

Town of Greece Bicycle and Pedestrian Master Plan

Prepared for:

Town of Greece
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Rochester, New York 14612
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Prepared by:

Sprinkle Consulting, Inc.



Adopted
June 2014



Minutes of the Regular Meeting of the Town Board, Town of Greece, Monroe County held June 17, 2014 at the Town Hall, One Vince Tofany Boulevard, Rochester, New York at 6:00 p.m.

PRESENT:

William D. Reilich	Supervisor
David M. Barry, Jr.	Councilman
Brett Granville	Councilman
Andrew J. Conlon	Councilman
Diana Christodaro	Councilwoman

Cheryl M. Rozzi, Town Clerk
Brian Marianetti, Town Attorney

EXCUSED: None

~~#280~~—Councilman Granville offered the following resolution and moved its adoption; seconded by Councilwoman Christodaro:

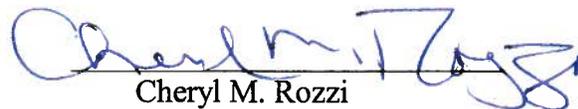
RESOLVED that this Town Board adopt the proposed Bicycle and Pedestrian Master Plan as submitted.

ADOPTED: Ayes 5 Reilich, Barry, Granville, Conlon, Christodaro
Nays 0

STATE OF NEW YORK)
TOWN OF GREECE) ss:
COUNTY OF MONROE)

I, the undersigned Clerk of the Town of Greece, Monroe County, New York, DO HEREBY CERTIFY that I have compared the foregoing copies of the resolutions of the meeting of the Town Board of said Town, including the resolution contained therein, held on the 17th day of June, 2014, with the originals thereof on file in my office and that the same are a true and correct copy of said originals and of the whole of said originals so far as the same relates to the subject matters therein referred to.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said Town this 24th day of June, 2014.



Cheryl M. Rozzi
Town Clerk – Town of Greece

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DISCLAIMERS

Town of Greece Bicycle and Pedestrian Master Plan

Financial assistance for the preparation of this report was provided by the Federal Highway Administration through the Genesee Transportation Council. The Town of Greece is solely responsible for its content and the views and opinions expressed herein do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

GTC's Commitment to the Public

The Genesee Transportation Council assures that no person shall, on the grounds of race, color, national origin, disability, age, gender, or income status, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. GTC further assures every effort will be made to ensure nondiscrimination in all of its programs activities, whether those programs and activities are federally funded or not.

En Español

El Consejo Genesee del Transporte asegura completa implementación del Título VI de la Ley de Derechos Civiles de 1964, que prohíbe la discriminación por motivo de raza, color de piel, origen nacional edad, género, discapacidad, o estado de ingresos, en la provisión de beneficios y servicios que sean resultado de programas y actividades que reciban asistencia financiera federal.



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EXECUTIVE SUMMARY

Town of Greece Bicycle and Pedestrian Master Plan

This *Bicycle and Pedestrian Master Plan* puts forth a strategy to accomplish the town's vision of a safer, more convenient non-motorized transportation network. To support this vision, the Plan examines existing conditions for on-street bicycling and the sidewalk network, identifies a series of specific facility needs, establishes design guidance for new such facilities, and recognizes existing and future opportunities for programmatic outreach and education activities that can lead to increased levels of bicycling and walking. The Plan's recommendations, when implemented, will help the Town of Greece achieve the many economic, public health, and quality of life benefits that can be achieved through enhanced accommodation of active transportation. The Plan includes the following sections:

Introduction and Summary - This section outlines the background and setting for the Plan, including Greece's many natural and planned characteristics that provide an ideal setting for its initiatives, as well as the variety of benefits that can be realized as a result of the Plan's eventual implementation. The Plan is based on extensive stakeholder and public involvement, and is heavily based on input from an active Project Advisory Committee (PAC) and from feedback received from Greece's residents.

Existing Conditions Evaluations - The existing conditions evaluation begins with an assessment of the conditions that the Town's roadway network provides for bicyclists, using the nationally implemented Bicycle Level of Service Model as the primary performance measure. The results of this assessment indicate that, at a town-wide level, bicycling conditions are relatively good (average bicycle level of service "B"), although many roads present significant opportunities for improvement. Regarding pedestrian facilities, there are already more than 500 miles of public sidewalks in Greece, and the Town's Sidewalk Policy requires that all development projects include the construction of public sidewalks along roadway frontage on both sides of public roads. This results in relatively good pedestrian connectivity within neighborhoods, while walking accommodation along some major roads leaves critical gaps. In addition to these supply-based evaluations, the existing conditions component also includes a non-motorized demand assessment that identifies areas within Greece that have the greatest potential for increased levels of bicycling and walking based on the proximity of key trip origins and destinations.

Facility Recommendations - Based on existing conditions and public/stakeholder input, the Plan identifies numerous strategic, location-specific facility needs that will help complete the Town's already significant bicycle and pedestrian network. The recommendations include new bicycle facilities, important sidewalk connections, and new and extended shared use paths and trails that tie into the region's extensive off-road network. Several of the recommended facilities are identified for "early implementation" to help gain important momentum. Initial implementation priorities, divided into facility types, are developed based on the demand analysis described above. Several of the high-profile and/or high-priority facility recommendations are discussed in greater detail. In the meantime, the Town will continue to implement projects in accordance with capital improvement schedules and specific funding opportunities.

Facility Design Guidance - This section provides a valuable ongoing resource as the Town constructs new bicycle and pedestrian facilities, 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 and Development Regulations Assessment - Beyond simply creating and improving in-the-ground facilities, the Plan recognizes the continuing role that zoning and subdivision policies will play in ensuring a complete and functional active transportation system. This section analyzes Greece's existing codes, standards, policies, and practices as they relate to bicycling and walking. Among the many associated recommendations are to adopt a town-wide Complete Streets policy and to use the successful Dewey Avenue Mixed Use District as a model for creating and enhancing bicycle- and pedestrian-friendly neighborhoods.



EXECUTIVE SUMMARY

Town of Greece Bicycle and Pedestrian Master Plan

Outreach and Education Recommendations - Another important aspect of the active transportation planning process is to conduct outreach and education programs. The Plan's associated recommendations aim to increase the number of bicyclists and pedestrians while improving safe and appropriate behavior by bicyclists, motorists, and pedestrians. A highlight of this element is a recommended focus on reaching out to and connecting with the numerous local and regional partners who can collectively help maximize the effectiveness of existing resources, programs, and materials. An additional recommendation is to appoint and sustain a public bicycle/pedestrian committee to engage with various groups and promote bicycling and walking in the community. This Plan section also includes sample bike parking requirements and potential incentives to private developers that can be used to leverage the Town's efforts.

Funding and Implementation Strategy - The Plan concludes with recommendations to continue several ongoing strategies to construct new non-motorized facilities and to pursue the plethora of funding sources, both traditional and innovative, that are available to the Town as it seeks to implement this *Bicycle and Pedestrian Master Plan*. Each of these sources is described, including the programs contained in the new Federal transportation legislation, MAP-21, as administered through the New York State Department of Transportation, as well as many state, regional, and private sector sources that provide grants for facilities and programs alike.



I. INTRODUCTION AND SUMMARY

Town of Greece Bicycle and Pedestrian Master Plan



I. INTRODUCTION AND SUMMARY

Background and Setting

This Bicycle and Pedestrian Master Plan represents the Town of Greece's approach to accommodating active transportation, and provides guidance to accomplish a Town vision that includes improved bicycling and walking conditions and associated increases in bicycling and walking activity.

The Town of Greece is endowed with a variety of characteristics, both natural and planned, which collectively make Greece a great place to live and provide a setting that is ripe for this important planning initiative:

- A large town with a small-town feel;
- More than a dozen regionally significant parks and trails, including the Lake Ontario State Parkway Trail, the Route 390 Trail, and the Erie Canal Heritage Trail;
- More than 500 existing linear miles of sidewalk (350 of which are routinely plowed);
- Easy access to water features (both lakefront and canalfont);
- An abundance of greenspace;
- A dispersed school system that leads to neighborhoods that are directly associated with schools;
- Significant diversity in character;
- Significant opportunities for outdoor winter activities;
- Relatively flat terrain;
- An outstanding senior center;
- Community diversity in both age and income; and
- A rich history and heritage.



I. INTRODUCTION AND SUMMARY

Town of Greece Bicycle and Pedestrian Master Plan



The desired results of this Plan – increasing the viability of biking and walking as transportation and recreation options for residents of and visitors to the Town of Greece - will benefit the Town in numerous ways. In addition to being highly enjoyable activities in and of themselves, bicycling and walking fulfill important functions in the overall transportation network and in people's everyday lives. Active transportation provides basic mobility - and therefore access to work, school, and necessary personal appointments - for people who cannot afford a car or who are unable to drive or are prohibited from driving, and provides transportation options for those people who would prefer not to travel by automobile on all trips. Bicycling and walking can also serve as the final leg of transit trips to and from other parts of the Rochester region, allowing riders to get between home and their boarding stop and between their disembarking stop and their final destination.

In addition to these direct benefits to the mobility of bicyclists and pedestrians, increased active transportation benefits the overall transportation network by providing cost-effective options for short trips which can provide alternatives to car trips and reduce roadway congestion. Bicycling and walking produce no emissions, and so provides travel options that do not contribute to air pollution. Bicycling and walking have personal and social benefits as well, as they provide opportunities to incorporate physical activity into the daily routines of Town residents, leading to better public health and a greater quality of life. Providing better and safer access for our students to walk or bicycle to school can help reduce childhood obesity, as well as create more alert students who achieve more in and out of the classroom.

Bicycling and walking can also serve as appealing activities for families looking to engage in new recreational opportunities. Communities across the country have embraced non-motorized transportation as a popular and beneficial option that residents increasingly expect and visitors actively seek when making choices about where to locate their families. With this Plan, the Town of Greece is taking important steps towards a future in which bicycling and walking are experienced as viable options for trips of all purposes.



Plan Summary

The Town of Greece Bicycle and Pedestrian Master Plan takes a wide-reaching approach to enhancing the Town's current accommodation and promotion of active transportation. A significant number of the Plan's recommendations identify and describe specific infrastructure improvements that will make the Town a better place to get around by bicycle and on foot. The Plan also recognizes that there are other ways to promote bicycling and walking activity, specifically engaging the private sector and increasing its role in providing facilities, as well as performing outreach and education initiatives that can make more Town residents aware of the many existing (and future) opportunities that are available. Following this introductory section, the Plan is divided into six parts:

- Analysis of existing conditions, focusing on the Town's existing bicycling conditions and the identification of locations that have the greatest potential for increased bicycling and walking;
- Identification of numerous specific locations for, and types of, new bicycling and walking facilities, as well as detailed descriptions of several of these proposed facilities;
- Design guidance for numerous established and emerging facility types that the Town can use as a reference as the Plan's infrastructure-related recommendations are implemented;
- A detailed review of the Town's existing zoning and development regulations, as they relate to bicycling and walking, as well as specific recommended enhancements to these codes that have the potential to bring about a more bicycle- and pedestrian-friendly community; and
- Numerous recommendations for reaching out to the existing and potential bicycling and walking communities and educating them on opportunities and responsibilities, with a focus on connecting the wide range of potential partners that have a stake in making Greece a great place to walk and ride.



I. INTRODUCTION AND SUMMARY

Town of Greece Bicycle and Pedestrian Master Plan

- A funding and implementation strategy, which identifies existing and new ways that the Town can secure resources to implement the Plan's recommendations

Public and Stakeholder Involvement

This Plan is heavily indebted to the residents of Greece and the surrounding community, as well as the many local and regional stakeholders, who significantly informed its recommendations. Many of the elements of this Plan were directly identified by members of the public at a June 2013 public workshop, and through ongoing and sustained public comment opportunities. Participants at the public workshop



- learned about the many benefits of active transportation;
- reviewed and provided feedback on the Plan's inventory of existing conditions;
- identified and prioritized specific facility improvement needs;
- reviewed and commented on existing and proposed elements of the regional trail system; and
- completed a public survey that included elements related to demographics, current bicycling and walking habits, attitudes toward bicycling and walking, and needed infrastructure enhancements - the results of the survey and other public comments received are included in Appendix A.

The development of the Plan was guided by a Project Advisory Committee (PAC). The Plan development team met several times with the PAC, which includes a diverse set of stakeholders that collectively represent the Town itself, implementing and neighboring jurisdictions, local school districts, the public health community, advocacy groups, and the general public. Groups represented on the PAC include the following:

- Town of Greece Chamber of Commerce;
- Town of Greece Constituent Services;
- Town of Greece Department of Development Services;
- Town of Greece Department of Public Works;
- Town of Greece Planning Board;
- Town of Greece Police Department;
- City of Rochester Department of Environmental Services;
- Monroe County Department of Transportation;
- Rochester Genesee Regional Transportation Authority;
- Genesee Transportation Council;
- New York State Department of Transportation;
- Greece Central School District;
- Hilton Central School District;
- Spencerport Central School District;
- Unity Health System;
- Greece residents; and
- local bicycling and walking commercial establishments.



In addition to advising on the Plan's development and elements, many members of the PAC and the public participated in separate bicycling and walking tours of the Town in August 2013. These tours provided an opportunity to further explore many of the public-identified recommendations, identify new opportunities, and study certain areas in significant detail from the perspective of those who will benefit most from the Plan's implementation. The findings of the PAC bicycling and walking tours are included in Appendix B.



II. EXISTING CONDITIONS EVALUATIONS

Town of Greece Bicycle and Pedestrian Master Plan



II. EXISTING CONDITIONS EVALUATIONS

Existing Bicycling 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 much of this information has been gleaned from input provided by the public through the processes described in the previous section, an objective, system-wide evaluation is also useful in setting the stage for identifying and prioritizing facility improvements.

Accordingly, an evaluation of existing bicycling conditions¹ was conducted for the Town's network of arterial and collector roads (approximately 110 centerline miles) using the Bicycle Level of Service Model, based on data collected in April 2013. This model, which has been applied on tens of thousands of miles of roads throughout the United States, is a fundamental performance measure and design tool in the national *Highway Capacity Manual (HCM 2010)*. The following sections provide background information and data descriptions for this evaluation tool.

Bicycle Level of Service

The Bicycle Level of Service (Bicycle LOS) Model, a bicycling conditions performance measure, is a "supply-side" criterion. It is an objective measure of the bicycling conditions of a roadway which provides an evaluation of bicyclists' perceived safety and comfort with respect to motor vehicle traffic and roadway conditions. This widely used and nationally adopted methodology quantifies the quality or level of service (accommodation) for bicyclists that currently exists within the roadway environment. One of the greatest benefits of incorporating Bicycle LOS is the indication it provides regarding which network segments have the greatest needs. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. With statistical precision, the Bicycle LOS Model clearly reflects the effect on bicycling suitability or "compatibility" due to variations in the following primary factors:

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

This method is not limited to merely assessing conditions; it can also serve as an important and effective planning and design tool in the identification of restriping candidates, development of street cross-section performance guidelines, and planning of bicycle routes.

The bicycle level of service analysis produces, for each study network segment, an objective score and "grade" which measures bicycle accommodation on that section of roadway, as shown in Table 1. For example, a particular segment without any type of bicycle facility (given other roadway characteristics detailed above) may provide a level of service "D." Using this tool, it is possible to determine how much accommodation benefit would be achieved as a result of improvements. In the above example, adding a designated bike lane might improve the segment's level of service to "B." Through this process, it is possible to simply and objectively determine which roadways have the greatest needs relative to the rest of the network.

¹ In the case of the pedestrian mode, the Town's extensive existing sidewalk network and continued intent to promote filling sidewalk gaps (discussed later in this section) renders the existing conditions evaluation less critical, hence the focus on the bicycle mode for this analysis.



II. EXISTING CONDITIONS EVALUATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Table 1. Bicycle Level of Service Grades and Scores

Level of Service	Numerical Range
A	≤ 1.5
B	>1.5 and ≤ 2.5
C	>2.5 and ≤ 3.5
D	>3.5 and ≤ 4.5
E	>4.5 and ≤ 5.5
F	> 5.5

Existing Conditions Analysis Results

Bicycling conditions analysis were performed for more than 300 directional network segments based on the collected data. The distribution of bicycle level of service grades is shown in Figure 1. At a distance-weighted network-wide level, the Town of Greece was found to currently provide bicycling conditions that correspond to a bicycle level of service of 2.46 (“B-”), which is generally favorable compared with many other metropolitan area municipalities. This positive result is due in part to the absence of very high speed, high volume roads in the town that are more likely to yield extremely poor bicycle level of service results (i.e., “E” and “F”). In addition, paved shoulders at least four feet wide are present on 45% of the network. A network-wide map of the existing bicycling conditions is shown in Figure 2. In the limited cases where one direction of travel along a segment has a different level of service grade than the other direction of travel, these maps show the worse of the two grades. Appendix C contains the full bicycle level of service dataset.

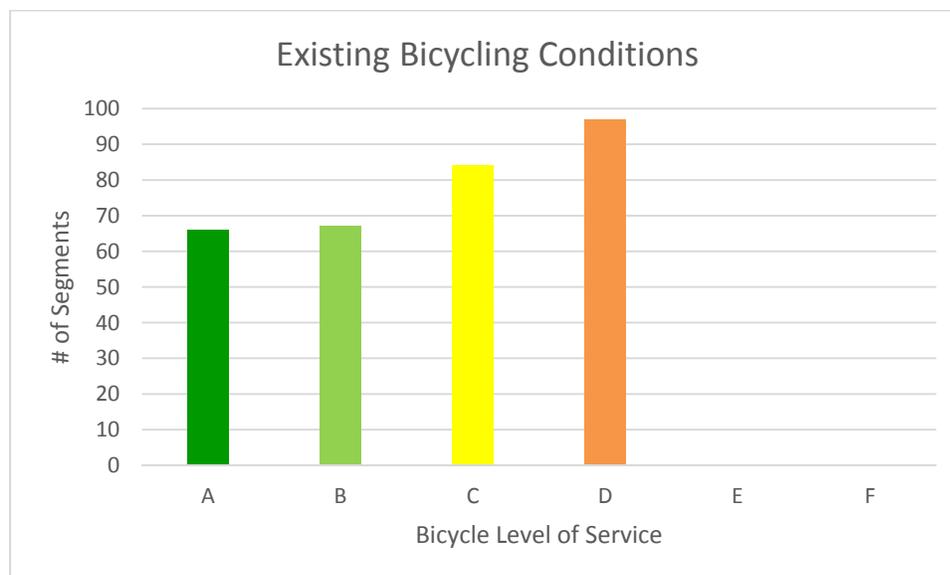


Figure 1. Existing Bicycling Conditions Chart



II. EXISTING CONDITIONS EVALUATIONS

Town of Greece Bicycle and Pedestrian Master Plan

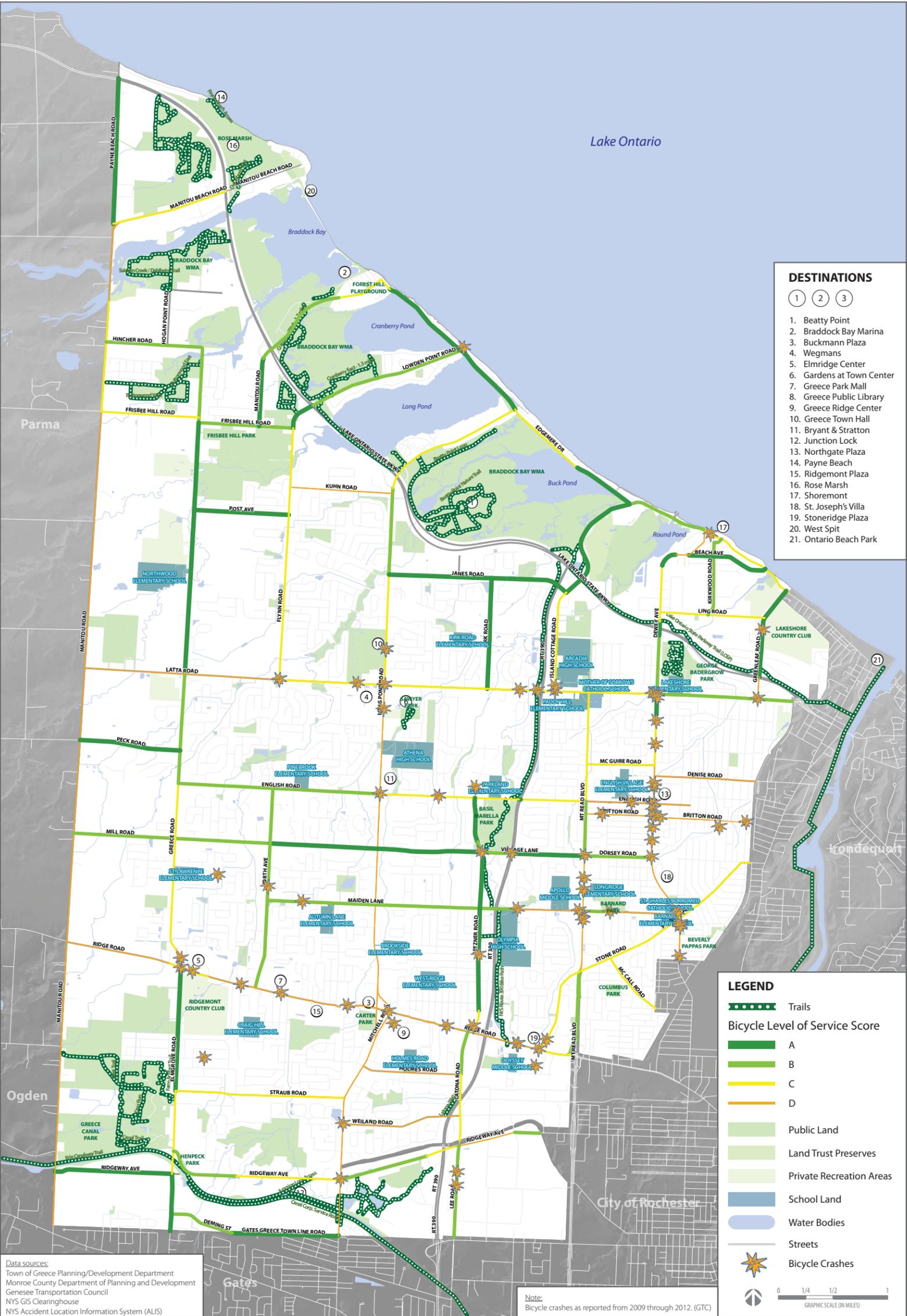


Figure 2: Existing Bicycle Conditions (Bicycle Level of Service)



II. EXISTING CONDITIONS EVALUATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Sidewalk Facilities and Policies

There are over 500 miles of concrete public sidewalk in the Town of Greece. Most of these sidewalks have been constructed by developers due to the town's longstanding sidewalk policy which requires that sidewalks be constructed on both sides of newly built public roads. As a result of this policy, the vast majority of town residents have access to a public sidewalk within sight of their home. Public sidewalks contribute greatly to residents' quality of life by providing safe opportunities for healthy activity and opportunities for social interaction.

The town's Sidewalk Policy requires that all development projects include the construction of public sidewalks along roadway frontage, on both sides of public roads. This requirement applies to commercial and residential development, and for both new development and redevelopment projects. A waiver option is available and must be approved by the Town Board. The policy provides for a fee to be paid upon granting the waiver in an amount sufficient to construct the same linear footage of sidewalk. This fee is applied to the town's Sidewalk Fund and may be used by the town for sidewalk construction elsewhere in the community. In addition to private development and the Sidewalk Fund, the town leverages grant funds when available to construct new sidewalks, including a recent extension of over 1000 linear feet on Mt. Read Boulevard using federal energy conservation funds. Facility recommendations included in this plan are meant to help prioritize the town's allocation of these funds.

The town's Specifications for Construction of Roadways and Utilities includes structural and dimensional specifications for sidewalks. The town's standard public right-of-way width is 60' to provide ample room for road, gutter, tree lawn, utilities, and sidewalks. Street trees are required by the Planning Board as part of most new construction, and the town's Tree Council maintains a list of recommended street tree species which are selected for their hardiness, low maintenance characteristics, shading qualities. Street trees are placed within a 9-10'-wide tree lawn to allow for root expansion without compromising infrastructure, and branches are generally trimmed to a height of 14' to allow clear passage of vehicles and pedestrians alike. The Planning Board works through the site plan review process to improve pedestrian accessibility and connectivity to the public sidewalk network on commercial sites. Sidewalk construction guarantees are obtained as part of the Letter of Credit for each applicable development project.

Sidewalk connectivity is fairly good *within* most residential subdivisions; however, gaps do exist along major arterials and in other key locations that may limit connectivity *between* residential neighborhoods and commercial/service areas. There is a need to logically prioritize sidewalk connection projects and identify cost effective ways of closing those gaps. A handful of neighborhoods, primarily in the older southeast part of town have no sidewalks, sidewalks on only one side of the street, or a single sidewalk along the neighborhood's collector road (e.g.; Hampton Boulevard, Tait Avenue). Many of these subdivision streets exist in a 49.5'-wide public right-of-way, so limited room is available for sidewalk construction. Specific recommendations are needed to address these particular situations.

In maintaining over 500 miles of public sidewalk, Greece spends over \$100,000 annually on repairs and plowing. Greece's sidewalks are remarkably well maintained, due in large part to a substantive construction specification, well-planned placement and spacing from other assets such as street trees, and a rigorous maintenance routine. The town generally plows one side of the road in subdivisions (alternative sides each year), and usually both sides on major collectors and arterials. As with road plowing, the town plows public sidewalks regardless of jurisdiction, meaning that sidewalks on county and state roads are plowed as well as town roads.

Non-Motorized Demand Evaluation

A pedestrian priority map was assembled using a variety of variables. ArcGIS and its Spatial Analyst extension were used to analyze the combination of variables to produce a "heat map" illustrating the highest and lowest pedestrian priority areas within the Town of Greece. These areas represent the "hot spots" for which priority investments should be made to improve and enhance the pedestrian environment.

The variables used for analysis are as follows:



II. EXISTING CONDITIONS EVALUATIONS

Town of Greece Bicycle and Pedestrian Master Plan



- Schools (local and Bryant and Stratton)
- Parks/recreation areas
- Activity centers (retail centers, beaches, Town Hall, senior facility)
- Transit stops
- Residential density (population/acre)

Buffers were placed around pedestrian generators/attractors at pre-determined distances (1/8-mile, 1/4-mile, 1/3-mile, and 1/2-mile). The result is a graphic illustrating, from high (warm colors) to low (cool colors) where higher values represent areas closer to pedestrian attractors. Sidewalks along the study network roadways were introduced as separate layer file to illustrate the relationship between pedestrian priority areas and the presence of a unified sidewalk network. The results enable the Town to determine the extent of gaps within the pedestrian network.

This map illustrates, through spatial relationships, the areas within the Town where priority investments should be made to improve and enhance the pedestrian environment. Figure 3 on the following page illustrates the draft version of the demand map.

Additional Existing Conditions Background Data

Appendix D of this Plan includes additional existing conditions information in graphic and tabular format. It includes the following information:

- map of road jurisdictions;
- map of transit routes;
- map of population density; and
- table showing population, housing information, area, and population density for Monroe County and its municipalities.



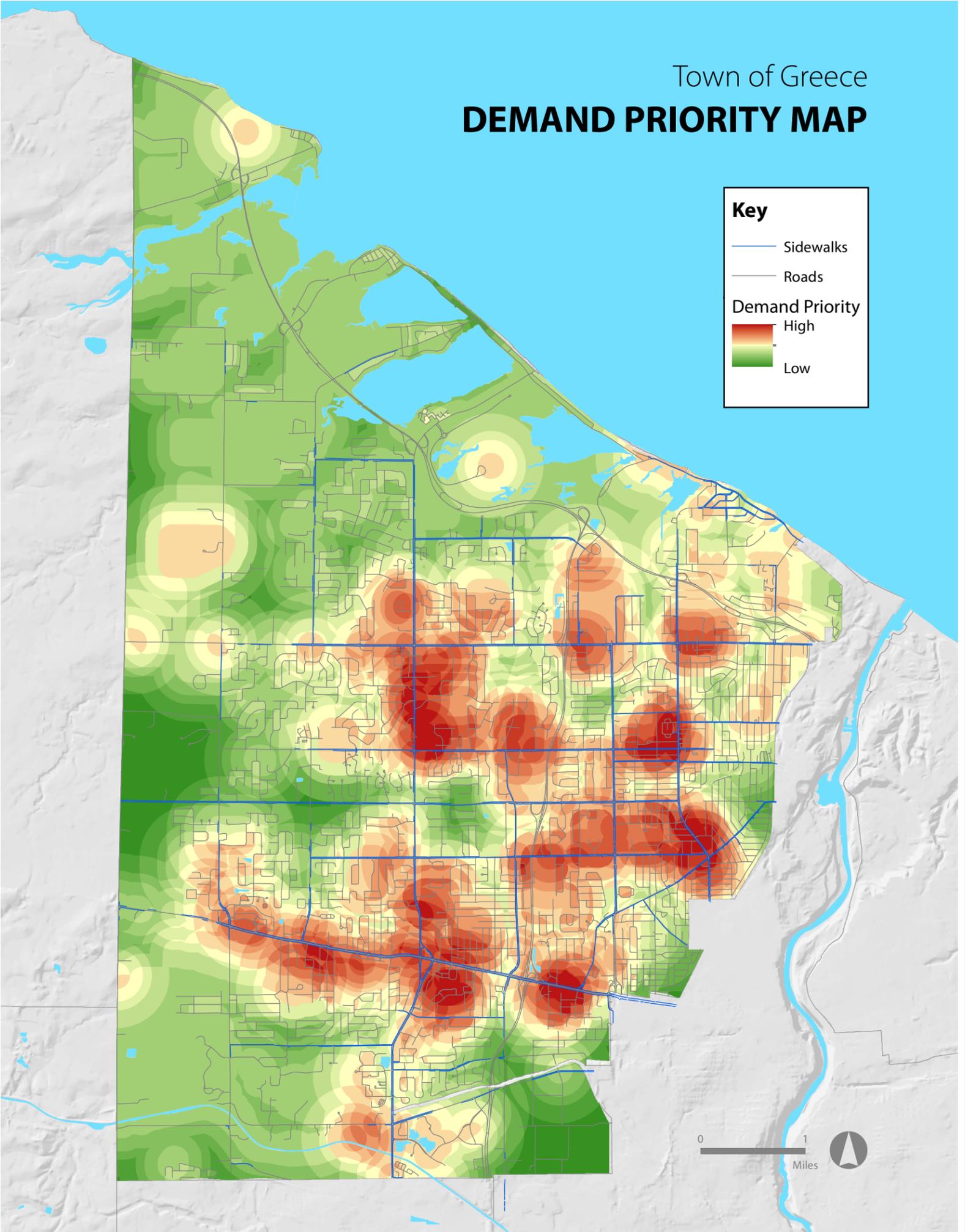
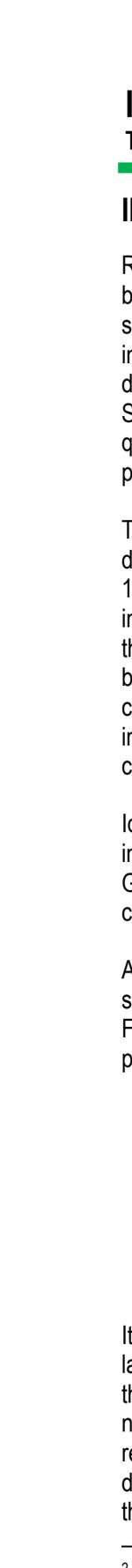


Figure 3: Demand Priority Map





III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

III. FACILITY RECOMMENDATIONS

Review and analysis of existing conditions, extensive public input, and stakeholder involvement collectively yield a broad picture of both general active transportation needs (i.e., facility types) in the Town of Greece, as well as specific projects that would most improve bicycle and pedestrian accommodation. Commonly cited facility types include closure of sidewalk gaps, shared use paths and trails (primarily extensions to the existing trail network), designated bike lanes, intersection improvements, and bicycle-specific signage and pavement markings (such as Shared Lane Markings and Share the Road signage). These projects range from those that can be implemented quickly and at very low costs to those that would be more costly and long-term because of the need for further study prior to design and implementation.

