Conditions

Appendix B

Bicycle and Pedestrian Level of Service Analysis

OBRORO

Sodus Point Active Transportation Plan Appendix B: Draft Bicycle and Pedestrian Level of Service Analysis

| Seg_ID | Road Name | From | То | Len-D | Dir. of L | anes (L) | | Tks. | Post. Spd. | Width o Paveme | f P nt W | Fotal Pvmt Vidth | Occ. Park. | Pavec | on L | Bike _ane C | cross | Buff. Width | Tree Spcg. in | % with | Swalk Width | Road Profile | Grates | Bic | ycle OS | Pede | estrian .OS | Comments | Photo # |
|--------------|-------------------|-------------------|--------------------|---------|--------------|----------|-------|------|--------------------|-------------------|-------------------|------------------------|---------------|-----------------|-------------------|----------------|--------|----------------|---------------------|----------|----------------|-----------------|--------|-------|------------|-------|----------------|--|----------------------|
| | | | | (Ls) Si | iur. Ti | h Con | ADT | (HV) | (SP _p) | Wt V | N ₁ (Т | (ft) | (OSPA) | PC _t | PC ₁ N | Mark S | Sec. | (BW) | Buffer | Sidewalk | (Ws) | Cond | | Score | Grade | Value | Grade | | |
| 1.00 | Bay St | Fitzhugh | Greig | (mi) | E 2 | # 2 U | 1,310 | 4 | 30 30 | 14.5 4 | l.0 3 | 30.0 | 0 | 4.0 | 4.0 | N (| S | 22.0 | 25 | 100 | 5.0 | (1,2,3) | N | 0.07 | (AF) A | 0.49 | (AF) A | 12-20 ft parking EB at park | 5032-5035,5065 |
| 1.00 | Bay St | Fitzhugh | Greig | 0.37 V | W 2 | 2 U | 1,310 | 4 | 30 | 16.5 6 | 5.0 3 | 30.0 | 0 | 4.0 | 4.0 | N | S | 22.0 | 25 | 100 | 5.0 | 1 | N | 0.00 | A | 0.48 | A | | |
| 2.00 | Bay St Ext | Greig | Wickham | 0.09 | N 2 | 2 U | 500 | 2 | 30 | 11.0 0 | 0.0 2 | 22.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.76 | А | 2.74 | С | angle parking at ballfiedl, very rough | 5010-5011, 5055 |
| 2.00 | Bay St Ext | Greig | Wickham | 0.09 | S 2 | 2 U | 500 | 2 | 30 | 11.0 0 | 0.0 2 | 22.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 0.76 | А | 2.74 | С | | |
| 3.00 | Bayview | SR 14 | Central | 0.55 E | E 2 | 2 U | 129 | 5 | 30 | 9.5 0 | 0.0 1 | 19.0 | 0 | 5.0 | 5.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.42 | А | 2.83 | С | pc 3.5 at north end | 4962-65 |
| 3.00 | Bayview | SR 14 | Central | 0.55 V | W 2 | 2 U | 129 | 5 | 30 | 9.5 0 | 0.0 1 | 19.0 | 0 | 5.0 | 5.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 0.42 | A | 2.83 | С | | |
| 4.00 | Central | SBH | S Shore | 0.25 E | E 2 | 2 U | 500 | 2 | 30 | 9.5 0 | 0.0 1 | 19.0 | 0 | 3.5 | 3.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 3 | Ν | 1.45 | A | 2.93 | С | | 4968 |
| 4.00 | Central | SBH | S Shore | 0.25 V | W 2 | 2 U | 500 | 2 | 30 | 9.5 0 | 0.0 1 | 19.0 | 0 | 3.5 | 3.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 3 | Ν | 1.45 | A | 2.93 | С | | |
| 5.00 | Fitzhugh | SR 14 | Bay St | 0.13 | N 2 | 2 U | 500 | 2 | 30 | 14.5 4 | l.0 3 | 30.0 | 0 | 4.5 | 4.5 | N | S | 5.0 | 100 | 100 | 4.0 | 1 | N | 0.00 | A | 1.86 | В | | 5046-5049 |
| 5.00 | Fitzhugh | SR 14 | Bay St | 0.13 | S 2 | 2 U | 500 | 2 | 30 | 15.5 5 | 5.0 3 | 30.0 | 0 | 4.5 | 4.5 | N | S | 6.0 | 0 | 100 | 5.0 | 1 | N | 0.00 | A | 1.82 | В | | |
| 5.10 | Fitzhugh | Вау | Lake St | 0.24 | N 2 | 2 U | 500 | 2 | 30 | 9.7 0 | 0.0 1 | 19.5 | 0 | 4.0 | 4.0 | N | S | 11.5 | 20 | 30 | 4.0 | 1 | N | 1.23 | A | 2.85 | С | 100 % SW SB, 30% 4 ft NB (Broken) | 5038-5044 |
| 5.10 | Fitzhugh | Вау | Lake St | 0.24 | S 2 | 2 U | 500 | 2 | 30 | 9.7 0 | 0.0 1 | 19.5 | 0 | 4.0 | 4.0 | N | S | 11.5 | 20 | 100 | 5.0 | 1 | N | 1.23 | A | 0.88 | A | 100 % SW SB, 30% 4 ft NB (Broken) | |
| 6.00 | Geneva | Morley | Margaretta | 0.60 | N 2 | 2 U | 1,000 | 4 | 55 | 13.5 3 | 3.0 2 | 27.0 | 0 | 4.5 | 4.5 | N | S | 0.0 | 0 | 0 | 0.0 | 3 | N | 0.05 | A | 4.12 | D | Shoulder drift 4/2 S/N at north end | 4979-4980 |
| 6.00 | Geneva | Morley | Margaretta | 0.60 | S 2 | 2 U | 1,000 | 4 | 55 | 13.5 3 | 3.0 2 | 27.0 | 0 | 4.5 | 4.5 | N | S | 0.0 | 0 | 0 | 0.0 | 3 | N | 0.05 | A | 4.12 | D | | |
| 7.00 | Greig | Bay St | Irwin St | 0.20 | E 2 | 2 U | 1,310 | 4 | 30 | 20.0 8 | 3.0 4 | 40.0 | 85 | 4.0 | 4.0 | N | С | 0.0 | 0 | 100 | 5.0 | 2 | N | 0.77 | A | 1.52 | В | WL is parking bay/SW rough, some sign obstruction | 5050-5052,5063-50644 |
| 7.00 | Greig | Bay St | Irwin St | 0.20 V | W 2 | 2 U | 1,310 | 4 | 30 | 20.0 8 | 3.0 4 | 40.0 | 85 | 4.0 | 4.0 | N | С | 0.0 | 0 | 100 | 5.0 | 2 | N | 0.77 | A | 1.52 | B | | |
| 7.10 | Greig | Irwin St | Wolcott St | 0.07 | E 2 | 2 0 | 1,310 | 4 | 30 | 17.5 6 | 5.0 3 | 34.0 | 0 | 4.0 | 4.0 | N | s | 0.0 | 0 | 0 | 0.0 | 1 | N | 0.00 | A | 3.03 | C | Sidewalk is flush with roadway | 5050-5052,5063-50644 |
| 7.10 | Greig | Irwin St | Wolcott St | 0.07 | W 2 | 2 0 | 1,310 | 4 | 30 | 16.5 6 | 5.0 3 | 34.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 100 | 4.0 | 1 | N | 0.00 | A | 2.15 | В | | |
| 7.20 | Greig | Wolcott St | Maiden Ln | 0.23 | E 2 | 2 0 | 1,310 | 4 | 30 | 13.5 3 | 5.5 2 | 27.0 | 0 | 4.0 | 4.0 | N | 5 | 0.0 | 0 | 35 | 4.0 | 2 | N | 0.49 | A | 2.97 | C | Sidewaik is flush with roadway | 5050-5052,5063-50644 |
| 7.20 | Greig | Wolcott St | Maiden Ln | 0.23 | | 2 0 | 1,310 | 4 | 30 | 13.5 3 | 5.5 2 | 27.0 | 0 | 4.0 | 4.0 | N | 5 | 0.0 | 0 | 10 | 4.0 | 2 | N | 0.49 | A | 3.24 | | Cidaualli is fluck with see dury. | |
| 7.30 | Greig | Maiden Ln | Maiden Lane (loop) | 0.15 | | 2 0 | 1,310 | 4 | 20 | 19.5 2 | | 19.5 | 0 | 4.0 | 4.0 | N | 3 6 | 0.0 | 0 | 100 | 4.0 | 2 | IN N | 0.99 | A | 2.05 | D D | | 5050-5052,5065-50644 |
| 7.30 | Greig | Maiden Ln | Maiden Lane (loop) | 0.15 | F 2 | 2 11 | 1,310 | 4 | 55 | 13.5 3 | | 27.0 | 0 | 4.0 | 4.0 | N | 5 | 0.0 | 0 | 0 | 4.0 | 2 | N | 0.59 | Δ | 2.05 | D | | 4947-4949 |
| 8.00 | Lake Rd | Geneva | (city limits) | 0.33 | w 2 | 2 11 | 1,225 | 4 | 55 | 13.5 3 | | 27.0 | 0 | 4.5 | 4.5 | N | s | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.59 | A | 4.19 | D | | -3-17-4343 |
| 8.00 | | City limit | (city innits) | 0.00 | E 2 | 2 U | 1.225 | 4 | 30 | 10.5 0 | 0.0 2 | 21.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.73 | В | 3.00 | C | | |
| 8.10 8.10 | | City limit | Fitzhugh | 0.90 | w 2 | 2 U | 1,225 | 4 | 30 | 10.5 0 | 0.0 2 | 21.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.73 | В | 3.00 | C | | |
| 0.10 | | (ond) | | 0.34 | E 2 | 2 U | 500 | 2 | 30 | 9.5 0 | 0.0 | 9.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.34 | A | 2.93 | С | | 5027-5031 |
| 9.00 | Lake St | (end) | Ontario | 0.34 V | w 2 | 2 U | 500 | 2 | 30 | 9.5 0 |).0 | 9.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.34 | A | 2.93 | С | | |
| 10.00 | Margaretta | Geneva | SR 14 | 1.04 | E 2 | 2 U | 500 | 2 | 30 | 11.0 0 |).5 2 | 22.0 | 0 | 4.5 | 4.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.88 | A | 2.80 | С | shoulders variable, some wider, pavecon goes to 3.5 west of storage center | |
| 10.00 | Margaretta | Geneva | SR 14 | 1.04 V | W 2 | 2 U | 500 | 2 | 30 | 11.0 0 |).5 2 | 22.0 | 0 | 4.5 | 4.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.88 | A | 2.80 | С | | |
| 11.00 | Morley Rd | Geneva | (end) | 0.11 | E 2 | 2 U | 500 | 2 | 30 | 10.0 C | 0.0 2 | 20.0 | 0 | 3.5 | 3.5 | N | s | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.98 | В | 2.86 | С | | 4976-4977 |
| 11.00 | Morley Rd | Geneva | (end) | 0.11 V | W 2 | 2 U | 500 | 2 | 30 | 10.0 0 | 0.0 2 | 20.0 | 0 | 3.5 | 3.5 | N | s | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.98 | В | 2.86 | С | | |
| 11.10 | Morley Rd | Sergeant | SR 14 | 0.29 E | E 2 | 2 U | 500 | 2 | 30 | 9.0 0 | 0.0 1 | 18.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 2.32 | В | 2.99 | С | | 4958 |
| 11.10 | Morley Rd | Sergeant | SR 14 | 0.29 V | W 2 | 2 U | 500 | 2 | 30 | 9.0 0 | 0.0 1 | 18.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 2.32 | В | 2.99 | С | | |
| 12.00 | Ontario | SR 14 | Wickham | 0.09 | N 2 | 2 U | 500 | 2 | 30 | 10.0 0 | 0.0 2 | 20.0 | 0 | 4.5 | 4.5 | Ν | S | 10.0 | 25 | 100 | 5.0 | 2 | Ν | 1.73 | В | 1.11 | А | | |
| 12.00 | Ontario | SR 14 | Wickham | 0.09 | S 2 | 2 U | 500 | 2 | 30 | 10.0 0 | 0.0 2 | 20.0 | 0 | 4.5 | 4.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 1.73 | В | 2.86 | С | | |
| 12.10 | Ontario | Wickham | Lake St | 0.14 | N 2 | 2 U | 500 | 2 | 30 | 10.0 0 | 0.0 2 | 20.0 | 0 | 4.5 | 4.5 | Ν | S | 10.0 | 0 | 100 | 5.0 | 2 | Ν | 0.99 | А | 1.86 | В | | 5019-5022 |
| 12.10 | Ontario | Wickham | Lake St | 0.14 | S 2 | 2 U | 500 | 2 | 30 | 10.0 0 | 0.0 2 | 20.0 | 0 | 4.5 | 4.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 0.99 | A | 2.86 | С | | |
| 13.00 | S Ontario | Bay St | (bay) | 0.11 | N 2 | 2 U | 500 | 2 | 30 | 9.0 0 | 0.0 1 | 18.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | Ν | 1.61 | В | 2.99 | С | | |
| 13.00 | S Ontario | Bay St | (bay) | 0.11 | S 2 | 2 U | 500 | 2 | 30 | 9.0 0 | 0.0 1 | 18.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.61 | В | 2.99 | С | | |
| 14.00 | S Shore | SR 14 | Central | 0.34 | E 2 | 2 U | 500 | 2 | 15 | 9.0 0 | 0.0 1 | 18.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.68 | A | 2.72 | С | | 4973-4975 |
| 14.00 | S Shore | SR 14 | Central | 0.34 V | W 2 | 2 U | 500 | 2 | 15 | 9.0 0 | 0.0 1 | 18.0 | 0 | 4.0 | 4.0 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.68 | A | 2.72 | C | | |
| 14.10 | S Shore | Central | (end) | 0.33 | E 2 | 2 U | 500 | 2 | 30 | 8.5 0 | 0.0 1 | 17.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.77 | В | 3.06 | C | 18 feet t northe end | 4970-4972 |
| 14.10 | S Shore | Central | (end) | 0.33 V | VV 2 | 2 U | 500 | 2 | 30 | 8.5 0 | 0.0 1 | 17.0 | 0 | 3.5 | 3.5 | N | s | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.77 | В | 3.06 | C | | |
| 15.00 | Sodus Bay Heights | SR 14 | Central | 0.12 | E 2 | 2 0 | 500 | 2 | 30 | 9.0 0 | | 18.0 | 0 | 3.5 | 3.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.64 | В | 2.99 | C | | 4967 |
| 15.00 | Sodus Bay Heights | SR 14 | Central | 0.12 V | vv 2 | 2 0 | 500 | 2 | 30 | 9.0 0 | | 18.0 | 0 | 3.5 | 3.5 | N | 5 | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.64 | В | 2.99 | C | | 4000.04 |
| 16.00 | SR 14 | Bayview | Sodus Bay Heights | 0.15 | N 2 | 2 U | 1,310 | 4 | 30 | 13.5 3 | | 27.0 | U | 4.5 | 4.0 | N | 3 c | 0.0 | U | 0 | 0.0 | 2 | N | 0.40 | A | 3.35 | | | 4960-61 |
| 16.00 | SR 14 | Bayview | Sodus Bay Heights | 0.15 | S 2 | 2 1 | 1,310 | 4 | 30 | 13.5 3 | | 27.0 | 0 | 4.5 | 4.0 | N | 3 | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.40 | A | 3.35 | C | | 4052 |
| 16.10 | SR 14 | Sodus Bay Heights | S Shore | 0.29 | N 2 | 2 1 | 1,310 | 4 | 30 | 13.5 3 | | 27.0 | 0 | 4.5 | 4.5 | N | 5 | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.42 | A | 3.35 | 0 | | 4903 |
| 16.10 | SR 14 | Sodus Bay Heights | S Shore | 0.29 | 3 2 N 2 | 2 1 | 1,310 | 4 | 30 | 13.0 3 | 25 | 26.0 | 0 | 4.5 | 4.0 | N | 0 | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.42 | A | 3.35 | 0 | | 4051 4050 |
| 16.20 | SR 14 | S Shore | Margaretta | 0.25 | 11 2 | 2 U | 1,310 | 4 | 30 | 13.0 2 | | 20.0 | U | 4.0 | 4.0 | IN | 3 | 0.0 | U | U | 0.0 | 2 | IN | 0.72 | А | 3.41 | U U | | 4951-4952 |