The locations of the recommended facility improvements were compared relative to the demand priority zones² described in the previous section zones to establish a numerical priority demand score for four different project types: 1) Pedestrian, 2) Bicycle, 3) Shared Use Path/Trail, and 4) “Early Implementation” (generally signage-related improvements). In cases where a proposed facility spans more than one zone, the median score is used. Several of the identified shared use path facilities would provide valuable regional connections. To account for the regional benefits that these facilities would provide, and given the Town’s and the region’s long-standing effort to create a connected network of trails, the demand score of these facilities has been doubled in the establishment of implementation priorities. Recommended improvements, regardless of their established priority, may be tied to capital improvement schedules and specific funding opportunities.

Identification of the facilities in this Plan represents a significant enhancement to the likelihood of their implementation as targets of opportunity arise. The established prioritization serves as a general guide to the Town of Greece in phasing implementation, but does not suggest a specific order in which projects will ultimately be constructed.

A list of the Plan’s recommended facility improvements, many of which were directly derived from citizen input, is shown in Tables 2 through 5, as separated by facility type. A companion map of the recommendations is shown in Figure 4. More detailed descriptions of several of the proposed facility improvements, including the following, are provided in the following sections (page number references are indicated in Tables 2 through 5, where applicable):

- Dewey Avenue Road Diet;
- Greenleaf Road pedestrian connectivity improvements;
- Latta Road/Long Pond Road intersection improvements;
- Town Hall campus internal circulation and external connectivity;
- Route 390/Lake Ontario State Parkway Trail signage;
- Several roadway restriping candidates to create new paved shoulders or designated bike lanes;
- Badgerow Park connection trail.

It should be noted that many of the recommendations include the creation of space for paved shoulders or bike lanes. In terms of Bicycle Level of Service, designating bike lanes is secondary to simply providing delineated space that can be used by bicyclists. There are, however, many operational benefits to designating bike lanes including, but not limited to, their striping through intersections (particularly those with exclusive right turn lanes) and their impact in reducing the incidence of wrong way riding. Decisions to designate paved shoulders as bike lanes will be at the discretion of the controlling jurisdictions of roads within Greece. Policy statements on this topic are provided below for the Town of Greece and Monroe County, respectively.

² The demand priority map includes 13 discrete zones, with 13 (darkest red) representing the highest potential demand and 1 (darkest green) representing the lowest. The priority ranks indicated for the recommended facilities correspond to their location relative to these zones. For facilities that pass through multiple zones, the average zone value is used.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



"The Town of Greece desires to accommodate and encourage cycling as an integral part of its transportation network. The town will consider application of on-road cycling provisions including pavement markings, signage, bike routes, and bike boulevards on a case-by-case basis. Each situation will be reviewed in light of the provided design guidance and priorities set out in this plan, and in keeping with the policies of the agency having jurisdiction over a given roadway."

"The choice of whether or not to designate bicycle lanes depends on a number of factors, including available pavement widths, the presence or absence of sidewalks, and other competing uses for the space. Bicycle lanes should not be designated where sidewalks are not present because pedestrians need to utilize the shoulder space for walking. Designating bicycle lanes can also preclude other multimodal uses of the space such as transit stops, parking, and delivery and service vehicles. An undesignated shoulder serves bicyclists by providing space that they can utilize without compromising these other uses. For these reasons, Monroe County's policy is to utilize the shoulder areas on County roads as a multipurpose space rather than dedicating them solely to bicycle use."

This section concludes with a summary of efforts to coordinate facility improvements with the City of Rochester along the Town's border with the City, including identification of specific locations (shown in Figure 4) and facility types.

Table 2. Recommended Pedestrian Facility Improvements

Roadway/Location	Recommended Facility Improvement	Coordinating Jurisdiction(s)	Demand Score	Priority Rank
Dewey (N of Ling)	complete sidewalk on both sides	Monroe Co.	7	12
Edgemere	corridor-wide feasibility analysis in the future	Monroe Co.	6	15
English (W of 390)	complete sidewalk on both sides	Monroe Co.	6.5	13
Flynn (S of Arborway)	complete sidewalk on both sides	Monroe Co.	5	18
Greenleaf (N of Ling)	complete sidewalk on both sides	Monroe Co.	8.5	6
Greenleaf @ LOSP and Latta	improve pedestrian connectivity, including landing pads at bus stops and maintenance issues; see p. 17	NYS DOT/Monroe Co./Town of Greece	9	4
Holmes	complete sidewalk on both sides	Town of Greece	5.5	17
Island Cottage (Latta to Janes)	complete sidewalk on both sides	Monroe Co.	9.5	2
Kirk	complete sidewalk on both sides	Monroe Co.	7.5	11
Kuhn	complete sidewalk on both sides	Monroe Co.	5	18
Latta (Flynn to North Greece)	complete sidewalk on both sides	NYS DOT	6.5	13
Long Pond	complete sidewalk on both sides	Monroe Co.	9	4
Long Pond (N of LOSP)	complete sidewalk on both sides	Monroe Co.	4	21
Long Pond @ Latta	intersection improvements/redesign; see p. 19	NYS DOT/Monroe Co.	8	8
Mt. Read	complete sidewalk on both sides	Monroe Co.	9.5	2
North (English to W Ridge)	corridor-wide feasibility analysis in the future	Monroe Co.	6	15
North Greece	corridor-wide feasibility analysis in the future	Monroe Co.	5	18
Stone (Dewey to Mt. Read)	complete sidewalk on both sides	Monroe Co.	8.5	6
Stone (S of Stone Ridge)	complete sidewalk on both sides	Monroe Co.	10	1
Straub	complete sidewalk on both sides	Town of Greece	8	8
Vintage/Mill (Fetzner to North)	complete sidewalk on both sides	Monroe Co.	4	21
Weiland	complete sidewalk on both sides	Town of Greece	8	8
Residential blocks where sidewalks are absent (not shown on map)	area-wide feasibility analysis in the future	Town of Greece	N/A	N/A



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Table 3. Recommended Bicycle Facility Improvements

Roadway/Location	Recommended Facility Improvement	Coordinating Jurisdiction(s)	Demand Score	Priority Rank
Beach (E of Dewey)	detailed corridor study to create bike facilities	Monroe Co.	8.5	7
Dewey (all)	detailed corridor study to create bike facilities (in coordination with existing adopted study's recommendations); see p. 15	Monroe Co.	10.5	3
Dewey (S of Britton)	study of potential road diet (3-lane cross section including two-way left turn lane)	Monroe Co.	10	4
Long Pond (all)	detailed corridor study to create bike facilities (in coordination with recommendations below)	Monroe Co.	8.5	7
Long Pond (Latta to Janes)	roadway restripe to create paved shoulders (would require 10' lanes); see p. 31	Monroe Co.	8	11
Long Pond (Latta to LOSP)	widen sidewalk to create sidepath; install Shared Lane Markings	Monroe Co.	8.5	7
Long Pond (Ridgeway to Mitchell)	roadway restripe to create paved shoulders; see p. 28	Monroe Co.	10	4
Long Pond/Mitchell one-way pair	roadway restripe to create paved shoulders; see p. 26	NYSDOT/Monroe Co.	12.5	1
Maiden (North to Dewey)	detailed corridor study to create bike facilities	Town of Greece	9	6
Mt. Read (all)	detailed corridor study to create bike facilities	NYSDOT/Monroe Co.	7	12
Mt. Read (Stone to English)	roadway restripe to create paved shoulders (would require 10' lanes); see p. 29	Monroe Co.	8.5	7
Town Hall campus	internal non-motorized circulation system; see p. 20	Town of Greece	12	2
Town-wide	conduct Town-wide bike boulevard identification study	NYSDOT/Monroe Co./ Town of Greece	N/A	N/A
various	edge matching with City of Rochester bike facilities; see p. 34	NYSDOT/ Monroe Co./ Town of Greece/ City of Rochester	N/A	N/A

Table 4. Recommended Shared Use Path Facility Improvements

Roadway/Location	Recommended Facility Improvement	Coordinating Jurisdiction(s)	Demand Score	Priority Rank
390 Trail	extend trail south from West Ridge Road to connect with Erie Canal trail	NYSDOT	7	3
Badgerow Park	create formal trail facility; see p. 32	Town of Greece/ Monroe Co.	8.5	2
B&O/Rochester Southern Trail	create trail along rail bed	Town of Greece/ Monroe Co.	5.5	7
Braddock Bay Park to LOSP	non-motorized connection	Town of Greece/ NYSDOT	5.5	7
Hojack Line	investigate potential trail facility	Town of Greece/ Monroe Co.	6	6
Junction Lock Access trail	extend trail eastward toward future Eastman Trail	Town of Greece/ Monroe Co.	7	3
LOSP trail	extend trail westward	NYSDOT	4.5	9
Pickering/Flynn	new non-motorized connection (across creek)	Town of Greece	6.5	5
Town Hall campus	connections to surrounding neighborhood streets (including via possible Vincy Tofany road extension)	Town of Greece	12	1



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Table 5. Recommended Early Implementation Facility Improvements

Roadway/Location	Recommended Facility Improvement	Coordinating Jurisdiction(s)	Demand Score	Priority Rank
390/LOSP interchange	directional/wayfinding signage for trail users and explore infrastructure enhancements to improve trail connections; see p. 24	NYSDOT	8	4
Maiden (Frear to Pomona)	roadway restripe to have paved shoulder on both sides (currently only on N side); see p. 27	Town of Greece	12.5	1
Maiden/390 interchange	trail/street connection improvements	Town of Greece/ NYSDOT	10	3
Route 390 Trail	develop/install cyclist-oriented sign package for Route 390 Trail, including wayfinding signage and advance crossing signage at Latta	NYSDOT	7	5
various	Shared Lane Markings (and possible Share the Road signage) on many arterials/collectors with posted speeds of 35 mph or less and no existing bike facilities	NYSDOT/Monroe Co./ Town of Greece	N/A	N/A



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Figure 4: Recommended Facility Improvements

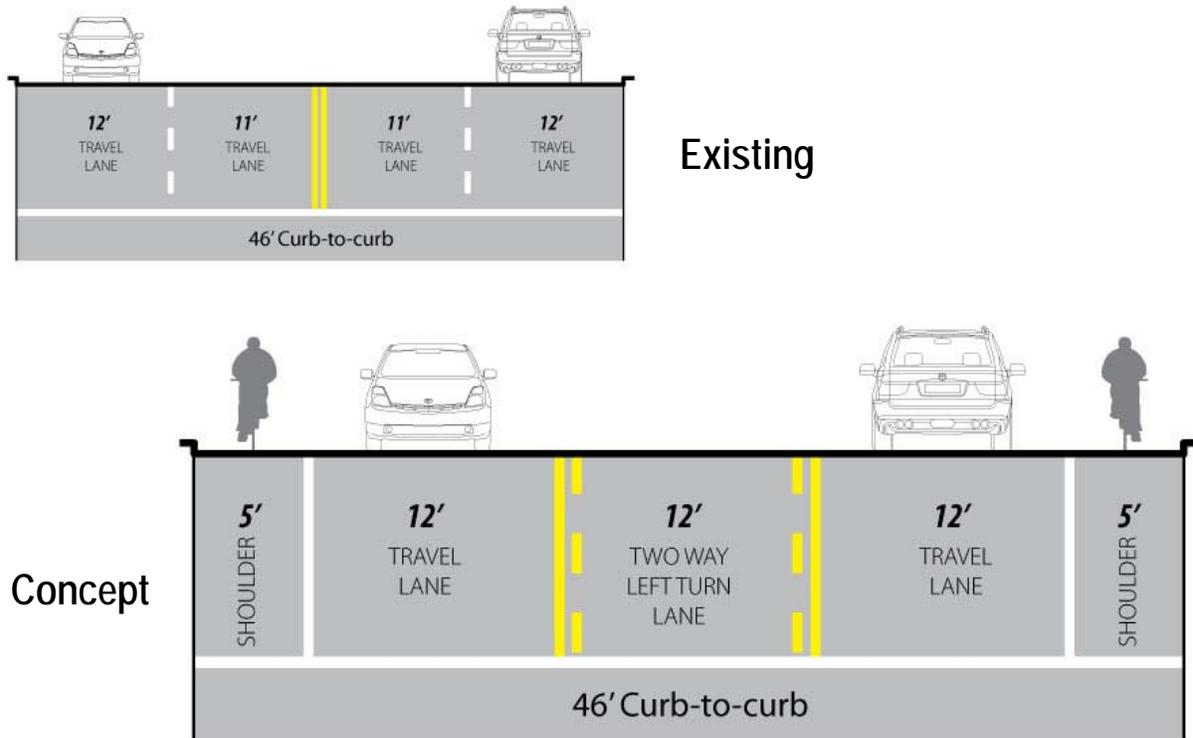


III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Dewey Avenue Potential Road Diet (from Britton Road to Greece/Rochester municipal line)



Context

The Dewey Avenue Corridor has been studied in recent years as an opportunity for enhancements to both the private development patterns and public realm. The segment of Dewey Avenue from Britton Road to the Town of Greece / City of Rochester municipal line has variations of cross sections. As a result of feedback gained from the *Bicycle and Pedestrian Master Plan*, as well as recommendations from the *Dewey Avenue Corridor Traffic Calming Study*, this area has been identified for a road diet recommendation. As stated in the *Traffic Calming Study*, the volume/capacity (also referred to as degree of saturation, represents the sufficiency of an intersection [or segment of roadway] to accommodate the vehicular demand) analysis for the segment of Dewey Avenue suitable for a road diet are acceptable under existing conditions and future restriped (road diet) conditions.

Issues & Concerns

Dewey Avenue within the aforementioned study area has a high density of residential development, along with pedestrian and bicycle attractors such as St. Joseph's Villa, St. Charles Borromeo Catholic School Barnard Elementary School, Northgate Plaza, and the former Wegmans site at Britton Road. The roadway width varies from 46' to 56' feet. In addition, the intersection of Stone Road and Dewey Avenue has a history of pedestrian and bicycle related crashes documented in the past five years. The segment of Dewey Avenue from Britton Road to the Town of Greece/City of Rochester municipal line has experienced eight recorded bicycle crashes in the same period.

Recommendation

It is recommended that the portions of Dewey Avenue which have a curb-to-curb width of 46' be restriped from 4-lanes to 3-lanes with a two-way left-turn lane (2WLT) and bicycle lanes. The concept illustrated above highlights the road diet configuration.



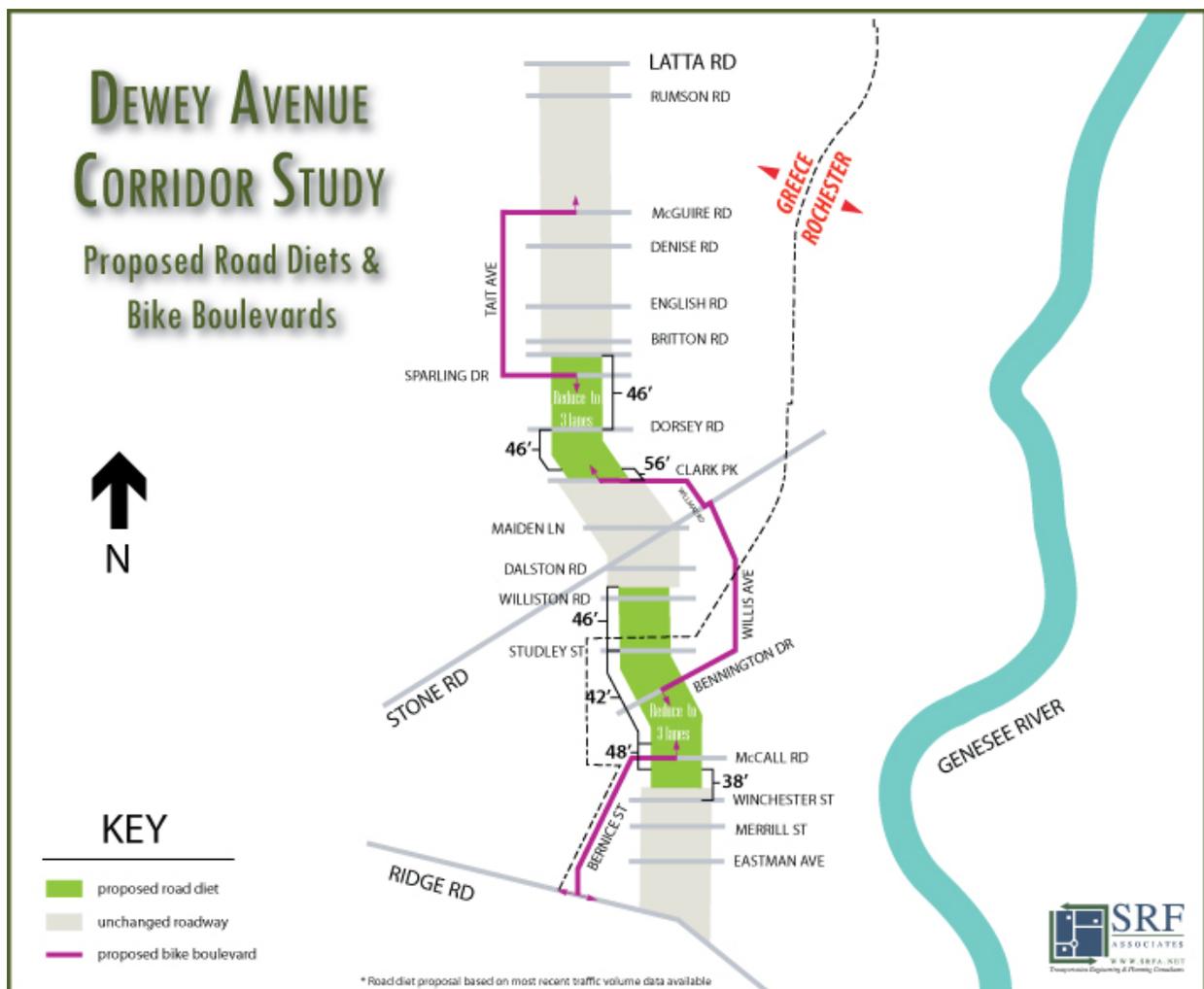
III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



For the segments within the area of concern that expand to a 56' curb-to-curb width where a road diet is not feasible because of higher traffic volumes, it is recommended that the *Town of Greece Bicycle and Pedestrian Master Plan* refer to the *Dewey Avenue Corridor Traffic Calming Study* (not formally adopted) as a starting point in determining alternate bicycle routes. These alternate routes may be classified as bicycle boulevards – low volume, low speed roadways optimized for bicycle travel. The illustration below, taken from the Corridor Study, shows the approximate locations of potential bicycle boulevard routes. Future consideration of any routes should be refined and planned accordingly to provide optimal linkages to the Dewey Avenue corridor and surrounding neighborhoods.

A detailed crash analysis for the corridor to determine crash types and crash patterns is also recommended. The findings of this analysis can be used to identify targeted educational and/or engineering crash countermeasures.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Greenleaf Road Connectivity Improvements (from Greenleaf Meadows to Latta Road)

LEGEND

- LOSP TRAIL
- IMPROVE PEDESTRIAN CONNECTION
- ADDRESS MAINTENANCE CONCERNS
- PHOTO LOCATION & ORIENTATION



①



②



Context

Greenleaf Road provides a north-south connection from Latta Road to Beach Avenue. The Lake Ontario State Parkway Multi-use trail crosses at a point along the roadway. Moderately dense residential developments are located on either side of the roadway. From these developments, such as Greenleaf Meadows, Beach Avenue and Lake Ontario are less than a mile away. Transit stops are located at the intersection of Greenleaf and Latta Roads. Residents have noted the frequent use of the segment of roadway by pedestrians during summer and winter months.

Issues & Concerns

Greenleaf Road has been noted on numerous occasions throughout the Study as an area of concern for residents. Residents have voiced their thoughts on the condition of the bridge crossing the Lake Ontario State Parkway as it relates to pedestrians walking alongside the travel lanes. Photo 1 shows the narrow asphalt path located on the eastern side of Greenleaf Road. It is difficult for a pedestrian to walk along the path provided as vegetation encroaches into the path.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Those individuals choosing to step off the path must walk on the painted shoulder space provided adjacent the travel lane. Photo 2, illustrates the conditions of the narrow sidewalk connecting the northern and southern ends of the bridge along the eastern side. The figure on the previous page highlights the residential development of Greenleaf Meadows. Residents have expressed concerns about walking from the development to the intersection of Greenleaf and Latta Roads to use the transit system. Handicapped access and those needing to use a wheelchair are unable to traverse the bridge on the provided paths.

Recommendation

It is recommended that improved pedestrian connections be made throughout this area, including the installation of landing pads at bus stops. Any improvements will require additional engineering study, including right-of-way analysis, should be sensitive to the multi-jurisdictional characteristics of the immediate area; inter-jurisdictional cooperation should be encouraged to discuss viable solutions. The NYSDOT maintains the Lake Ontario State Parkway (LOSP) while the Monroe County DOT is responsible for Greenleaf Road outside the purview of the LOSP overpass and bridge deck. Any enhancements should be coordinated with the Rochester Genesee Regional Transportation Authority (RGRTA) as transit stops are located in the immediate area. Given these various jurisdictional responsibilities, the Town of Greece should assume leadership in obtaining funds, designing improvements, and acquiring right-of-way (if necessary).

The importance of providing a safe environment for high pedestrian activity areas for all users cannot be understated. Maintenance issues regarding the condition of the existing sidewalk on the bridge should be addressed. It is important when planning any improvements along the bridge to consider the structural integrity of the overpass. Furthermore, snow removal is an important item to plan for throughout the design phase of enhancements.



III. FACILITY RECOMMENDATIONS

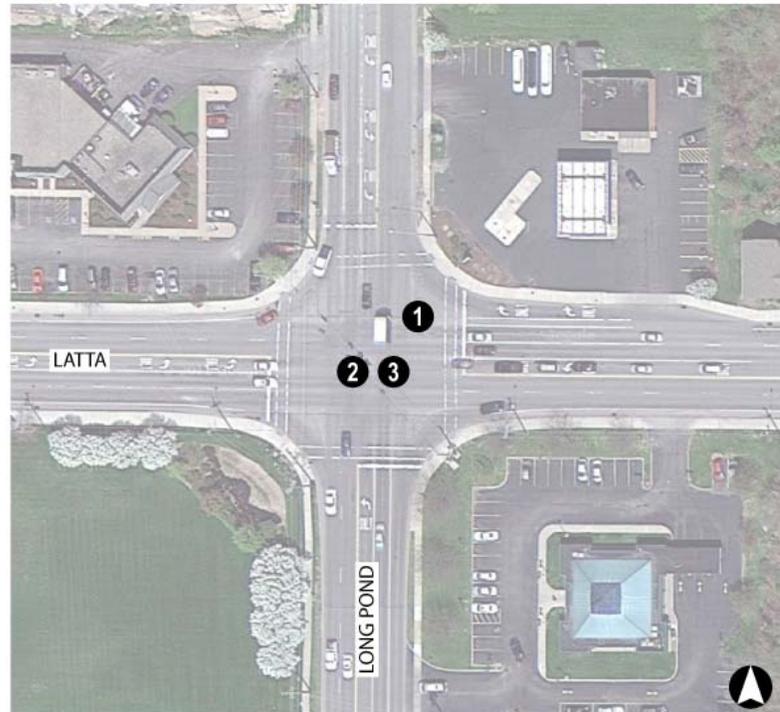
Town of Greece Bicycle and Pedestrian Master Plan



Latta Road and Long Pond Road Intersection Improvements

LEGEND (ALTERNATIVES)

- 1 INSTALL CHANNELIZED RIGHT-TURN ISLAND
- 2 INSTALL "TURNS YIELD TO PEDESTRIANS" SIGNAGE (MUTCD R10-15)
- 3 INCREASE THE GREEN "WALK" TIME



Context

The intersection of Latta and Long Pond Roads experiences high volumes of vehicular traffic during a typical weekday. Feedback generated by the public has indicated the unpleasantness of the environment for a pedestrian attempting to cross any of the approaches to the intersection. It was noted that seniors are a frequent user group of the intersection. Pedestrian generating land uses are located nearby including Wegmans, Tim Hortons, Bruegger's Bagel, YMCA Walgreen's, and the future 176-unit Gardens at Town Center senior housing complex under construction behind the YMCA. The complex will have pedestrian and vehicular access to both Latta and Long Pond Roads, and will be located adjacent to Sawyer Park.

Issues & Concerns

Residents have voiced concerns over vehicle speeds travelling through the intersection and making turns on adjacent departure lanes. The "look" and "feel" of the intersection was mentioned as hardened and not pedestrian friendly. Crossing distances on any of the approaches are no less than 75'.

Recommendation

An alternative to consider is the installation of right-turn channelized island (marker 1). This would reduce crossing distances for pedestrians. Less intensive improvements may be to install "Turns Yield to Pedestrians" signage (marker 2). This would encourage drivers to be aware of pedestrians that may be in the crosswalk. Finally, consideration should be given to increasing the green walk time for pedestrians crossing the intersection. Using walk times of 3.5' to 3' per second enable individuals whom walk slower additional time to cross.

In addition, a detailed crash analysis for the corridor to determine crash types and crash patterns is recommended. The findings of this analysis can be used to identify targeted educational and/or engineering crash countermeasures.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Town Hall Campus Internal Circulation and External Connectivity Concept

Context

The Town Hall campus located on Vince Tofany Boulevard includes a significant cluster of destinations for residents and visitors. In addition to the wide range of services provided within the Town Hall building, the campus includes the Greece Public Library, the Court House, the Community and Senior Center, and the Historical Society and Museum. The possibility of moving the Greece Police Department to the campus is being considered for the future. The Town facilities are set within expansive open space that includes a popular community playground. Adjacent land use is predominantly single family residential, with the Department of Public Works complex directly to the south of the Town Hall campus.

Comments from residents during the 6/12/13 public meeting indicated a desire for improved pedestrian and bicycle connections from surrounding neighborhoods to the Town Hall campus, and a desire for an improved internal pedestrian walkway system around Town facilities. Concurrently, the Town is exploring the prospect of extending Vince Tofany Boulevard to connect with Latta Road.

Recommendations

The “Town Hall Trails” conceptual site plan addresses the needs and opportunities for active transportation improvements on the Town Hall campus. The concept takes advantage of existing opportunities and provides a holistic approach to establishing a safe, sustainable, and attractive multi-modal environment.

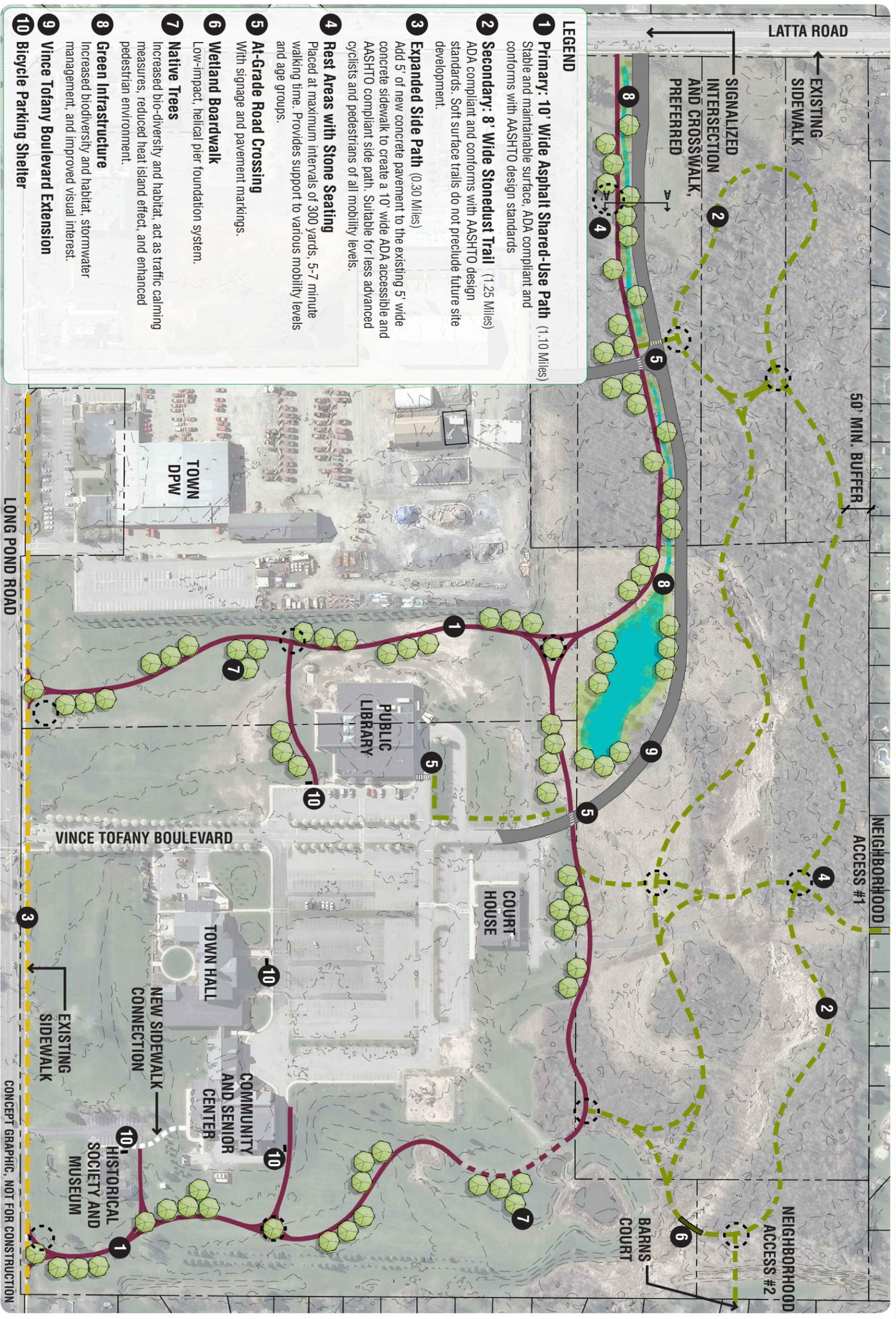
An extension of Vince Tofany Boulevard to Latta Road will provide improved circulation and access to the DPW complex and the Town facilities. The roadway extension will include consideration of traffic calming to allow for safe co-existence of motor vehicles, pedestrians, and bicyclists. Storm water run-off from the roadway will be managed by a Green Infrastructure system that meets or exceeds NYSDEC requirements. The Green Infrastructure will be embedded within a sustainable and multi-functional landscape that enhances the pedestrian experience and provides numerous environmental benefits.

A hierarchy of shared use paths/trails would provide access from surrounding neighborhoods, connectivity to campus destinations, and a walking/biking network offering healthy recreation and fitness opportunities. All trails will conform to current best design and construction practices and will be fully ADA compliant. Trail alignments will minimize environmental impacts and be respectful of adjacent properties. Resting points are indicated for walkers, and bike parking shelters are suggested at key locations. Soft surface trails on open space parcels would allow for multiple activity opportunities, but would not prevent future site development. The Town Halls Trails concept can be constructed cost-effectively, can be easily maintained, and can be implemented in phases over time.



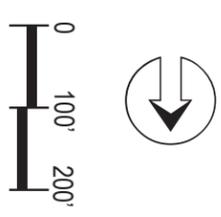
III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



- LEGEND**
- 1 Primary: 10' Wide Asphalt Shared-Use Path** (1.10 Miles)
Stable and maintainable surface. ADA compliant and conforms with AASHTO design standards
 - 2 Secondary: 8' Wide Stonedust Trail** (1.25 Miles)
ADA compliant and conforms with AASHTO design standards. Soft surface trails do not preclude future site development.
 - 3 Expanded Side Path** (0.30 Miles)
Add 5' of new concrete pavement to the existing 5' wide concrete sidewalk to create a 10' wide ADA accessible and AASHTO compliant side path. Suitable for less advanced cyclists and pedestrians of all mobility levels.
 - 4 Rest Areas with Stone Seating**
Placed at maximum intervals of 300 yards, 5-7 minute walking time. Provides support to various mobility levels and age groups.
 - 5 At-Grade Road Crossing**
With signage and pavement markings.
 - 6 Wetland Boardwalk**
Low-impact, helical pier foundation system.
 - 7 Native Trees**
Increased bio-diversity and habitat, act as traffic calming measures, reduced heat island effect, and enhanced pedestrian environment.
 - 8 Green Infrastructure**
Increased biodiversity and habitat, stormwater management, and improved visual interest.
 - 9 Vince Tofany Boulevard Extension**
 - 10 Bicycle Parking Shelter**

- KEY**
- Primary: 10' Wide Asphalt Shared-Use Path
 - Secondary: 8' Wide Stonedust Trail
 - Expanded Side Path
 - Rest Areas with Stone Seating



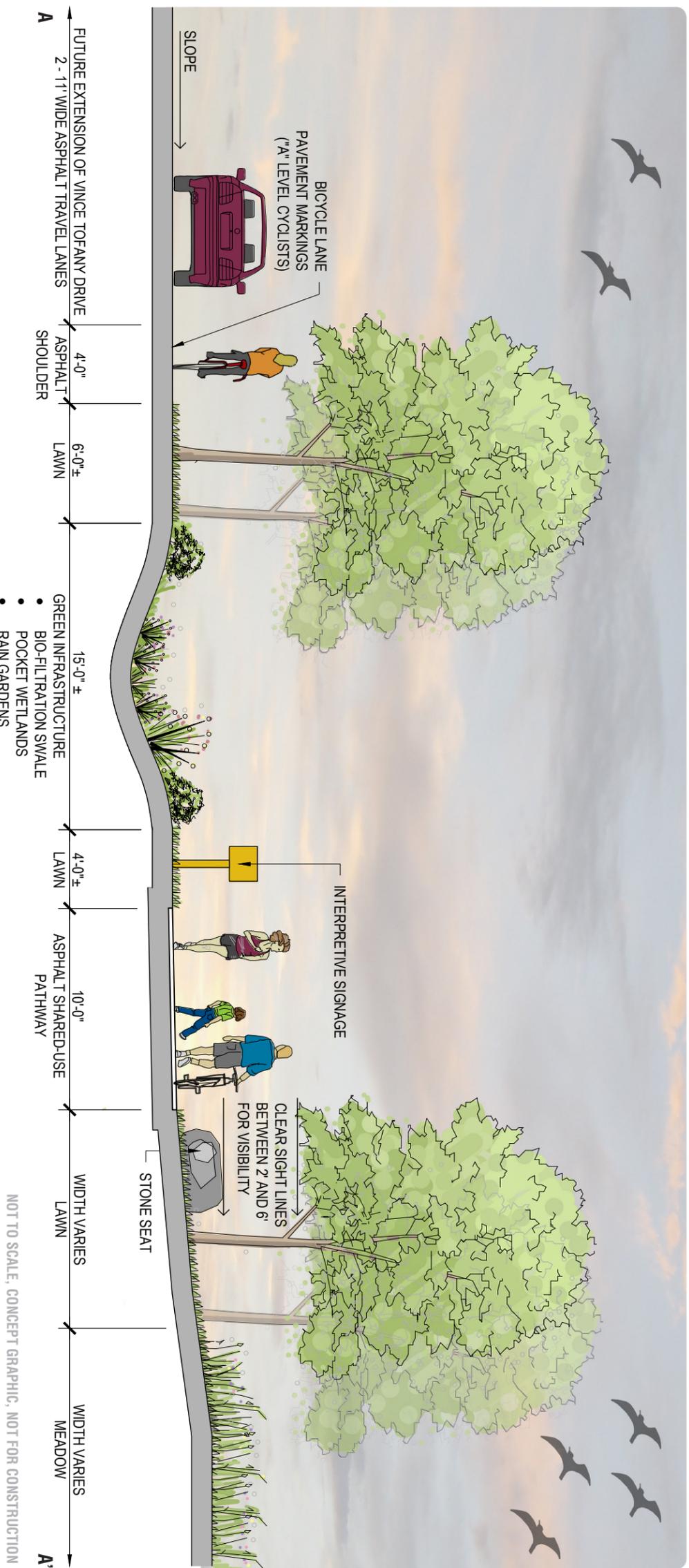
Town Hall Trails
Conceptual Site Plan



Prepared by Sprinkle Consulting in association with SRF & Associates and EDR

III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



VEGETATION AND TREE BENEFITS

- Increased biodiversity and enhanced habitat
- Run-off volume reduction by evapotranspiration
- Run-off volume reduction by infiltration
- Stormwater interception by tree canopy
- Phytoremediation of pollutants
- Reduction in atmospheric carbon
- Interception of particulate matter
- Absorption of ozone, nitrogen dioxide, and sulfur dioxide
- Prevention of erosion through roots stabilizing the soil
- Hardy native deciduous trees provide improved year-round visual quality

GREEN INFRASTRUCTURE BENEFITS

- Reduces soil erosion
- Removes pollutants
- Increases groundwater renewal
- Supports biodiversity
- Conserves water
- Infiltration and groundwater recharge

INTERPRETIVE SIGNAGE OPPORTUNITIES

- Green infrastructure
- Active transportation
- Urban ecology

RESTORATION MEADOW BENEFITS

- Reduced maintenance, only mowed 1-2 times annually
- Increased biodiversity
- Improved visual interest
- Enhanced edge effect

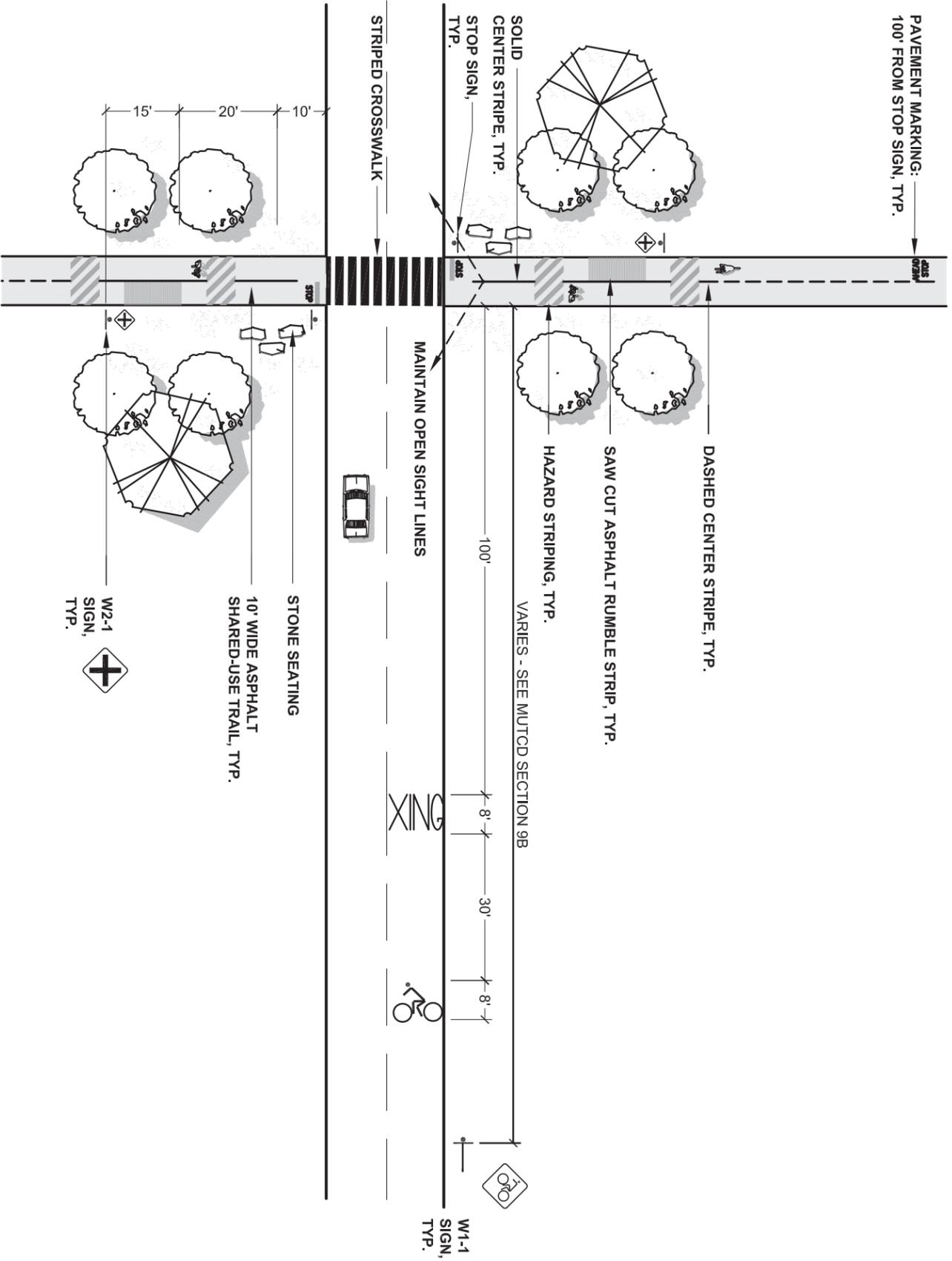


III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



NOTE: ROAD CROSSINGS TO COMPLY WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO) GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES.



NOT TO SCALE. CONCEPT GRAPHIC. NOT FOR CONSTRUCTION

Town of Greece
Bicycle and Pedestrian
Master Plan
Greece, Monroe County, New York

Figure: Town Hall Trails

At-Grade Road Crossings

November 2013



Prepared by Sprinkle Consulting in association with SRF & Associates and EDR

III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

Route 390/Lake Ontario State Parkway Trail Signage Concept

Context

As noted in both the public workshop and the PAC bicycle tour, the interchange between the Lake Ontario State Parkway Trail and the Route 390 Trail lacks wayfinding signs directing cyclists to a safe way through the interchange area. The requirement for cyclists to find their own path may discourage users, particularly families with young children using the trails. This section describes how signs and other marking improvements could be used to improve the utility of this corridor through the interchange.

Recommendations

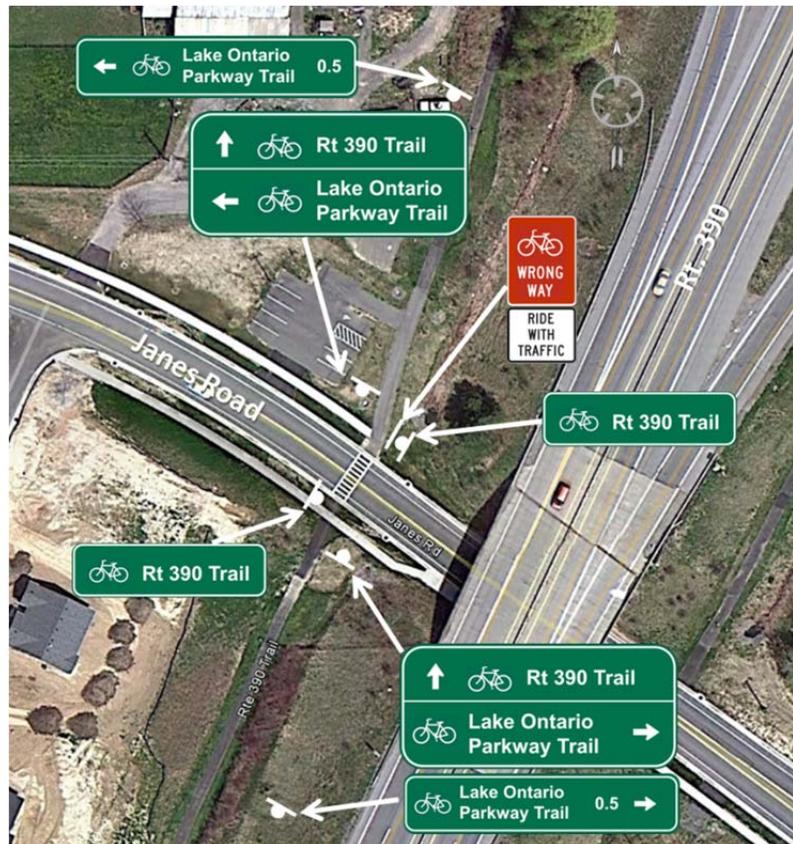
Route 390 Trail and Janes Road – In advance of the intersection of the Route 390 Trail and Janes Road, BICYCLE ROUTE DESTINATION (sign designation D1-1c, *Manual on Uniform Traffic Control Devices*) signs informing cyclists of the presence of, and distance to, the Lake Ontario State Parkway Trail should be provided. These signs will let cyclists know how long they can expect to be on the on-street bike route connecting the two trails.

BIKE ROUTE DESTINATION (D1-1b) signs should be installed at the intersection to inform cyclists of the potential to access the Lake Ontario State Parkway Trail using Janes Road. A STREET NAME (D3-1) sign could inform cyclists traveling on Janes Road of the access to the Route 390 Trail. A bi-directional arrow plaque (M6-4) could be placed under this sign but it is not necessary.

Some inexperienced bicyclists may feel it is more appropriate to ride on the sidewalk. Others may ride on the shoulders but be less knowledgeable (than other bicyclists) about the requirement and safety benefits of riding with traffic. Consequently, BICYCLE WRONG WAY (R5-1b) and RIDE WITH TRAFFIC (R9c3P) sign assembly should be considered for this roadway. One of these signs could be placed on the back of a Route 390 Trail sign.

Because it is only 600 feet to the next guidance point (Island Cottage Road) no route confirmation signs are recommended on Janes Road.

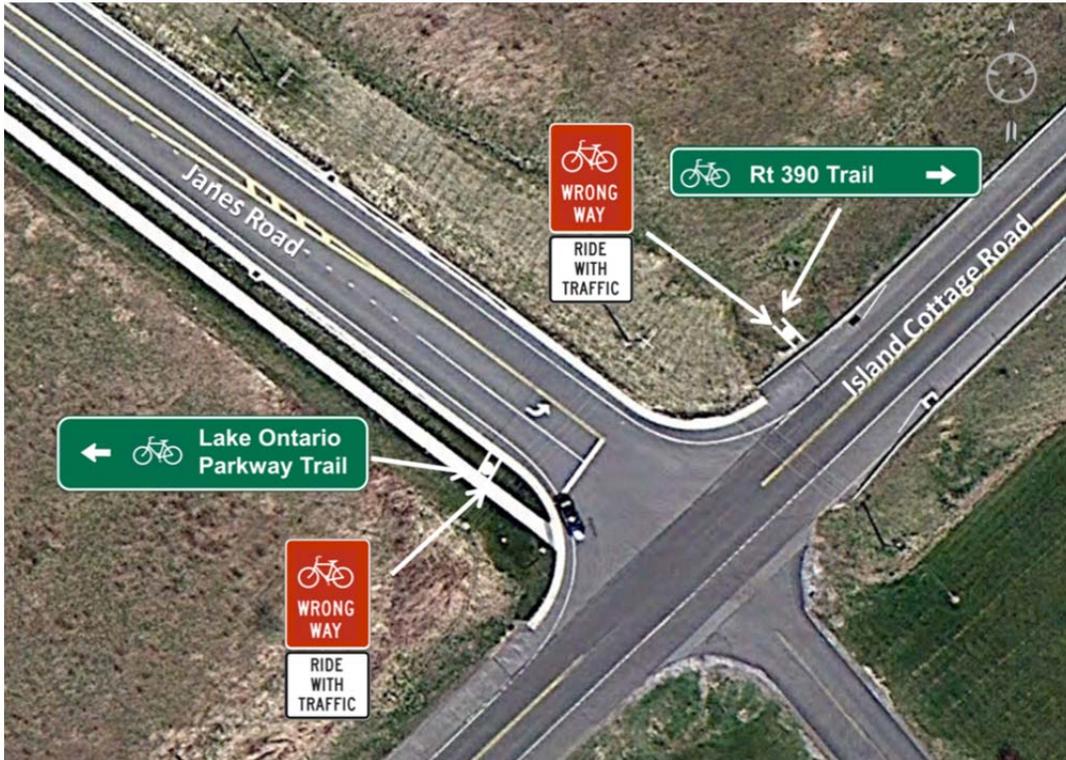
Janes Road and Island Cottage Road – BICYCLE ROUTE DESTINATION signs should be installed for bicyclists traveling east on Janes Road and south on Island Cottage Road. Again, BICYCLE WRONG WAY (R5-1b) and



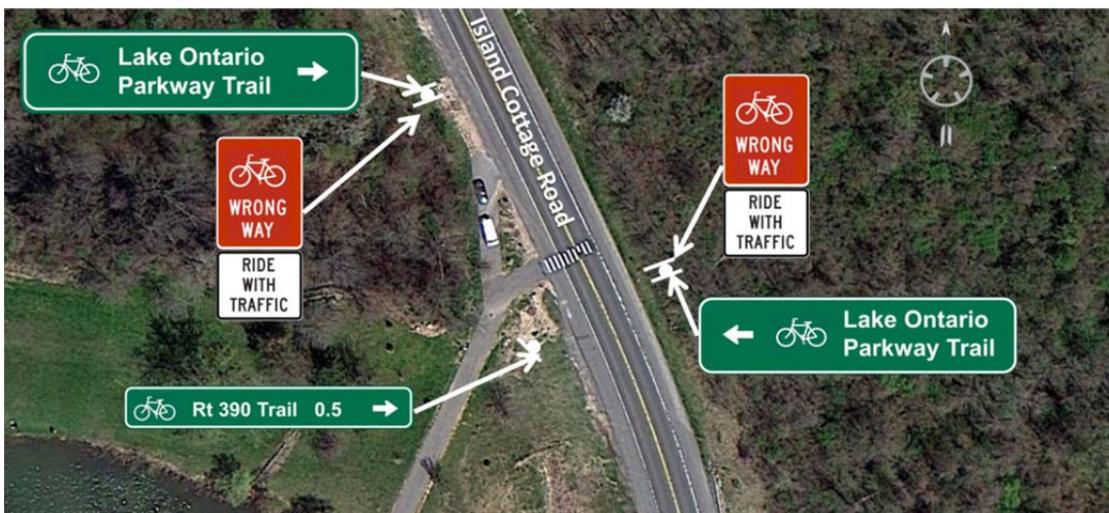
III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

RIDE WITH TRAFFIC (R9c3P) sign assembly should be considered for Janes Road to encourage less experienced cyclists to ride with traffic. On Island Cottage Road there are wide shoulders. This will provide a place a comfortable area for many cyclists to ride. However, there are some drainage structures within the shoulders; solid white lines should be placed on the approach to these structures to guide bicyclist using the shoulders around the drainage grates.



Lake Ontario State Parkway Trail Access and Island Cottage Road – A BICYCLE ROUTE DESTINATION sign that includes distance to the Route 390 Trail should be provided for cyclists approaching this intersection on the Lake Ontario State Parkway Trail approach. At BICYCLE ROUTE DESTINATION sign should also be provided for cyclists traveling north on Island Cottage Road. BICYCLE WRONG WAY (R5-1b) and RIDE WITH TRAFFIC (R9c3P) sign assemblies could be placed on the back of the Lake Ontario Parkway Trail signs.

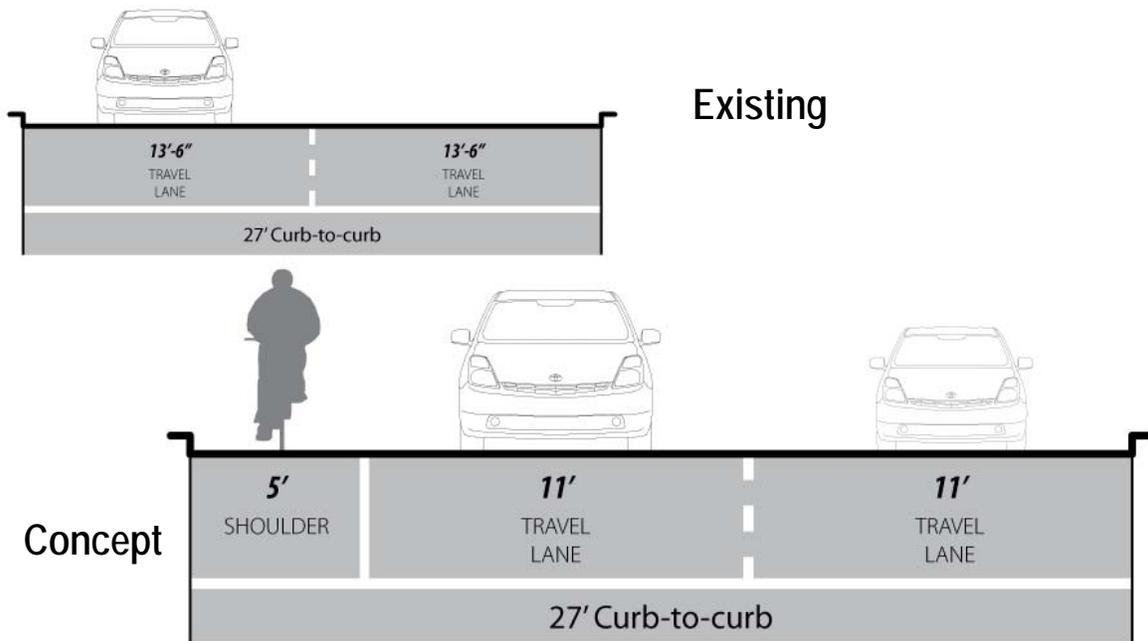


III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Long Pond and Mitchell Roads One-Way Pair Restripe Concept



Context

The area of Long Pond and Mitchell Road is a heavily travelled corridor. Destinations include The Mall at Greece Ridge and Carter Park amongst others. The two roadways are bisected by Ridge Road. Mitchell Road is a one-way northbound roadway with two travel lanes while Long Pond Road within the immediate area is a one-way southbound roadway with two travel lanes. For each direction of traffic the total curb-to-curb width is 27' with 13'-6" travel lanes.

Issues & Concerns

The results of the Bicycle Level of Service (BLOS) Model indicate a letter score of "D."

Recommendation

The proposed concept (see illustration above) entails restriping the two northbound/southbound travel ways to include a 5' paved shoulder with two 11' travel lanes. Providing a 5' shoulder space affords bicyclists a dedicated portion of the roadway and improves the bicycle level of service (LOS "C"). The shoulder space should be provided on the right side of prevailing traffic. Careful consideration should be given as to bicycle operations through the signalized intersections at Ridge Road.

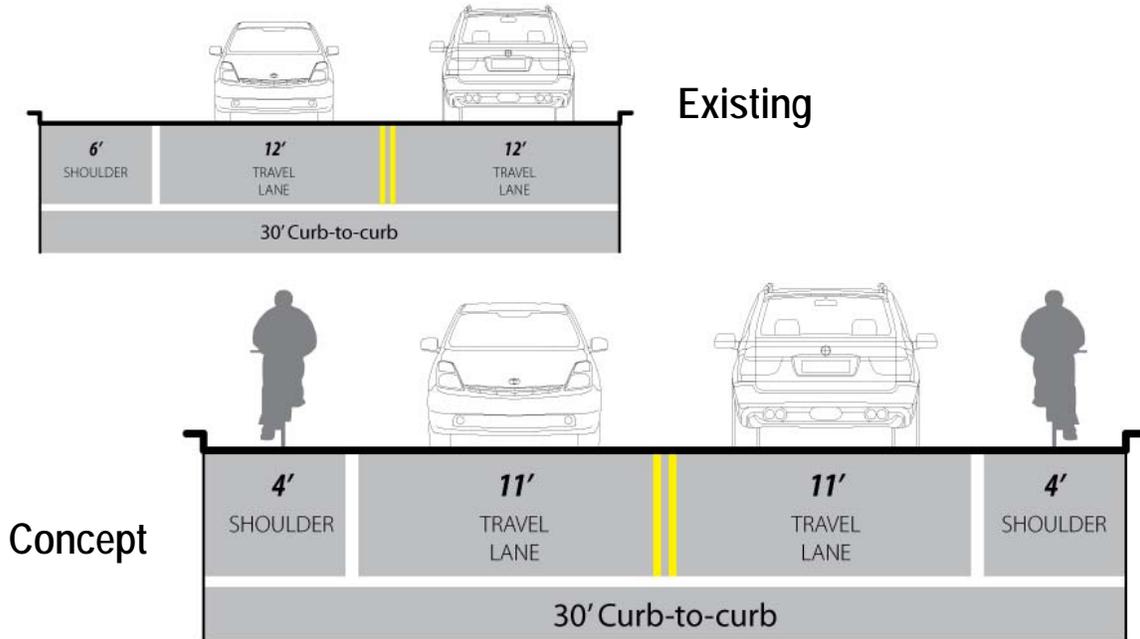


III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Maiden Lane Restripe Concept (between Frear and Pomona Drives)



Context

The portion of Maiden Lane concerning a conceptual restripe is located adjacent Barnard Park and GrandeVille Senior Living Facility. Currently the segment of roadway consists of a 6' paved shoulder on the westbound side with two 12' travel lanes in each direction.

Issues & Concerns

The results of the BLOS Model indicate a letter score of "D."

Recommendation

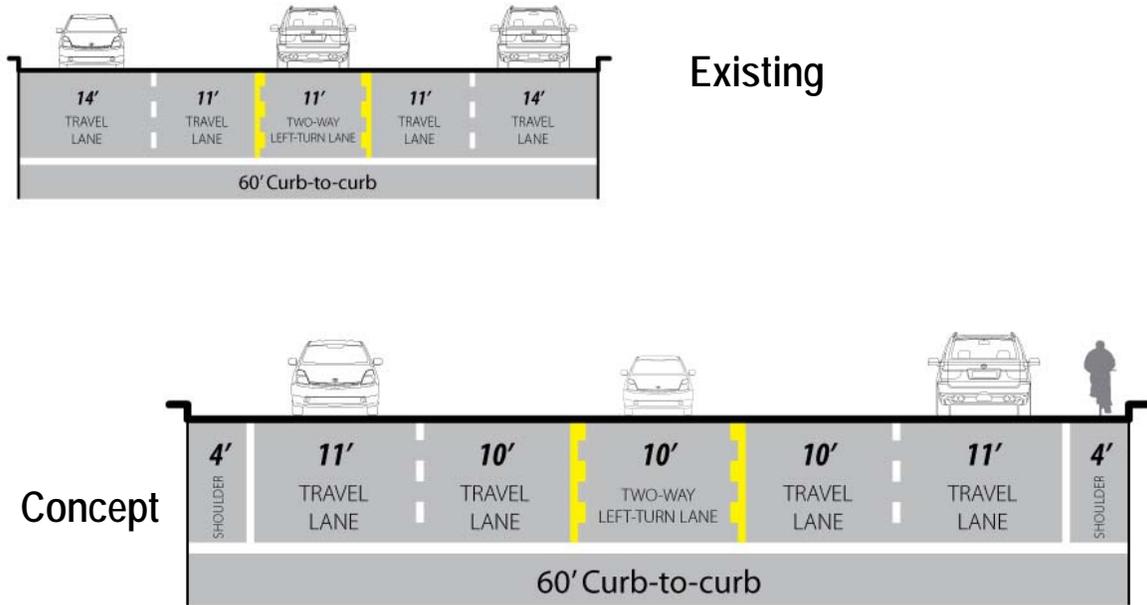
Illustrated above is the proposed concept for Maiden Lane between Frear and Pomona Drives. It is proposed that the roadway be restriped to include two 4' paved shoulders and two 11' travel lanes. Plans exist for reconstructing parts of Maiden Lane – bicycle facilities should be incorporated into these current (2014) reconstruction plans.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

Long Pond Road Restripe Concept (between Ridgeway Avenue and Mitchell Road)



Context

The segment of Long Pond Road between Ridgeway Avenue and Mitchell Road services locations such as Unity Hospital, The Mall at Greece Ridge, adjacent residential neighborhoods as well as numerous office parks near the intersection of Long Pond Road and Ridgeway Avenue. Long Pond Road's current configuration in this segment is two travel lanes in the northbound and southbound directions with a two-way left-turn lane (2WLTL). The outside travel lanes are 14' wide while the inside travel lanes and 2WLTL are 11' wide.

Issues & Concerns

The results of the BLOS Model indicate a letter score of "D."

Recommendation

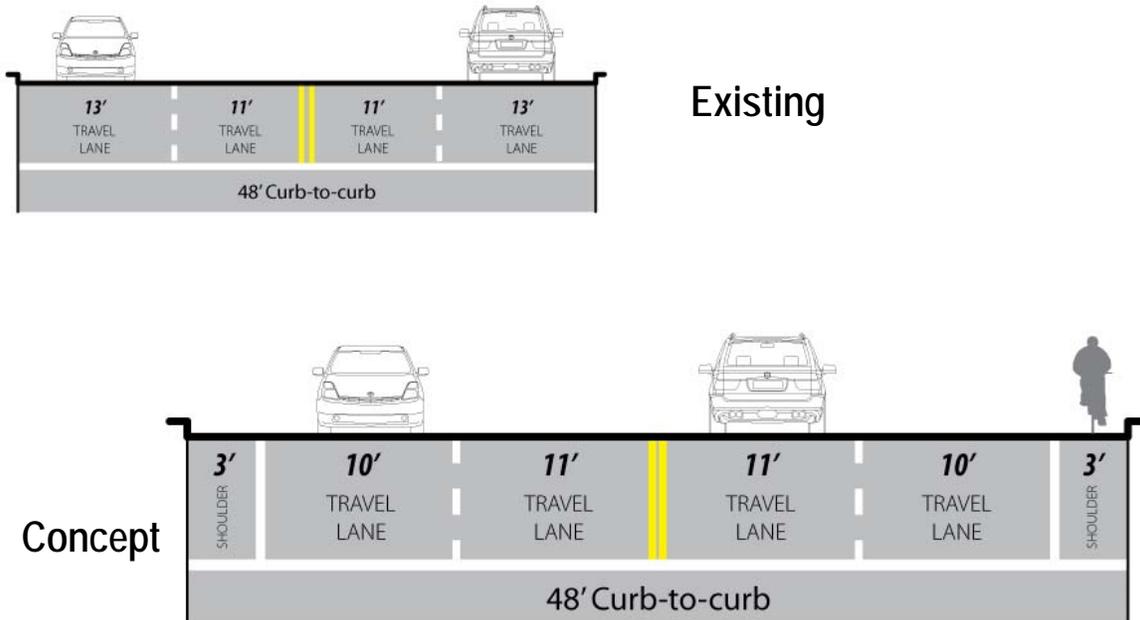
The concept proposes restriping the segment of roadway to include one inside 10' travel lane in each direction, one outside 11' travel lane in each direction, a 10' 2WLTL, and 4' paved shoulders.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

Mt Read Boulevard Restripe Concept (between English and Stone Roads – 48' width)



Context

Mt Read Boulevard between English and Stone Roads provides a varied cross-section for motorists and bicyclists alike. The segments of Mt Read Boulevard between English Road and Wildwood Drive as well as Maiden Lane and Stone Road are 48' in curb-to-curb width. Between Wildwood Drive and Maiden Lane, Mt Read Boulevard expands to 58' in curb-to-curb width. As illustrated above, the 48' section consists of two lanes of traffic in the northbound and southbound directions with 13' outside and 11' inside travel lanes.