Sodus Point Active Transportation Plan Appendix B: Draft Bicycle and Pedestrian Level of Service Analysis

| | | _ | _ | Len- | Dir. | | | _ | Post. | Widt | th of | Total Pvmt | Occ. | | | Bike | | Buff. | Tree Spcg. | | Swalk | Road | | Bio | ycle | Peo | lestrian | | |
|--------|-----------|------------|------------|-------------|------------|---------------------|-------|------|----------------------------|---------|----------------|---------------|-----------------|-------------|-----------------|--------------|-------|-------|---------------|--------------------|-------|---------|--------|-------|-------|-------|----------|------------------------------------|----------------------|
| Seg_ID | Road Name | From | 10 | gth (Ls) | of Sur. | Lanes (L) Th Con | ADT | (HV) | Spd. (SP _p) | Wt (ft) | W ₁ | (TPW) | Park. (OSPA) | Pave PCt | PC ₁ | Lane Mark | Sec. | (BW) | IN Buffer | % with Sidewalk | (Ws) | Cond | Grates | Score | Grade | Value | Grade | Comments | Photo # |
| | | | | (111) | | # | | (%) | mpn | (11) | (11) | (11) | (70) | (15) | (15) | (1/N) | (0/3) | (11) | (II/CII) | | (11) | (1,2,3) | | (07) | (AF) | (07) | (AF) | | |
| 16.20 | SR 14 | S Shore | Margaretta | 0.25 | S | 2 U | 1,310 | 4 | 30 | 13.0 | 2.5 | 26.0 | 0 | 4.5 | 4.5 | N | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.72 | A | 3.41 | С | | |
| 16.30 | SR 14 | Margaretta | Fitzhugh | 0.46 | Ν | 2 U | 1,310 | 4 | 30 | 14.5 | 4.0 | 29.0 | 0 | 4.5 | 4.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.00 | А | 3.27 | С | | 4950 |
| 16.30 | SR 14 | Margaretta | Fitzhugh | 0.46 | S | 2 U | 1,310 | 4 | 30 | 14.5 | 4.0 | 29.0 | 0 | 4.5 | 4.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 0.00 | A | 3.27 | С | | |
| 17.00 | Wickham | Ontario | Bay St Ext | 0.23 | E | 2 U | 500 | 2 | 30 | 9.5 | 0.0 | 19.0 | 0 | 3.5 | 3.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.45 | А | 2.93 | С | | 4984, 5017 |
| 17.00 | Wickham | Ontario | Bay St Ext | 0.23 | w | 2 U | 500 | 2 | 30 | 9.5 | 0.0 | 19.0 | 0 | 3.5 | 3.5 | Ν | S | 0.0 | 0 | 0 | 0.0 | 2 | N | 1.45 | A | 2.93 | С | | |
| 17.10 | Wickham | Bay Ext | (Park) | 0.35 | E | 2 U | 500 | 2 | 30 | 11.0 | 1.5 | 23.5 | 0 | 4.0 | 4.0 | Ν | S | 5.0 | 0 | 45 | 5.0 | 2 | N | 1.30 | A | 2.82 | С | SW siwtches sides, is gravel,geese | 4985-4981, 5056-5057 |
| 17.10 | Wlckham | Bay Ext | (Park) | 0.35 | W | 2 U | 500 | 2 | 30 | 12.5 | 1.5 | 23.5 | 0 | 4.0 | 4.0 | Ν | S | 0.0 | 0 | 55 | 5.0 | 2 | N | 0.76 | А | 2.66 | С | SW siwtches sides, is gravel,geese | |



Appendix C

Community Assessment Results

Village of Sodus Point Active Transportation Plan



| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Full-time resident of the Village | 41.72% | 63 |
| Seasonal resident of the Village | 44.37% | 67 |
| Resident of the Town of Sodus (outside of the Village limits) | 4.64% | 7 |
| None of the above | 0.00% | 0 |
| Other (please specify) | 9.27% | 14 |
| TOTAL | | 151 |

Q2 Where do you live in relation to the Village Hall? (use image above for reference)



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| North | 24.31% | 35 |
| South | 18.75% | 27 |
| East | 43.75% | 63 |
| West | 13.19% | 19 |
| TOTAL | 1 | 44 |



Q3 How many years have you lived in Sodus Point?

| ANSWER CHOICES | RESPONSES |
|----------------------------|-----------|
| 1 year | 4.17% 6 |
| 2-5 years | 10.42% 15 |
| 6-10 years | 14.58% 21 |
| 11+ years | 57.64% 83 |
| Do not live in Sodus Point | 13.19% 19 |
| TOTAL | 144 |



| ANSWER CHOICES | AVERAGE NUMBER | TOTAL NUMBER | RESPONSES |
|---------------------------|----------------|--------------|-----------|
| Number of seniors (62 +) | 2 | 212 | 126 |
| Number of adults (18-62) | 2 | 180 | 106 |
| Number of children (0-18) | 1 | 61 | 84 |
| Number of automobiles | 2 | 305 | 136 |
| Number of bicycles | 2 | 279 | 128 |
| Total Respondents: 144 | | | |

Q4 Please tell us about your household:

Q5 Do you work in the Village of Sodus Point?



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 12.14% | 17 |
| No | 87.86% | 123 |
| TOTAL | | 140 |

Q6 How often do you use roadways in the Village of Sodus Point to commute to work? (Please specify which routes you use for your commute).

Answered: 123 Skipped: 28

| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| Daily | 38.21% | 47 |
| Weekly | 14.63% | 18 |
| Monthly | 8.13% | 10 |
| Seasonally | 17.89% | 22 |
| Never | 44.72% | 55 |

Q7 What mode of transportation do you use for your commute patterns described in Question 6?

Answered: 111 Skipped: 40

| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| Daily | 52.25% | 58 |
| Weekly | 10.81% | 12 |
| Monthly | 7.21% | 8 |
| Seasonally | 16.22% | 18 |
| Never | 27.03% | 30 |

Q8 What modes of transportation do you prefer besides motor vehicle?



| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Bicycle | 51.11% | 69 |
| Walking | 85.19% | 115 |
| Water Transportation (kayak, canoe, etc.) | 32.59% | 44 |
| None | 6.67% | 9 |
| Total Respondents: 135 | | |

Q9 Do you have particular locations in the Village that you like to bicycle, kayak/canoe, drive, or walk to? Please list below.





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Bicycle 🛛 🖉 Walk

Kayak/Canoe

Only vehicle

| | BICYCLE | WALK | KAYAK/CANOE | ONLY VEHICLE | TOTAL |
|--------------------------------|--------------|--------------|-------------|--------------|-------|
| Sodus Point Beach Park | 23.20% 29 | 60.00% 75 | 2.40% 3 | 14.40% 18 | 125 |
| Downtown Shops and Restaurants | 12.80% 16 | 64.00% 80 | 0.80% 1 | 22.40% 28 | 125 |
| Lighthouse Museum | 18.18% 22 | 65.29% 79 | 0.83% 1 | 15.70% 19 | 121 |
| Krenzer Marine | 15.29% 13 | 68.24% 58 | 1.18% 1 | 15.29% 13 | 85 |
| Sodus Bay Heights Golf Club | 8.43% 7 | 24.10% 20 | 0.00% 0 | 67.47% 56 | 83 |
| Sodus Bay Yacht Club | 19.75% 16 | 55.56% 45 | 6.17% 5 | 18.52% 15 | 81 |
| Arneys Marina | 16.46% 13 | 27.85% 22 | 6.33% 5 | 49.37% 39 | 79 |
| Katlynn Marine | 15.38% 12 | 37.18% 29 | 2.56% 2 | 44.87% 35 | 78 |
| Willow Park | 17.39% 12 | 65.22% 45 | 0.00% 0 | 17.39% 12 | 69 |
| House/Apartment | 7.58% 5 | 56.06% 37 | 0.00% 0 | 36.36% 24 | 66 |
| Harriman Park | 23.33% 14 | 46.67% 28 | 1.67% 1 | 28.33% 17 | 60 |

| Village of Sodus Point Active Transportation Plan | | | | | |
|---|-------|--------|-------|--------|----|
| Church or Religious Institution | 3.70% | 35.19% | 0.00% | 61.11% | |
| | 2 | 19 | 0 | 33 | 54 |

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| ANSWER CHOICES | RESPONSES | |
|---------------------------------|-----------|-----|
| On-road | 39.84% | 49 |
| Off-road/trails | 2.44% | 3 |
| Sidewalks | 8.13% | 10 |
| Shoulder | 21.14% | 26 |
| I do not bicycle in Sodus Point | 26.83% | 33 |
| Other (please specify) | 1.63% | 2 |
| TOTAL | | 123 |

Q11 Which of the following describes your personal bicycle experience level?



| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Beginner or novice | 14.78% | 17 |
| Fair (prefer not to ride on roads with busy traffic) | 57.39% | 66 |
| Intermediate (ride often) | 24.35% | 28 |
| Advanced (would use as a primary means of transportation) | 3.48% | 4 |
| TOTAL | | 115 |

Q12 Please describe your level of bicycling for the following activities.





99

| Travel to Shopping | 2.04% | 10.20% | 4.08% | 15.31% | 0.00% | 68.37% | |
|------------------------------------|--------|--------|--------|--------|-------|--------|-----|
| | 2 | 10 | 4 | 15 | 0 | 67 | 98 |
| Travel to School | 0.00% | 2.15% | 0.00% | 0.00% | 0.00% | 97.85% | |
| | 0 | 2 | 0 | 0 | 0 | 91 | 93 |
| Physical Exercise | 16.96% | 35.71% | 5.36% | 19.64% | 0.89% | 21.43% | |
| | 19 | 40 | 6 | 22 | 1 | 24 | 112 |
| Travel to Event/Social Destination | 3.13% | 13.54% | 7.29% | 14.58% | 2.08% | 59.38% | |
| | 3 | 13 | 7 | 14 | 2 | 57 | 96 |
| Leisure (No Specific Destination) | 14.29% | 29.46% | 11.61% | 23.21% | 0.00% | 21.43% | |
| | 16 | 33 | 13 | 26 | 0 | 24 | 112 |



Q13 To what degree does your bicycling vary by season?

Significantly Somewhat

None

| | SIGNIFICANTLY | SOMEWHAT | NONE | TOTAL |
|--------|---------------|--------------|--------------|-------|
| Winter | 41.35% 43 | 5.77% 6 | 52.88% 55 | 104 |
| Spring | 12.62% 13 | 54.37% 56 | 33.01% 34 | 103 |
| Summer | 33.33% 35 | 28.57% 30 | 38.10% 40 | 105 |
| Fall | 16.67% 17 | 52.94% 54 | 30.39% 31 | 102 |



Q14 What is your current preferred means of walking?

| ANSWER CHOICES | RESPONSES | |
|------------------------------|-----------|-----|
| On-road | 10.08% | 12 |
| Off-road/trails | 7.56% | 9 |
| Sidewalks | 72.27% | 86 |
| Shoulders | 7.56% | 9 |
| I do not walk in Sodus Point | 0.84% | 1 |
| Other (please specify) | 1.68% | 2 |
| TOTAL | | 119 |

Q15 Please describe your level of walking for the following activities.





102

| Travel to Shopping | 8.65% | 22.12% | 4.81% | 19.23% | 0.00% | 45.19% | |
|------------------------------------|--------|--------|-------|--------|-------|--------|-----|
| | 9 | 23 | 5 | 20 | 0 | 47 | 104 |
| Travel to School | 0.00% | 2.00% | 0.00% | 0.00% | 0.00% | 98.00% | |
| | 0 | 2 | 0 | 0 | 0 | 98 | 100 |
| Physical Exercise | 59.82% | 21.43% | 4.46% | 9.82% | 0.00% | 4.46% | |
| | 67 | 24 | 5 | 11 | 0 | 5 | 112 |
| Travel to Event/Social Destination | 15.69% | 29.41% | 8.82% | 22.55% | 0.00% | 23.53% | |
| | 16 | 30 | 9 | 23 | 0 | 24 | 102 |
| Leisure (No Specific Destination) | 40.00% | 33.64% | 3.64% | 15.45% | 0.00% | 7.27% | |
| | 44 | 37 | 4 | 17 | 0 | 8 | 110 |



Q16 To what degree does your walking vary by season?

| | Significantly | Somewhat | None | | | |
|--------|---------------|--------------|----------|--------------|--------------|-------|
| | SIGNIFICANTLY | | SOMEWHAT | | NONE | TOTAL |
| Winter | | 45.05% 50 | | 32.43% 36 | 22.52% 25 | 111 |
| Spring | | 23.15% 25 | | 45.37% 49 | 31.48% 34 | 108 |
| Summer | | 35.78% 39 | | 21.10% 23 | 43.12% 47 | 109 |
| Fall | | 22.02% | | 42.20% | 35.78% | |

24

46

39

109

Q17 If public bus service was available, how often would you use it?



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Daily | 2.50% | 3 |
| Weekly | 5.00% | 6 |
| Monthly | 5.00% | 6 |
| Seasonally | 16.67% | 20 |
| Yearly | 2.50% | 3 |
| Never | 68.33% | 82 |
| TOTAL | | 120 |

Q18 If public bus service was available, under what circumstances would you use it?

Answered: 79 Skipped: 72

Q19 What do you consider to be the primary barriers in Sodus Point that keep you from bicycling more often? On a scale of 1 to 5, with 1 meaning "no barrier" and 5 meaning "significant barrier," rate the following issues that could affect your ability and/or willingness to bicycle.





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1 (no barrier) 2 3 4 5 (significant barrier)

| | 1 (NO BARRIER) | 2 | 3 | 4 | 5 (SIGNIFICANT BARRIER) | TOTAL |
|---|-------------------|--------------|--------------|--------------|----------------------------|-------|
| Winter weather conditions | 8.74% 9 | 2.91% 3 | 4.85% 5 | 4.85% 5 | 78.64% 81 | 103 |
| Lack of consistent, adequate shoulder space | 10.48% 11 | 5.71% 6 | 10.48% 11 | 19.05% 20 | 54.29% 57 | 105 |
| Lack of dedicated bike lanes | 12.50% 13 | 9.62% 10 | 10.58% 11 | 16.35% 17 | 50.96% 53 | 104 |
| Safety (with respect to motor vehicle traffic) | 9.43% 10 | 5.66% 6 | 23.58% 25 | 17.92% 19 | 43.40% 46 | 106 |
| Personal security | 45.19% 47 | 13.46% 14 | 13.46% 14 | 7.69% 8 | 20.19% 21 | 104 |
| Travel flexibility | 57.00% 57 | 10.00% 10 | 8.00% 8 | 6.00% 6 | 19.00% 19 | 100 |
| Travel time | 66.67% 66 | 5.05% 5 | 9.09% 9 | 4.04% 4 | 15.15% 15 | 99 |
| Possession of/access to a bicycle | 77.67% 80 | 2.91% 3 | 4.85% 5 | 1.94% 2 | 12.62% 13 | 103 |
| Availability of secure, weather-protected bicycle parking | 45.10% 46 | 18.63% 19 | 14.71% 15 | 9.80% 10 | 11.76% 12 | 102 |

Q20 What do you consider to be the primary barriers in Sodus Point that keep you from walking more often? On a scale of 1 to 5, with 1 meaning no barrier and 5 meaning significant barrier, rate the following issues that could affect your ability and/or willingness to walk.



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1 (no barrier) 2 3 4 5 (significant barrier)

| | 1 (NO BARRIER) | 2 | 3 | 4 | 5 (SIGNIFICANT BARRIER) | TOTAL |
|--|-------------------|--------------|--------------|--------------|----------------------------|-------|
| Travel flexibility | 68.93% 71 | 8.74% 9 | 10.68% 11 | 3.88% 4 | 7.77% 8 | 103 |
| Travel time | 66.67% 68 | 10.78% 11 | 12.75% 13 | 2.94% 3 | 6.86% 7 | 102 |
| Personal security | 58.25% 60 | 11.65% 12 | 12.62% 13 | 7.77% 8 | 9.71% 10 | 103 |
| Safety (with respect to motor vehicle traffic) | 26.42% 28 | 16.04% 17 | 16.04% 17 | 12.26% 13 | 29.25% 31 | 106 |
| Lack of trail connections | 19.61% 20 | 4.90% 5 | 15.69% 16 | 24.51% 25 | 35.29% 36 | 102 |
| Lack of consistent, adequate shoulder space | 17.59% 19 | 4.63% 5 | 13.89% 15 | 24.07% 26 | 39.81% 43 | 108 |
| Sidewalk conditions (cracked pavement, snow, etc.) | 14.55% 16 | 9.09% 10 | 13.64% 15 | 21.82% 24 | 40.91% 45 | 110 |
| Winter weather conditions | 13.33% 14 | 10.48% 11 | 17.14% 18 | 13.33% 14 | 45.71% 48 | 105 |
| Sidewalk connectivity | 11.71% 13 | 9.01% 10 | 18.92% 21 | 19.82% 22 | 40.54% 45 | 111 |

Q21 Please list locations in the Village where you feel there is a need to improve bicycling or walking conditions under the following categories.

Answered: 90 Skipped: 61

| ANSWER CHOICES | RESPONSES | |
|--|-----------|----|
| Road crossing (no crosswalk or mid-block crossings) | 61.11% | 55 |
| Intersection | 41.11% | 37 |
| Roadway segments (part of a road from one intersection to another) | 52.22% | 47 |
| Maintenance | 46.67% | 42 |
| Hazard | 51.11% | 46 |

Q22 Please list up to five key destinations (restaurants, parks, shopping areas, other) within the Village of Sodus Point that would benefit from bicycle and/or pedestrian access.

Answered: 86 Skipped: 65

| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| Destination 1 | 100.00% | 86 |
| Destination 2 | 82.56% | 71 |
| Destination 3 | 63.95% | 55 |
| Destination 4 | 44.19% | 38 |
| Destination 5 | 24.42% | 21 |

Q23 Of the following facilities or amenities, which would most likely increase your current level of bicycling and/or walking. Select and rank your top 5, with 1 representing the most desired.



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Village of Sodus Point Active Transportation Plan



1 (most desired) 2 3 4 5 (less desired)

| | 1 (MOST DESIRED) | 2 | 3 | 4 | 5 (LESS DESIRED) | TOTAL |
|--|---------------------|--------------|--------------|--------------|---------------------|-------|
| Availability of a bicycle share program | 9.21% 7 | 3.95% 3 | 22.37% 17 | 7.89% 6 | 56.58% 43 | 76 |
| Availability of secure, weather-protected bicycle parking | 6.58% 5 | 15.79% 12 | 11.84% 9 | 14.47% 11 | 51.32% 39 | 76 |
| Pedestrian signals at crosswalks and intersections | 26.25% 21 | 10.00% 8 | 17.50% 14 | 15.00% 12 | 31.25% 25 | 80 |
| Signed bicycle routes | 28.57% 22 | 15.58% 12 | 15.58% 12 | 11.69% 9 | 28.57% 22 | 77 |
| Shared-use roadways | 28.75% 23 | 21.25% 17 | 13.75% 11 | 8.75% 7 | 27.50% 22 | 80 |
| On-street buffered bicycle lanes | 26.83% 22 | 24.39% 20 | 19.51% 16 | 6.10% 5 | 23.17% 19 | 82 |
| Bicycle boulevards (low volume, low speed, marked roadways that optimize bicycle travel) | 30.86% 25 | 12.35% 10 | 28.40% 23 | 7.41% 6 | 20.99% 17 | 81 |
| Shared-use trails | 34.88% 30 | 18.60% 16 | 17.44% 15 | 10.47% 9 | 18.60% 16 | 86 |
| Designated (signed and marked) on-street bicycle lanes | 45.88% 39 | 16.47% 14 | 16.47% 14 | 3.53% 3 | 17.65% 15 | 85 |
| Shared-use paths adjacent to roadway | 38.46% 35 | 18.68% 17 | 19.78% 18 | 7.69% 7 | 15.38% 14 | 91 |
| Sidewalks | 67.35% 66 | 13.27% 13 | 5.10% 5 | 5.10% 5 | 9.18% 9 | 98 |
| Improved sidewalk maintenance | 63.04% 58 | 16.30% 15 | 9.78% 9 | 3.26% 3 | 7.61% 7 | 92 |

Q24 Of the following facilities or amenities, which would most likely increase your public transit use? Select and rank your top 5, with 1 representing the most desired.





| Availability of weather-protected transit stops (protection from rain and wind) | 11.54% 9 | 7.69% 6 | 20.51% 16 | 7.69% 6 | 52.56% 41 | 78 |
|---|--------------|--------------|--------------|--------------|--------------|----|
| Availability of fully enclosed transit stops (heating in the winter, cooling in the summer) | 2.86% 2 | 4.29% 3 | 11.43% 8 | 7.14% 5 | 74.29% 52 | 70 |
| Improved walkability around transit stops (between stop and destination) | 20.51% 16 | 14.10% 11 | 15.38% 12 | 8.97% 7 | 41.03% 32 | 78 |
| Improved sidewalk maintenance | 63.10% 53 | 10.71% 9 | 8.33% 7 | 5.95% 5 | 11.90% 10 | 84 |
| Improved ADA accessibility | 18.57% 13 | 22.86% 16 | 11.43% 8 | 12.86% 9 | 34.29% 24 | 70 |
| Improved signage and way-finding | 24.66% 18 | 13.70% 10 | 17.81% 13 | 10.96% 8 | 32.88% 24 | 73 |
| Availability of bicycle parking at stops | 14.67% 11 | 17.33% 13 | 17.33% 13 | 13.33% 10 | 37.33% 28 | 75 |

Q25 Please look through the following images displaying roadway schemes. Then, identify which one reflects improvements you would like to see in Sodus Point.



| ANSWER CHOICES | RESPONSES | |
|-------------------------------------|-----------|----|
| Sidewalks and bicycle lane | 26.60% | 25 |
| Sidewalks and bicycle boulevard | 9.57% | 9 |
| Shared use lanes and sidewalks | 14.89% | 14 |
| Bicycle lanes, buffers, & sidewalks | 19.15% | 18 |
| Separated bicycle lane | 30.85% | 29 |
| On-street shared use | 47.87% | 45 |
| Total Respondents: 94 | | |

Q26 Please provide any other comments regarding bicycling and walking in Sodus Point.

Answered: 58 Skipped: 93

Q27 Please provide your email address if you would like to be notified of upcoming plan meetings and other activities.

Answered: 53 Skipped: 98

Appendix D

Issues Identification

Steering Committee Kick Off Meeting Issue and Opportunity Identification



Sodus Point Active Transportation Plan

- Improve Connectivity to Beechwood State Park
- 2 Add a buffer speed limit zone of 45 MPH between 30 and 50 MPH zones
- 3 Increase bicycle and pedestrian facilities along Margaretta Road
- 4 Enhance this trail to create a non-vehicular gateway into the Village
- Significantly improve bicycle and pedestrian facilities in this area and implement traffic calming measures
- 6 Improve safety for fisherman along this corridor and prevent vehicles with boat trailers from parking along this corridor
- Redesign boat launch entrance to avoid back-up of boat trailers along Route 14 and Margaretta Road and implement sidewalks along the boat launch
- 8 Consider roundabout to improve circulation and highlight central locus of the Village
- Create access point to new Genesee Land Trust park
- 10 Create pedestrian connection between S. Fitzhugh St. and S. Ontario St.
- Implement sidewalks
- Prevent vehicles from speeding on Wickham Blvd and create a safe pedestrian environment
- 13 Prevent vehicles from parking on gravel pedestrian path
- 14 Create connection between the two new parks
- 15 Restore pedestrian connections
- 16 Install sidewalks along S. Shore Road and address safety issues along this section
- 17 Consider connections to the proposed passive boat launch in this area
- 18 Increase connectivity between the marinas and downtown
- 19 Create additional non-motorized connections to the Lighthouse Museum
- 20 Define the streetscape and remove gravel shoulder
- 2 Implement streetscaping and reassess sidewalk and parking allocations
- 22 Improve sidewalk quality along this corridor
- 23 Consider connections to new park and boat launch
- 20 Consider rerouting traffic to downtown off of Route 14
- 25 Investigate the possibility of golf cart paths
- 26 Look into solutions for identifying turnarounds on dead-end roads

Appendix E

Community Impacts of Trails



Irondequoit Bay Park West, Irondequoit NY



El Camino Trail, Rochester NY



Erie Canalway Trail, Brighton NY



Corbetts Glen, Brighton NY



COMMUNITY IMPACT OF TRAILS Understanding the impact of public trails

Prepared by Barton & Loguidice, DPC

STUDIES OF EXISTING TRAILS AND SHARED USE PATHS

https://linkingtheloop.files.wordpress.com/2014/08/studies-of-existing-trails-crime-and-properties-value.pdf

Source: Multiple

Subject: Trail Safety and Real Estate Values

Findings: "There are many misconceptions about the safety of bicycle paths/trails and their relationship to property values/the real estate market. Below is a collection of excerpts from various resources that provide information on the often-misunderstood nature of bicycle paths/trails and their effect on the community."

Figure 1: Comparison of Major Crime Rates between Rail Trails and the Nation (rates per 100,000 population, Source: Rails to Trails Conservancy

| CRIME | URBAN | | SUBU | RBAN | RURAL | |
|---------------|----------------------------|--------------------------|----------------------------|--------------------------|----------------------------|--------------------------|
| | 1995 National ¹ | Rail-Trails ² | 1995 National ¹ | Rail-Trails ² | 1995 National ¹ | Rail-Trails ² |
| Mugging | 335 | 0.53 | 102 | 0.00 | 19 | 0.00 |
| Assault | 531 | 0.58 | 293 | 0.02 | 203 | 0.01 |
| Forcible Rape | 43 | 0.04 | 29 | 0.00 | 26 | 0.01 |
| Murder | 11 | 0.04 | 4 | 0.01 | 5 | 9.01 |

1. Rates per 100,000 Population. FBI Uniform Crime Reports for 1995.

2. Rates per 100,000 users, RTC survey results.

THE CORRELATION OF NATURE TRAILS AND CRIME

http://www.parkpride.org/get-involved/community-programs/park-visioning/content/correlationbetweennaturetrails and crime.pdf

Source: Multiple

Subject: Trail Safety and Real Estate Values

Findings:

- "The results showed that in most incidences the trails were perceived to be positive to both quality of life and property value.
- Single family home residents adjacent to a trail: 29% believed that the location of the trail would increase selling price, 7% felt that the trail would make the home easier to sell, 57% of these residents lived in their homes prior to construction of the trail, 29% of those surveyed were positively influenced by the trail in their decision to buy the home
- Town homes, apartments, and condominium residents: 0% thought the trail would decrease selling price, 42% thought it would increase the selling price.