Issues & Concerns

The results of the BLOS Model indicate a letter score of "B" between English and Vintage Lane-Dorsey Road. Between Vintage Lane-Dorsey Road and Stone Road, the BLOS letter score is "D."

Recommendation

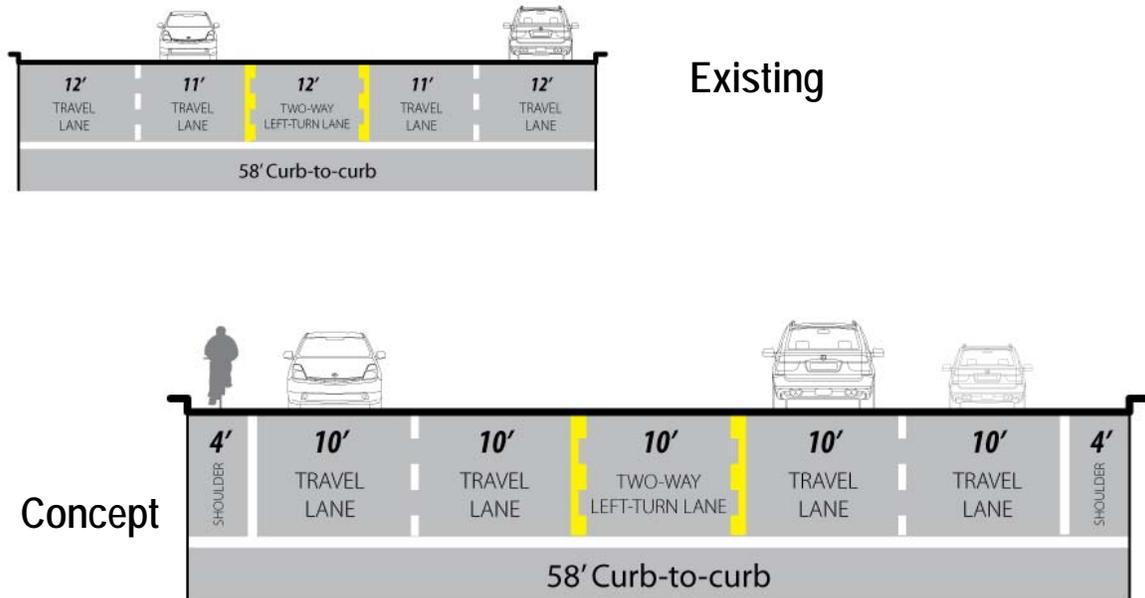
Throughout the 48' width segments, the concept calls for 11' inside and 10' outside travel lanes in each direction with 3' paved shoulders.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

Mt Read Boulevard Restripe Concept (between English and Stone Roads – 58' width)



Context

Mt Read Boulevard between Wildwood Drive and Maiden Lane consists of two travel lanes (12' outside, 11' inside) in each direction with a 12' 2WLTL.

Issues & Concerns

The results of the BLOS Model indicate a letter score of “D” between Wildwood Drive and Maiden Lane.

Recommendation

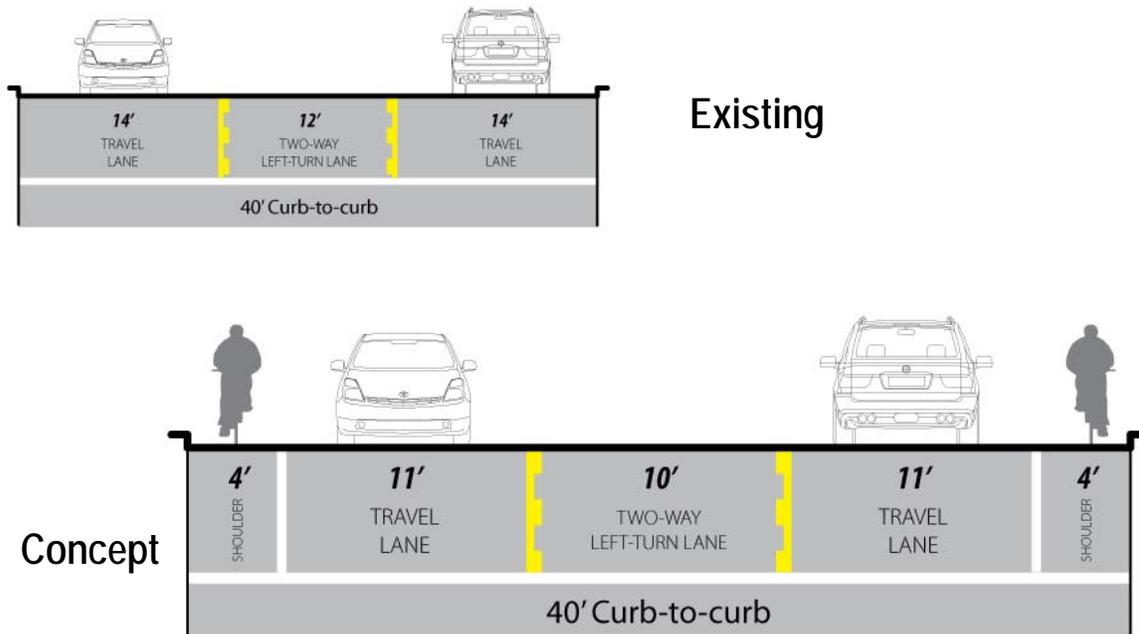
A preliminary concept for the segment calls for two 10' travel lanes in each direction with a 10' 2WLTL and two 4' pave shoulders. It should be noted that the Mt Read Boulevard corridor is recommended for a detailed corridor study to create bicycle facilities. In addition to consideration of a road diet concept within this segment, there is a neighborhood bike boulevard opportunity through the adjacent residential neighborhoods.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan

Long Pond Road Restripe Concept (between Latta and Janes Road)



Context

Long Pond Road between Latta and Janes Road consists of one 14' travel lane in each direction with a 12' 2WLTl. The segment of roadway provides an important north-south connection between the Town offices and the lake beyond Janes Road.

Issues & Concerns

The results of the BLOS Model indicate a letter score of "C."

Recommendation

The concept illustrated above consists of reducing the existing travel lanes to 11', reducing the 2WLTl to 10', and installing 4' paved shoulders in each direction.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



Badgerow Park Connection Trail

Context

Badgerow Park is situated in the populous east part of town, east of Dewey Avenue and Between Latta Road and the NYS Parkway. The Lake Ontario State Parkway (LOSP) Trail crosses Dewey Avenue about 1000' north of the park's Dewey Avenue entrance. Sidewalks connect the park entrance with the LOSP, and this particular stretch of Dewey Avenue has a Bicycle Level of Service score of "A." A well-worn path exists connecting the Park's northern entrance on Dewey Avenue and its southern entrance on Latta Road.

Issues & Concerns

There is a history of auto/bicycle crashes indicated at the Dewey/Latta intersection. The area is identified as having a high Demand Priority.

Recommendation

Convert the existing de facto trail into an ADA-accessible shared use path to provide an alternate pedestrian and bicycle route which circumvents the busy Dewey/Latta intersection.



III. FACILITY RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



1 inch = 400 feet



III. FACILITY RECOMMENDATIONS

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Bicycle Facility Coordination with the City of Rochester (Edge Matching)

Continuous bicycle facility design should be made between the City of Rochester and the Town of Greece. Currently, the City of Rochester is installing bicycle facilities within the City Limits as part of the *2011 Rochester Bicycle Master Plan*. The roadways providing continuous connections between the City and Town are Lee Road, McCall Road, Stonewood Avenue/Stone Road, Britton Road, Latta Road, and Beach Avenue. Figure 4 above illustrates the edge match locations between the City and the connecting roadways into the Town of Greece.

Lee Road

The *Rochester Bicycle Master Plan* recommended the roadway be considered as a restripe candidate. Lee Road has recently been restriped to provide paved shoulders for which bicyclists may use to ride on.

McCall Road

The roadway is proposed as an “other bicycle facilities” roadway. Shared Lane Markings (“sharrows”) or related bicycle signage may be used provide a connection between municipalities.

Stonewood Avenue/Stone Road

Currently Stonewood Avenue within the City is approved for bike lanes. The existing lane geometry of Stonewood Avenue/Stone Road within the Town provides a 4’ striped shoulder space for bicyclists to use. Although the shoulder space is not wide enough to officially be designated a bike lane (5’ width is required), bicyclists should be encouraged to use this space for their transportation needs.

Britton Road

Shared Lane Markings are approved within the City. These markings, or related bicycle signage, may be used provide a continued connection between the City and Town.

Latta Road

Bike lanes are approved for installation on the City’s side of the roadway. Within the Town of Greece, a striped shoulder space exists. This space may continue to be used by bicyclists and can be further enhanced through the use of bicycle marking symbols (where deemed appropriate based on shoulder width) or bicycle signage.

Beach Avenue

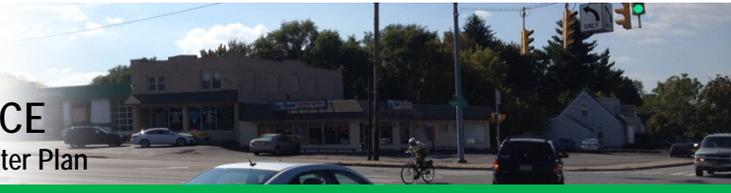
As of December 2013, bike lanes are approved for installation on Beach Avenue. However, this action may be deferred to a later date. As called for in this *Plan*, a more detailed Beach Avenue corridor is recommended to determine the most appropriate bicycle facilities within the Town of Greece.

Coordination with the City of Rochester should be undertaken to ensure the safest and most appropriate continuation of the existing and planned bicycle facilities.



IV. FACILITY DESIGN GUIDANCE

Town of Greece Bicycle and Pedestrian Master Plan



IV. 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 Town of Greece. They are not intended as comprehensive design standards. Rather, they reference existing design standards and provide clarification or supplemental information as necessary. There are seven primary sources of bicycle and pedestrian facility design information that were used to develop the guidelines provided in this section:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Institute of Transportation Engineers *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* – This document's development was supported by 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.
7. 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 nonmotorized 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.

In this guidance section of the Town of Greece Bicycle and Pedestrian Master Plan the following facility types are discussed:

- sidewalks,
- curb ramps,
- midblock crossings,
- bike lanes,
- shared lane markings,
- bike routes,
- bike boulevards, and
- shared use paths.



IV. FACILITY DESIGN GUIDANCE

Town of Greece Bicycle and Pedestrian Master Plan



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 Town of Greece must 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. Under constrained conditions, 4-foot wide sidewalks are acceptable provided a 5-foot by 5-foot area with less than 2% cross slope is provided every 200 feet (maximum) to allow for the passing of one pedestrian using a wheelchair by another. Sidewalks placed at the back of curb should 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.

Sidewalk Slopes

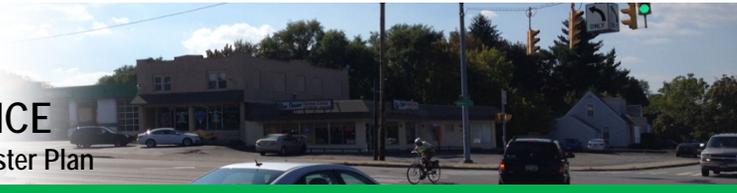
The maximum cross slope on a sidewalk is 2%. This maximum cross slope must be maintained across driveways and crosswalks.

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.



IV. FACILITY DESIGN GUIDANCE

Town of Greece Bicycle and Pedestrian Master Plan



Curb Ramps and Blended Transitions

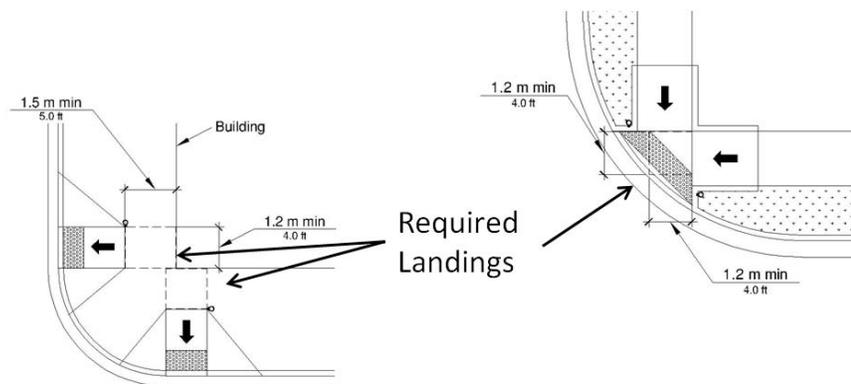
A curb ramp is a ramp that cuts through or is built up to the curb. A blended transition is a relatively flat area where a sidewalk meets a roadway. Curb ramps and blended transitions are primarily used where a sidewalk meets a roadway or driveway at a pedestrian crossing location. Blended transitions 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.

Curb Ramp Slopes

The slope of a curb ramp shall not exceed 8.33%. The only exception to this standard is when a sidewalk is located along a roadway with a significant slope, in which case the maximum length of the curb ramp is 15 feet.

Landings

All curb ramps must have a landing at the location where a wheelchair user would have to turn to prepare to enter the roadway. For perpendicular ramps, this means a 4-foot by 4-foot landing at the top of the ramp (5-foot by 5-foot if there is a vertical obstruction adjacent to the landing). For parallel ramps where the sidewalk is depressed, the 4-foot by 4-foot landing is required at the bottom of the ramp.



Detectable Warnings

Detectable warning surfaces shall extend a minimum of 2 feet in the direction of pedestrian travel and shall extend the full width of the curb ramp. Detectable warning surfaces are not required, nor desirable, at crossings of residential driveways since the pedestrian right-of-way continues across residential driveway aprons. However, where commercial driveways are provided with yield or stop control, detectable warnings should be provided at the junction between the pedestrian and vehicular routes.



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Midblock Roadway Crossings

Intersections are often 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 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.
- 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.

Pedestrian Approach (Sidewalk/Curb Line)

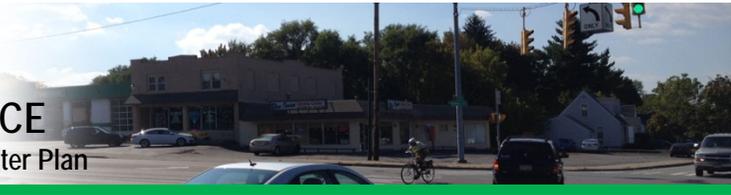
The pedestrian approach is the area near the crossing where pedestrians wait on the side of the roadway and away from traffic until they are able to cross. It is often part of the sidewalk, if the sidewalk is adjacent to the curb line, or an extension or spur of the sidewalk that provides a path from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

- 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.



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- Encourage pedestrians to cross at the marked crossing. The approach design should discourage pedestrians from crossing away from the marked crossing to the extent possible. 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 pedestrians from the site 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.

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.

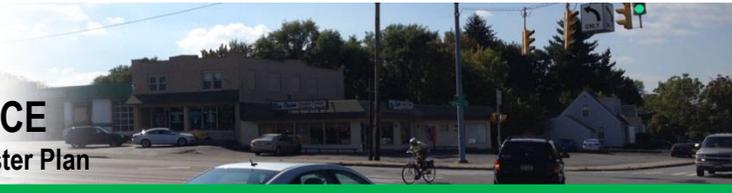
Signing and markings on and along the motor vehicle approach to a midblock crossing should be designed in such a way as to make drivers aware of the crossing in time to notice and react to the presence of a pedestrian, and to enhance the visibility of the crossing. Advanced warning signs should indicate 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.



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Town of Greece Bicycle and Pedestrian Master Plan



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. They should be designed to encourage 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 recommended width for bike lanes is 5 feet;
- for roadways with no curb and gutter and no on-street 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 rideable surface is maintained);
- additional width may be 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 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. 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. That is, if a bike lane is provided to the intersection, a receiving bike lane should be provided on departure side of the intersection.

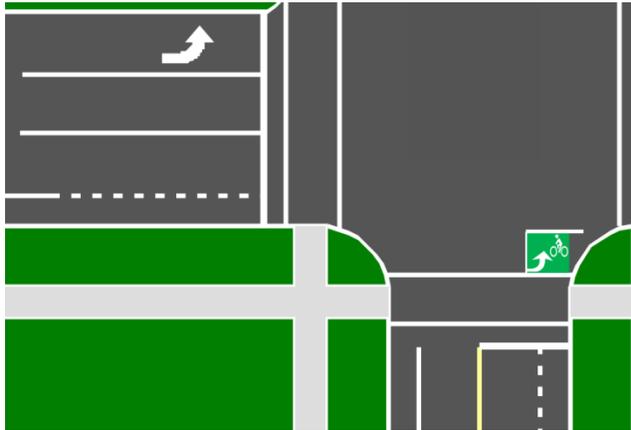
Two-Stage Left Turn Queuing Box

In locations where conventional left turns are prohibited or where bicyclists merging to a conventional left-turn would be inconvenient, a two-stage left turn can be utilized. To improve operational characteristics, and to avoid conflict with pedestrians and with right-turning traffic in the street into which the bicyclist is turning, a queuing area is needed. A two-stage turn queuing box is a waiting area for bicyclists to queue to turn left at an intersection by first proceeding to a position to queue at the right side of the intersection, then turning left and crossing as traffic permits, or when the traffic signal changes to green.



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At locations where two-stage left turn queuing boxes are considered, potential impacts to right turn on red motorists should be analyzed because of the prohibition of this movement by the *MUTCD*. In addition, bicycle demand of the facility should be considered.

The more common implementation of a bike box, in which the box is placed between the stop bar and the crosswalk to provide for queuing of through bicyclists, is illustrated below (source: NACTO *Urban Bikeway Design Guide*). It should be noted that in some states (including New York) some operational factors may prevent this application from operating as intended.

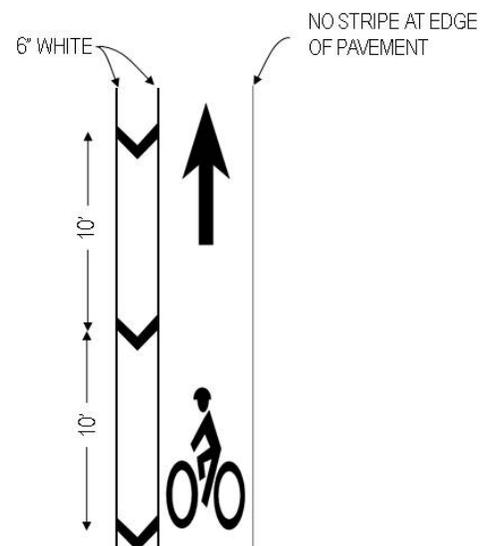
This occurs because right turn motorists are discouraged from moving into the bike lane (separated by a solid line), while the rules of the road require that right turns be made as close as practical to the right hand edge of the roadway.



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 midblock 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.



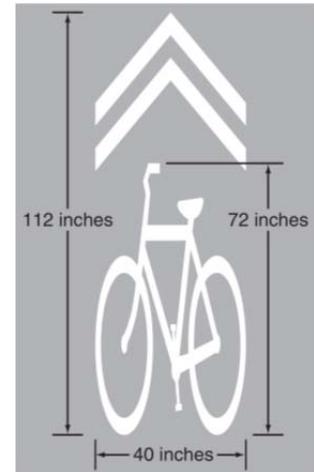
IV. FACILITY DESIGN GUIDANCE

Town of Greece Bicycle and Pedestrian Master Plan

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, as is the case throughout most of the Town of Greece, 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

1. alert motorists to the lateral location bicyclists are likely to occupy within the traveled way,
2. encourage safe passing of bicyclists by motorists,
3. 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,
4. reduce the incidence of wrong-way bicycling, and
5. 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 (see Appendix XX). 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.



IV. FACILITY DESIGN GUIDANCE

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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 reference 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.



Bike Routes

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:

- 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.

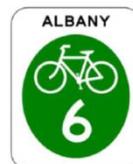
General Routes connect users to destinations within a community. Typical destinations include the following:

- Attraction Areas (i.e. libraries, parks, etc.)
- Neighborhood Areas (i.e. downtown, historic neighborhoods, etc.)
- Trail Networks or trailheads (i.e. Lake Ontario Trail)

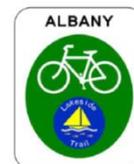
Bicycle Guide (the D11 series in the *MUTCD*) signs may be provided along designated bicycle routes to inform bicyclists of bicycle route direction changes and to confirm route direction, distance, and destination. Typical signs that convey the basic wayfinding information for general routes are shown below in Figure 14-1. 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. NYS DOT has developed special Bike Route signs that can be used in Greece.



NYM6-2



NYM6-2

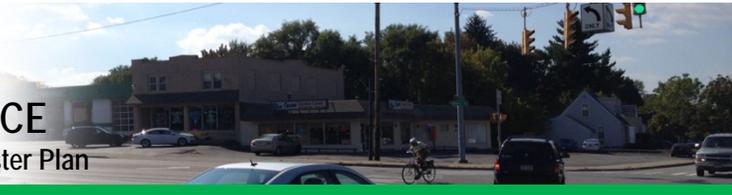


NYM6-3



IV. FACILITY DESIGN GUIDANCE

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Signing Roadways with Paved Shoulders

The Town of Greece may want to sign some roadways with paved shoulders to either guide bicyclists to destinations or to alert motorists to the presence of bicyclists.

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 Town determines it is appropriate to warn motorists of the potential presence of bicyclists along a section of roadway with paved shoulders, then special signing would be required. The Bicycle Warning sign (W11-1) and an “In Lane” plaque (NYW5-32P) shown above would not be appropriate because bicyclists would not actually be in the lane. Similarly, the “Share the Road” (W16-1P) plaque is not appropriate as bikes on the shoulder are not on the *road* (which is defined the same way as *roadway* in the MUTCD and excludes the shoulder). Thus a special supplemental plaque such as “On Shoulder” might be appropriate.

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.



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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 often make use of low volume, very low speed local streets. Frequently, 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) 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.

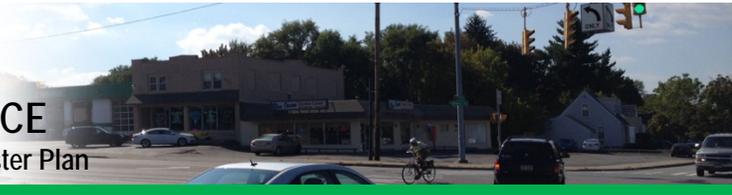
In some communities, bike boulevard networks begin as a "one-off" system of bikeways. When a primary arterial roadway cannot be improved to a point where most cyclists feels safe and comfortable using the facility, a parallel roadway - often one street off the main road (or "one-off") - may be improved with bicycle facilities and traffic calming features to provide an enhanced cycling street. By paralleling the main road, the "one-off" network provides access to the businesses along the arterial using a pleasant cycling roadway. A "one-off" 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 Greece. Wayfinding adds to the utility of bike boulevards because it educates cyclists and would be cyclists that there are safe, comfortable ways of accessing Greece by bike.



IV. FACILITY DESIGN GUIDANCE

Town of Greece Bicycle and Pedestrian Master Plan



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 two-way 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 marking 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 quite similar to that of roadways. However, additional considerations such as aesthetics, rest areas, amenities, and personal security are also important 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/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 negative impacts are not an issue in either regard, and in fact suggests that property values frequently increase following the construction of shared use paths while crime rates are sometimes found to decrease.



V. ZONING AND DEVELOPMENT OF REGULATIONS ASSESSMENT

Town of Greece Bicycle and Pedestrian Master Plan



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While the specific bicycle and pedestrian infrastructure recommendations included in this Plan have the potential to go a long way in making the Town of Greece a more accommodating place to walk and ride, it is also important to consider the positive impact that zoning and subdivision policies can also contribute. A review of existing Town of Greece zoning provides a context for the development of this Bicycle and Pedestrian Master Plan. The following section includes summaries of existing zoning codes, details their relevance to bicycle and pedestrian issues, and makes recommendations to enhance active transportation.



In addition to site-specific projects and zoning improvements, the Town should consider educational, outreach, and maintenance programs that can be implemented on a Town-wide basis to improve utilization and safety of the Active Transportation network.

Significant portions of Greece already accommodate bicycling and walking in the public right-of-way. The use of the public right-of-way, however effective it may be, is not enough to increase walking and biking from occasional recreation to commuting and travel. This effort will fall short of its goals unless it is coupled with zoning, incentives, private sector partnerships and public education.

These partnerships can be stimulated through changes in Greece Town regulations, as well as private sector incentives. The private sector's role in the encouragement of active transportation, particularly by providing end of trip facilities for commuting, can be incentivized by changes to zoning language that promote public-private sector partnerships where appropriate.

Evaluation of Codes and Standards

Pedestrian safety and mobility are primary considerations of the Town of Greece Planning Board when considering applications. Construction of public sidewalks and the accommodation of bicycles and pedestrians are specified design considerations and conditions of subdivision and site plan approval by the Board. This section assesses the zoning and development regulations that provide the foundation of those decisions.

Of the twenty-two zoning districts in the Town of Greece, bicycle and pedestrian use is only discussed in the code language for four of those districts. Of those four districts, only two have any regulations that provide specific accommodations for bicycles and pedestrians: the Dewey Avenue Mixed Use District (DMU) and the Waterfront Development District (WD). Both the DMU and WD districts provide regulations related to pedestrian circulation, as well as provide building design standards to encourage pedestrian-friendly development. The DMU should serve as a model for the other districts regarding design standards intended to encourage pedestrian-friendly development throughout the Town of Greece. The consultants have reviewed Town policies and sections of Town Code which relate to bicycle and pedestrian activity. In some cases, Town regulations require bicycle and pedestrian accommodations. The following associated recommendations incorporate or add components that will strengthen and encourage bicycle and pedestrian access and safety throughout the Town of Greece.



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Town of Greece Bicycle and Pedestrian Master Plan



Town Code: Chapter 211. Zoning

211-17.1. Dewey Avenue Mixed Use District (DMU)

The purpose of the district includes development that promotes “the health, safety, and general welfare of residents by fostering physical activity, alternative transportation choices, and greater social interaction along Dewey Avenue”. The guidelines for the district address this goal through standards for building design, vehicular and pedestrian circulation patterns, off-street parking areas, bicycle parking, and landscaping.

- *Building design standards* are intended to create lively, pedestrian-friendly and attractive buildings, sites, open spaces and streetscapes where residents and visitors will enjoy walking, biking, driving and shopping by encouraging appropriately-scaled development with varied building massing, visual interest, emphasized street corners, transparent ground floor facades, prominent and accessible street-level entrances, and quality materials.
- *Vehicular and pedestrian circulation standards* are designed to provide safe, efficient, and convenient vehicular and pedestrian access and circulation patterns within and between developments. By creating a safe, continuous network of pedestrian walkways within and between developments, pedestrians will feel more inclined to safely walk (rather than drive) between land uses. By creating a network of rear-access roads and shared driveways that provide cross access between developments, motorists can patronize multiple establishments without utilizing Dewey Avenue. This will reduce the number of turning movements along the corridor and increase the safety for all users.
- *Off-street parking area standards* are, in part, intended to reduce the scale of parking areas, siting some or all of the parking lot out of view from the public right-of-way, providing clear pedestrian circulation paths and amenity areas within parking areas, and using increased landscaping within parking lots to screen spaces and reduce the overall visual impact of large parking areas. The standards specifically require clearly identified pedestrian walkways from parking areas to the main building entrance and the public sidewalk along the street.
- *Bicycle parking standards* are intended to provide safe and convenient places to park and securely store bicycles and to encourage the use of bicycles as an alternative to motor vehicle transportation to access employment, commercial, and residential destinations along Dewey Avenue. Bicycle parking requirements apply to new development, building expansions or occupancy changes requiring a zoning permit where motor vehicle parking is required. Bicycle parking is required to be provided at 10% of the motorized vehicle parking requirements but not fewer than two bicycle spaces and not more than 20 bicycle spaces for any use.
- *Landscaping* is intended to be designed as an integral part of every development project, and not merely located in leftover portions of the site. Landscaping is intended to visually tie the entire development together, help to define and announce entryways and circulation patterns (both vehicular and pedestrian), and, where appropriate, help buffer less intensive adjacent land uses. It shall help to minimize the expansive appearance of parking lots, provide shaded areas for pedestrians, and soften hard edges of buildings and parking lots. Guidelines are provided for landscaping in building setbacks, building foundations, interior parking lots, and adjacent to fences and walls. The street tree requirement is one shade tree per 40 feet of linear frontage, and one shade tree for every five parking spaces.



Rt. 390 Trail near Greece Olympia High School



V. ZONING AND DEVELOPMENT OF REGULATIONS ASSESSMENT

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211-19.1. Flexible Office/Industrial District (FOI) 211-19.1.

The purpose of the district is to “enhance the long-term fiscal well-being of the Town by providing opportunities for expansion of the employment base and tax base in the vicinity of the Erie Canal in a manner that preserves open space and natural habitat areas, while also promoting a pedestrian-friendly environment and public access to the Canal waterfront for recreation and interpretation of local history”. The code notes that one specific purpose of the district is to “permit the maintenance and extension of public access to the Erie Canal in a manner that is compatible with the primary purpose of proposed developments or activities”. The zoning for the district only addresses these intentions through permitted and prohibited uses, but does not outline any guidelines or standards such as those found in other districts, such as the Dewey Avenue Mixed Use District.

211-20. Canal Corridor Overlay District (CCO)

The purpose of the district is to “protect a scenic corridor along the Erie Canal, by maintaining a vegetative corridor along most of the Town’s Canal waterfront and by providing a consistent level of protection of the visual, environmental, and historical resources within this corridor. In order to accomplish this, the CCO District is overlaid onto zoning districts that are adjacent to the Erie Canal.” The code notes that one specific purpose of the district is to “use existing vegetation along the Canal to create a secluded natural experience for boaters, hikers, bikers and other Canal users”.

The zoning for this overlay district outlines certain uses and structures that are prohibited, as well as establishes development regulations related to setbacks, building height, parking area/driveway locations, vegetative buffers, docks and water use. The code notes that “development shall not prohibit, interfere with, hinder or discourage the public use of the Erie Canal Trail. Development shall provide opportunities for trail linkages between the Erie Canal Trail and existing or proposed pedestrian walkways”.

211-21. Waterfront Development District (WD)

The purpose of the district is to “provide unique opportunities for the development and continued operation and maintenance of water-oriented uses within certain areas adjacent to the Erie Canal. The WD District requires or permits certain recreational, open space, business and residential uses that generally will benefit from and enhance the unique aesthetic, recreational, environmental and historical qualities of the waterfront areas. This district also is designed to protect unique and sensitive environmental and historical features that may exist along the shoreline, to promote and encourage public access to the shoreline, and to encourage appropriate water-oriented recreational uses along the shoreline”.