NEIGHBORHOODS AND TRAILS: WHY TRAILS?

http://www.sfct.org/trails/neighborhoods

Source: Santa Fe Conservation Trust

Subject: Crime, Privacy and Noise, Property Values, Ecological Destruction, Habitat Degradation, Land Acquisition and Property Rights

Findings:

- "Burglary near trails was extremely rare, more so than other crimes. Only 4 burglaries were reported in homes adjacent to 7,000 miles of rail trails in 1996 and 3 of those 4 were reported in rural areas. There's no evidence that these 4 crimes were a result of the nearby trail."
- "In Santa Rosa (California), a similar survey found that 64% of the residents near a trail felt their quality of life had improved; 33% said their home would be easier to sell while the remainder felt the trail had no effect on values." [Webel, 2007 using data collected in 1992]
- "A careful count of bird species along urban and rural rail trails showed no significant difference. Generally, there were more birds in woody urban and rural areas in spring and summer and more birds near urban trails in the fall and winter. [Poague, 2000]
- "For example, a release from liability can be useful, but homeowners and agency administrators may be reluctant to sign anything. Municipal "umbrella" policies are helpful and claims virtually unknown." [Eyler, 2008, p. 423]

RAIL-TRAILS AND SAFE COMMUNITIES

http://safety.fhwa.dot.gov/ped_bike/docs/rt_safecomm.pdf

Source: Rails-to-Trails Conservancy

Subject: Economic Impacts of Trails

Findings: "The trail has not caused any increase in the amount of crimes reported and the few reported incidents are minor in nature...We have found that the trail brings in so many people that it has actually led to a decrease in problems we formerly encountered such as underage drinking along the river banks. The increased presence of people on the trail has contributed to this problem being reduced." [Charles R. Tennant, Chief of Police, Elizabeth Township, Buena Vista, PA]

| Figure 2: Comparison of Incidence Kate of Minor Crimes on Rail-Irails to U.S. Crime Kates & Percentages of Irails Reporting Types of Cri | <i>rime in 1995</i> |
|--|---------------------|
|--|---------------------|

| CRIME | URI | BAN | SUBURBAN | | RURAL | |
|---------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|
| | National ¹ | Rail-Trails ² | National ¹ | Rail-Trails ² | National ¹ | Rail-Trails ² |
| Burglary | 1,117 | 0.00% | 820 | 0.01% | 687 | 0.01% |
| Trespassing | N/A | 5% | N/A | 3% | N/A | 4% |
| Graffiti | N/A | 26% | N/A | 17% | N/A | 12% |
| Littering | N/A | 24% | N/A | 24% | N/A | 25% |
| Sign Damage | N/A | 22% | N/A | 22% | N/A | 23% |
| Motorized Use | N/A | 18% | N/A | 14% | N/A | 23% |

1. Rates per 100,000 Population. FBI Uniform Crime Reports for 1995 for burglary.

2. Rates per 100,000 users, RTC survey results for burglary. Results for other crime types reported as percentage of trails experiencing that type of crime.

ECONOMIC IMPACTS OF TRAILS

http://www.americantrails.org/resources/economics/GreenwaySumEcon.html

Source: American Trails

Subject: Economic Impacts of Trails

Findings: "In the vicinity of Philadelphia's 1,300 acre Pennypack Park, property values correlate significantly with proximity to the park. In 1974, the park accounted for 33 percent of the value of land 40 feet away from the park, nine percent when located 1,000 feet away, and 4.2 percent at a distance of 2,500 feet." Hammer, Coughlin and Horn, 1974]

IMPACTS OF TRAILS AND TRAIL USE

http://www.americantrails.org/resources/adjacent/sumadjacent.html

Source: American Trails

Subject: Impacts of Trails and Trail Use

Findings: "A 1978 study of property values in Boulder, Colorado, noted that housing prices declined an average of \$4.20 for each foot of distance from a greenbelt up to 3,200 feet. In one neighborhood, this figure was \$10.20 for each foot of distance. The same study determined that, other variables being equal, the average value of property adjacent to the greenbelt would be 32% higher than those 3,200 feet away."

PROPERTY VALUE/DESIRABILITY EFFECTS OF BIKE PATHS ADJACENT TO RESIDENTIAL AREAS

http://128.175.63.72/projects/DOCUMENTS/bikepathfinal.pdf

Source: University of Delaware

Subject: Property Value Near Bike Paths

Findings: "The analysis indicates that the impact of proximity to a bike path on property prices is positive, controlling for the number of bedrooms, years since sale, acres, land, buildings, total number of rooms, total assessment. The properties within 50m of the bike paths show a positive significance of at least \$8,800 and even higher when controlled for specific variables."

http://www.greenway.org/pdf/la_bikepath_safety.pdf

Source: Los Angeles County, Metropolitan Transportation Authority

Subject: Home sales near trails

Findings:

"Home sales were examined in the seven Massachusetts towns through which the Minuteman Bike way and Nashua River Rail Trail
run. Statistics on list and selling prices and on days on the market were analyzed. The analysis shows that homes near these rail trails
sold at 99.3% of the list price as compared to 98.1% of the list price for other homes sold in these towns. The most significant feature of
home sales near rail trails is that these homes sold in an average of 29.3 days as compared to 50.4 days for other homes." [Home Sales
Near Two Massachusetts Trails, Jan. 25, 2006. Craig Della Penna]

| TABLE 1: HOME SALES NEAR RAIL TRAILS | | | | | | | |
|--------------------------------------|-------------------|--------------------|--------------------|-----------------------|----------------|--|--|
| TOWN | NO. OF PROPERTIES | AVERAGE LIST PRICE | AVERAGE SALE PRICE | RATIO OF SALE TO LIST | DAYS ON MARKET | | |
| | SOLD | | | | | | |
| Arlington | 10 | \$513,750 | \$509,690 | 99.2% | 27.1 | | |
| Lexington | 10 | \$906,090 | \$907,040 | 100.1% | 18.5 | | |
| Bedford | 3 | \$511,600 | \$500,833 | 97.9% | 55.3 | | |
| Ayer | 1 | \$329,900 | \$317,500 | 96.2% | 47.0 | | |
| Groton | 2 | \$689,900 | \$675,000 | 97.8% | 22.0 | | |
| Dunstable | 1 | \$695,000 | \$685,000 | 98.6% | 20.0 | | |
| Pepperell | 3 | \$385,833 | \$376,333 | 97.5% | 48.3 | | |
| AVERAGE | | \$643,180 | \$638,377 | 99.3% | 29.3 | | |

| TABLE 2: HOME SALES NEAR RAIL TRAILS | | | | | | | |
|--------------------------------------|---------------------------|--------------------|--------------------|-----------------------|----------------|--|--|
| TOWN | NO. OF PROPERTIES SOLD | AVERAGE LIST PRICE | AVERAGE SALE PRICE | RATIO OF SALE TO LIST | DAYS ON MARKET | | |
| Arlington | 119 | \$558,775 | \$556,327 | 99.6% | 28.3 | | |
| Lexington | 166 | \$871,533 | \$849,470 | 97.5% | 54.4 | | |
| Bedford | 38 | \$633,912 | \$624,289 | 98.5% | 42.4 | | |
| Ayer | 30 | \$344,677 | \$340,155 | 98.7% | 73.0 | | |
| Groton | 53 | \$605,198 | \$584,689 | 96.6% | 80.4 | | |
| Dunstable | 12 | \$587,946 | \$578,965 | 98.5% | 83.2 | | |
| Pepperell | 57 | \$384,818 | \$379,482 | 98.6% | 80.2 | | |
| AVERAGE | | \$645,607 | \$633,072 | 8.1% | 50.4 | | |

- "Realizing the selling power of greenways, developers of the Sheperd's Vineyard housing development in Apex, North Carolina added \$5,000 to the price of 40 homes adjacent to the regional greenway, those homes were still the first to sell." [Economic Benefits of Trails and Greenways, Rails-to-Trails Conservancy, 2004]
- "The average price for all homes sold in greenway corridors was nearly 10 percent higher than the average price for all homes. Similarly, the average sale price was 11 percent higher than for all homes that sold in 1999," [Public Choices and Property Values: Evidence from Greenways Indianapolis, Center for Urban Policy and the Environment, December 2003]
- "A study of property values near greenbelts in Boulder, Colorado, noted that...other variables being equal, the average value of property adjacent to the greenbelt would be 32 percent higher than those 3,200 feet away." [Economic Impacts of Rivers, Trails and Greenways: Property Values. Resource Guide published by the National Parks Service, 1995]
- "A study completed by the Office of Planning in Seattle, Washington, for the 12 mile Burke-Gilman trail was based upon surveys of homeowners and real estate agents. The survey of real estate agents revealed that property near, but not immediately adjacent to

the trail, sells for an average of 6 percent more." [Economic Impacts of Rivers, Trails and Greenways: Property Values. Resource Guide published by the National Parks Service, 1995]

- "In a survey of adjacent landowners along the Luce Line rail-trail in Minnesota, 61 percent of the suburban residential owners noted an increase in their property value as a result of the trail. New owners felt the trail had a more positive effect on adjacent property values than did continuing owners. Appraisers and real estate agents claimed that trails were a positive selling point for suburban residential property." [Economic Impacts of Rivers, Trails and Greenways: Property Values. Resource Guide published by the National Parks Service, 1995]
- "A survey of Denver residential neighborhoods by the Rocky Mountain Research Institute shows the publics increasing interest in greenways and trails. From 1980 to 1990, those who said they would pay extra for greenbelts and parks in their neighborhoods rose from 16 percent to 48 percent." [Economic Impacts of Rivers, Trails and Greenways: Property Values. Resource Guide published by the National Parks Service, 1995]
- "Recognizing what had happened, the realty companies decided to restructure the pricing of future lots located along the Mountain-Bay Trail. Thus, in the addition of Highridge Estates, the average lot located along the rail was priced 26 percent higher than slightly larger lots not located along the trail." [Perceptions of How the Presence of Greenway Trails Affects the Value of Proximate Properties. Journal of Park and Recreation Administration, Fall 2001. John L. Crompton.]

Appendix F

Bicycle and Pedestrian Supportive Code Language

TECHNICAL MEMORANDUM

| TO: | Interested Parties |
|-------|---|
| FROM: | Robert Torzynski, AICP Program Manager – Bicycle & Pedestrian Planning |
| DATE: | July 27, 2007 |
| RE: | Bicycle & Pedestrian Supportive Code Language (UPWP Task 5510) |

Introduction

Local zoning codes, community design guidelines, and site planning requirements (local codes) can significantly affect the accessibility, safety, and attractiveness of development for bicyclists and pedestrians. Site plan elements, presence of sidewalks, building orientation, parking supply, and parking layout can affect the attractiveness of bicycling and walking as modes of travel. Likewise, connectivity between adjacent properties can also be influenced through local code requirements.

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhances accessibility and safety for bicyclists and pedestrians. The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/Finger Lakes Regional Planning Council (G/FLRPC). Staff researched and assessed materials previously compiled by G/FLRPC including, but not limited to, comprehensive plans, zoning regulations, and site planning guidance. Project research also assessed codes and associated materials available from national- and state-level agencies and associations such as the Federal Highway Administration, New York State Department of State, the American Planning Association, and municipalities located within New York State.

Project Methodology

GTC staff surveyed county planning departments in the nine-county Genesee-Finger Lakes region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: 1) sidewalk requirements adjacent to new and existing development, 2) bicycle parking requirements, and 3) automobile parking design. Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, access, and attractiveness within the community.

Background

In New York State, land use is regulated predominantly at the local level pursuant to the State's Consolidated Laws. These include the General City Law, General Municipal Law, Municipal Home Rule Law, Town Law, and Village Law. The Consolidated Laws provides a wide variety of tools

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that local governments can utilize to improve the transportation system for pedestrians and bicyclists.

The study scope is limited to code language such as local zoning ordinances, site plan review guidelines, and subdivision ordinances. Many communities include bicycle and pedestrian related policies within local comprehensive plans; however, specific code examples are less often available although essential to implementing policy. One town's formally-adopted sidewalk policy has been included because it provides a direct link between exemplary policy and the implementing code. Study examples are limited to New York State jurisdictions to ensure consistency with the enabling provisions included in the State's Consolidated Laws. The study is not presented as legal analysis however; it is instead intended to provide a resource for communities that may wish to assess suitability toward local conditions and needs.

Key Findings

Based on the survey results and project research, five key findings emerge as areas where communities might consider revisions to land use codes to support bicycle and pedestrian travel. These include:

- Require that developers include sidewalks within residential subdivisions;
- Work to infill gaps in the existing sidewalk network within each community;
- Ensure that bicycle parking is provided within new commercial development;
- Improve the integration of pedestrian facilities within automobile parking lots; and
- Locate buildings to the front of lot lines and parking toward the rear in order to support pedestrian access to the site.

None of the measures are a panacea, and few if any of the communities studied include all the measures throughout their land use regulations. However, each approach has been used by municipalities within New York State and the implementation of one or all of the measures described below could provide tangible benefits to local communities seeking to improve conditions for motorists, bicyclists, and pedestrians.

A. Sidewalks Adjacent to New Residential Development

1. Background

Every trip begins and ends with a walking trip. Providing sidewalks adjacent to new development is one way that communities can improve mobility for all users including the elderly, the young, people with disabilities, and others without access to an automobile. Sidewalks can improve pedestrian safety and convenience by providing a firm, stable, and slip resistant surface separate from the roadway.

The determination of whether or not sidewalks should be provided adjacent to new development depends on the roadway classification and the proposed land use which influences the number of pedestrian trips that will occur. The Federal Highway Administration (FHWA) recommendations range from paved shoulders (typically, three-foot minimum width for rural highways with less than 400 average daily vehicle trips) to sidewalks on both sides of the street (typically, five-foot minimum width) for commercial urban streets.

FHWA guidelines represent standard practice where high intensity land use warrants sidewalks as a safety measure and in low density rural areas where paved roadway shoulders comprise adequate facilities. However, at medium residential densities near FHWA's threshold of four dwelling units per acre there appear to be opportunities for communities that may wish to improve local pedestrian facilities by requiring that sidewalks be provided adjacent to new residential development regardless of roadway classification and the proposed land use.

Residential subdivisions comprise a significant land use in many communities and have the potential to generate a considerable number of pedestrian trips. In addition to improved pedestrian safety, providing sidewalks to serve residential neighborhoods facilitates access to nearby parks, schools, and commercial activity centers and promotes public health through daily physical activity.

2. How it's done

Communities that seek to provide sidewalks adjacent to new residential development can utilize several approaches, including:

- Sidewalk requirements based on residential density (i.e., per FHWA Guidelines);
- Requirements based on the roadway's functional classification;
- Sidewalk requirements based on adjacent land use; and
- Policy-based requirements.
- 3. Examples

<u>Requirements based on residential density</u>: the Town of Malta (Code Chapter 143-13.1, Subdivision of Land) requires sidewalks to be provided within all new residential and commercial projects within the Town. The code specifies that the sidewalk shall have a minimum width of five feet and be constructed of concrete designed to serve pedestrians. The code's requirements go on to state that for residential development with more than four units per acre sidewalks shall be required on both sides of the roadway and are required on one side only when the density of development is less than four units per acre. These density-based requirements are consistent with FHWA guidelines.

<u>Requirements based on the roadway's functional classification</u>: the Town of Rhinebeck (Land Subdivision Regulations Article VI, Section 2, Subdivision Design Standards) requires that all streets designated as through roads shall be provided a pedestrian path, sidewalk, or bikeway on at least one side of the street. Sidewalks, if provided, must include a fourfoot buffer between the sidewalk and the street. Bikeways (combined bicyclist/pedestrian paths) must also meet this buffer requirement and be at least four-feet in width. Similar requirements apply within the Town of Bethel (applicable to collectors and arterial roads). Sidewalks can also be required based on the ownership of the road. This approach is followed by the Town of Guilderland which requires sidewalks on both sides of all state and county roads wherever properties abutting such roads have access to municipal waterlines (unless adjacent to agriculturally zoned property).

<u>Sidewalk requirements based on nearby land use</u>: the Town of Perinton (Code Section 208-28) requires that sidewalks or pedestrian ways shall be constructed along lands fronting both sides of collector or arterial street(s), within Pedestrian (PED) Zones as shown on the Town of Perinton's Official PED Map. A "PED Zone" is defined as land within a 4,000-foot radius of the central point of a public school, public park, or active commercial area.

<u>Policy-based requirements</u>: the Town of Penfield has adopted a Sidewalk Policy that requires all new development approved by the Town to include sidewalks along both sides of all local roads. Developers may seek a waiver from the policy subject to the payment of a \$500 per dwelling unit fee placed in the sidewalk capital account specifically for the installation of sidewalks in locations identified by the Town Board.

4. Summary

There are several options available to communities that wish to provide sidewalks adjacent to new residential development and/or support the development of "complete streets" within these areas. Code language linked to roadway classification and adjacent land use may support pedestrian travel between neighborhoods (along collector roads to and from schools and local shopping centers, etc.) but is unlikely to support improved pedestrian facilities along local streets unless local streets are included in the requirements.

Two options that might also be considered by jurisdictions seeking to improve pedestrian accessibility include providing between-lot pedestrian easements to connect residences with parks, schools, neighborhood shopping facilities, and similar destinations and limiting the length of cul-de-sacs to provide more direct pedestrian access between destinations.

B. Sidewalks Adjacent to Existing Development

1. Background

In many communities there are gaps within the existing sidewalk network. These result when new development includes sidewalks but the development site is not located adjacent to the existing sidewalk network with the number of gaps increasing over time. Communities have several options to consider if they wish to complete the existing sidewalk network for residents and visitors.

2. How it's done

Local communities can provide sidewalks adjacent to existing development using the following techniques:

- Sidewalks constructed at the property owner's expense;
- Sidewalks constructed at the municipality's expense;
- Sidewalks constructed following petition by the affected property owners; and
- Comprehensive sidewalk policy.

3. Examples

<u>Sidewalks constructed at the property owner's expense</u>: the Town of Ithaca (Code Section 230-8, Streets & Sidewalks) provides that the Town Board may require that sidewalks be constructed along streets and highways at the owner's expense. The code includes language to authorize the Town to construct the facility and then to assess the owner for the cost, plus any interest. The code allows but does not require the Town to pay some portion of the cost pursuant to an adopted local law.

<u>Sidewalks constructed at the municipality's expense</u>: the Town of Mamaroneck (Code Section 187-2, Streets & Sidewalks) authorizes the Town Board to direct the Town

Superintendent to construct sidewalks along county roads and state highways (with permission from county or state officials) at Town expense. Sidewalks along town roads are the responsibility of, and must be voluntarily constructed by, the property owner at their own expense.

<u>Sidewalks constructed following petition by affected property owners</u>: the Town of Union (Code Chapter 178-1, Streets and Sidewalks) adopted a regulation in 1946 that creates a mechanism for property owners to request sidewalks along their side of the street. When 51 percent of the property owners request the sidewalk, its construction becomes mandatory. The Town acts as agent for the construction and the property owners are required to pay all costs.

<u>Comprehensive sidewalk policy</u>: The Town of Penfield Sidewalk Policy applies to new development and also to existing development. This policy articulates the Town's intent to "Install sidewalks along all Minor Arterial, Major Collector and Minor Collector roads to develop safe pedestrian mobility and enjoyment." These roadways comprise what is referred to as the primary sidewalk system. The installation of sidewalks along the primary sidewalk system is supported by the allocation of funds from the Town's General Fund, by grants, and by the sidewalk waiver fees paid when an exemption to the sidewalk requirement for new development is granted.

This policy is further supported by an officially adopted "Primary Sidewalk System Map" that identifies the improvements that will be made on an annual basis, as resources permit.

4. Summary

Local jurisdictions may wish to consider developing specific codes and/or policies that address the process and financial details that will apply if they seek to improve the existing sidewalk system.

Mandating that property owners pay for the installation of sidewalks may not be well received, and even a petition-based process could create hard feelings between neighbors depending on individual positions on the issue.

For these reasons, a policy-based approach that identifies and funds specific sidewalk improvements adjacent to existing development linked to a requirement that new development provide sidewalks or pay a fee that can be allocated for the construction of sidewalks adjacent to existing development (such as the Penfield example cited above) may represent a workable approach to improving the existing sidewalk system.

C. Bicycle Parking

1. Background

Bicyclists need places to park and secure their bicycles upon reaching their destination. Lacking designated facilities, bicyclists will use trees, utility poles, parking meters, railings, and street furniture to secure their bicycles. Doing so may cause damage to the bike or to the ad-hoc bike racks and may also result in inconvenience and potential danger (such as tripping hazards) to non-cyclists. Lack of bicycle parking facilities discourages bicycling by cyclists who may feel uncomfortable locking bicycles to non-designated facilities.

In order to avoid the undesirable effects associated with ad-hoc bike racks, bicycle parking facilities can be provided at activity centers that are accessible by bike. Bicycle parking facilities should be convenient, safe, secure, and protected from inclement weather. At a

minimum, well-designed racks should be provided and, depending on the need, enclosed bike lockers located within covered parking structures may be considered.

2. How it's done

Communities can provide adequate bicycle parking in the following ways:

- Allocate an identified percentage of off-street parking for bicycle parking;
- Incorporate general bicycle parking provisions in the off-street parking regulations; and
- Implement flexible bicycle parking requirements via the Planning Board.
- 3. Examples

<u>Allocate an identified percentage of off-street parking for bicycle parking</u>: the City of Rochester Charter and Code (Chapter 120-173, Off-Street Parking) requires that bicycle parking equal to 10 percent of the vehicle parking requirements for the property (for a minimum of two bicycles) be provided at all multifamily housing (over 10 units), commercial, and industrial uses. An additional requirement is that bicycle parking be located and clearly designated in a safe and convenient location, at least as convenient as the majority of auto spaces provided and that facilities are designed to accommodate U-shaped locking devices and support bicycles in a stable position without damage to wheels, frame, or other components. The facilities are required to be securely anchored and of sufficient strength to resist vandalism and theft.

<u>Incorporate general bicycle parking provisions in the off-street parking regulations</u>: the Town of Warwick (Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements) requires that pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks be provided for parking lots meeting specific requirements.

<u>Implement flexible requirements via the Planning Board</u>: the Town of Red Hook (Zoning Ordinance Section 143-116) includes a provision in its site plan design criteria that facilities be provided, where deemed applicable by the Planning Board, for the short-term parking of bicycles.

4. Summary

In communities with ongoing commercial, multi-family, and industrial development, a percentage-based approach could be considered to ensure that bicycle accommodations are provided for new development. Those communities that prefer additional flexibility or wish to defer the decision to the Planning Board and/or site plan review process may want to consider more general code language that would allow but not require the provision of bicycle facilities on a case-by-case basis.

D. Automobile Parking to Include Pedestrian Accommodations

1. Background

Providing convenient parking for motorists adjacent to retail and other establishments is typically addressed through a municipality's off-street parking requirements. These requirements, within the zoning code, provide dimensions for automobile parking spaces and specify the number of automobile parking spaces required for each land use. In some

cases, a general acknowledgement that pedestrians be considered during the design review for the parking facility is included within the off-street parking requirements. In other cases, however, pedestrians are not considered during the design review for parking lots and the resulting facilities are difficult to cross, creating barriers to pedestrian travel that could be resolved with improved design.

2. How it's done

Local jurisdictions may consider the following options if they wish to include pedestrian accommodations within off-street parking facilities:

- Specific requirements within off-street parking code language; and
- Flexible requirements based on the Planning Board's determination.
- 3. Examples

<u>Specific requirements within off-street parking code language</u>: the Town of Warwick (Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements) includes specific requirements for parking lot design that improve the environment for pedestrians by: 1) breaking up large parking lots into smaller parking groves and parking courts with a significant number of shade trees and surrounded by low hedges, stone walls, or attractive fencing; 2) encouraging designs that avoid placing more than 15 parking spaces in a continuous row and more than 60 spaces in any single parking area as defined by landscaping; 3) promoting landscaping that delineates vehicular and pedestrian patterns; 4) providing clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques to direct the flow of both vehicular and pedestrian traffic within the lot; and 5) providing separate pedestrian walkways in large parking lots to allow safe movement within the lots.

Additional design criteria specify that: 1) One walkway can serve as a collector for up to four bays of parked cars; 2) the walkway should be a minimum of four-feet wide, allowing an additional 30 inches on each side for overhanging of automobiles; 3) all walkways should be raised to a standard sidewalk height and should be constructed of different paving material than the parking lot; and 4) pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks should be provided.

<u>Flexible requirements based on the Planning Board's determination</u>: the Town of Malta (Zoning Ordinance Chapter 167, Site Plan) provides that the Planning Board shall consider the maximum adequacy of interior circulation in parking and loading facilities with particular attention to vehicular and pedestrian safety.

4. Summary

Communities that wish to promote pedestrian and bicycle-sensitive parking lot design can do so by including the desired design elements within their off-street parking code language. Doing so will provide developers with examples of expected design features at an early stage in the site planning process. For communities that prefer a more flexible approach, the Planning Board can be directed and/or authorized to consider pedestrian safety within the design/site plan review process.

E. Automobile Parking Site Location

1. Background

The location of automobile parking facilities with respect to buildings on a commercial development site can have a significant effect on the viability of pedestrian access to and from the site. When the buildings are located near the rear lot line and the parking facilities are located between the front of the building and the street, pedestrians may be forced to walk through the parking lot to access the buildings from the public right of way. This creates a potential for conflict between motorists and pedestrians that can be reduced by locating parking lots to the rear of buildings and locating buildings adjacent to the street with minimal setback.

Additionally, locating buildings near the street provides a sense of enclosure to the streetscape and provides merchants the opportunity for exposure to passersby that is lost when buildings are set behind parking facilities.

2. How it's done

The location of parking facilities on a site can be controlled directly by:

- Parking to the side or rear of the primary use included within design criteria; and
- Parking to the side or rear of the primary use and on the same lot.

3. Example

Parking to the side or rear of the primary use included within design criteria: the City of Batavia (Code Section 190-39, Parking requirements) "seeks to balance the need for adequate parking with the need to minimize harm resulting from the provision of parking and to avoid the negative impacts of excessive parking requirements." In seeking that balance, the code requires that all off-street parking be located behind or to the side of the principal building. In order to provide limited amounts of parking in front of buildings, a maximum of two rows of parking may be located in the front of a principal building in a C-2 District. The code language also specifies that parking areas shall be designed and landscaped to avoid long, uninterrupted rows of vehicles.

<u>Parking to the side or rear of the primary use and on the same lot</u>: the City of Lackawanna (Code Section 230-36, Parking, loading and stacking) requires that off-street parking be located on the same lot as the building to which it is an accessory use. The code further requires that all off-street parking facilities shall be located to the side or rear of the principal use building except in the Central Business District, where off-street parking shall be restricted to the rear yard.

4. Summary

Communities can direct parking to the rear of development sites and thereby support pedestrian utilization of commercial facilities located within their jurisdiction. Since parking lot and building location are closely interrelated, jurisdictions could also address this issue by revised building setback requirements. However, including the location criteria for the parking lot within the parking regulations allows a more unified approach to managing the facilities by including criteria related to parking lot internal design within the same section of the zoning ordinance as parking lot location criteria.