The zoning for this district addresses principal and permitted uses, but also identifies regulations related to site review and approval for buildings and other structures, pedestrian access, vehicle access and parking, fences, signs, and lighting. In addition, the code includes development regulations related to lot dimensions, lot coverage, gross floor area, setback, building height, parking, fences, signs and outdoor lighting. Pedestrian access and amenities are identified as a priority within the Waterfront District. For example:

- A. Site plans shall identify building entrances and connections to pedestrian paths.
- B. Pedestrian access routes between the WD District and the Erie Canal shall take precedence over vehicle circulation routes and shall function as an integrated system.
- C. Pedestrian and bicycle paths shall be linked to other existing local and regional trail systems.
- D. Pedestrian paths and amenities shall be compliant with the provisions of the federal Americans with Disabilities Act.



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- E. Signs and lighting, and business signs shall be oriented to the Erie Canal and pedestrian paths

Planning Board Review

The Planning Board of Greece provides review and recommendations on land use issues “to promote the safe and orderly development of the community in balance with property rights, community values and environmental preservation.” Planning board review and approval is required for site plans, subdivisions, minor improvements, and changes in lot lines. The Planning Board considers transit, pedestrian, and bicycle access in the site development review process and may require the developer to guarantee completion of public improvements such as roadways and landscaping. For example, multi-modal transportation issues were prime concerns in the Northgate Plaza site plan review. This section reviews the Town guidelines currently used by the Board to ensure that new development is consistent with the Town character and planning objectives.

As a guide to planning decisions, the Town relies upon: **Site Plan Application Guidelines**, **Subdivision Application Guidelines**, and **Landscape Guidelines for Development**. Pedestrian and Bicycle Mobility issues are primary considerations in commercial development and subdivision of land. The Guidelines state that residential and commercial development should occur in a way that:

- “Encourages and facilitates pedestrian and bicycle mobility for town residents between their homes and commercial, institutional, recreational, and governmental services.”
- Construction of public sidewalks along road frontage is a standard requirement in the Town of Greece. Sidewalk easements may also be requested where adequate room does not exist in the public right-of-way.”

Landscape Guidelines for Development provides standards for plants, buffers, swales, and sound practices to foster environmental protection. . As a general rule, 30% of commercial development and 50% of multi-family residential development is required to be landscaped. Street trees are often required in new development—one tree per tree lawn or two trees on a corner lot. Plant materials are specified in the Town of Greece Master Tree List with an emphasis on native, noninvasive species. Additionally, buffering guidelines are provided for visual and traffic screening issues.

A healthy landscape produces more livable communities in which people enjoy walking, biking, and living. An additional benefit of street trees is their effect of “traffic calming.” Street trees may actually affect driving behavior, safety perception, and speed. The City of Seattle now includes street tree planting as part of their Traffic Calming design guidelines. Landscape guidelines result in, not only more livable communities, but also increased self-enforcement and compliance with traffic control devices such as signals and signs. Street trees and lighting complement traffic calming devices and are often used to provide the visual cues that encourage people to drive more slowly.



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Town of Greece Sidewalk Policy

Established in 2000, the Town of Greece Sidewalk Policy is designed to provide a safe pedestrian sidewalk system for all residents and visitors. The policy stipulates that sidewalks will be installed, repaired, or upgraded along roads based upon an approved plan with priorities set by the Town Board. Also, as a condition of site plan approval for any development in residential, commercial, and industrial districts, sidewalks are required to be installed along the property frontage of existing dedicated roads and along both sides of publicly dedicated local roads within the subdivision development. In commercial and industrial districts, applicants for development, significant redevelopment or renovation are also required to repair or reconstruct existing sidewalks in need of repair and/or which do not meet the current Town standards.

The Streets and Sidewalks section of the Town Code refers to documents that are on file in the Town Clerk's office, one of which is the Town of Greece Design Criteria and Construction Specifications. This document specifies that five foot concrete sidewalks are required on the following roadways: Collectors, Local Collectors, Local Roads, Subdivision Entrance Roads, and Subdivision Roads. Arterial roadways and Private drives are not included. In addition, detectable warnings are required at all sidewalk ramps.

In certain cases, the policy allows for applicants to request a waiver and instead make a payment to the Town's Sidewalk Capital Account in lieu of sidewalk installation. In addition, a sidewalk easement for construction, installation, inspection, repair, reconstruction, maintenance, and snow removal purposes is required to be granted from the developer to the Town for all sidewalks to be constructed.



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Associated Recommendations

The consultants have reviewed the Town of Greece Codes, Standards, and Sidewalk Policy and have the following recommendations:

- A. The Dewey Avenue Mixed Use District (DMU,) should serve as a model to encourage pedestrian and bicycle- friendly neighborhoods through mixed-use development and the appropriate scale and location of buildings. The Town should consider expanding the applicability of the bicycle and pedestrian-supportive language included in the DMU and incorporate those components of the DMU District that support and advance bicycle and pedestrian travel within the other Town districts. Maximum parking codes within the DMU encourage the use of on-street parking, municipal lots and shared parking with adjacent landowners— providing another pedestrian-friendly component that should be expanded into other Town districts.
- B. Adopt a town-wide Complete Streets policy that would incorporate the Town Sidewalk Policy and Complete Streets guidelines throughout all Town districts. According to New York State Department of Transportation (DOT), “Complete Street roadway design features include sidewalks, lane striping, bicycle lanes, paved shoulders suitable for use by bicyclists, signage, crosswalks, pedestrian control signals, bus pull-outs, curb cuts, raised crosswalks, ramps and traffic calming measures.”
- C. All development documents should include requirements for sidewalks on all public roadways. These requirements should specifically state that sidewalks must be compliant with the ADA Public Rights of Way Accessibility Guidelines draft, or most recent ADA standards for public rights of way.
- D. Revisit the in-lieu-of fee to be more meaningful and reflective of actual costs. Developers are allowed to request a waiver to the requirement to provide sidewalks and make an in-lieu-of payment of \$10.00 per linear foot of sidewalk. This cost is likely low; for reference, NYSDOT costs are \$39/linear foot for a 5’ wide concrete sidewalk.
- E. Recommend revising the standards for minimum sidewalk easements to reflect current AASHTO standards. The sidewalk easement that may be required is to be a minimum of 7 feet wide. This allows for 1 foot of clear space on either side of a 5-foot wide sidewalk. These are fairly tight easements and may result in difficult or infeasible construction conditions depending upon the topography. If these easements are intended for construction of sidewalks adjacent to a roadway the following should be considered: AASHTO provides for a minimum 4-foot wide sidewalk with 2 feet of separation to the back of curb; if the 2-foot separation cannot be provided, AASHTO calls for a 6-foot minimum sidewalk width.
- F. Revise Construction Details for many standard design treatments. Those drawings were reviewed and we have the following comments:
 - 1) Drawing Number 20 - 21, Collector Road Sections – Consideration should be given to including bike lanes on these typicals.

What is a Complete Street?

A Complete Street is a roadway planned and designed to consider the safe, convenient access and mobility of all roadway users of all ages and abilities. This includes pedestrians, bicyclists, public transportation riders, and motorists; it includes children, the elderly, and persons with disabilities.

Complete Street roadway design features include sidewalks, lane striping, bicycle lanes, paved shoulders suitable for use by bicyclists, signage, crosswalks, pedestrian control signals, bus pull-outs, curb cuts, raised crosswalks, ramps and traffic calming measures.

www.dot.ny.gov/programs/completestreets



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- 2) Drawing Number 34, Sidewalk Ramp Details – Consider adding a note that ramps shall be planar, and that the maximum cross slope of the ramp is 2%.
- 3) Bicycle facility types should be specified by roadway types for example buffered bike lanes on arterials, bike lanes on collector roads.
- 4) Consider adding text to promote interconnectivity amongst developments: direct access shall be provided for non-motorized traffic where feasible to include an efficient system of internal circulation and roadway stub-outs to connect into adjacent cul-de-sacs and developments to link neighborhoods together.
- 5) Consider adding a requirement to meet minimum sight distance for shared use paths located within a right-of-way sight.
- 6) Any lighting requirements should include a requirement for lighting levels and uniformity ratios to be consistent across the roadway and sidewalk areas.

G. Chapter 178- Design Criteria and Construction Specifications should also be applied to arterial roadways and private drives.

Two industry standards provide planners with excellent resources—the *Guide for the Development of Bicycle Facilities*, by the American Association of State Highway and Transportation Officials (AASHTO), *Leadership in Energy & Environmental Design (LEED) Active Design Standards*, by the United States Green Building Council (USGBC) New York City recently published *Active Design Guidelines (2014)* that include neighborhood, building, and community design strategies that encourage regular physical activity and provide ideas for community outreach. www.nyc.gov/html/ddc/html/design/active_design.shtml

Encouraging walking and bicycling does require more than providing sidewalks. Additional regulatory and educational programs are needed to encourage and incentivize the use of active transportation for commuting or daily errands. The Town of Greece has many natural assets and planning tools already in place. Like many other communities that are also seeking ways to encourage active transportation-- the result of more livable communities is worth the effort.



VI. OUTREACH AND EDUCATION RECOMMENDATIONS

Town of Greece Bicycle and Pedestrian Master Plan



VI. OUTREACH AND EDUCATION RECOMMENDATIONS

A successful bicycle and pedestrian network depends on users being able to safely, appropriately and frequently utilize the network. To assist in creating an effective, safe bicycle and pedestrian network, outreach, education, and zoning enhancements will be necessary. Educating roadway users (both bicyclists and motorists) about the rules of the road and safe bicycling behavior is essential, while at the same time, encouraging more people to get out and ride their bikes.

The outreach and education recommendations in this section aim 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.

“Bicyclists and motorists together must better learn to Share the Road, to operate defensively, to understand each other's behaviors, and to be alert to any unanticipated actions or movements. By working together, we can achieve the joint goals to increase bicycle ridership while reducing the number of bicycle crashes, injuries and fatalities.”

New York State Department of Transportation (NYSDOT)

Important Informational 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 language to explain concepts and issues. In addition, the Town of Greece is home to people of many different ethnic backgrounds. Language barriers should be considered as educational materials are developed. The Town of Greece should seek partnerships that bridge cultural boundaries. Such partnerships would provide a valuable channel for distribution of educational materials and for general promotion of bicycling in underserved communities. The Town should ensure that all parts of the Greece, not only geographically, but also demographically, have equal access to active transportation information and facilities. Table 6 at the end of this Plan section provides a thorough summary of existing active transportation-related education and outreach programs and partnerships.

One of the key things to keep in mind when planning outreach and education efforts is not to “reinvent the wheel”. Many successful programs, campaigns and resources are available. Locally, there are already many efforts underway. Other communities throughout the U.S. and Canada have already developed tools that can be adapted and modified for the Town of Greece. 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.



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"1,152 pedestrians were treated in emergency rooms after being injured while using a cellphone or some other electronic device in 2010 — and the number had doubled since the year before."

US Consumer Product Safety Commission

Bike and pedestrian education and outreach are vitally important in light of the growing number of distracted pedestrians. Much attention has rightly been focused on distracted drivers. But a recent National Highway Traffic Safety Administration reported that pedestrian fatalities rose by 4.2 percent in 2010 over the previous year, and injuries were up 19 percent, even though overall traffic deaths declined.

As we look around us every day, pedestrians are being distracted by their handheld devices. Researchers believe that the number of injured pedestrians is actually much higher than these results suggest, since police don't always collect that data. A recent survey by Liberty Mutual suggests 60 percent of 1,000 people surveyed routinely read and send texts and emails, talk on their cell or smartphones, and listen to music while walking. 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.

Recommendations

Recommendation 1: 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 part of the Rochester population. Some examples of education and outreach programs are suggested here:



1. Coordinate different organizations that offer bicycle rodeos for young bicyclists to see ways they can support each other and maximize existing resources. Organizations include Town of Greece Community & Senior Center (CSC), Injury Free Coalition for Kids, and Monroe County Office of Traffic Safety.
2. Utilize the RocCity Coalition to locate volunteers for bicycle rodeos and bicycle repair programs, and to distribute information about bicycling to young adults in Rochester.
3. Coordinate safety education with the three school districts within the Town of Greece: Greece Central School District, Hilton Central School District and Spencerport Central School District.
4. 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 the Town of Greece.
5. May is National Bike Month - Recognize those who commute by bike and encourage people to become new bicycle commuters or increase their trips by bike during the season when spring has sprung and new



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beginnings abound. This program features a month long calendar of events that offers 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 the Town and greater business community.

6. **Bicycle Ambassadors** - A team of at least two ambassadors encourages an increase in bicycling by engaging the general public to answer questions about bicycling and teach 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.
7. **Bike Light Campaign** - With shorter days, when it gets dark before commuters head home from the office, 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 City 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 university as well as K-12 students to school. The campaign should expire before peak holiday season when bike shops are busy and less interested in offering discounts.
8. **League of American Bicyclists: Bicycle Friendly Community status** - 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.
9. **League Certified 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.
10. **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 recently administered a regional study of the Safe Routes to School program. The Town should work with the different schools operating in Greece to 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 cooperative efforts involving both the Town and the various schools or districts. Both Canal View Elementary (SCSD) and Northwood Elementary (HSCS) are prime locations for traffic safety education.
11. **Conduct public safety announcements on following the rules of the road.** For motorists, this campaign could 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

SafeRoutes



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campaign could address crossing at designated crossing facilities, and walking on the sidewalk in all seasons.

12. 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. www.walkfriendly.org/
13. Distribute a Bike Map – The Genesee Transportation Council has created a regional bike map that includes bicycle suitability ratings, extensive safety information for bicyclists, a listing of area bicycle shops and repair services, location of bicycle lockers and how to obtain access to use them, information about how to use the bike racks that are provided on all RTS buses, and a listing of multi-use trails in the region. The map is free and can be provided upon request. If the Town published a map including only its corporate boundary, it could probably be produced in a smaller format than the GTC map, which covers a much larger area. An excellent example is the map and info guide produced by the City of Vancouver, British Columbia that illustrates bicycle/ pedestrian routes in the city, and utilizes a compact, folded-into-wallet-size (Z-card) format. Additionally, the Greater Rochester Area Bicycling Map is in final development and publication is anticipated in spring 2014.
14. Institute a “Sunday Parkways” ride once per month - In Madison, WI, Sunday Parkways are times set aside on weekends and holidays for traffic-free biking and walking on a network of selected streets.
15. 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.
16. Monroe County Pedestrian Safety videos review the rules of pedestrian safety utilizing age appropriate videos for PreK-1, Grade 2-3, Grade 3-6 and three adult safety review videos. www2.monroecounty.gov/safety-trafficssafety.php. These videos could be incorporated into school district curriculum and shown at town events.
17. 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.



Other Possible Examples:

- 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



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- b. 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 on-going 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.
- c. 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 and the League of American Bicyclists.
- d. 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 Monroe County Office of Traffic Safety should be explored.
- e. Participate in an annual meeting of all bicycle/pedestrian planners and engineers in Monroe County. An annual meeting should be held to allow local communities and organizations to communicate their plans and programs, as well as share best practice information. Note: Town officials may not want to facilitate such a meeting, but it would be useful to participate if some other entity were to organize the event.
- f. AARP Network of Age-Friendly Communities Toolkit can be adapted by municipal and local governments, non-profit organizations, community partners and volunteers to guide and support age-friendly initiatives that make "Livable Communities" great places for all ages.
www.aarp.org/livable-communities/network-age-friendly-communities
- g. Identify proper enhanced visibility clothing for bicyclists and pedestrians, and advise the local active transportation community of the associated safety benefits.

- h. As part of a larger roadway safety campaign, develop an educational campaign to eliminate bicycle and pedestrian fatalities. In Minnesota, "Toward Zero Deaths" is a statewide partnership involving federal, state, county and academic partners. The mission is to create a culture in which traffic fatalities and serious injuries are no longer acceptable through the integrated application of education, engineering, enforcement, and emergency medical and trauma services.



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Recommendation 2: Appoint a public bicycle/pedestrian committee to promote non-motorized transportation and to actively engage with town citizens, planning committees, and boards to expand commuting and recreational paths for walkers and cyclists.

- 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.

The 5 E's: Essential elements for communities to become great places for bicycling:

1. **Engineering:** Creating safe and convenient places to ride and park
2. **Education:** Giving people of all ages and abilities the skills and confidence to ride
3. **Encouragement:** Creating a strong bike culture that welcomes and celebrates bicycling
4. **Enforcement:** Ensuring safe roads for all users
5. **Evaluation & Planning:** Planning for bicycling as a safe and viable transportation option

(The League of American Bicyclists)

Recommendation 3: 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 to bicyclist behavior and will likely result in resentment of law enforcement personnel. Those behaviors to be targeted should be determined at the outset of the law enforcement campaign. The following behaviors should be targeted consistently:

- 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.



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In addition to the need to educate bicyclists, pedestrians, and motorists, some targeted training of law enforcement may also be appropriate. Some questions that could be covered in this training include:

- When is it okay for bicyclists to 'claim the lane?'
- What width constitutes 'traffic lanes too narrow for a bicycle and a vehicle to travel safely side-by-side within the lane?'
- Why is it important for a bicyclist to use headlamps and tail lamps?
- Why is riding against traffic such a problem?

By answering these and other similar questions, and discussing what infractions are most likely to lead to bike crashes, cities can encourage law enforcement to help promote bike safety by targeting those behaviors most likely to result in crashes. Some communities educate local law enforcement through the enforcement agency's standing roll-call meetings, while others send officers to the League of American Bicyclists' Traffic Skills 101 courses.

Recommendation 4: 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.

It should be noted that the Greece Department of Public Works efficiently maintains snow removal, leaf and brush collection, pothole repairs and road resurfacing to a high level, scheduling an active multi-year calendar of road and sewer projects for planning and public informational purposes. 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 Town of Greece. 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 Town 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, countywide, coordinated enforcement campaign. Targeted enforcement initiatives result in everyone following the rules of the road.



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Encouraging Public Private Partnerships

These types of regulation standards stimulate private sector partnerships to provide end of trip provisions as well as increased choices of interesting and essential destinations for bikers and pedestrians. The two most influential end-of-trip provisions consistently cited by North Americans in nationally prominent opinion surveys as affecting their choice to bicycle for transportation are:

- Bicycle parking- availability and convenience, and
- Lockers and workplace showers for commuters.

Although these are currently allowable uses in Town of Greece codes, anecdotally, these are not frequently implemented throughout the Town. Thus, changes to applicable codes are recommended in the form of stronger incentives, rather than mandates. Recommended bicycle parking standards should formalize developers' ability to reduce the number of required motor vehicle parking spaces by the number of bicycle parking spaces required; this strategy will become more of an incentive as gas prices continue to rise in the future.



Bicycle lockers, City of Rochester

Sample Bike Parking Requirements

Bicycle parking shall be provided at multi-family developments on two (2) or more acres, parks and recreation facilities, and commercial establishments according to the following standards:

1. All bicycle parking facilities shall be located on the same Building site as the Use for which such facilities serve and as close to the Building entrance as possible without interfering with the flow of pedestrian or motor Vehicle traffic. Bicycle and auto Parking Areas shall be separated by a physical barrier which shall be at a minimum a two (2) foot high wall, fence or berm; a ten (10) foot wide buffer; or a six (6) inch curb with four feet of buffer width to protect parked bicycles from damage by cars.
2. All bicycle parking facilities shall be clearly identified as bicycle parking. Where bicycle Parking Areas are not clearly visible to approaching cyclists, signs shall clearly indicate the location of the facilities. When possible, this facility should protect the bike from inclement weather including wind-driven rain. Bike parking shall be consistent with the surroundings in color and design and be incorporated whenever possible into buildings or street furniture design.
3. The number of bicycle spaces required is as follows:



Type of Use	Minimum Number of Bicycle Spaces
Parks and recreation facilities	1 space per 10 required vehicle parking spaces
Commercial uses	1 space per 25 required vehicle parking spaces
Multi-family development	1 space per 20 required vehicle parking spaces



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4. Bicycle parking spaces may be provided as either bicycle racks or other storage facilities, provided that the following standards are met:
 - a) Facilities shall be designed to allow each bicycle to be secured against theft;
 - b) Facilities shall support the bike in a stable position without damage to wheels, frames, or components; Facilities shall be installed to resist removal;
 - c) Facilities shall be installed to resist damage by rust, corrosion, or vandalism;
 - d) Facilities shall accommodate a range of bicycle shapes and sizes and allow easy locking without interfering with adjacent bicycles;
 - e) Facilities shall be located in convenient, highly-visible, active, well-lighted areas;
 - f) Facilities shall include an aisle or space for bicycles to enter and leave parking racks. This aisle shall have a width of at least four (4) feet to the front or rear of a standard six (6) foot bicycle parked in the facility;
 - g) Facilities shall provide safe access from the parking spaces to the right-of-way or bicycle lane;
 - h) Facilities shall be located not to interfere with pedestrian or vehicular movement;
 - i) Bicycle parking spaces shall have a minimum width of two (2) feet and minimum length of six (6) feet, and
 - j) The Administrator shall be authorized to modify these standards where the facilities will be used predominately by bicycles having different space needs such as adult tricycles, or when another design (such as the provision of bike lockers) could serve the needs to an equal or greater degree

Furthermore, the design specification for bicycle parking should stipulate that the parking location be similar to that required for handicapped (motor vehicle) parking, and that the bicycle parking location be secure, covered, and at grade level. Workplace bicycle lockers, change and/or shower facilities are not generally being constructed in Greece. Thus there are two options to be considered: increase the incentives or mandate the facilities. The first option of offering more effective incentives is recommended; outlined herein are several approaches to this strategy.



Photo: R. Torzynski

Continued investment by the Town of Greece in public bicycle transportation infrastructure can be complemented by developers and commercial property owners providing on-site showers and locker facilities for employees. There are a number of incentives that can be offered to the private sector developing and managing commercial properties; many of these incentives can be offered at little or no actual expense to the Greece.

Development Incentives

There are two phases in which the incentives can be effective: upon initial land development and during tenant build-out and/or remodeling or renovation. Among the compelling incentives for the construction of bicycle locker/changing/shower facilities at initial land development (or during site re-development) are:

- Trip generation (hence traffic impacts) reduction during traffic impact assessments (e.g., up to five percent of total trip generation, depending on land use);
- Floor area bonus (equal to the space taken up by the bicycle commuter facility) for those districts and uses that specify maximum square footage;
- Reductions to required yard/setbacks (e.g., up to 20 percent for providing shower and locker facilities with capacity of serving up to five percent of employees);
- Administrative variances (not currently authorized in Greece) for more compact parking lot dimension(s); and
- Greenspace (for vehicle utilization area (VUA)) requirement reduction, (e.g., up to twenty times the building square footage dedicated to the bicycle facility).



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Incentives for actions subsequent to initial development (i.e., tenant build-outs and internal building renovations) include ad valorem tax exclusion of at least two times the square footage of the building dedicated to the locker/changing/shower facility. This exclusion could be increased if the tenant businesses participated in additional transportation demand management programs offered by the Greece. Other incentives could include offsets to collected user fees.

As Greece transforms its transportation system in the public rights-of-way, a concomitant partnership by the private sector will ensure the effectiveness of the public initiative. The end result will be increased opportunities for the residents of the town to choose bicycling for, not only recreation, but also for commuting and travel. Their choice will enhance workplace productivity and employee health, which will in turn improve the economic well-being and overall quality of life in Greece.



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PARTNER NAME	EXISTING PROGRAMS					EXISTING PARTNERSHIPS					HIGHLIGHTS
	Bicycle Safety	Community Health	Environmental Concerns	Transportation Equity	Neighborhood Livability	Bicycle Safety	Community Health	Environmental Concerns	Transportation Equity	Neighborhood Livability	
AARP		+			+						Age-Friendly Communities programs
Boys & Girls Clubs of Rochester, NY	+	+				+					Cyclopeda - connects bicycling to online documentation.
Greece Central School District		+	+				+				
Hilton Central School District		+	+				+				
Spencerport Central School District		+	+				+				
Greece Police Department	+				+					+	Hands out free bike helmets for children; School Crossing Guards
Finger Lakes Health Systems Agency		+								+	Various health & wellness initiatives
Genesee Land Trust			+				+			+	
Genesee Regional Off-Road Cyclists (GROC)	+	+				+					Singletack Academy to teach bicycle handling skills.
Genesee Transportation Council	+	+	+	+		+		+			Funds studies addressing key issues; Helmet brochure, bike map.
Greater Rochester Health Foundation											
Greece Chamber of Commerce											
Visit Rochester		+			+					+	Distributes information to visitors.
Injury Free Coalition for Kids	+	+									Kohl's Pedal Patrol provides bike rodeos and helmets.
Monroe Community College (MCC)		+	+								Curb Your Car program, LEED Projects/Bike Facilities.
Monroe County Health Department		+									Partnered w/ University of Rochester Center for Community Health
Monroe County/Rochester Public Libraries					+						Venue for education/outreach programs and distribution of materials
Monroe County Office of Traffic Safety	+					+					Programs are free and available to any school in Monroe County.
Monroe County Parks											
Monroe County Planning Department			+	+				+			
Northwest YMCA	+	+				+			+		
NYS DOT											
RGRTA									+		
Rochly Coalition					+					+	Many partnerships, not specifically related to active transportation.
Rochester Area Community Foundation		+	+							+	Support community efforts through grants
Rochester Bicycling Club (RBC)	+					+					Dedicated to promoting cycling for health and well being
R Community Bikes, Inc.	+	+				+			+		Bike and helmet giveaways, bike repairs for underserved
Rochester Cycling Alliance	+	+				+					
Rochester General Hospital		+				+					
Unity Health Services		+				+					
U of R Medical Center, Center for Community Health					+						
Wagners	+	+	+	+	+	+	+	+	+	+	Passport to Wellness

Table 6: Existing Active Transportation Education and Outreach Programs and Partnerships



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Those responsible for implementing this Plan's 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 addition to these strategies, the Town of Greece has historically funded, and will continue to fund, sidewalks and other active transportation projects using the following techniques:

- New development projects requesting incentive zoning may be required to install and/or fund sidewalks as an amenity.
- New developments or redevelopments may be required to provide sidewalk easements and/or construct sidewalks as a condition of Planning Board approval.
- In addition, the Town has established a sidewalk maintenance fund that annually funds sidewalk maintenance projects.

In general, however, most large sidewalk construction projects are funded by state and federal grants. In addition, the costs associated with constructing the bicycle and pedestrian facilities recommended in this Plan exceed available Town 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, Moving Ahead for Progress for the 21st Century (MAP-21). 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 quick-reference table (Table 7) includes all of the funding sources that are described subsequently in greater detail.

Table 7. Potential Funding Sources

Funding Source	Category	Relevant Project Type(s)
National Highway Performance Program	Federal	Bicycle transportation and pedestrian walkways (Section 207)
Surface Transportation Program	Federal	Bicycle transportation and pedestrian walkways; modification of sidewalks to comply with ADA; recreational trail projects; Scenic Byway projects; SRTS projects (Section 207)
Highway Safety Improvement Program	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



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Congestion Management and Air Quality (CMAQ)	Federal	Bicycle and pedestrian facilities (TA projects)
Transportation Alternatives (replaced TE, SRTS, Recreational Trails)	Federal	Bicycle and pedestrian facilities; Safe routes for non-drivers projects and systems; preservation of abandoned railway corridors including for pedestrian and bicycle trails; Safe Routes to School infrastructure and non-infrastructure projects: school-based facility, education, and enforcement projects/campaigns
State and Community Highway Safety Grants	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
CHIPS (Consolidated Local, State, and Highway Improvement Program) (www.dot.ny.gov/programs/chips)	State	Bike lanes and wide curb lanes
The Greater Rochester Health Foundation	Regional	Community health and prevention projects and programs
Bikes Belong Coalition (www.bikesbelong.org/grants)	Private	Bicycle facilities; end-of-trip facilities; trails; advocacy projects such as Ciclovias
National Trails Fund (www.americanhiking.org/our-work/national-trails-fund)	Private	Hiking trails
Global ReLeaf Program (www.americanforests.org/our-programs/global-releaf-projects/global-releaf-grant-application/global-releaf-project-criteria)	Private	Trail tree plantings
Robert Wood Johnson Foundation (general) (www.rwjf.org/grants)	Private	Various
The Conservation Alliance Fund (www.conservationalliance.com/grants/grant_criteria)	Private	Land Use
Surdna Environment/Community Revitalization (www.surdna.org/grants/grants-overview.html)	Private	Community revitalization and environment, including greenway trail design



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1. Federal Funding Sources: MAP-21 Funded Programs

With the adoption of Moving Ahead for Progress for the 21st Century (MAP-21), the funding landscape for bicycle and pedestrian projects changed radically. Whereas under SAFTEA-LU (MAP-21's legislative predecessor), non-motorized transportation facility projects had been eligible under dedicated funding categories that included the Transportation Enhancements Program (TEP), Safe Routes to School (SRTS) and recreational trails. These dedicated programs have been folded into is a new category, Transportation Alternatives which recasts, at reduced funding levels, the former TE program.³ Transportation Alternatives includes TA projects (see list below), previously eligible Safe Routes to School Projects,⁴ Recreational Trails projects, and boulevard projects in former Interstate Highway rights of way. Eliminated programs include Safe Routes to School, National Scenic Byways, and the Paul S. Sarbanes Transit in Parks program. The Land and Water Conservation Fund has been funded at a reduced amount through 2013. As before, non-motorized projects must be "principally for transportation, rather than recreation, purposes" and must be designed and located pursuant to the transportation plans required of States and Metropolitan Planning Organizations. The exception to this rule is the Recreational Trails Program (RTP), under which projects may be used for recreational purposes.

Whereas before there were different funding methods for each program, new MAP-21 TA funds will be distributed through grant programs. Fifty percent of the funding will be distributed according to population share. For areas over 200,000, the MPOs will manage the distribution of funds by grant competition. For areas under 200,000, the state will

³ Section 101 (29) Transportation Alternatives.--The term 'transportation alternatives' means any of the following activities when carried out as part of any program or project authorized or funded under this title, or as an independent program or project related to surface transportation: (A) Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety- related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.)(B) Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs. (C) Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users. (D) Construction of turnouts, overlooks, and viewing areas. (E) Community improvement activities, including--(i) inventory, control, or removal of outdoor advertising; (ii) historic preservation and rehabilitation of historic transportation facilities; (iii) vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control; and (iv) archaeological activities relating to impacts from implementation of a transportation project eligible under this title. (F) Any environmental mitigation activity, including pollution prevention and pollution abatement activities an mitigation to-- (i) address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 133(b)(11), 328(a), and 329; or (ii) reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.

⁴ Authorized in the 2005 SAFETEA-LU bill, Safe Routes to School projects include: (f) Eligible Projects and Activities.-- (1) Infrastructure-related projects-- (A) In general.--Amounts apportioned to a State under this section may be used for the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bicycle parking facilities, and traffic diversion improvements in the vicinity of schools. (B) Location of projects.--Infrastructure-related projects under subparagraph (A) may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools. (2) Non-infrastructure-related activities--(A) In general.--In addition to projects described in paragraph (1), amounts apportioned to a State under this section may be used for non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training, volunteers, and managers of safe routes to school programs.



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manage the distribution through a competitive grant program. These funds are limited to this use and are not transferable. The remaining fifty percent will be distributed by DOTs, and is transferable to other highway uses.

The combination of reduced available funding and increased competition for funds due to the combining of programs may lead to a reduction in bicycle and pedestrian projects being funded.