Summary and Conclusion

This report shows that within New York State and the Genesee-Finger Lakes Region there are numerous examples of noteworthy zoning code and site planning language and guidance that enhance accessibility and safety for bicyclists and pedestrians. Exemplary codes and policies demonstrate that:

- Sidewalks can be provided adjacent to new residential developments utilizing a code-based approach (within the jurisdiction's subdivision regulations) or based on a comprehensive sidewalk policy that guides the implementation of the subdivision, site planning, and zoning ordinance.
- Providing sidewalks adjacent to existing development is challenging due to the cost and the difficulty in obtaining consensus from the affected parties. An approach based on a comprehensive sidewalk policy supported by an officially-adopted Sidewalk System Map, including a dedicated funding source and prioritization strategy, may be preferable to mandated construction at the property owners' expense adjacent to existing development.
- Bicycle facilities can be provided by including the requirements to do so within the jurisdiction's off-street parking requirements. A ratio of required automobile parking can be used, and the ordinance should include appropriate design criteria to ensure that damage to bicycles does not occur and that bicycle parking is properly located on the site.
- Designing parking lots to incorporate pedestrian-friendly features can be accomplished by "breaking up" the lot with bays and islands and by providing identifiable separation between vehicles and pedestrians on the site. These strategies should be combined with appropriate location on the site (parking lots located to the rear of the site) and can be addressed within the jurisdictions off-street parking requirements.
- The siting of parking lots toward the rear of the development site can be controlled within a jurisdiction's off-street parking requirements and should be combined with requirements to include pedestrian-friendly features within the lot to maximize the quality of the site design.

Resources:

- 1. Federal Highway Administration, <u>Pedestrian Facilities Users Guide</u>, FHWA-RD-01-102, March 2002.
- 2. New York State Department of State, <u>Creating the Community You Want: Municipal</u> <u>Options for Land Use Control</u>, June 1998.
- 3. Office of the New York State Comptroller, Division of Local Government Services & Economic Development, <u>Smart Growth in New York State: A Discussion Paper</u>, May 2004.
- 4. The Rockefeller Institute of Government, <u>Local Governments in New York State</u>, May 2003.

- 5. State of New York, <u>Local Government Handbook, 5th Edition</u>, January 2000.
- 6. Codes and Policies, as provided in Appendix A.

Appendix A

Bicycle and Pedestrian Supportive Codes and Policies Representative Examples

Sidewalks Adjacent to New Development

1. Town of Malta, New York, Code Chapter 143-13.1, Subdivision of Land:

Sidewalks.

A. General. Sidewalks shall be provided within all new residential and commercial projects within the Town.

B. Definitions. As used in this section, the following terms shall have the meanings indicated: SIDEWALK — A walking surface with a minimum width of five feet and constructed of concrete designed to service pedestrians. C. Requirements. (1) Sidewalks shall be required within all residential and commercial projects within the Downtown District (as defined herein) and all residential and commercial Planned Development Districts. "Downtown" shall be defined as ... (2) Sidewalks shall be installed within all residential projects under the following criteria: (a) Residential development with more than four units per acre: sidewalks shall be required on both sides of the roadway.

(b) Residential developments with fewer than four units per acre: sidewalks shall be required on one side of the roadways.

2. Town of Rhinebeck, New York, Land Subdivision Regulations Article VI, Section 2, Subdivision Design Standards:

<u>Pedestrian Ways</u>: Adequate provision shall be made for convenient and safe movement of pedestrians and bicyclists in any subdivision of land for residential purposes throughout the Town of Rhinebeck. All streets designated as through roads shall have an improved pedestrian path, sidewalk or bikeway provided on at least one (1) side of the street. Any such sidewalk or pedestrian path shall be so placed that there will be a distance of not less than four (4) feet between the sidewalk and the street pavement. A bikeway, or combined bicyclist/pedestrian path, not less than four (4) feet in width, may be alternatively situated adjacent the street pavement and be visually separated there from by striping on both its inner and outer edges.

To the extent considered practicable by the Planning Board, and in consideration of Public Health, safety and convenience, the Planning Board may require that additional or alternatively-located pedestrian ways be provided within a residential subdivision to provide access to parks or public spaces, school sites, neighborhood shopping facilities, or similar destination. Any such pedestrian way may be situated within either a public right-of-way or established within a suitable easement.

3. Town of Bethel, New York, Land Subdivision Regulations Chapter 116-11, Design Standards, Streets:

Streets shall be graded and improved with pavements in accordance with the minimum road specifications of the Town of Bethel, New York, as amended. Curbs and provision for sidewalks shall be required for all arterial and collector streets in accordance with the graphic standards included in this chapter.

4. Town of Guilderland, New York, Code Chapter 227-2, Sidewalks:

Required sidewalk locations.
A. Sidewalks shall be required on both sides of all state and county roads wherever properties abutting such roads have access to municipal water lines, except such roads abutting agricultural zoned property, and shall be required on any other Town road, or part thereof, by resolution of the Town Board after a public hearing, or by provision of state law.

B. On all roads other than those enumerated in § 227-2A, the Planning Board and the Zoning Board of Appeals are authorized, in their discretion, to require the installation of sidewalks, bike paths, or other pedestrian facilities as a condition of approval for property under review. The Planning Board and the Zoning Board of Appeals shall consider sidewalks, bike paths, or other pedestrian facilities as a condition of approval for property under review when said property is in proximity to schools, parks, businesses, religious institutions, existing neighborhoods, undeveloped land zoned for residential or commercial construction, existing sidewalks, or roads with the potential for high traffic volumes.

5. Town of Perinton, New York, Code Section 208-28:

Sidewalks.

A. Intent. The Town of Perinton recognizes the need to encourage and facilitate the development of a system of sidewalks for the safety of its residents along its collector and arterial streets.

B. Requirements. Sidewalks or pedestrian ways shall be constructed and an easement for maintenance of such shall be provided along lands fronting both sides of collector or arterial street(s), as defined in Chapter 182, Subdivision of Land, within Pedestrian (PED) Zones as shown on the Town of Perinton's Official PED Map, adopted July 8, 1981, and as amended. A "PED Zone" is defined as land within a four-thousand-foot radius of the central point of a public school, public park or active commercial area. The central point shall be determined by the intersection of two roads or a driveway and a road. If the four-thousand-foot radius intersects any portion of a given property, then that lot in total becomes subject to sidewalk installation. Pedestrian zones may also be linear, with the bounds of the zones set forth on the Official Town of Perinton PED Map.

The Planning Board may require the construction of sidewalks along streets not within PED Zones at its discretion, after considering the policies set forth in § 182-6 of this Code. Sidewalks defined under this section shall be constructed in conformance with the Design Criteria of the Town of Perinton. In cases where a sidewalk has been previously constructed by the Town, county or state along frontage proposed for development or subdivision approval, the applicant shall be required to make a contribution to the Sidewalk Fund as described in § 208-28E. The Planning Board may require a sidewalk contribution in lieu of construction when it determines that a constructed sidewalk will not connect with an existing sidewalk and that the contribution may be used to link or extend existing sidewalks within the Town. [Amended 6-8-1994 by L.L. No. 2-1994; 6-27-2001 by L.L. No. 5-2001]

6. Town of Penfield, New York, Sidewalk Policy:

All new development approved by the Town of Penfield is required to install sidewalks along both sides of all local roads.

Sidewalks Adjacent to Existing Development

1. Town of Ithaca, New York, Code Section 230-8, Streets & Sidewalks:

Duty to construct and maintain sidewalks. The Town Board may adopt orders from time to time, directing the owners of the respective lots and parcels of land abutting on any Town street or highway, or, with the consent of the County Superintendent of Highways or the State Commissioner of Transportation, as the case may be, abutting on a county or state highway within the Town of Ithaca, along which it is desired that sidewalks be built, relaid or repaired, to

construct the same to conform the terms of this article, and specifying the time within which the same shall be done...

Notwithstanding the foregoing, the Town Board may adopt a local law apportioning the expense of building, relaying or repairing any sidewalk within such Town between the Town and owners of the respective lots and parcels of land abutting any street or county or state highway within the Town along which it is desired that sidewalks be built, relaid or repaired.

2. Town of Mamaroneck, New York, Code Section 187-2, Streets & Sidewalks:

Construction of sidewalks along county roads or state highways.

A. The Town Board of the Town of Mamaroneck may, by resolution, direct the Town Superintendent to construct a sidewalk along a described portion of any county road or state highway in the manner and not exceeding an expense to be specified in the resolution, and the expense of constructing such sidewalk shall be a town charge and shall be paid in the same manner as other town charges.

B. No such sidewalks shall be built along any state highway until the State Superintendent of Public Works shall have given his consent thereto, pursuant to § 54 of the Highway Law, and no such sidewalk shall be built along any county road until the County Superintendent of Highways shall have given his consent thereto, pursuant to § 136 of the Highway Law.

§ 187-3. Construction of sidewalks by property owner. Editor's Note: Amended at time of adoption of Code; see Ch. 1, General Provisions, Art. I.

Any property owner, after applying for and receiving a permit, may construct a sidewalk or curb on town property or may build a drain from any structure, enclosure or lot of ground at his own expense. Before the owner may proceed with the work, the Town Engineer shall establish proper grades and the same shall be followed in laying such sidewalk, curb or drain. The width, materials and construction of such sidewalks, curbs and drains shall fully conform to standard specifications for such work. No drainage piping shall be allowed to discharge onto the surface of any public right-of-way.

3. Town of Union, New York, Code Chapter 178-1, Streets and Sidewalks:

Sidewalk Construction Rules and regulations. All sidewalks constructed within the Town of Union outside the corporate limits of the Villages of Endicott and Johnson City shall be constructed in accordance with the following rules and regulations:

A. All sidewalks shall be built in accordance with standard sidewalk specifications, copies of which are on file with the Town Clerk and Director of Planning at the Town Office Building, 3111 East Main Street, Endwell, New York.

B. Any property owner may request a sidewalk along his premises.

C. When 51% of the property owners on the same side of the street request sidewalks, the construction of sidewalks for the entire block shall be mandatory. When requested, the Town shall act as agent for this construction, supplying the specifications, engineering and inspection services, engaging the contractor and acting as the collecting and remitting agent, which services may be chargeable to the property owners.

D. Engineering and inspection services relative to any new sidewalk construction shall be mandatory and such services shall be furnished by the Town of Union, which service may be chargeable to the property owner.

E. All requests for engineering service shall be in writing to the Town Board at least 10 days previous to the anticipated starting date, and in special cases where a complete block of sidewalk is being constructed the request for construction should be filed with the Town Clerk previous to May 1.

F. Property owners shall engage only responsible contractors who have the necessary machinery and equipment for such purpose.

G. Inspection during construction shall be made by the Town Engineer.

H. Payment shall be made by the property owner direct to the contractor, except in special cases the Town may act as receiving agent for the contractor.

4. Town of Penfield, New York, Sidewalk Policy:

It is the intent of the Town of Penfield to install sidewalks along all Minor Arterial, Major Collector and Minor Collector roads to develop safe pedestrian mobility and enjoyment. This policy encourages the installation of sidewalks along all local streets, including but not limited to new subdivisions. This network of sidewalks is intended to provide a safe linkage of major residential developments to commercial, civic, recreational, educational, and employment centers for residents and visitors.

Bicycle Parking

1. City of Rochester, New York, Charter and Code Chapter 120-173, Zoning, Off-Street Parking:

C. (3) Bicycle parking. Bicycle parking shall be provided equal to 10% of the vehicle parking requirements for the property, for a minimum of two bicycles, for all multifamily housing (over 10 units), commercial and industrial uses. [Amended 7-27-2004 by Ord. No. 2004-240]

G. Design of bicycle parking. (1) Bicycle parking shall be located and clearly designated in a safe and convenient location, at least as convenient as the majority of auto spaces provided. (2) Facilities shall be designed to accommodate U-shaped locking devices and shall support bicycles in a stable position without damage to wheels, frame or other components and shall be securely anchored and of sufficient strength to resist vandalism and theft.

2. Town of Warwick, New York, Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements:

[Requirements for large parking lots] Provide pedestrian and bicycle amenities, such as benches, shade, human-scale lighting, and bicycle racks.

3. Town of Red Hook, New York, Zoning Ordinance Section 143-116:

Site plan design criteria.

(L)(3) Facilities shall be provided, where deemed applicable by the Planning Board, for bicycle travel within the site and to adjacent areas and for the short-term parking of bicycles.

Automobile Parking to Include Pedestrian Accommodations

1. Town of Malta, New York, Zoning Ordinance Chapter 167, Site Plan:

The Planning Board may approve, approve with modifications or disapprove such site plan review application and, in doing so, shall consider the following objectives: ... (c) The maximum adequacy of interior circulation in parking and loading facilities with particular attention to vehicular and pedestrian safety.

2. Town of Warwick, New York, Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements:

Reduce visual impacts by breaking up large parking lots into smaller parking groves and parking courts with a significant number of shade trees and surrounded by low hedges, stone walls, or attractive fencing. Avoid more than 15 parking spaces in a continuous row and more than 60

spaces in any single parking area defined by landscaping...(i) Landscaping should be used to delineate vehicular and pedestrian patterns. Clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques should be used to further direct the flow of both vehicular and pedestrian traffic within the lot... (n) In large parking lots, separate pedestrian walkways should be provided to allow safe movement within the lots. These facilities should generally be oriented perpendicular to and between parking bays. Adjacent to the walks, trees should be planted. Coordinate pedestrian walkways with access for public transit if available or planned. The following walkway guidelines also apply: [1] One walkway can serve as a collector for up to four bays of parked cars. [2] The walkway should be a minimum of four feet wide, allowing an additional 30 inches on each side for overhanging of automobiles. [3] All walkways should be raised to a standard sidewalk height and should be constructed of different paving material than the parking lot. [4] Provide pedestrian and bicycle amenities, such as benches, shade, human-scale lighting, and bicycle racks.

Automobile Parking Site Location

1. City of Batavia, New York, Code Section 190-39, Parking requirements:

Purpose: The City finds that large and highly visible parking areas represent one of the most objectionable aspects of commercial development. Such parking lots may damage the historic layout and architectural fabric of historic areas, harm the natural environment and visual character of the community, interfere with pedestrian safety and accessibility and reduce the quality of life in developed areas, as measured by the City's Visual Preference Survey[™]. However, the City also recognizes that inadequate parking can diminish quality of life by creating traffic congestion, safety hazards and inconvenience. The City therefore seeks to balance the need for adequate parking with the need to minimize harm resulting from the provision of parking and to avoid the negative impacts of excessive parking requirements....

Design, layout and construction of parking areas.

(1) Location and screening. (a) All off-street parking shall be located behind or to the side of the principal building. Parking spaces located in a side yard shall, if possible, be screened from public view. Adjoining parking areas shall be connected directly to one another or to a service road or alley wherever feasible to reduce turning movements onto roads. (b) Within the C-2 District only, a maximum of two rows of parking may be located in the front of the principal building. Such parking shall be set back from the front lot line by a landscaped buffer at least 10 feet in width. Any green space or landscaping can be included in the percentage calculation of § 190-34, Landscaping and buffering, of this chapter. (c) Parking areas shall be designed and landscaped to avoid long, uninterrupted rows of vehicles.

2. City of Lackawanna, New York, Code Section 230-36, Parking, loading and stacking:

Location.

(1) Required off-street parking shall be located on the same lot as the building to which it is an accessory use, except as herein provided.

(2) All off-street parking facilities shall be located to the side or rear of the principal use building except in the Central Business District, where off-street parking shall be restricted to the rear yard.

(3) Off-street parking facilities shall not be located within the required setback areas.

(4) Permanent front and rear yard parking areas in residential zones, other than driveways accessing a garage or designated parking area, are prohibited.

Appendix G

Steering Committee Walking Tour Summary

Village of Sodus Point Active Transportation Plan



NOTES

SODUS POINT ACTIVE TRANSPORTATION PLAN

Genesee Transportation Council

June 05, 2019 Walking Tour - 10:00am Debrief – 11:15am

GROUP 1

Led by: Karen Shughart & Kathy Berretta Maxine Appleby, Bret DeRoo (Wayne County), Nicole Cleary (B&L), Chris Fellerhoff, (Landis Evans + Partners)

NICOLE CLEARY NOTES:

General concern with lack of sidewalks. Often have to dodge cars. Consider other materials than standard concrete – porous options. Sidewalk ends on Wickham at 8th – can it extend to N Ontario St?



General concern with lack of marked crosswalks. Consider different hierarchies for high-visibility options – raised, striped, etc. Raised crosswalks could function dually as speed bumps.

Future drainage improvements have been identified on Wickham – find out more. Ensure there is collaboration with any future construction improvements and possible ped/bike improvements.

Look at options for wayfinding signage. But, don't just add more signs, consider rebranding options to enhance the existing system with more directional signage.





Intersection @ Wickham and Bay St Ext. – Issues with cars not stopping, lack of crosswalk striping, consider raised intersection. Regular junk pile up at north west corner.



Wickham - cars use sidewalk to park, trucks and trailers line the street at night.



LWRP – redoing trail to beach, \$245K, includes residential access to put kayak/canoe it – find out more.



This area contains two loops for visitors. One loop down Greig Street and the other loop to the Beach. Are there other options so cars/trucks/trailers can turn around before getting to heavy pedestrian zones?

Access to Sodus Point Beach Park could be improved.



Right-of-way behind homes along Wickham could be improved – enhance the respectful use of the area. "sidewalk to nowhere"



Sodus Bay Junior Sailing Association is open to the public – higher amount of vehicles using their space – large parking lot – could it be used more efficiently to increase capacity?

Sidewalks along Greig St need improvement. Condition and gaps.



Fire Department and Oscar First Field – large space, could it be shared-use? Other recreational or picnic facilities?

Intersection at Bay St/Greig St/Bay St Ext needs help – everything! Ped, bike, gas station reduced driveway widths, etc.



Parking along Greig and John not standard dimensions – also serious concerns for backing out of the spaces onto the road at Bay/Greig.



Crossing across Bay St at John St is needed.

Expanse of pavement at Bay St and Lummis St – could that be designed differently? Confusing for motorists, no crosswalk, and used as a turnaround.



S Ontario Street – concern for parking during Church. Used for access to the marinas.



At the stub end of South Ontario Street, there will be a seasonal pier/ kayak launch installed, there is a short cut many take by foot and bicycle through Katlynn's boat yard to get to Rubino's subs and is also well traversed by the public going up s.ontario to downtown from Sodus Marina. The LWRP recommended several designs for the street.



GROUP 2

Led by: Joe O'Toole & Denise Washburn Lora Leon (NYSDOT), Bob Williams (GTC), Tom Robinson (B&L)

TOM ROBINSON NOTES:

Sidewalk gap on Firehouse property



Need upgraded crossing of Bay St at Ontario St



Sodus Point Lighthouse Museum hosts concerts and weddings. 10 concerts every summer. Parking at lighthouse is minimal (get a parking count) Event parking occurs along N. Ontario St., causing conflicts and congestion. Contact Joe O'Toole for details on event attendance and parking requirements

Need ADA tactile warning strips on sidewalks at Wickham Blvd and N. Ontario St.







Sidewalk long N. Ontario dumps right into angle parking zone for Lighthouse. Provide new sidewalk along east edge of parking area.

Scan for any "goat paths" or desire lines in project area that should become formalized trails.

At lighthouse, look for connectivity from street to lakeshore; need wayfinding, and pathway?

Joe mentioned that they attempted to establish remote lots and shuttle bus, but nobody used them. Follow up for more details

Parking is prohibited on south side of Lake Street, but is not well enforced. North side becomes solid parking, and Lake becomes effectively a one lane road during peak times. Good for traffic calming, but no designated pedestrian space. Addition of a sidewalk on one side of lake would be good.

Note pocket park, north side of Lake St at Fitzhugh. Village park, but not identified. Add signage, bike racks and some improvements for ADA compliance. Nice micro-destination



Consider temporary measures, tactical-urbanism strategies to mitigate peak seasonal fluctuations.

Denise: Pultneyville is popular with bicyclists. About 12 miles from Sodus Point. Investigate feasibility of a shared use trail on the south side of Lake Street between Sodus Point and Pultneyville. (Part of which may have been an old trolley track; verify)

Connect to Beachwood Park.

New Town park in the works along Lake Road? (confirm with Sharon)



Sidewalk on west side of N. Fitzhugh St. good conditions and tree lawn buffer

SR 14 is a state bike route, and part of the Seaway Trail. Decent shoulders for bikes



Strange signage placement creates obstacle and sidewalk gap at southeast corner of Bay St and Fitzhugh





Sidewalks on both sides of SR 14 (S Fitzhugh) end at the marina. West side sidewalk terminates with an ADA tactile

warning strip, which goes nowhere.





Consider custom bike racks using anchor theme as community branding. Very large, and apparently underutilized parking lot at Yacht Works



Develop ideas for a shared-use wetland boardwalk system on the Jefferson Property (east parcel). Refer to Huckleberry Swamp in North Rose, and concepts for the Ellison Wetland Trail





Sidewalk, or shared use path along lake side of SR 14 would be beneficial. Include seating/resting spots at regular intervals.

Public boat launch at Margaretta Rd causes summer congestion and hazards for walkers and cyclists; parking area is on opposite side of SR 14.

SR 14 pavement and shoulders in good condition. Re-paved 5-6 years ago (verify)

Consider out of the box ideas: summer installation of temporary flexible delineators along key shoulder segments that are heavily used by walkers. Remove during off-season for winter plowing. (City of Rochester examples)

Look at seasonal breakdown of traffic data: summer vs winter ADT, etc

BOB WILLIAMS NOTES:

North Ontario, Lake St, and N Fitzhugh all had above average pavement condition for cyclists. The major issue was ROW width on Lake St during seasonal peaks. Very difficult to find a pedestrian only space. This area would benefit as much from a public spaces plan as anything else, including paths on the lighthouse grounds and better identification and programming at the pocket park at the end of Ftizhugh. While we didn't walk Wickham Blvd, we understand it to be a beach access route that lacks sidewalks from Ontario to Bay Street Ext. At least at the western end, the configuration of utility poles suggests a wider ROW than is currently being used.

Travelling route 14 (S Fitzhugh) south of Bay Street, formalization issues begin @ Katlynn Marine. Access driveway for the old malt house may make access to land trust land difficult. At Sentell Street, lack of formalized space lends to ped danger (Large pavement with large turn radii, no crossings). A good candidate for a intersection redesign/aerial rendering that illustrates principles of ped/bike focused design. Further south, grade change and railroad abutments seem to preclude sidewalks on the west side, but a sidewalk along the east (bay) side seems fairly feasible.



A final note, as brought up by one of our community members, the signage at the intersection pictured below is a direct pedestrian obstruction as well as a distraction so close to the stop sign. Figure 2D-6 in the MUTCD illustrates what I meant when I called it non-standard in the meeting. The lady in our group mentioned that she'd like to see the signage across the street in this view improved as well. My thoughts immediately went to branded wayfinding that could incorporate that as well as the contents of the blue signs, bearing in mind (also from MUTCD 2D.50.06): Wayfinding should not be installed where adequate spacing cannot be provided between the community wayfinding guide sign and other higher priority signs.





GROUP 3

Led by: Lynn Carlyle & Sharon Lilla Katie Olbrich (B&L)

KATIE OLBRICH NOTES:

Route 14 was the primary concern in this subarea due to a high number of speeding vehicles. The current speed limit shifts from 55 MPH to 30 MPH at the Village Boundary. The roadway design that features wide lanes and no visual barriers that would promote traffic calming, as well at the slope of the road when entering the Village facilitates speeding well into the 30 MPH traffic zone. There is interest in creating a 45 MPH speed zone between Sill Road and the Village Boundary to facilitate slower traffic once vehicles are within the Village limits.

Additionally, there are no pedestrian or bicycle accommodations on Route 14. This results in pedestrian and bicyclists using the narrow shoulder, which has significant pavement deterioration and is difficult to walk along at times.

The intersection of Route 14 and Margaretta Road poses significant difficulties for pedestrian and bicycle travel. There is significant boat trailer traffic during the summer months, and many boat trailers parked along the shoulder on Route 14 when the parking lot at the corner of Margaretta and Route 14 is filled. In addition, many residents and visitors fish nearby at the mouth of First Creek into Sodus Bay, which can be dangerous given the seasonal high traffic volumes at this segment of Route 14.

South shore road is typically quiet, and walking along the vehicular ROW is generally not an issue for residents. However, there is a section of South Shore Road near Central Ave that involves a relatively steep slope, extremely narrow lanes, and a road geometry that prevents pedestrians and vehicles from seeing each other in both directions. Additionally, there is golf cart traffic that also uses South Shore Road frequently, which poses additional safety hazards at this intersection.



Dangerous Section of South Shore Road





South Shore Road facing West – Narrow Lanes & Visibility Issues



South Shore Road facing East – Visibility Issues

Central Ave has a relatively steep slope as well, and poses the same issues as South Shore Road in terms of visibility both coming up and going down the hill. The Village has plans to resurface Central Ave in the near future.





Central Ave - visibility issues

There is a strip of land along South Shore Road that is Village owned, and a public right-of-way to the water across the street. There is opportunity here for development of a pocket park combined with a passive boat launch. Several unauthorized cars park on the Village-owned land.



Village-owned Parcel on South Shore Road





Public Water Access on South Shore Road

Appendix H

Public Meeting #1 Summary

Village of Sodus Point Active Transportation Plan

Public Meeting #1 Summary

On July 4, 2019, the Village of Sodus Point held its first public meeting for the Active Transportation Plan. The consultant team as well as members of the Steering Committee put together an information booth at the Pancake Breakfast at the Sodus Point Lighthouse Museum for residents and visitors to stop by throughout the day. Those who visited the booth were provided with information about the purpose of the study and the type of recommendations that will result. Visitors were also asked to use stickers to vote for the initial issues and opportunities presented on a map that were derived for the first stakeholder meeting, and to annotate an aerial photo of the village with any additional concerns or ideas they had. The results of these input opportunities are summarized below, and on the following pages.

Comments:

- The boat launch park on Route 14 near Margaretta Road is too congested, and pedestrians are forced to cross Route 14 in the dark. There needs to be a striped crosswalk.
- Sidewalk and all walkway improvements would improve form and function simultaneously.
- There needs to be better definition of right of way off Wickham Boulevard.
- Please provide more walking and bike space along streets in Wayne County. Resident would bike more if there were safer streets.
- Resident would like to see the Genesee Land Trust park and boardwalks happen.
- There should be a permanent walkway along Wickham Boulevard to the ball park and along Bay Street behind the ball park and homes.
- Resident has given up on walking because it's dangerous in the Village, especially on Wickham Boulevard. The sandbags from flooding issues are compounding or making the problem.
- The intersection at the north end of Bay Street at Wickham Boulevard should be striped. Sidewalks on the east side of the street should be suggested.
- Make a connection with Rails-to-Trails some rail right of way still exists.
- Created a dedicated bike lane on Margaretta Road.
- Install bumpouts along Wickham Boulevard to ease traffic.
- There should be sidewalks for the full length of Wickham Boulevard.
- The existing sidewalks that are flush against the roadway with no buffer are not functional.
- Resident who owns a cabin in Sodus is planning on selling his cabin. High water levels has not impacted his property, but they impact his chosen activities and make Sodus Point less desirable.
- There needs to be more bicycle paths in Sodus Point, especially along Lake Road between Sodus Point and Pultneyville. They would benefit both drivers and cyclists; groups of bikers on the road can be an obstacle.
- There needs to be a better connection from the Marina to the rail trail.
- The four corners at Wickham Boulevard and Bay Street Extension is a dangerous intersection.
- "Chaotic parking" in the Village is a problem for bicyclists.
- There needs to be a bike path on Route 14 (mentioned several times).
- There needs to be a marked crosswalk near the ball park.
- Pedestrian conflicts occur with cars parked at the ball park.
- The condition of some of the sidewalks along the Downtown Streets should be improved.
- The new Genesee Land Trust Nature Preserve should be integrated as a key destination of the active transportation network.
- There should be pedestrian connection between the Lighthouse to Sodus Beach Park along the lake shore.