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.

Surface Transportation Program (STP). Funds may be used for the construction of bicycle transportation facilities and pedestrian walkways, as well as many other related facilities (bicycle parking, bike-transit interface, etc.). Transportation Alternative projects are eligible for STP funds. Modifications of public sidewalks to comply with the Americans with Disabilities Act (ADA) are also covered.

Highway Safety Improvement Program. Funds may be used for bicycle- and pedestrian-related highway safety improvement projects, strategies and activities 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 MAP-21, CMAQ will continue to provide funding for projects that help State and local governments meet the requirements of the Clean Air Act. Whether they include attainment or non-attainment areas, States may use CMAQ funds for CMAQ- or STP-eligible projects. Projects must be included in the MPO's current transportation plan and transportation improvement program (TIP) or state transportation program (STIP) in areas without an MPO.

It is important to note that future additional funding from this program is unlikely to be available in the Genesee-Finger Lakes region and there is a backlog of eligible projects in the region that makes funding for new bicycle and pedestrian projects unlikely within the MAP-21 timeframe (through 2014).

Transportation Alternatives. As mentioned earlier, this new program now provides funding for what used to be funded by three separate programs (Transportation Enhancements, Safe Routes to School, Recreational Trails). In addition to projects in these categories, TA money can be used to fund some road projects. Fifty percent of each state's funds will be distributed by the DOT, the remainder by the MPOs. There is an opt-out clause that allows up to fifty percent of the funds to be transferred to use in any program without restriction. NYS DOT's TAP Guidebook lists six eligible project categories and two sub-categories:

Categories

1. Construction, Planning and Design of On-road and Off-road Facilities for Pedestrians, Bicyclists and Other Non-motorized Forms of Transportation;
2. Construction, Planning and Design of Infrastructure-Related Projects to Provide Safe Routes for Non-drivers to Access Daily Needs;
3. Conversion and Use of Abandoned Railroad Corridors for Trails for Pedestrians, Bicyclists and Other Non-motorized Transportation Users;
4. Construction of Turnouts, Overlooks and Viewing Areas;
5. Safe Routes to School;
6. Construction, Planning and Design of Boulevards; and

Sub-Categories

- A. Community Improvement Activities (including Landscaping and Streetscape Improvements), when integrated with work in another category;
- B. Environmental Storm Water Management Activities, when integrated with work in another category



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The Recreational Trails Program is now funded under the TA umbrella. 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 off-road motorized vehicles. The funding amount will remain the same as in 2009 (\$2,204,556). An important provision of the new bill allows the Governor of a state to opt out the recreational trails program if the Governor notifies the U.S. Secretary of Transportation no later than 30 days prior to apportionments being made for any fiscal year.

Highway Safety Section 402 Grants. Generally unchanged from SAFETEA-LU. 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.

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. <http://www.hud.gov/offices/cpd/communitydevelopment/programs/>

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.

2. Other Federally Funded Programs

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.

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).



VII. FUNDING AND IMPLEMENTATION STRATEGY

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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 (the letter of intent deadline for 2013 grants was August 6, 2012), bicycle- and pedestrian-related projects and programs may frequently be well suited for these opportunity grants. <http://www.thegrhf.org/>

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 health-based initiatives and may be resources for partnership or sponsorship.

Bikes Belong Coalition. The Bikes Belong Grants 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 Bikes Belong 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. Bikes Belong Coalition seeks to assist local organizations, agencies, and citizens in developing bicycle facilities projects that will be funded by MAP-21. Bikes Belong Coalition will accept applications for grants of up to \$10,000 each (with potential local matches), and will consider successor grants for continuing projects. Grant applications are accepted quarterly. <http://www.bikesbelong.org/grants>

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. <http://www.americanhiking.org/NTF.aspx>

The Global ReLeaf Program. The Global ReLeaf Forest Program is American Forests’ education and action program that helps individuals, organizations, agencies, and corporations improve the local and global environment by planting and caring for trees. The program provides funding for planting tree seedlings on public lands, including trailsides. Emphasis is placed on diversifying species, regenerating the optimal ecosystem for the site and implementing the best forest management practices. This grant is for planting tree seedlings on public lands, including along trail rights-of-way. http://www.americanforests.org/global_releaf/grants/

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. <http://www.rwjf.org/grants/>

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. <http://www.conservationalliance.com/>





VII. FUNDING AND IMPLEMENTATION STRATEGY

Town of Greece Bicycle and Pedestrian Master Plan

Surdna Foundation. The Surdna Foundation seeks to foster just and sustainable communities in the United States, communities guided by principles of social justice and distinguished by healthy environments, strong local economies and thriving cultures. <http://www.surdna.org/>



APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

This appendix summarizes public comments received as of July 15, 2013, including comments received at the first public workshop held on June 12, 2013 at the Town of Greece Community & Senior Center.

Display Stations:

Three display stations were set up at the June 12th public meeting to collect comments and information regarding Benefits of Bicycling and Walking, Pedestrian Data Inventory, and a Needs Identification Map.

Station # 1

Benefits of Bicycling and Walking:

- Most support was received for benefits related to Healthy Living and Quality of Life
 - Well over half (63%) of participants indicated that health and quality of life were the most important benefits that could come from increased bicycling and walking within the community
 - Within this category, most people seemed to be more concerned with issues of health than they were with quality of life or community vitality
- Fewer participants (30%) indicated that benefits related to Transportation Options were most important
- A small number of participants (7%) felt that benefits related to Air Quality were most important
- None of the participants indicated that Congestion Mitigation benefits were most important
- Besides those listed on the board, participants also suggested some benefits of their own:
 - Improved bicycling and walking conditions provide better access around town for the local senior population
 - Bicycling and walking helps to keep money local- it slows people down along Main Street and helps to boost business

Station # 2

Pedestrian Data Inventory:

- NYS State Route 390 Bike Path
 - Poor connectivity was noted between the Canalway Trail, the Latona-Weiland Trail, and the NYS State Route 390 Bike Path
 - Dangerous conditions were noted along the Route 390 Bike Path near Parkland Elementary School, particularly with regard to steep turns
 - Participants noted that trail users need a warning at that location
 - Vehicular conflicts were noted at the location of Route 390 ramps at Latta Road
 - The crossings at Route 390 and the Lake Ontario State Parkway Trail (LOSP) are inconvenient, and wayfinding should be improved
 - In general, a need for resurfacing the Route 390 Bike Path was noted
- LOSP (Lake Ontario State Parkway)
 - A number of concerns were raised regarding the area between the Latta Road, the LOSP, Greenleaf Meadows apartments, and the waterfront
 - Better connections were suggested between the LOSP and Greenleaf Road
 - Vehicular traffic travels at unsafe speeds along Greenleaf, especially near the curve on the north end near the country club
 - Lack of complete sidewalk facilities were noted between Ling Road and Beach Avenue, making dangerous conditions for seniors, families on bikes, etc.
 - A connection was suggested between the undeveloped area north of Janes Road (along the creek) and the LOSP
 - Gaps in service occur along the Lake Ontario State Parkway at two important locations:
 - Between the Beatty Point Loop/Nature Trail and the LOSP/Route 390 Bike Path
 - Between the trails within the Braddock Bay WMA and the trails located in Rose Marsh
 - A third potential gap noted along the western stretch of Manitou Beach Road

PUBLIC COMMENT COMPILATION

Town of Greece Bicycle and Pedestrian Master Plan

- A large area of concern was noted surrounding Long Pond Road and Latta Road
 - Senior housing located nearby [noted intersection for unsafe crossings, high speeds, fast turns, and pedestrian crashes]
 - Pedestrian crossing buttons not working near Athena High School
 - Lack of connections between Athena High School and Sawyer Park trails
 - The area could use more character, more green/open space
- Additional (smaller) service gaps were noted at the following locations
 - Pedestrian connections between Pickering Drive and Flynn Road
 - Senior housing nearby
 - Larkin Creek crossing
 - English Road between Greece Road and Long Pond Road
- Boardwalk needed at Salmon Creek/Dahlhein Trail
- General comments:
 - Hojack line
 - Speed of vehicular traffic on Latta Road does not match the context

Station # 3

Needs Identification Map:

- Locations of concern:
 - Island Cottage Road at the LOSP- connections to State Route 390 Bike Path
 - Long Pond Road (all)
 - Especially at Latta Road
 - Need to soften the intersection, calm traffic, make it safer for pedestrian use
 - Mt. Read Road (all)
 - Dewey Road (all)
 - Especially between Denise Road and St. Charles & Barnard schools
 - North Greece Road (all)
 - Latta Road (all)
 - Especially at Long Point Road (see above)
- Issues of concern:
 - General need for cyclist/pedestrian education regarding the “rules of the road”
 - Traffic signals and length of countdown timers
 - Need for clearer connections
 - Janes Road/ Island Cottage and 390/LOSP
 - Ridge Road/390 to Downtown
 - Need for more connections to center of town
 - Trail sight-lines/vegetation
 - Trail connections through Kodak land?
 - Quality of paths (i.e., surface quality)
- Priorities:
 - Parkway connection to activity centers
 - Connections adjacent to 390
 - Rail corridor opportunities

APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

Additional public comments from the meeting not included above:

- Make Maiden Lane bike lane continuous and separated from traffic
- Add bike lanes to Long Pond and Latta Roads
- Add “sharrows” along Long Pond Road, especially between the Parkway and Latta Road
- Pedestrian access to the Town Hall and Library campus should be improved, possibly to make use of the dirt path from the end of Barnes Court
- A walking loop around the Town Hall and Library campus would be beneficial to encourage walking, especially for seniors
- Sidewalk gaps occur on Flynn Road (between Whispering Pines and Arborway Drive) and on Kuhn Road (east and west of Emberglow)
- A curb cut is needed where the 390 Bike Path meets the south side of Maiden Lane at Olympia school

PUBLIC COMMENT COMPILATION

Town of Greece Bicycle and Pedestrian Master Plan

Public Survey:

In addition to the Display Stations a written survey was available to collect data and comments. Section # 1 collected Demographic information from participants. Section # 2 addressed Current Bicycling and Walking Habits. Section #3 asked opinions on Attitudes toward Bicycling and Walking. Sections #4 and #5 of the survey were Open Answer format questions. Section #4 asked three specific questions while Section #5 was for any additional comments participants had regarding bicycling and walking in the Town of Greece.

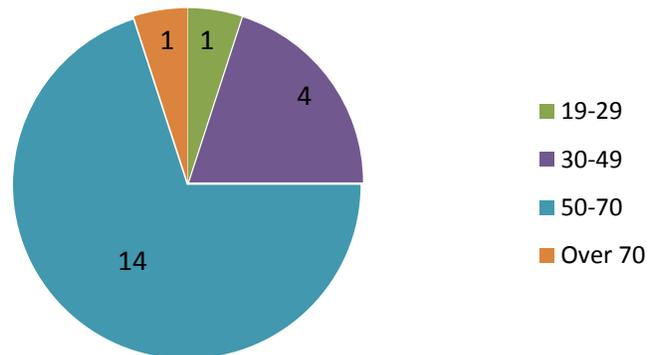
Survey Results

- A survey was distributed to town residents to determine preferences and priorities for bicycle and pedestrian travel
- Approximate number of surveys received: 33 (all questions were not answered by all participants)
- The following data is based on the received responses:

1. Demographics

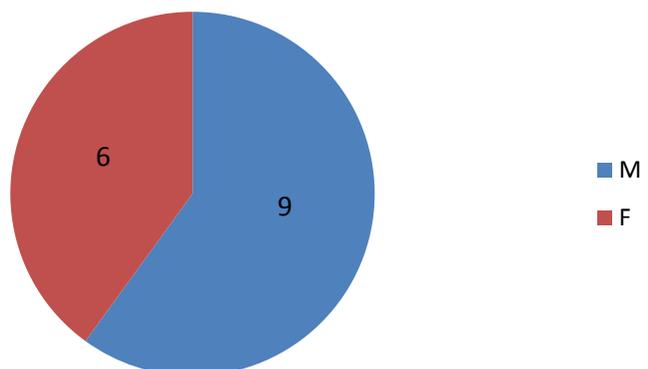
○ 1A - Age:

- K-8: 0
- High School: 0
- 19-29: 1
- 30-49: 4
- 50-70: 14
- Over 70: 1



○ 1B - Gender:

- Male: 9
- Female: 6



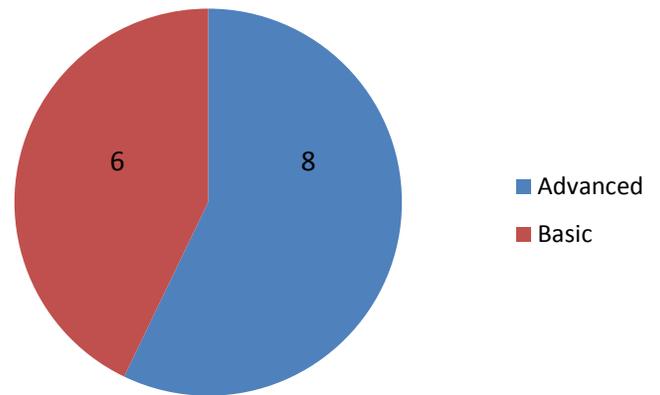
APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

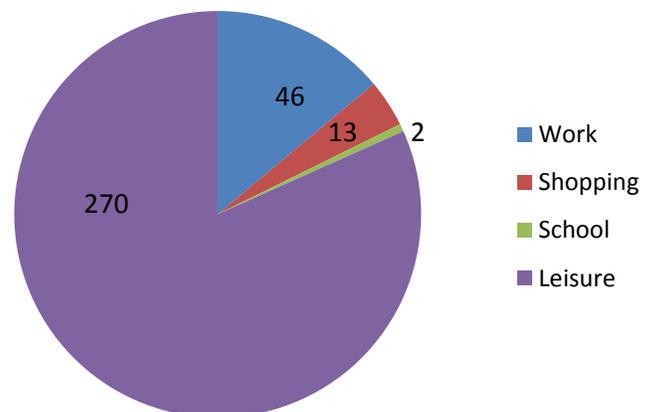
- **1C** - Average number of years living in the area:
 - 36
- **1D** - Average number of adults:
 - 2.1
- **1E** - Average number of adults:
 - 0.7
- **1F** - Average number of automobiles:
 - 1.8
- **1G** - Average number of bicycles:
 - 2.8

2. Current Bicycling and Walking Habits

- **2A** - Bicycling experience level
 - Advanced: 8
 - Basic: 6
 - Novice: 0



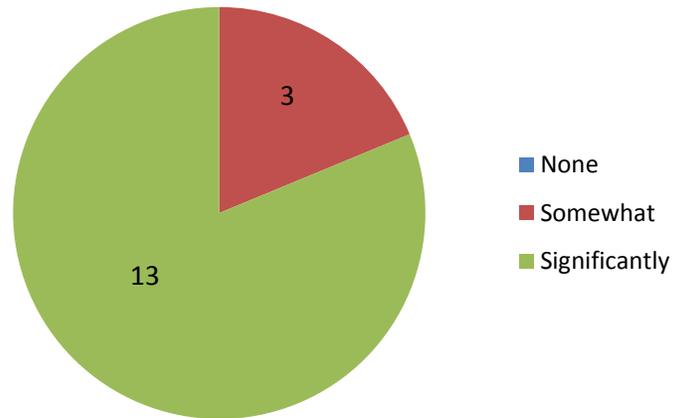
- **2B** – Miles traveled by bicycle based on the following reasons
 - Travel to work: 46
 - Travel to shopping: 13
 - Travel to school: 2
 - Leisure or physical exercise: 270



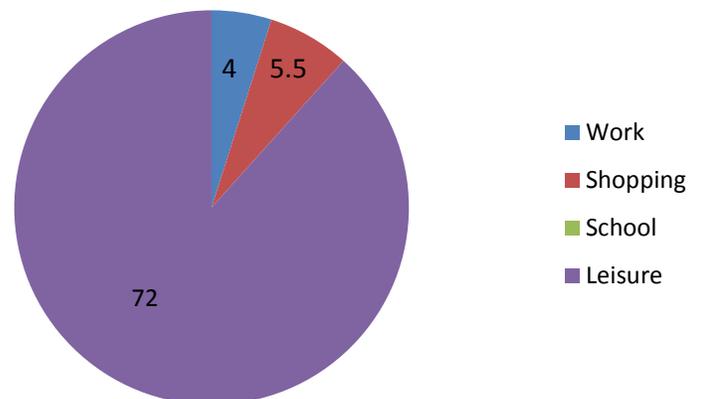
PUBLIC COMMENT COMPILATION

Town of Greece Bicycle and Pedestrian Master Plan

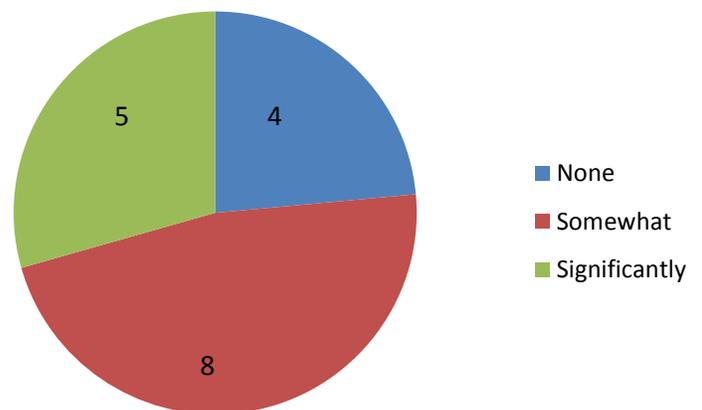
- **2C** - Bicycle activity varies by season
 - None
 - Somewhat: 3
 - Significantly: 13



- **2D** - Amount of walking based on the following reasons
 - Travel to work: 4
 - Travel to shopping: 5.5
 - Travel to school: 0
 - Leisure or physical exercise: 72



- **2E** - Walking activity varies by season
 - None: 4
 - Somewhat: 8
 - Significantly: 5

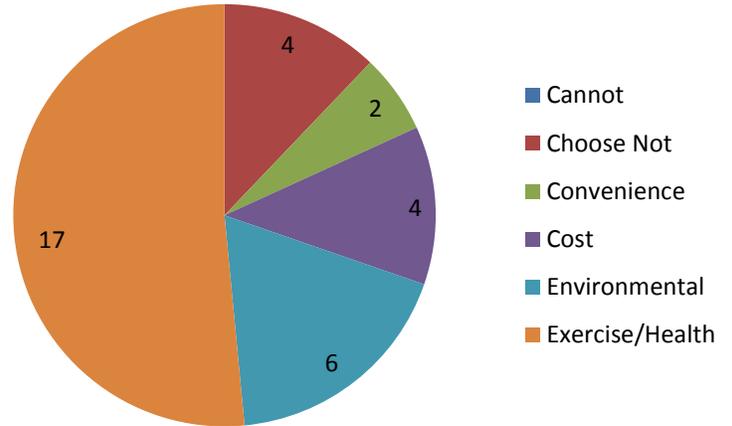


APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

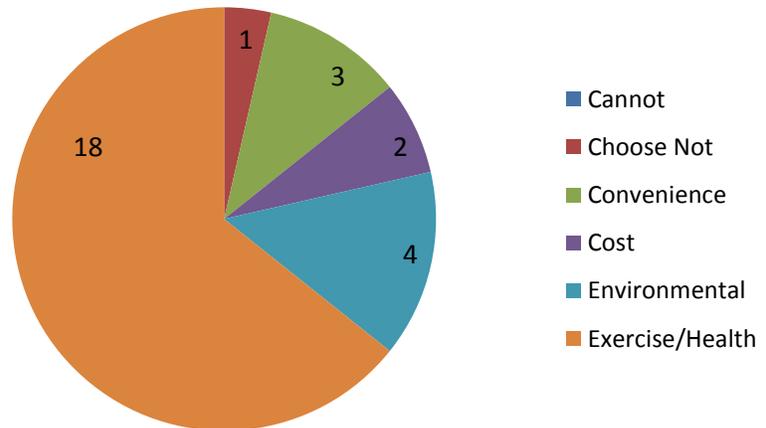
○ **3A -** Reasons for choosing to ride a bicycle:

- Cannot drive a car: 0
- Choose not to drive a car: 4
- Convenience: 2
- Cost savings: 4
- Environmental reasons: 6
- Exercise/personal health: 17



○ **3B -** Reasons for choosing to walk:

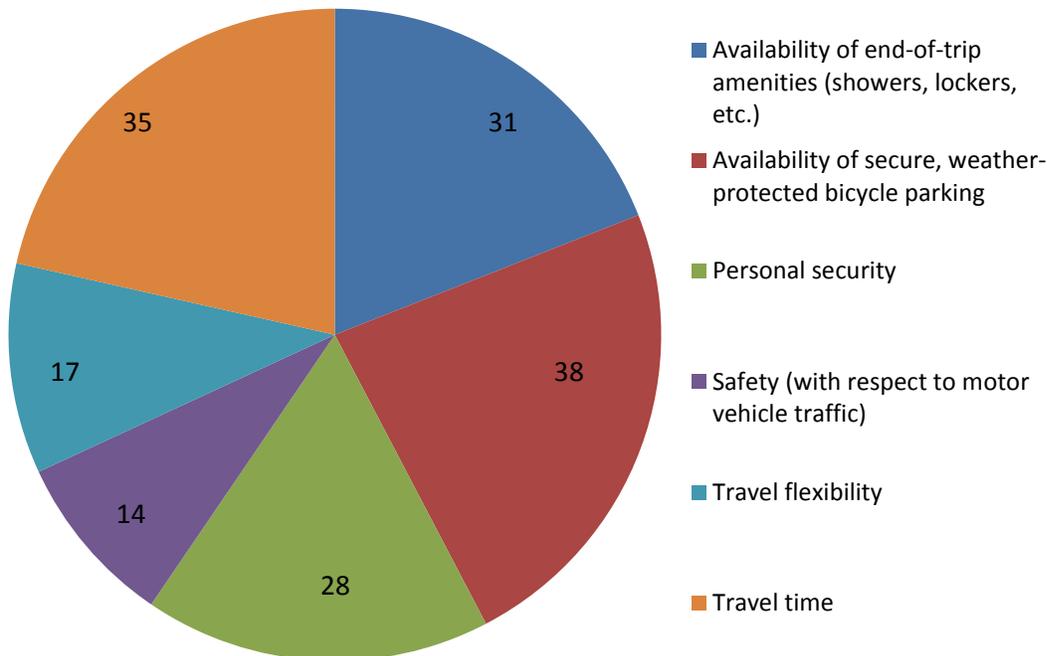
- Cannot drive a car: 0
- Choose not to drive a car: 1
- Convenience: 3
- Cost savings: 2
- Environmental reasons: 4
- Exercise/personal health: 18
- Fuel cost savings



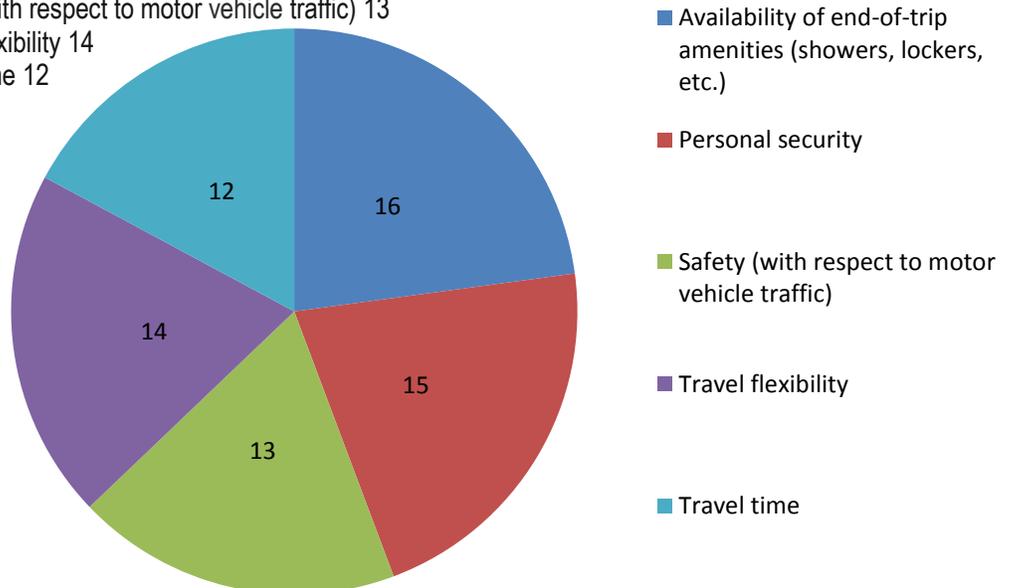
PUBLIC COMMENT COMPILATION

Town of Greece Bicycle and Pedestrian Master Plan

- **3C – Primary barriers keeping you from bicycling more often**
 - Availability of end-of-trip amenities (showers, lockers, etc.) 31
 - Availability of secure, weather-protected bicycle parking 38
 - Personal security 28
 - Safety (with respect to motor vehicle traffic) 14
 - Travel flexibility 17
 - Travel time 35



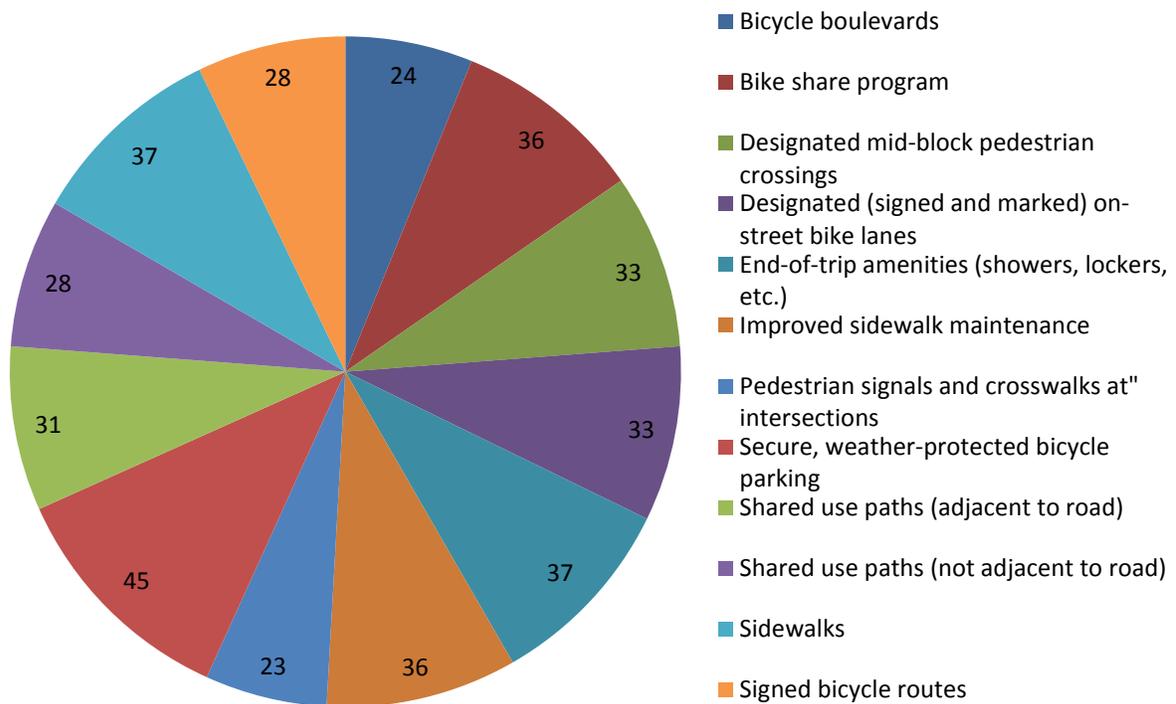
- **3D – Primary barriers keeping you from walking more often**
 - Availability of end-of-trip amenities (showers, lockers, etc.) 16
 - Personal security 15
 - Safety (with respect to motor vehicle traffic) 13
 - Travel flexibility 14
 - Travel time 12



APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

- **3E – Facility types or amenities likely to increase current level of bicycling and/or walking**
 - Bicycle boulevards (low-volume and low-speed streets that have been optimized for bicycle travel) 24
 - Bike share program 36
 - Designated mid-block pedestrian crossings 33
 - Designated (signed and marked) on-street bike lanes 33
 - End-of-trip amenities (showers, lockers, etc.) 37
 - Improved sidewalk maintenance 36
 - Pedestrian signals and crosswalks at" intersections 23
 - Secure, weather-protected bicycle parking 45
 - Shared use paths (adjacent to road) 31
 - Shared use paths (not adjacent to road) 28
 - Sidewalks 37
 - Signed bicycle routes 28



Section # 4 :

- List up to 3 Roadway segments that would benefit most from a bicycle/pedestrian facility:
 - 390 bike path to canal (II)
 - 390 trail maintenance
 - Beach Ave (bike lane)
 - Connection with Canal path
 - Dewey Ave (city to Parkway)
 - Dewey Ave from Maiden Lane to Latta Rd
 - Dewey Ave/north gate area

PUBLIC COMMENT COMPILATION

Town of Greece Bicycle and Pedestrian Master Plan

- Dewey between Latta and Stone (bike lane)
 - Edgemere Dr from Manitou Rd to Island Cottage Rd
 - Edgemere Drive
 - Flynn from Latta to Edgemere (wider shoulders)
 - Hojack Line – bike/pedestrian trail
 - Hojack line for bike/pedestrian
 - Hojack railroad bed from 390 west to Parma (rails to trails)
 - Hojack trail from 390 to Flynn
 - James Rd to Island Cottage Rd (safe bike crossing parkway)
 - Lake Ontario State Parkway trail access from Greenleaf/Latta intersection
 - Lake Ontario State Parkway trail west from Island Cottage Rd
 - Latta between Dewey and Long Pond (bike lane)
 - Latta between Post Office and 390 (bike lane)
 - Latta Rd (between Parkway and Manitou)
 - Latta Road from Flynn to Manitou road (wider shoulders)
 - Long Pond (between Parkway and Ridgeway)
 - Long Pond (English to Latta)
 - Long Pond between Town Hall and CVS (English) (bike lane)
 - Long Pond could use bike lane from Edgemere to Ridge Road
 - Long Pond Rd from Rt. 104 to Latta Rd
 - Long Pond, south of Athena high school/middle school – buffered bike lane
 - Long Pong from Parkway to Ridge Rd
 - Maiden Lane, Mt. Read, Dewey Ave, some are missing
 - Mt. Read (slower traffic)
 - Mt. Read between Latta and Ridge (bike lane)
 - Mt. Read Boulevard (English to Stone Rd)
 - Mt. Read to Maiden bike path
 - N Greece Rd – bike lane/sidewalk
 - N Greece Rd – Ridge to Latta (bike lane)
 - North/south route to downtown bike paths
 - Parkway – bike trail
 - Parkway 390 to Parma
 - Ridge Road West to connect to city trails or canal trails (bike lane)
 - Ridge to Erie Canal Trail
- List up to 3 Spot-specific improvements to improve bicycling/pedestrian conditions:
 - Better light sequences on W. Ridge Road (Fetzner to Mt. Read)
 - Clear underbrush on 390 path between English Rd-Maiden Lane
 - Connect Town Hall complex with subdivision to the west
 - Connection between south end of Flynn and English
 - Crossing Latta at Long Pond is difficult by bike
 - Delay timer for “right on reds” at Greece Olympia
 - Dewey – bike lane between Ridge and Latta
 - Greenleaf Rd and Latta Rd (better ped crossings)
 - Latta/390 exit and entrance ramp vs. bike path
 - Latta/Long Pond – bicycle and pedestrian lanes
 - Latta/Long Pond – lower speed limit with mid-block crossings
 - Latta/Long Pond – more green space – center of town feel
 - Latta/Long Pong – pedestrian crossing, right turn east to south

APPENDIX A: COMPILATION OF PUBLIC COMMENTS

Town of Greece Bicycle and Pedestrian Master Plan

- Long Pond Rd at Latta Rd (better ped crossings)
- Maintenance of sidewalk on Lake Ontario State Parkway trail Greenleaf bridge
- Mid-block crossing for Latta near Willowood
- Mid-block crossing near YMCA, too dangerous to cross at corners (jay walking)
- Route the 390 trail under Latter (under the bridge)
- West Ridge at Long Pond

- List up to 3 Key Destinations that would benefit from improved bicycle/pedestrian access:
 - 390 bike trail connection to canal
 - Braddock Bay Park (I)
 - Canal Ponds
 - Erie Canal
 - Extend 390 bike path south to Erie Canal path (shared use)
 - Extend Ontario State Parkway bike path from Island Cottage Rd west to Parma
 - Greece Ridge Mall via Long Pond and Ridge Road (I)
 - Lake Ontario area
 - Library (II)
 - Maiden at Mt. Read
 - Ridge and Fetzner
 - Ridge and Stone
 - RIT via Long Pond
 - Town Hall complex (II)
 - Town Hall playground
 - Wegmans plazas (multiple)
 - Wegmans at Latta/Long Pond (I)
 - Wegmans (center of town)
 - West Ridge area
 - YMCA

Section # 5:

- Additional comments:
 - Bicycling on busy streets – cars entering from side streets don't "see" bicycles
 - Bike parking at Wegmans bike shelters
 - Drivers education on rights of bicyclists
 - Hojack Trail
 - Major roads (Mt. Read, Long Pond) are not wide enough for safe bike travel
 - Need bike/ped maps showing accessible routes
 - Parkway/390 at Jones Rd could use some signage
 - Pavement/marked lanes
 - Route 390 extension
 - Several bike/pedestrian accidents have occurred on 390 bike trail on north side of English Rd - two hills connect in a series of blind turns at the bottom of the hills
 - Should apply for walk friendly community
 - Signage for traffic to make aware and more friendly
 - Some signal lights trip easily/early for "right on red," stopping bike and other traffic flow
 - Traffic awareness
 - Vintage Lane road diet was great! More!

APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

Town of Greece Bicycle and Pedestrian Master Plan

Introduction

In August 2013, two tours of the Town were conducted to help PAC members and Town staff gain a more thorough understanding of the existing bicycling and walking conditions experienced by residents. One tour was conducted on foot and the other by bicycle. The observations and findings from these tours will help in formulating the Bicycle and Pedestrian Plan recommendations not only in the areas directly observed, but also throughout the Town.

Walking Tour

The walking tour group traveled to four locations to assess walking environments typical to the Town of Greece. The locations were: 1) Greenleaf Road at Latta Road; 2) Dewey Avenue at Northgate Shopping Center; 3) Maiden Lane at Heritage Drive; and 4) Ridge Road at Ridgemont Plaza. The group took a resident's point-of-view whereby participants parked in the nearby neighborhood and walking to the target location to get a sense of the resident's experience interacting with his or her neighborhood. Some of the group's observations are highlighted below.

Greenleaf Road/Latta Road

- This intersection/area has been of particular interest to residents. The bridge over the LOSP is in disrepair for pedestrians attempting to walk along the roadside. The sidewalk from Pebbleview Drive south toward the LOSP ends at the LOSP trail. There are no internal sidewalks leading pedestrians from Greenleaf Meadows to Greenleaf Road.
- There is a narrow asphalt goat (walking) path alongside the northbound side of Greenleaf Road for pedestrians to walk on.
- The intersection of Greenleaf Road and Latta Road lacks pedestrian crossing signals.
- Residents north of the LOSP bridge access transit on the south side of the bridge.
- This area is worthy of further study and coordination with involved agencies (NYSDOT and MCDOT).

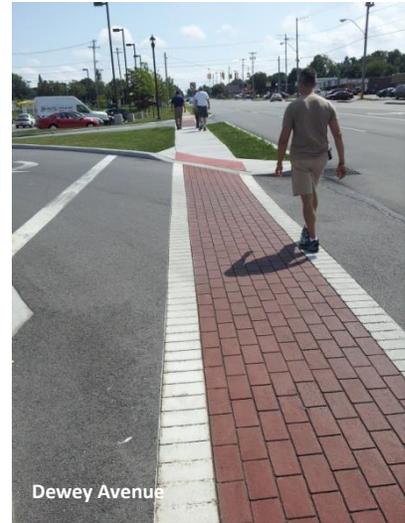


APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

Town of Greece Bicycle and Pedestrian Master Plan

Dewey Avenue/Northgate Shopping Plaza

- The group parked along Dobson Road and walked to Dewey Avenue. The first observation was the effect of the mixed-use zoning on the development of the Northgate Shopping Plaza. The crosswalks along Dewey Avenue adjacent to the shopping center are enhanced with textured applications. Accessible pedestrian signals that use audible cues and tactile push buttons to assist with the crossing are present.
- A transit island at Northgate Plaza provides a safe and convenient location for residents and shoppers to access transit services as well as a layover point for buses waiting to start the next trip. The transit island provides a positive pedestrian connection to the adjacent retail destinations and includes a pavilion structure as a transit shelter. The project also incorporated a large decorative pergola as part of the pedestrian park with enhanced amenities such as benches, bike racks, landscaping, decorative concrete pavers and trash collectors.
- The loading docks along Dobson Road are screened from traffic with brick columns and iron fencing.
- Decorative light posts were installed along Dewey Avenue.
- Green infrastructure practices are used to capture stormwater runoff onsite through the use of rain gardens and native plantings.
- The textured crosswalks are continued throughout the site, along with ADA compliant curb ramps. Bike racks are located throughout the Plaza. A new bus stop features a pergola shading design.
- The site attempts to create a more walkable, human-scaled environment despite the suburban context.



Maiden Lane/Heritage Drive

- The intersection is offset from Black Walnut Drive. Sidewalks are present within the neighborhoods as well as along Maiden Lane.
- A pedestrian was observed crossing from the southeastern corner of Maiden Lane/Black Walnut Drive to the northwestern corner of Heritage Drive/Maiden Lane, outside of a crosswalk.



APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

Town of Greece Bicycle and Pedestrian Master Plan

Ridge Road/Ridgmont Plaza

- It took 27 seconds for the group to cross the six-lane divided Ridge Road from Harvest Drive to the entrance to Ridgmont Plaza (a 105-foot crossing distance) with less than ten seconds to spare on the pedestrian countdown signal. Countdown timers such as this one are helpful, but lengthy crossings remain intimidating.
- Walking westbound along the south side of Ridge Road, the sidewalk was observed to be approximately seven feet wide. The 3.5-foot paved shoulder between the outside travel lane and the sidewalk was observed to provide a useful buffer between vehicles and the sidewalk.



Other Items Discussed

- Pedestrian connections to commercial and service locations and to private residential developments (such as apartments) can be lacking, and associated design guidelines may be beneficial.
- As with cyclists, pedestrians could benefit from signage directing them how to interact with motor vehicle traffic.
- Adequate landing areas should be provided for transit riders.
- Any company that owns the utility poles that reside within the ROW must be responsible for the relocation of such poles in the event that a streetscape project occurs. NYSDOT or any other overseeing agency on a particular roadway project is not responsible for physically relocating the utility poles.
- There is a desire to upgrade existing pedestrian signals to accessible pedestrian signals with countdown timers.
- Sensitivity must be given to the Greenleaf Road Bridge across the LOSP if installing a sidewalk due to the added weight.
- At signalized intersections, green signal housings denote state-owned signals while yellow housings denote county-owned signals.

Bicycling Tour

The bicycle tour began on Long Pond Road, adjacent to Town Hall, traveling north. The tour then followed a clockwise loop that included sections along Janes Road, Island Cottage Road, the Lake Ontario State Parkway Trail

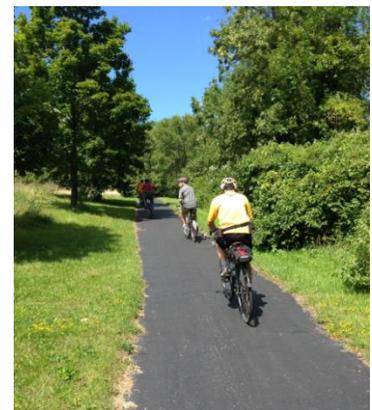
APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

Town of Greece Bicycle and Pedestrian Master Plan

and the Route 390 Trail, Latta Road, Mount Read Boulevard, McGuire Road, Tait Avenue, Maiden Lane, and a series of local neighborhood streets. General and site-specific observations made by participants are highlighted below. A map of the route is also provided.



- Heavily traveled roads without bike lanes, such as Long Pond Road and Maiden Lane, could benefit from signage such as “Share the Road” signs. Note: This is a PAC recommendation, not necessarily a formal recommendation of the Plan.
- Long Pond Road has wide lanes that could potentially be narrowed to create paved shoulders. Alternatively, Shared Lane Markings might be useful. Drainage grates are set too low and force bicyclists to go around them. Also, there appears to be abundant right of way, suggesting that the existing 5-foot sidewalk could be widened to create a 10- or 12-foot shared use path. Other such opportunities in the Town should be identified.
- Janes Road, with paved shoulders present and a lower traffic volume, was observed to be more accommodating of bicycle travel.
- The interchange between the Lake Ontario State Parkway Trail and the Route 390 Trail lacks signage to direct cyclists to a safe way of traversing it, leading to a potentially scary situation, particularly for families with young children using the trails. Signage at Janes Road directing people headed east on the Parkway to go over the Island Cottage Road bridge would be helpful. There is a series of sections on the north side of the Parkway there that are confusing - there should be a better way of directing people to the right section of trail to get through the area safely. Cyclist-oriented signage along the 390 path was also discussed (i.e.; a stop sign for bikes where the trail intersects Latta Road). Strengthening the existing bicycling framework (like these trails) is a good approach for early implementation projects.
- At-grade road crossings should be upgraded, primarily through signage and pavement markings, to meet current best practices.
- The paved shoulders on Maiden Lane go in and out. Share the Road signage may be appropriate when they are absent.
- Tait Avenue is a good example of a low-volume street that parallels a busy arterial (Dewey Avenue). Such parallel routes should be identified, even though such a route may be circuitous in some cases. An example of a more circuitous connection is the series of pleasant neighborhood



APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

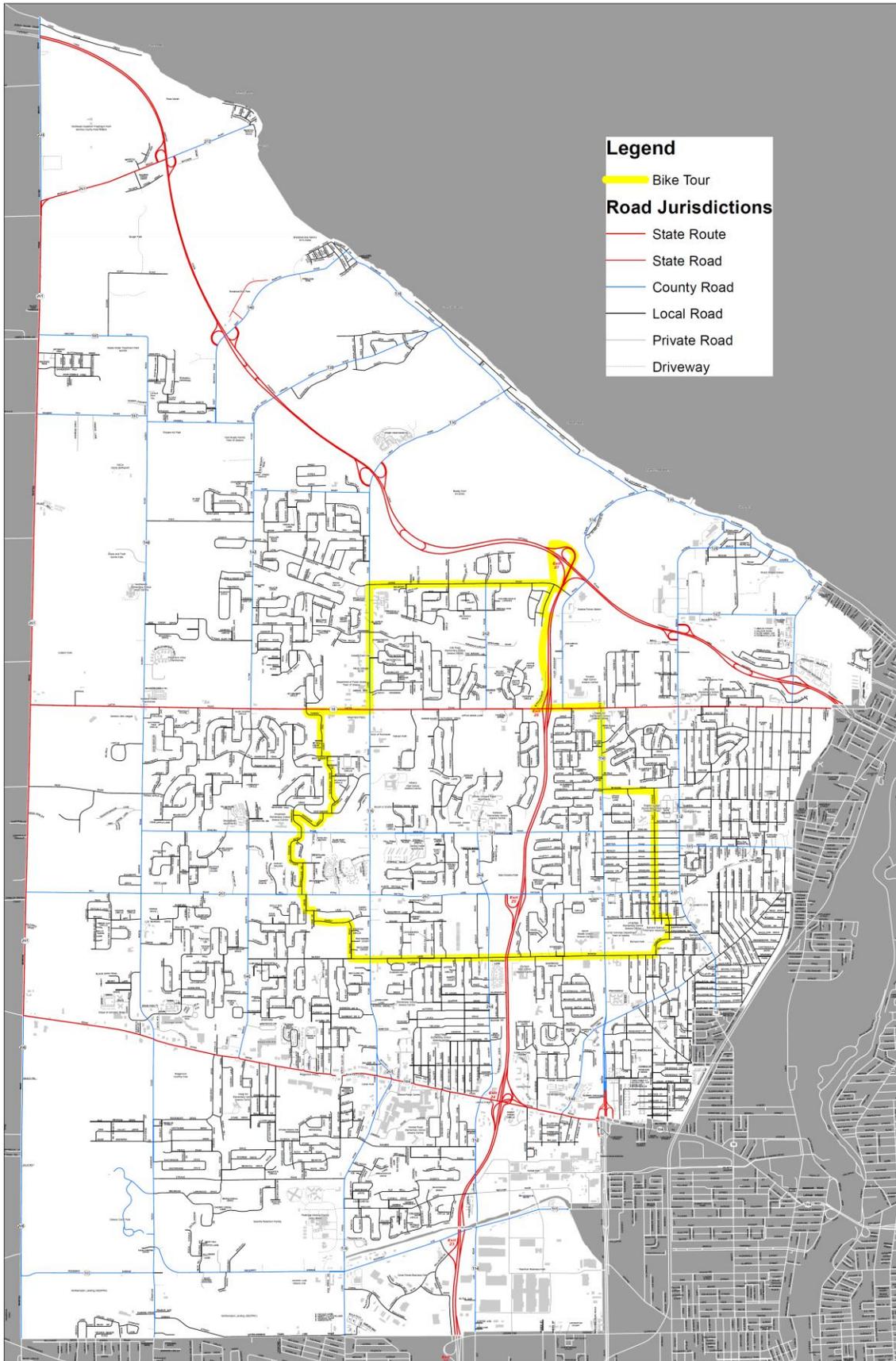
Town of Greece Bicycle and Pedestrian Master Plan

streets that participants rode on the west side of the tour to get from Maiden Avenue to Latta Road without using Long Pond Road.

- Olympia Drive, just east of Olympia High School, provides a nice non-motorized neighborhood connection from Maiden Lane to Buckman Heights Elementary School and Buckman Road and by extension to the commercial destinations on the north side of Ridge Road. Also there are path cuts allowing a zigzag connection to Black Walnut and Stone Road. The Route 390 Trail is also in view to the west of Olympia Drive.
- The Wegmans Plaza at Latta Road and Long Pond Road has many bike/ped destinations, but is not accommodating (including bike racks).
- There should be a focus on connecting key corridors, such as Dewey Avenue, to the City of Rochester. Connecting across boundaries gets the most bang for the buck, and capitalizing on the City's bicycle improvement momentum is important.

APPENDIX B: SUMMARY OF PAC WALKING AND BICYCLING TOURS

Town of Greece Bicycle and Pedestrian Master Plan





Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)
72.0	Beach	Edgemere	Dewey Ave	0.74	EB	2	U	2,449	2	30	16.5	5.5	4.0	3.5	0.42	A
72.0	Beach	Edgemere	Dewey Ave	0.74	WB	2	U	2,449	2	30	17.0	6.0	4.0	3.5	0.17	A
91.0	Britton	Town Line	Dewey Ave	0.92	EB	2	U	6,294	2	35	9.5	0.0	4.0	-	3.94	D
91.0	Britton	Town Line	Dewey Ave	0.92	WB	2	U	6,294	2	35	9.5	0.0	4.0	-	3.94	D
92.0	Britton	Dewey Ave	Mt. Read	0.62	EB	2	U	7,442	2	35	9.5	0.0	4.0	-	4.06	D
92.0	Britton	Dewey Ave	Mt. Read	0.62	WB	2	U	7,442	2	35	9.5	0.0	4.0	-	4.06	D
2.0	Deming	Gates Greece Town Line	Elmgrove	0.60	EB	2	U	1,500	2	35	9.5	0.0	4.0	-	2.34	B
2.0	Deming	Gates Greece Town Line	Elmgrove	0.60	WB	2	U	1,500	2	35	9.5	0.0	4.0	-	2.34	B
89.0	Denise	Dewey Ave	Town Line	0.93	EB	2	U	5,500	2	35	11.5	0.0	4.0	-	3.63	D
89.0	Denise	Dewey Ave	Town Line	0.93	WB	2	U	5,500	2	35	11.5	0.0	4.0	-	3.63	D
73.0	Dewey Ave	Beach	Edgemere	0.29	NB	2	U	7,658	2	30	11.5	0.5	3.5	3.0	3.91	D
73.0	Dewey Ave	Beach	Edgemere	0.29	SB	2	U	7,658	2	30	11.5	0.5	3.5	3.0	3.91	D
102.0	Dewey Ave	Town Line	Stone	0.39	NB	4	U	13,784	3	35	12.0	0.0	4.0	-	4.02	D
102.0	Dewey Ave	Town Line	Stone	0.39	SB	4	U	13,784	3	35	12.0	0.0	4.0	-	4.02	D
103.0	Dewey Ave	Stone	Maiden	0.06	NB	4	S	13,784	3	35	11.5	0.0	4.0	-	4.08	D
103.0	Dewey Ave	Stone	Maiden	0.06	SB	4	S	13,784	3	35	11.5	0.0	4.0	-	4.08	D
104.0	Dewey Ave	Maiden	Clark	0.18	NB	4	S	15,575	3	35	12.0	0.0	4.0	-	4.14	D
104.0	Dewey Ave	Maiden	Clark	0.18	SB	4	S	15,575	3	35	12.0	0.0	4.0	-	4.14	D
105.0	Dewey Ave	Clark	Dorsey	0.39	NB	4	U	15,575	3	35	12.0	0.0	4.0	-	4.14	D
105.0	Dewey Ave	Clark	Dorsey	0.39	SB	4	U	15,575	3	35	12.0	0.0	4.0	-	4.14	D
106.0	Dewey Ave	Dorsey	Ronald	0.30	NB	4	U	19,234	3	35	12.0	0.0	4.0	-	4.25	D
106.0	Dewey Ave	Dorsey	Ronald	0.30	SB	4	U	19,234	3	35	12.0	0.0	4.0	-	4.25	D
107.0	Dewey Ave	Ronald	Britton	0.08	NB	4	S	19,234	3	35	12.0	0.0	4.0	-	4.25	D
107.0	Dewey Ave	Ronald	Britton	0.08	SB	4	S	19,234	3	35	12.0	0.0	4.0	-	4.25	D
108.0	Dewey Ave	Britton	English	0.12	NB	4	S	19,234	3	35	12.0	0.0	4.0	-	4.25	D
108.0	Dewey Ave	Britton	English	0.12	SB	4	S	19,234	3	35	12.0	0.0	4.0	-	4.25	D
109.0	Dewey Ave	English	Denise	0.25	NB	4	S	19,234	3	35	12.0	0.0	5.0	-	4.09	D



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS		
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)	
109.0	Dewey Ave	English	Denise	0.25	SB	4	S	19,234	3	35	13.0	0.0	5.0	-	-	3.96	D
110.0	Dewey Ave	Denise	Mcquire	0.10	NB	4	S	19,234	3	35	12.0	0.0	4.5	-	-	4.15	D
110.0	Dewey Ave	Denise	Mcquire	0.10	SB	2	S	19,234	3	35	12.0	0.0	4.5	-	-	4.50	D
111.0	Dewey Ave	Mcquire	Rumson	0.47	NB	2	S	12,895	3	35	17.0	5.0	4.0	4.0	4.0	2.70	C
111.0	Dewey Ave	Mcquire	Rumson	0.47	SB	2	S	12,895	3	35	17.0	5.0	4.0	4.0	4.0	2.70	C
112.0	Dewey Ave	Rumson	Latta	0.19	NB	2	S	12,895	3	35	22.0	8.0	4.5	4.5	4.5	0.52	A
112.0	Dewey Ave	Rumson	Latta	0.19	SB	2	S	12,895	3	35	22.0	8.0	4.5	4.5	4.5	0.52	A
113.0	Dewey Ave	Latta	EB Ramp	0.54	NB	2	S	7,658	2	35	16.5	5.5	4.5	4.0	4.0	2.15	B
113.0	Dewey Ave	Latta	EB Ramp	0.54	SB	2	S	7,658	2	35	16.5	5.5	4.5	4.0	4.0	2.15	B
114.0	Dewey Ave	EB Ramp	WB Ramp	0.13	NB	2	S	7,658	2	35	20.0	8.0	4.0	4.0	4.0	0.62	A
114.0	Dewey Ave	EB Ramp	WB Ramp	0.13	SB	2	S	7,658	2	35	20.0	8.0	4.0	4.0	4.0	0.62	A
115.0	Dewey Ave	WB Ramp	Water Plant	0.31	SB	2	S	7,658	2	35	15.0	4.0	4.0	4.0	4.0	2.73	C
115.0	Dewey Ave	WB Ramp	Water Plant	0.31	NB	2	S	7,658	2	35	16.5	5.5	4.0	4.0	4.0	2.12	B
116.0	Dewey Ave	Water Plant	Begin of Bend in Road	0.21	NB	2	U	7,658	2	35	14.5	3.5	4.0	4.0	4.0	2.92	C
116.0	Dewey Ave	Water Plant	Begin of Bend in Road	0.21	SB	2	U	7,658	2	35	17.0	6.0	4.0	4.0	4.0	1.89	B
117.0	Dewey Ave	Begin of Bend in Road	End of Bend in Road	0.17	NB	2	U	7,658	2	30	20.5	9.5	4.0	4.0	4.0	0.00	A
117.0	Dewey Ave	Begin of Bend in Road	End of Bend in Road	0.17	SB	2	U	7,658	2	30	20.5	9.5	4.0	4.0	4.0	0.00	A
118.0	Dewey Ave	End of Bend in Road	Beach	0.13	EB	2	U	7,658	2	30	11.5	0.0	4.0	-	-	3.76	D
118.0	Dewey Ave	End of Bend in Road	Beach	0.13	WB	2	U	7,658	2	30	11.5	0.0	4.0	-	-	3.76	D
101.0	Dorsey	Mt. Read	Dewey Ave	0.61	EB	2	U	6,581	2	35	16.5	5.5	5.0	5.0	5.0	1.84	B
101.0	Dorsey	Mt. Read	Dewey Ave	0.61	WB	2	U	6,581	2	35	17.0	6.0	5.0	5.0	5.0	1.61	B
22.0	E Manitou	Frisbee Hill	Ramp	0.63	SB	2	U	1,567	2	35	14.5	3.5	4.0	3.0	3.0	0.71	A
22.0	E Manitou	Frisbee Hill	Ramp	0.63	NB	2	U	1,567	2	35	15.0	4.0	4.0	3.0	3.0	0.50	A
23.0	E Manitou	Ramp	Ramp	0.22	SB	2	U	3,643	2	35	15.0	4.0	3.5	3.5	3.5	2.19	B
23.0	E Manitou	Ramp	Ramp	0.22	NB	2	U	3,643	2	35	16.0	5.0	3.5	3.5	3.5	1.77	B
24.0	E Manitou	Ramp	Edgemere	0.44	SB	2	U	3,643	2	35	13.0	2.0	3.5	3.5	3.5	2.91	C
24.0	E Manitou	Ramp	Edgemere	0.44	NB	2	U	3,643	2	35	14.0	3.0	3.5	3.5	3.5	2.57	C
56.0	E Manitou	Park	Ramp	0.71	NB	2	U	3,643	2	35	15.0	4.0	3.5	3.5	3.5	2.19	B



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Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)
56.0	E Manitou	Park	Ramp	0.71	SB	2	U	3,643	2	35	15.0	4.0	3.5	3.5	2.19	B
54.0	Edgemere	Lowden	Cranberry	0.87	WB	2	U	1,985	2	35	14.5	3.5	4.0	4.0	0.91	A
54.0	Edgemere	Lowden	Cranberry	0.87	EB	2	U	1,985	2	35	16.0	5.0	4.0	4.0	0.16	A
55.0	Edgemere	Cranberry	E Manitou	0.12	EB	2	U	1,985	2	35	10.0	0.0	4.0	-	2.55	C
55.0	Edgemere	Cranberry	E Manitou	0.12	WB	2	U	1,985	2	35	10.0	0.0	4.0	-	2.55	C
63.0	Edgemere	Long Pond	Lowden	0.74	WB	2	U	1,985	2	35	14.5	3.0	4.0	4.0	0.96	A
63.0	Edgemere	Long Pond	Lowden	0.74	EB	2	U	1,985	2	35	16.0	5.0	4.0	4.0	0.16	A
64.0	Edgemere	Long Pond	Halfway of Edgemere	0.79	EB	2	U	2,517	2	35	12.0	1.0	4.0	4.0	2.67	C
64.0	Edgemere	Long Pond	Halfway of Edgemere	0.79	WB	2	U	2,517	2	35	14.5	3.5	4.0	4.0	1.37	A
65.0	Edgemere	Halfway of Edgemere	Island Cottage	0.59	WB	2	U	2,517	2	35	15.0	3.0	4.0	4.0	1.30	A
65.0	Edgemere	Halfway of Edgemere	Island Cottage	0.59	EB	2	U	2,517	2	35	15.0	4.0	4.0	4.0	1.14	A
66.0	Edgemere	Island Cottage	Dewey Ave	0.76	EB	2	U	2,653	2	30	14.5	3.5	3.5	3.5	1.55	B
66.0	Edgemere	Island Cottage	Dewey Ave	0.76	WB	2	U	2,653	2	30	14.5	3.5	3.5	3.5	1.55	B
67.0	Edgemere	Dewey Ave	Town Line	0.97	EB	2	U	2,923	2	30	12.0	1.0	3.5	3.5	2.97	C
67.0	Edgemere	Dewey Ave	Town Line	0.97	WB	2	U	2,923	2	30	12.0	1.0	3.5	3.5	2.97	C
3.0	Elmgrove	Deming	Straub	0.53	NB	2	U	14,977	4	40	21.0	10.0	4.0	4.0	0.74	A
3.0	Elmgrove	Deming	Straub	0.53	SB	2	U	14,977	4	40	21.0	10.0	4.0	4.0	0.74	A
33.0	Elmgrove	Ridge	Straub	1.14	NB	2	U	14,833	4	40	15.0	3.0	3.5	3.0	4.14	D
33.0	Elmgrove	Ridge	Straub	1.14	SB	2	U	14,833	4	40	15.0	3.0	3.5	3.0	4.14	D
34.0	Elmgrove	Straub	Ridgeway	0.76	NB	2	U	14,833	4	40	22.0	10.0	4.0	4.0	0.42	A
34.0	Elmgrove	Straub	Ridgeway	0.76	SB	2	U	14,833	4	40	22.0	10.0	4.0	4.0	0.42	A
90.0	English	Dewey Ave	Glenbrook	0.34	EB	2	U	6,800	2	35	9.5	0.0	5.0	-	3.83	D
90.0	English	Dewey Ave	Glenbrook	0.34	WB	2	U	6,800	2	35	9.5	0.0	5.0	-	3.83	D
93.0	English	Dewey Ave	Mt. Read	0.62	EB	2	U	7,380	2	35	11.0	0.0	5.0	-	3.74	D
93.0	English	Dewey Ave	Mt. Read	0.62	WB	2	U	7,380	2	35	11.0	0.0	5.0	-	3.74	D
94.0	English	Mt. Read	Rt 390	0.60	EB	2	U	9,499	2	35	14.0	3.5	4.5	4.5	3.07	C
94.0	English	Mt. Read	Rt 390	0.60	WB	2	U	9,499	2	35	14.0	3.5	4.5	4.5	3.07	C
94.0	English	Mt. Read	Rt 390	0.60	WB	2	U	9,499	2	35	15.5	4.0	4.5	4.5	2.70	C



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Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0...7)	Grade (A..F)
95.0	English	Rt 390	Rt 390	0.02	EB	2	U	9,499	2	35	24.0	12.0	4.0	4.0	0.00	A
95.0	English	Rt 390	Rt 390	0.02	WB	2	U	9,499	2	35	23.5	12.0	4.0	4.0	0.00	A
96.0	English	Rt 390	Long Pond	1.28	EB	2	U	9,499	2	35	14.0	3.5	4.5	4.5	3.07	C
96.0	English	Rt 390	Long Pond	1.28	WB	2	U	9,499	2	35	15.5	4.0	4.5	4.5	2.70	C
97.0	English	Long Pond	Manitou	1.85	EB	2	U	9,499	2	35	16.0	5.0	5.0	5.0	2.34	B
97.0	English	Long Pond	Manitou	1.85	WB	2	U	6,499	2	35	16.0	5.0	5.0	5.0	2.04	B
150.0	Fetzner	English	Sherry	0.41	NB	2	U	4,831	2	35	21.5	9.5	4.0	4.0	0.00	A
150.0	Fetzner	English	Sherry	0.41	SB	2	U	4,831	2	35	21.5	9.5	4.0	4.0	0.00	A
151.0	Fetzner	Sherry	Vintage	0.10	SB	2	U	4,831	2	35	15.5	3.5	4.0	4.0	2.40	B
151.0	Fetzner	Sherry	Vintage	0.10	NB	2	U	4,831	2	35	16.5	4.5	4.0	4.0	2.00	B
152.0	Fetzner	Vintage	Maiden	0.52	SB	2	U	4,831	2	35	20.5	9.0	4.0	4.0	0.00	A
152.0	Fetzner	Vintage	Maiden	0.52	NB	2	U	4,831	2	35	21.5	10.0	4.0	4.0	0.00	A
153.0	Fetzner	Maiden	Gardner	0.94	NB	2	U	4,831	2	35	19.0	8.0	4.5	4.5	0.46	A
153.0	Fetzner	Maiden	Gardner	0.94	SB	2	U	4,831	2	35	19.0	8.0	4.5	4.5	0.46	A
154.0	Fetzner	Gardner	Ridge	0.23	NB	4	S	4,831	2	35	12.0	0.0	4.5	-	2.97	C
154.0	Fetzner	Gardner	Ridge	0.23	SB	4	S	4,831	2	35	12.0	0.0	4.5	-	2.97	C
50.0	Flynn	Frisbee Hill	Latta	2.32	NB	2	U	5,902	2	35	14.5	3.5	4.0	3.5	2.81	C
50.0	Flynn	Frisbee Hill	Latta	2.32	SB	2	U	5,902	2	35	15.5	4.5	4.0	3.5	2.46	B
17.0	Frisbee Hill	North Greece Rd	Manitou	0.90	EB	2	U	4,538	2	35	14.0	4.0	3.5	3.0	2.80	C
17.0	Frisbee Hill	North Greece Rd	Manitou	0.90	WB	2	U	4,538	2	35	15.0	5.0	3.5	3.0	2.46	B
18.0	Frisbee Hill	North Greece Rd	E Manitou	0.56	EB	2	U	4,538	2	35	16.0	5.0	4.5	4.5	1.87	B
18.0	Frisbee Hill	North Greece Rd	E Manitou	0.56	WB	2	U	4,538	2	35	16.0	5.0	4.5	4.5	1.87	B
19.0	Frisbee Hill	E Manitou	Flynn	0.31	EB	2	U	2,009	2	35	11.0	0.0	4.5	-	2.21	B
19.0	Frisbee Hill	E Manitou	Flynn	0.31	WB	2	U	2,009	2	35	11.0	0.0	4.5	-	2.21	B
125.0	Frontage	Mt. Read	Thorpe	0.35	NB	2	U	1,500	2	25	10.0	0.0	4.0	-	1.94	B
125.0	Frontage	Mt. Read	Thorpe	0.35	SB	2	U	1,500	2	25	13.0	3.0	4.0	4.0	0.79	A
126.0	Frontage	Thorpe	Ridge	0.21	NB	2	U	1,500	2	25	10.0	0.0	4.0	-	1.94	B