Priority Recommendations

| Map # | Preliminary Recommendation | Votes |
|-------|--|-------|
| 14 | Create connection between the two new parks | 5 |
| 4 | Enhance multi-use trail to create a non-vehicular gateway into the Village | 4 |
| 8 | Consider roundabout to improve circulation and highlight central locus of the Village | 3 |
| 3 | Increase bicycle and pedestrian facilities along Margaretta Road | 2 |
| 5 | Significantly improve bicycle and pedestrian facilities along Route 14 and implement | 2 |
| | traffic calming measures | |
| 6 | Improve safety for fisherman along this corridor and prevent vehicles with boat trailers | 2 |
| | from parking along Route 14 | |
| 7 | Redesign boat launch entrance to avoid back-up of boat trailers along Route 14 and | 2 |
| | Margaretta Road and implement sidewalks along the boat launch | |
| 13 | Prevent vehicles from parking on gravel pedestrian path along Wickham Blvd | 2 |
| 19 | Create additional non-motorized connections to the Lighthouse Museum | 2 |
| 1 | Improve connectivity to Beechwood State Park | 1 |
| 2 | Add a buffer speed limit zone of 45 MPH between 30 MPH and 50 MPH zones | 1 |
| 10 | Create pedestrian connection between S. Fitzhugh Street and S. Ontario Street | 1 |
| 11 | Implement sidewalks along South Ontario Street | 1 |
| 12 | Prevent vehicles from speeding on Wickham Blvd and create a safe pedestrian | 1 |
| | environment (by raising stop signs and putting in bump-outs) | |
| 15 | Restore pedestrian connections | 1 |
| 16 | Install sidewalks along S. Shore Road and address safety issues along the corridor | 1 |
| 21 | Implement streetscaping and reassess sidewalk and parking allocations | 1 |
| 9 | Create access point to new Genesee Land Trust park | 0 |
| 17 | Consider connections to the proposed passive boat launch in this area | 0 |
| 18 | Increase connectivity between the marinas and downtown | 0 |
| 20 | Define the streetscape and remove gravel shoulder | 0 |
| 22 | Improve sidewalk quality along this corridor | 0 |
| 23 | Consider connections to new park and boat launch | 0 |
| 24 | Consider rerouting traffic to downtown off of Route 14 | 0 |
| 25 | Investigate the possibility of golf cart paths | 0 |
| 26 | Look into solutions for identifying turnarounds on dead-end roads | 0 |



Public Meeting #2 Summary

Village of Sodus Point Active Transportation Plan

Public Meeting #2 Summary

On Saturday, September 21st, the Village of Sodus Point held its second public meeting for the Active Transportation Plan. The meeting was held as a public open house, allowing attendees to visit as they pleased between 10:00 AM and 12:00 PM. Informational boards containing information about the existing conditions analyses, the results of the community assessment, the alternatives toolkit, and the draft recommendations sections of the report were placed around the room for attendees to view and comment on. Attendees were asked to vote on site-specific recommendations using dollar sign stickers based upon the estimated cost of the recommendation. Additionally, attendees were asked to vote on which priority intersection identified as part of the planning process should be the highest priority for improvement, and which policy and program recommendations should be of the most importance to the Village. A separate board displayed the draft recommendations for the Bay/Grieg Street and Bay Street Extension intersection, and attendees were asked to vote on which additional treatments they would be interested in seeing at this intersection. Approximately 25 people were in attendance, and the results of their input are summarized below and on the following pages:

General Comments:

Time Lapse Camera Analysis:

- 9th Street is mislabeled as 9th ave.
- The bars in the number of pedestrian and number of bicyclist charts should be the same color to reduce confusion.

Off-Street Recommendations:

- The Village should work with the Town of Sodus and Town of Huron to extend trails and bikeways around the bay.
- Snowmobiles should not be allowed in the Genesee Land Trust nature preserve.
- Sidewalks in sensitive areas need to be designed to allow for natural drainage to control stormwater.
- There should be a separate recommendation proposing a trail connection between the proposed passive park on Featherly Drive and the new Genesee Land Trust nature preserve.
- New trails and sidewalks should be made of permeable pavement and concrete to aid in drainage of stormwater.

Policy and Program Recommendations:

- Environmental review procedures should be added to empower the planning and zoning bards to review the environmental impacts of all projects.
- Any new sidewalks or parking areas should be permeable and constructed in an environmentally positive manner to manage stormwater run-off.
- Speed enforcement should also apply to police vehicles who speed down Bay Street without lights or sirens on.

Priority Intersection Recommendations:

- Both sides of Route 14 from Margaretta Road to First Creek should be connected with crosswalks create a unified park.
- There should be a slower speed limit along Route 14 headed north from First Creek.
- Sidewalks should be added on Bay Street Extension connecting to crosswalks at the intersection of Wickham Boulevard.

Priority Recommendations

Bay/Greig Street at Bay Street Extension

| Additional Potential Treatments | Description/Benefit | Votes |
|--|---|-------|
| Motorcycle parking along Willow Park | This proposed treatment would replace the existing angled parking on Bay Street adjacent to Willow Park with several motorcycle parking spots. These would be designed as back-in angled parking spots to help promote visibility of pedestrians when motorcyclists are pulling out of the parking space. The provision of these spaces would help pull motorcyclists out of vehicle parking spaces along Greig Street, opening up additional parking for motorists. | 7 |
| Planters along Willow Park | The provision of plantings and landscaping along the parking area next to Willow Park would help define this intersection as a gateway to Downtown Sodus Point while buffering the park space from vehicle and/or motorcycle activity. | 1 |
| Crosswalks | As seen in the time lapse camera analysis, there is a heavy amount of pedestrian activity that occurs at this intersection. A crosswalk would help increase safety and comfort for pedestrians. Crosswalks could be most beneficial if placed between the gas station and Willow Park, as well as across Bay Street Extension. | 17 |
| 3-way stop | A three way stop at Bay Street, Greig Street, and Bay Street Extension would help calm traffic and alert motorists of pedestrians walking along the corridor or crossing at the intersection. | 4 |
| Reconfiguration of Village parking lot | The parking lot adjacent to Willow Park could be reconfigured to be more accommodating to pedestrians. For instance, the planted parking islands could be re-arranged to provide pedestrian accommodations that connect to the sidewalks. | 8 |
| Parking signage | It has been noted that there is a lack of general public knowledge that the parking lot on the south side of Bay Street next to Hots Point is a public parking lot. Signage to inform visitors and residents of the availability of public parking in this lot would help reduce on-street parking congestion. | 5 |

Votes on the most important priority intersections to be improved:

| Priority Intersection | Votes |
|--|-------|
| Central Avenue at South Shore Road | 1 |
| Route 14 at Margaretta Road | 8 |
| Fitzhugh Street (NYS 14) at Lake Road/Bay Street | 6 |
| Bay Street Extension at Wickham Boulevard | 18 |

Off-Street Recommendations

| # | Location | Recommended Facility | Votes |
|----|--|--|-------|
| 1 | Lake Road | Develop a shared use path along the south side of Lake Road from N. Fitzhugh Street to the Village Boundary. Incorporate interpretive panels about POW Camp and the Historic Trolley Route | 19 |
| 2 | Various | Create connections between trail systems throughout the Village | 7 |
| 3 | Downtown, Sodus Point Beach Park, Wickham Boulevard | Formalize path between sidewalks that terminate at the baseball fields behind properties on Wickham Boulevard. Replace gravel path with concrete sidewalk along the bay side of Wickham Boulevard, and extend path along the eastern edge of the Park to the Outer Lighthouse | 22 |
| 4 | Route 14, South Ontario Street, Lummis Street | Create a continual pedestrian path connecting Arney's Marina, Northwind Harbor, Katlynn Marina, and Downtown Sodus Point | 12 |
| 5 | Route 14 | Develop a shared use path along the east side of Route 14 from Bayview Drive to Arney's Marina | 8 |
| 6 | 8040 Lake Road | Develop trail system in the wetlands between Lake Road and Sentell Street | 8 |
| 7 | Snowmobile Trail between Southern Village boundary and Sentell Street | Enhance snowmobile trail to accommodate additional users, including bicyclists, pedestrians, and other winter sport user groups such as nordic skiers. | 5 |
| 8 | South Shore Drive, South Ontario Street, Wickham Boulevard | Create passive boat launches at several locations within the community | 8 |
| 9 | Margaretta Road | Install sidewalks along the south side of Margaretta Road. Establish connection between Harriman Park and the First Creek passive fishing access site. | 5 |
| 10 | Greig Street | Fill in sidewalk gaps along all of Greig St. | 5 |
| 11 | Wickham Boulevard | Install sidewalks on Wickham Boulevard between North Ontario Street and Bay Street Extension. Install sidewalks on the south side of Wickham Boulevard beginning at the crosswalk on 4th Street, replacing the stone dust pedestrian path from 4th Street to the County Park. | 17 |
| 12 | Bay Street Extension | Install sidewalks along the baseball field to Greig Street across from the entrance of the Village public parking lot. | 10 |
| 13 | Bay Street (Route 14) @ Village Fire Hall | Fill in sidewalk gap along the front of the Village Fire Department along Route 14. | 3 |
| 14 | Lake Street | Implement sidewalks between N. Fitzhugh Street and N. Ontario Street. | 5 |



Sodus Point Active Transportation Plan

Off-Street Facility Recommendations

- Sodus Point Parcels
- Village of Sodus Point
- Traffic Calming Recommendations
- Shared Use Path Recommendations
- Sidewalk Recommendations
- Road Crossing Recommendations
- Trail Recommendations
 - Other Recommendations

On-Street Recommendations

| # | Location | Recommended Facility | Votes |
|----|--|--|-------|
| 1 | South Shore Drive | Install pedestrian & bicyclist signage and speed bumps | 4 |
| 2 | Route 14 | Implement transition speed zone and crosswalks | 10 |
| 3 | Bay Street at Lummis Street | Extend median and implement pedestrian crossing | 3 |
| 4 | Route 14 & Sentell Street | Investigate roundabout feasibility | 8 |
| 5 | Wickham Boulevard | Implement speed bumps | 8 |
| 6 | Greig Street | Implement reduced speed limits, considering parking allocations | 5 |
| 7 | North Ontario Street & Wickham Boulevard | Implement tactile warning strips at intersection | 4 |
| 8 | Bay Street & John Street | Implement crosswalks | 5 |
| 9 | Bay Street & Ontario Street | Improve crosswalks | 4 |
| 10 | Margaretta Road | Implement Shared-use roadway policy on the entirety of Margaretta Road, install wayfinding signage to alert users of non-motorized trail connection locations | 10 |
| 11 | Morley Road | Create connection to snowmobile trail | 9 |



Sodus Point Active Transportation Plan

On-Street Facility Recommendations

- Sodus Point Parcels
- Village of Sodus Point
- Traffic Calming Recommendations
- Shared Use Path Recommendations
- Sidewalk Recommendations
- Road Crossing Recommendations
- Trail Recommendations
 - Other Recommendations

Policy & Program Recommendations

| Recommendation | Notes | Votes |
|---|--|-------|
| Implement increased speeding and parking enforcement | Speeding has been noted as a persistent issue within the Village, particularly on Route 14, Lake Road, Wickham Boulevard, and Grieg Street. The Village should work with the County Sheriff and State Police to increase speed enforcement in the Village. In addition, street parking enforcement should also be increased throughout the Village, especially during events at the Lighthouse Museum along adjacent streets | 10 |
| Create a maintenance plan for key pedestrian and bicyclist corridors in the Village | Given the limited ROW on many of the roadways in Sodus Point, it is important that the pavement condition of the shoulders and sidewalks on key pedestrian and bicyclist corridors are in good condition to increase the safety and comfort of non-motorized travel. The Village should develop a maintenance plan that commits to resurfacing and repairing roadways and sidewalks in the Village based on the capacity constraints of the DPW and Monroe County Highway Department. | 1 |
| Update zoning code to support pedestrian and bicycle activity | The language of the Village code, in particular the zoning code, can be enhanced to help support active transportation. Key updates include reducing the required block size in subdivision requirements, including bicycle parking as part of off-street parking requirements, including bicycle accommodations in site plan review and subdivision processes, and adding purpose statements to select districts that speak to the walkability and bikeability of the Village. | 7 |
| Develop education and outreach strategies to promote active transportation in the Village | Increased awareness and understanding of biking and walking in the Village can lead to increased activity. The Village should consider developing a program to get Village stakeholders involved in such activities. Suggested programming includes organized bike rides, festivals and events to promote bicyclist and pedestrian safety, bike tune up programs, and organized walking tours of the Village. | 0 |
| Bicycle-Friendly Community Designation | The Bicycle-Friendly Community was developed by the League of American Bicyclists. The program gives communities guidance for developing a more bikeable community, and can help promote bicycling activity in the Village. Sodus Point should consider getting involved in the program to improve their biking conditions and highlight the community for regional bicyclists. | 4 |
| Walk-Friendly Community Designation | The Walk-Friendly Community program is for municipalities that have shown commitment to improving and maintaining walkability in their community. The program is operated by the University of North Carolina Highway Safety Research Center, and sponsored by Fed Ex. The program would help the village assess their pedestrian infrastructure in a comprehensive manner, receive feedback from a third-party perspective, and provide the Village recognition for their efforts. | 5 |

Policy & Program Recommendations

| Recommendation | Notes | Votes |
|--|---|-------|
| Develop an open space plan | Sodus Point has many open spaces and parks that enhance the quality of life and character of the Village. These sites should be considered in a comprehensive approach to determine key linkages between such open spaces, and pedestrian and bicyclist accommodations that connect to parks and open spaces. The Village should consider developing a vision for their open space amenities through the development of an open spaces and parks plan. | 4 |
| Create a wayfinding signage program | A comprehensive wayfinding system can help all transportation users navigate throughout the Village and obtain information on key destinations and attractions in the area. The Village should consider the creation and implementation of a branded wayfinding system that helps increase ease of navigation while creating a community brand that helps contribute to the character of the Village. | 2 |
| Identify turn-arounds on dead-end streets | The Village has several dead-end streets, particularly along Wickham Boulevard. Many vehicles use this roadway for accessing the beach park, which results in many vehicles circling this area in search of an appropriate location for turning around. Such opportunities for turning around should be identified via signage to improve traffic flow and avoid vehicles from using private driveways for turning around. | 2 |
| Implement tactical urbanism initiatives to accommodate seasonal pedestrian and bicyclist traffic | The amount of bicycle and pedestrian activity in Sodus Point is significant during the summer months when there are many visitors the Village. However, those activity levels drop significantly when the seasonal population leaves. In order to account for such fluctuation, the Village should consider implementing temporary bicycle and pedestrian accommodations during the summer months to assess their usage and functionality. This can include creating pedestrian and bicyclists paths using traffic cones, free-standing delineators, plastic construction barriers, or other movable materials. If successful, the Village could consider installing permanent but removable delineators that provide active transportation users dedicated space during busy summer months, but can be removed for plowing during the winter months. | 5 |