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Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0...7)	Grade (A..F)
126.0	Frontage	Thorpe	Ridge	0.21	SB	2	U	1,500	2	25	10.0	0.0	4.0	-	1.94	B
1.0	Gates Greece Town Line	Long Pond	Deming	0.98	EB	2	U	1,500	2	35	14.0	3.0	4.0	4.0	0.67	A
1.0	Gates Greece Town Line	Long Pond	Deming	0.98	WB	2	U	1,500	2	35	14.0	3.0	4.0	4.0	0.67	A
68.0	Greenleaf	Beach/Edge	Parkway	0.86	NB	2	U	2,186	2	35	14.0	3.0	4.0	3.5	1.40	A
68.0	Greenleaf	Beach/Edge	Parkway	0.86	SB	2	U	2,186	2	35	15.0	4.0	4.0	3.5	0.97	A
69.0	Greenleaf	Parkway	Latta	0.21	NB	2	U	8,000	2	35	12.5	0.0	3.5	-	3.93	D
69.0	Greenleaf	Parkway	Latta	0.21	SB	2	U	8,000	2	35	14.0	1.5	3.5	3.0	3.73	D
14.0	Hincher	Manitou	Bridge	0.88	EB	2	U	849	2	35	10.0	0.0	3.5	-	1.76	B
14.0	Hincher	Manitou	Bridge	0.88	WB	2	U	849	2	35	10.0	0.0	3.5	-	1.76	B
52.0	Holmes	Long Pond	Latona	0.91	EB	2	U	8,500	2	35	11.5	1.0	4.0	3.0	3.95	D
52.0	Holmes	Long Pond	Latona	0.91	WB	2	U	8,500	2	35	11.5	1.0	4.0	3.0	3.95	D
74.0	Island Cottage	Edgemere	Halfway of Island Cottage	0.57	SB	2	U	1,704	2	35	16.0	5.0	4.0	3.5	0.02	A
74.0	Island Cottage	Edgemere	Halfway of Island Cottage	0.57	NB	2	U	1,704	2	35	17.0	6.0	4.0	3.5	0.00	A
75.0	Island Cottage	Halfway of Island Cottage	Janes	0.59	SB	2	U	1,704	2	35	22.0	11.0	4.0	4.0	0.00	A
82.0	Island Cottage	Janes	Latta	0.94	SB	2	U	9,414	3	45	16.5	4.5	3.5	3.5	3.11	C
82.0	Island Cottage	Janes	Latta	0.94	NB	2	U	9,414	3	45	17.0	5.0	3.5	3.5	2.89	C
76.0	Janes	Island Cottage	Long Pond	1.67	WB	2	U	2,375	2	35	14.0	3.0	5.0	4.5	1.37	A
76.0	Janes	Island Cottage	Long Pond	1.67	EB	2	U	2,375	2	35	14.5	3.5	5.0	4.5	1.16	A
77.0	Kirk	Janes	Latta	1.02	NB	2	U	1,554	2	30	14.0	3.0	4.5	4.0	0.61	A
77.0	Kirk	Janes	Latta	1.02	SB	2	U	1,554	2	30	15.0	4.0	4.5	4.0	0.15	A
71.0	Kirkwood	Ling	Beach	0.76	NB	2	U	800	2	30	10.0	0.0	3.5	-	1.65	B
47.0	Kuhn	Long Pond	Flynn	0.94	EB	2	U	4,373	2	35	12.5	1.5	3.5	3.5	3.51	D
47.0	Kuhn	Long Pond	Flynn	0.94	WB	2	U	4,373	2	35	12.5	1.5	3.5	3.5	3.51	D
155.0	Latona	Ridge	Holmes	0.40	NB	2	S	8,645	2	35	18.0	6.0	4.5	4.0	1.81	B
155.0	Latona	Ridge	Holmes	0.40	SB	2	S	8,645	2	35	18.0	6.0	4.5	4.0	1.81	B



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS		
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)	
156.0	Latona	Holmes	Weiland	0.38	NB	2	S	8,645	2	35	16.0	4.0	4.0	4.0	3.5	2.73	C
156.0	Latona	Holmes	Weiland	0.38	SB	2	S	8,645	2	35	16.0	4.0	4.0	4.0	3.5	2.73	C
157.0	Latona	Weiland	Ridgeway	0.23	NB	4	U	8,645	2	35	13.0	0.0	4.0	4.0	-	3.29	C
157.0	Latona	Weiland	Ridgeway	0.23	SB	4	U	8,645	2	35	13.0	0.0	4.0	4.0	-	3.29	C
79.0	Latta	Long Pond	Brandy Brook	0.52	EB	4	S	13,069	4	45	16.0	5.0	4.0	4.0	4.0	3.01	C
79.0	Latta	Long Pond	Brandy Brook	0.52	WB	4	S	13,069	4	45	16.0	5.0	4.0	4.0	4.0	3.01	C
80.0	Latta	Brandy Brook	Flynn	0.45	EB	4	U	13,069	4	45	16.0	5.0	4.0	4.0	4.0	3.01	C
80.0	Latta	Brandy Brook	Flynn	0.45	WB	4	U	13,069	4	45	16.0	5.0	4.0	4.0	4.0	3.01	C
81.0	Latta	Flynn	Manitou	1.79	EB	2	U	13,069	4	45	14.5	3.5	4.0	4.0	4.0	3.95	D
81.0	Latta	Flynn	Manitou	1.79	WB	2	U	13,069	4	45	14.5	3.5	4.0	4.0	4.0	3.95	D
83.0	Latta	Long Pond	Rt 390	1.44	EB	4	U	19,822	4	40	16.0	5.0	4.0	4.0	4.0	3.13	C
83.0	Latta	Long Pond	Rt 390	1.44	WB	4	U	19,822	4	40	16.0	5.0	4.0	4.0	4.0	3.13	C
84.0	Latta	Rt 390	Picturesque	0.20	WB	4	S	17,728	3	35	15.0	4.0	4.0	4.0	4.0	3.12	C
84.0	Latta	Rt 390	Picturesque	0.20	EB	4	S	17,728	3	35	15.0	4.0	4.0	4.0	4.0	3.12	C
85.0	Latta	Picturesque	Mt. Read	0.24	EB	4	S	17,728	3	35	15.0	4.0	4.0	4.0	4.0	3.12	C
85.0	Latta	Picturesque	Mt. Read	0.24	WB	2	S	17,728	3	35	15.0	4.0	4.0	4.0	4.0	3.47	C
86.0	Latta	Mt. Read	Dewey Ave	0.63	EB	2	S	18,113	3	35	16.0	5.0	4.0	4.0	4.0	3.08	C
86.0	Latta	Mt. Read	Dewey Ave	0.63	WB	2	S	18,113	3	35	16.0	5.0	4.0	4.0	4.0	3.08	C
86.0	Latta	Mt. Read	Dewey Ave	0.63	WB	2	S	18,113	3	35	16.5	5.5	4.0	4.0	4.0	2.87	C
87.0	Latta	Dewey Ave	Town Line	1.24	WB	2	U	10,306	3	35	18.5	7.5	4.5	4.0	4.0	1.74	B
87.0	Latta	Dewey Ave	Town Line	1.24	EB	2	U	10,306	3	35	19.0	8.0	4.5	4.0	4.0	1.50	A
158.0	Lee	Ridgeway	Lexington	0.85	NB	4	S	7,913	2	35	18.0	6.0	4.5	4.0	4.0	1.26	A
158.0	Lee	Ridgeway	Lexington	0.85	SB	2	S	7,913	2	35	18.0	6.0	4.5	4.0	4.0	1.73	B
70.0	Ling	Greenleaf	Dewey Ave	0.96	EB	2	U	4,032	2	30	10.5	0.5	4.0	3.0	3.0	3.44	C
70.0	Ling	Greenleaf	Dewey Ave	0.96	WB	2	U	4,032	2	30	11.5	0.5	4.0	3.0	3.0	3.33	C
36.0	Long Pond	Gates Greece Town Line	Ridgeway	0.52	NB	4	U	16,842	3	35	16.0	5.0	4.0	4.0	4.0	2.70	C
36.0	Long Pond	Gates Greece Town Line	Ridgeway	0.52	SB	4	U	16,842	3	35	16.0	5.0	4.0	4.0	4.0	2.70	C
37.0	Long Pond	Ridgeway	Mitchell/Spit	1.38	NB	4	S	16,840	3	35	13.0	0.0	4.0	-	-	4.06	D



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)
37.0	Long Pond	Ridgeway	Mitchell/Spilt	1.38	SB	4	S	16,840	3	35	14.0	0.0	4.0	-	3.92	D
39.0	Long Pond	Spilt	Mitchell	0.46	SB	2	OW	8,502	2	35	13.5	0.0	4.0	-	3.74	D
40.0	Long Pond	Mitchell	Maiden	0.77	NB	4	U	16,840	3	35	13.0	0.0	4.0	-	4.06	D
40.0	Long Pond	Mitchell	Maiden	0.77	SB	4	U	16,840	3	35	13.0	0.0	4.0	-	4.06	D
41.0	Long Pond	Maiden	Vintage	0.52	NB	4	U	16,840	3	35	13.0	0.0	4.0	-	4.06	D
41.0	Long Pond	Maiden	Vintage	0.52	SB	4	U	16,840	3	35	13.0	0.0	4.0	-	4.06	D
42.0	Long Pond	Vintage	English	0.50	NB	4	S	16,840	3	35	11.0	0.0	4.0	-	4.30	D
42.0	Long Pond	Vintage	English	0.50	SB	4	S	16,840	3	35	11.0	0.0	4.0	-	4.30	D
43.0	Long Pond	English	Banbury	0.59	NB	4	U	16,840	3	35	11.5	0.0	4.0	-	4.24	D
43.0	Long Pond	English	Banbury	0.59	SB	4	U	16,840	3	35	10.0	0.0	4.0	-	4.40	D
44.0	Long Pond	Banbury	Latta	0.42	NB	4	S	16,840	3	35	11.0	0.0	4.0	-	4.30	D
44.0	Long Pond	Banbury	Latta	0.42	SB	4	S	16,840	3	35	11.0	0.0	4.0	-	4.30	D
45.0	Long Pond	Latta	Janes	0.60	NB	2	S	5,369	2	35	14.5	0.0	4.5	-	3.13	C
45.0	Long Pond	Latta	Janes	0.60	SB	2	S	5,369	2	35	14.0	0.0	4.5	-	3.20	C
46.0	Long Pond	Janes	Ramp	0.80	NB	2	U	6,728	2	35	17.0	5.5	3.0	2.5	2.43	B
46.0	Long Pond	Janes	Ramp	0.80	SB	2	U	6,728	2	35	17.5	6.0	3.0	2.5	2.23	B
48.0	Long Pond	Ramp	Ramp	0.23	NB	2	U	6,236	2	35	15.5	4.0	3.5	3.0	2.75	C
48.0	Long Pond	Ramp	Ramp	0.23	SB	2	U	6,236	2	35	15.5	4.0	3.5	3.0	2.75	C
49.0	Long Pond	Ramp	Edgemere	1.15	NB	2	U	6,236	2	35	15.5	4.0	4.0	3.5	2.58	C
49.0	Long Pond	Ramp	Edgemere	1.15	SB	2	U	6,236	2	35	15.5	4.0	4.0	3.5	2.58	C
78.0	Long Pond	Latta	Town Buildings	0.42	NB	4	S	5,373	2	35	12.5	0.0	4.5	-	2.98	C
78.0	Long Pond	Latta	Town Buildings	0.42	SB	4	S	5,373	2	35	13.5	0.0	4.5	-	2.85	C
20.0	Lowden Point	Frisbee Hill	Lake Ontario Parkway	0.30	NB	2	U	1,600	2	35	17.0	6.0	4.0	4.0	0.00	A
20.0	Lowden Point	Frisbee Hill	Lake Ontario Parkway	0.30	SB	2	U	1,600	2	35	17.0	6.0	4.0	4.0	0.00	A
21.0	Lowden Point	Lake Ontario Parkway	Edgemere	1.46	NB	2	U	2,041	2	35	12.0	1.0	4.0	3.0	2.35	B
21.0	Lowden Point	Lake Ontario Parkway	Edgemere	1.46	SB	2	U	2,041	2	35	12.0	1.0	4.0	3.0	2.35	B
143.0	Maiden	North	Long Pond	0.99	EB	2	U	7,843	2	35	17.5	6.5	4.5	4.5	1.57	B



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)
143.0	Maiden	North	Long Pond	0.99	WB	2	U	7,843	2	35	17.5	6.5	4.5	4.5	1.57	B
144.0	Maiden	Long Pond	School	1.30	EB	2	U	11,043	3	35	17.5	5.5	4.5	4.5	2.30	B
144.0	Maiden	Long Pond	School	1.30	WB	2	U	11,043	3	35	17.5	5.5	4.5	4.5	2.30	B
145.0	Maiden	School	Heritage	0.27	EB	2	S	11,043	3	35	11.5	0.0	4.5	-	4.28	D
145.0	Maiden	School	Heritage	0.27	WB	2	S	11,043	3	35	12.0	0.0	4.5	-	4.22	D
146.0	Maiden	Heritage	Mt. Read	0.33	EB	4	S	11,043	3	35	12.0	0.0	4.5	-	3.71	D
146.0	Maiden	Heritage	Mt. Read	0.33	WB	4	S	11,043	3	35	12.0	0.0	4.5	-	3.71	D
147.0	Maiden	Mt. Read	Frear	0.20	EB	2	U	11,043	3	35	24.0	0.0	4.0	-	2.16	B
147.0	Maiden	Mt. Read	Frear	0.20	WB	2	U	11,043	3	35	24.0	0.0	4.0	-	2.16	B
148.0	Maiden	Frear	Pomona	0.25	EB	2	U	11,043	3	35	11.5	0.0	4.0	-	4.38	D
148.0	Maiden	Frear	Pomona	0.25	WB	2	U	11,043	3	35	17.5	5.5	4.0	4.0	2.39	B
149.0	Maiden	Pomona	Dewey Ave	0.43	EB	2	U	11,043	3	35	11.5	0.0	4.0	-	4.38	D
149.0	Maiden	Pomona	Dewey Ave	0.43	WB	2	U	11,043	3	35	12.0	0.0	4.0	-	4.32	D
5.0	Manitou	Ridgeway	Ridge	2.62	NB	2	U	10,220	4	40	15.0	4.0	4.0	3.0	3.73	D
5.0	Manitou	Ridgeway	Ridge	2.62	SB	2	U	10,220	4	40	15.0	4.0	4.0	3.0	3.73	D
6.0	Manitou	Ridge	Latta	2.53	SB	2	U	7,349	3	40	14.5	2.5	4.0	3.0	3.58	D
6.0	Manitou	Ridge	Latta	2.53	NB	2	U	7,349	3	40	15.0	3.0	4.0	3.0	3.44	C
7.0	Manitou	Latta	Parma Center	0.35	SB	2	U	7,464	3	40	14.5	2.5	4.0	3.0	3.60	D
7.0	Manitou	Latta	Parma Center	0.35	NB	2	U	7,464	3	40	15.0	3.0	4.0	3.0	3.45	C
8.0	Manitou	Parma Center	Frisbee Hill	2.01	SB	2	U	7,464	3	40	14.5	2.5	4.0	3.0	3.60	D
8.0	Manitou	Parma Center	Frisbee Hill	2.01	NB	2	U	7,464	3	40	15.0	3.0	4.0	3.0	3.45	C
9.0	Manitou	Frisbee Hill	South of Bridge	1.02	NB	2	U	3,837	3	40	15.0	3.0	4.0	4.0	2.58	C
9.0	Manitou	Frisbee Hill	South of Bridge	1.02	SB	2	U	3,837	3	40	15.0	3.0	4.0	4.0	2.58	C
10.0	Manitou	South of Bridge	North of Bridge	0.32	SB	2	U	3,837	3	40	12.0	1.0	4.0	4.0	3.64	D
10.0	Manitou	South of Bridge	North of Bridge	0.32	NB	2	U	3,837	3	40	12.0	2.0	4.0	4.0	3.26	C
11.0	Manitou	North of Bridge	Split	0.50	SB	2	U	3,837	3	40	13.5	1.5	4.0	4.0	3.51	D
11.0	Manitou	North of Bridge	Split	0.50	NB	2	U	3,837	3	40	14.5	2.5	4.0	4.0	2.76	C



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur. #	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0...7)	Grade (A..F)
13.0	Manitou Beach	Split	Lake Ontario Parkway	1.08	NB	2	U	2,032	3	40	12.0	1.0	4.0	3.0	2.51	C
13.0	Manitou Beach	Split	Lake Ontario Parkway	1.08	SB	2	U	2,032	3	40	13.0	2.0	4.0	3.0	1.87	B
141.0	McCall	Stone	Town Line	0.64	NB	2	U	2,800	2	25	10.5	0.0	3.5	-	2.82	C
141.0	McCall	Stone	Town Line	0.64	SB	2	U	2,800	2	25	10.5	0.0	3.5	-	2.82	C
88.0	McGuire	Mt. Read	Dewey Ave	0.62	EB	2	U	2,300	2	35	9.5	0.0	3.5	-	3.00	C
88.0	McGuire	Mt. Read	Dewey Ave	0.62	WB	2	U	2,300	2	35	9.5	0.0	3.5	-	3.00	C
29.0	Mill	North Greece Rd	Manitou	1.81	EB	2	U	3,000	2	35	14.5	3.5	4.5	4.5	1.64	B
29.0	Mill	North Greece Rd	Manitou	1.81	WB	2	U	3,000	2	35	14.5	3.5	4.5	4.5	1.64	B
30.0	Mill	North Greece Rd	Long Pond	0.99	EB	2	U	2,257	2	35	14.0	3.0	4.5	4.5	1.28	A
30.0	Mill	North Greece Rd	Long Pond	0.99	WB	2	U	2,257	2	35	14.5	3.5	4.5	4.5	1.06	A
38.0	Mitchell	Split	Long Pond	0.53	NB	2	OW	8,340	2	35	13.5	0.0	4.0	-	3.72	D
119.0	Mt. Read	Latta	English	1.00	NB	4	S	4,804	2	35	12.0	0.0	3.5	-	3.23	C
119.0	Mt. Read	Latta	English	1.00	SB	2	S	4,804	2	35	14.0	0.0	3.5	-	3.38	C
120.0	Mt. Read	English	Vintage	0.50	NB	4	U	4,804	2	35	13.0	0.0	4.0	-	2.14	B
120.0	Mt. Read	English	Vintage	0.50	SB	4	U	4,804	2	35	13.5	0.0	4.0	-	2.01	B
121.0	Mt. Read	Vintage	Wildwood	0.21	NB	4	U	14,649	3	35	13.0	0.0	4.0	-	3.96	D
121.0	Mt. Read	Vintage	Wildwood	0.21	SB	4	U	14,649	3	35	13.0	0.0	4.0	-	3.96	D
122.0	Mt. Read	Wildwood	Maiden	0.30	NB	4	S	14,649	3	35	12.0	0.0	4.0	-	4.08	D
122.0	Mt. Read	Wildwood	Maiden	0.30	SB	4	S	14,649	3	35	12.0	0.0	4.0	-	4.08	D
123.0	Mt. Read	Maiden	Stone	0.63	NB	4	U	14,649	3	35	12.0	0.0	4.0	-	4.08	D
123.0	Mt. Read	Maiden	Stone	0.63	SB	4	U	14,649	3	35	13.0	0.0	4.0	-	3.96	D
124.0	Mt. Read	Stone	Frontage	0.50	SB	4	D	14,649	3	35	17.0	6.0	4.0	4.0	2.16	B
124.0	Mt. Read	Stone	Frontage	0.50	NB	4	D	14,649	3	35	19.5	8.5	4.0	4.0	0.88	A
51.0	North	English	Ridge	1.34	NB	2	U	4,185	2	35	15.0	4.0	4.0	4.0	2.32	B
51.0	North	English	Ridge	1.34	SB	2	U	4,185	2	35	15.0	4.0	4.0	4.0	2.32	B
142.0	North	Mill	English	0.51	SB	2	U	4,185	2	35	15.0	4.5	4.5	4.5	2.12	B
142.0	North	Mill	English	0.51	NB	2	U	4,185	2	35	15.5	5.0	4.5	4.5	1.92	B



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0...7)	Grade (A..F)
15.0	North Greece Rd	Bridge	Anglers Cove	0.15	NB	2	U	786	2	35	11.0	1.0	3.5	3.5	1.69	B
15.0	North Greece Rd	Bridge	Anglers Cove	0.15	SB	2	U	786	2	35	12.0	2.0	3.5	3.5	0.89	A
16.0	North Greece Rd	Anglers Cove	Frisbee Hill	0.54	NB	2	U	786	2	35	11.0	1.0	3.5	3.5	1.69	B
16.0	North Greece Rd	Anglers Cove	Frisbee Hill	0.54	SB	2	U	786	2	35	12.0	2.0	3.5	3.5	0.89	A
25.0	North Greece Rd	Frisbee Hill	Latta	2.32	NB	2	U	3,711	2	35	17.0	6.0	4.5	4.5	1.11	A
25.0	North Greece Rd	Frisbee Hill	Latta	2.32	SB	2	U	3,711	2	35	17.0	6.0	4.5	4.5	1.11	A
27.0	North Greece Rd	Latta	English	1.01	NB	2	U	8,196	2	35	16.0	5.0	4.0	4.0	2.38	B
27.0	North Greece Rd	Latta	English	1.01	SB	2	U	8,196	2	35	16.0	5.0	4.0	4.0	2.38	B
31.0	North Greece Rd	English	Bram Hall	1.54	NB	2	U	8,196	2	35	16.0	5.0	4.0	3.5	2.51	C
31.0	North Greece Rd	English	Bram Hall	1.54	SB	2	U	8,196	2	35	16.0	5.0	4.0	3.5	2.51	C
32.0	North Greece Rd	Bram Hall	Ridge	0.18	NB	2	U	8,196	2	35	14.0	0.0	4.0	-	3.60	D
32.0	North Greece Rd	Bram Hall	Ridge	0.18	SB	2	U	8,196	2	35	14.0	0.0	4.0	-	3.60	D
12.0	Payne Beach	Split	Lake Ontario Parkway	1.34	NB	2	U	1,135	3	40	16.0	5.0	3.5	3.5	0.00	A
12.0	Payne Beach	Split	Lake Ontario Parkway	1.34	SB	2	U	1,135	3	40	16.0	5.0	3.5	3.5	0.00	A
28.0	Peck	North Greece Rd	Manitou	0.93	WB	2	U	1,460	2	35	13.5	3.0	4.0	3.5	0.89	A
28.0	Peck	North Greece Rd	Manitou	0.93	EB	2	U	1,460	2	35	14.0	3.5	4.0	3.5	0.67	A
26.0	Post	North Greece Rd	Flynn	0.87	EB	2	U	600	2	35	10.0	0.0	3.5	-	1.48	A
26.0	Post	North Greece Rd	Flynn	0.87	WB	2	U	600	2	35	10.0	0.0	3.5	-	1.48	A
127.0	Ridge	Mt. Read	Stone	0.30	EB	6	D	38,398	4	40	16.0	4.0	4.0	4.0	3.46	C
127.0	Ridge	Mt. Read	Stone	0.30	WB	6	D	38,398	4	40	16.0	4.0	4.0	4.0	3.46	C
128.0	Ridge	Stone	NB 390	0.29	EB	6	D	46,121	5	40	16.0	4.0	4.0	4.0	3.81	D
128.0	Ridge	Stone	NB 390	0.29	WB	6	D	46,121	5	40	16.0	4.0	4.0	4.0	3.81	D
129.0	Ridge	NB 390	SB 390	0.31	EB	6	D	46,121	5	40	15.5	3.5	4.0	4.0	4.00	D
129.0	Ridge	NB 390	SB 390	0.31	WB	6	D	46,121	5	40	15.5	3.5	4.0	4.0	4.00	D
130.0	Ridge	SB 390	Felzner	0.07	EB	6	D	42,459	5	40	15.5	3.5	4.0	4.0	3.96	D
130.0	Ridge	SB 390	Felzner	0.07	WB	6	D	42,459	5	40	15.5	3.5	4.0	4.0	3.96	D
131.0	Ridge	Felzner	Mitchell	0.75	EB	6	D	29,730	4	40	15.5	3.5	4.0	4.0	3.53	D



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation

Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0...7)	Grade (A..F)
131.0	Ridge	Felzner	Mitchell	0.75	WB	6	D	29,730	4	40	15.5	3.5	4.0	4.0	3.53	D
132.0	Ridge	Mitchell	Long Pond	0.12	EB	6	D	29,730	4	40	15.0	3.0	4.0	4.0	3.71	D
132.0	Ridge	Mitchell	Long Pond	0.12	WB	6	D	29,730	4	40	15.0	3.0	4.0	4.0	3.71	D
133.0	Ridge	Long Pond	Before N. Greece Rd	1.54	EB	6	D	29,401	4	40	15.5	3.5	4.0	4.0	3.52	D
134.0	Ridge	Before N. Greece Rd	After N. Greece Rd	0.38	WB	6	S	18,706	4	40	15.5	3.5	4.0	4.0	3.29	C
134.0	Ridge	Before N. Greece Rd	After N. Greece Rd	0.38	EB	6	S	18,706	4	40	16.0	4.0	4.0	4.0	3.10	C
135.0	Ridge	After N. Greece Rd	Halfway to Manitou	0.45	WB	4	S	18,706	4	40	14.0	3.0	4.0	4.0	3.86	D
135.0	Ridge	After N. Greece Rd	Halfway to Manitou	0.45	EB	4	S	18,706	4	40	15.0	4.0	4.0	4.0	3.50	C
136.0	Ridge	Halfway to Manitou	Manitou	0.51	WB	4	U	18,706	4	40	14.5	2.5	3.5	3.0	4.07	D
136.0	Ridge	Halfway to Manitou	Manitou	0.51	EB	4	U	18,706	4	40	15.5	3.5	3.5	3.0	3.74	D
4.0	Ridgeway	Manitou	Elmgrove	1.08	EB	2	U	2,833	2	35	16.5	6.5	4.0	4.0	0.52	A
4.0	Ridgeway	Manitou	Elmgrove	1.08	WB	2	U	2,833	2	35	16.5	6.5	4.0	4.0	0.52	A
57.0	Ridgeway	Elmgrove	Canal Woods	0.69	WB	2	U	17,661	3	35	19.0	6.0	4.0	4.0	2.15	B
57.0	Ridgeway	Elmgrove	Canal Woods	0.69	EB	2	U	17,661	3	35	20.5	7.5	4.0	4.0	1.36	A
58.0	Ridgeway	Canal Woods	Long Pond	0.96	WB	2	U	17,661	3	35	15.0	4.0	4.0	4.0	3.47	C
58.0	Ridgeway	Canal Woods	Long Pond	0.96	EB	2	U	17,661	3	35	16.0	5.0	4.0	4.0	3.07	C
59.0	Ridgeway	Long Pond	Bellwood	0.82	EB	2	U	17,661	3	35	17.5	7.0	4.0	3.5	2.49	B
59.0	Ridgeway	Long Pond	Bellwood	0.82	WB	2	U	17,661	3	35	17.5	7.0	4.0	3.5	2.49	B
60.0	Ridgeway	Bellwood	Latona	0.29	EB	3	S	17,661	3	35	16.0	4.0	4.5	4.5	2.82	C
60.0	Ridgeway	Bellwood	Latona	0.29	WB	3	S	17,661	3	35	16.0	4.0	4.5	4.5	2.82	C
61.0	Ridgeway	Latona	McLaughlin	0.53	EB	2	U	24,921	4	35	14.0	4.0	4.5	4.5	3.95	D
61.0	Ridgeway	Latona	McLaughlin	0.53	WB	2	U	24,921	4	35	14.0	4.0	4.5	4.5	3.95	D
62.0	Ridgeway	McLaughlin	Town Line	0.23	EB	2	U	24,921	4	35	19.5	7.5	4.0	4.0	2.02	B
62.0	Ridgeway	McLaughlin	Town Line	0.23	WB	2	U	24,921	4	35	19.5	7.5	4.0	4.0	2.02	B
35.0	Staub	Elmgrove	Long Pond	1.55	EB	2	U	3,500	2	30	12.0	1.0	3.0	3.0	3.47	C
35.0	Staub	Elmgrove	Long Pond	1.55	WB	2	U	3,500	2	30	12.0	1.0	3.0	3.0	3.47	C



Appendix C: Town of Greece Existing Bicycling Conditions (Level of Service) Evaluation



Seg_ID	Road Name	From	To	Len- gth (Ls) (mi)	Dir. of Sur.	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP _p) mph	Width of Pavement		Pavecon		Bicycle LOS	
						Th	Con				W _i (ft)	W _i (ft)	PC _i (1..5)	PC _i (1..5)	Score (0..7)	Grade (A..F)
137.0	Stone	Ridge	Mt. Read	0.85	NB	2	U	11,767	3	35	16.5	5.5	4.0	4.0	2.65	C
137.0	Stone	Ridge	Mt. Read	0.85	SB	2	U	11,767	3	35	16.5	5.5	4.0	4.0	2.65	C
138.0	Stone	Mt. Read	Aldridge	0.75	NB	2	U	11,767	3	35	15.5	3.5	4.0	3.0	3.43	C
138.0	Stone	Mt. Read	Aldridge	0.75	SB	2	U	11,767	3	35	15.5	3.5	4.0	3.0	3.43	C
139.0	Stone	Aldridge	Dewey Ave	0.29	NB	2	U	11,005	3	35	15.0	4.0	4.0	4.0	3.23	C
139.0	Stone	Aldridge	Dewey Ave	0.29	SB	2	U	11,005	3	35	15.0	4.0	4.0	4.0	3.23	C
140.0	Stone	Dewey Ave	Town Line	0.84	NB	2	U	7,930	2	35	15.0	4.0	4.0	4.0	2.75	C
140.0	Stone	Dewey Ave	Town Line	0.84	SB	2	U	7,930	2	35	15.0	4.0	4.0	4.0	2.75	C
98.0	Vintage	Long Pond	Fetzner	0.95	EB	2	S	12,361	3	35	19.5	7.5	5.0	5.0	1.29	A
98.0	Vintage	Long Pond	Fetzner	0.95	WB	2	S	12,361	3	35	19.5	7.5	5.0	5.0	1.29	A
99.0	Vintage	Fetzner	Rt 390	0.28	EB	4	S	12,361	3	35	16.5	5.5	5.0	5.0	2.05	B
99.0	Vintage	Fetzner	Rt 390	0.28	WB	4	S	12,361	3	35	16.5	5.5	5.0	5.0	2.05	B
100.0	Vintage	Rt 390	Mt. Read	0.66	EB	2	S	12,361	3	35	20.0	8.0	5.0	5.0	1.02	A
100.0	Vintage	Rt 390	Mt. Read	0.66	WB	2	S	12,361	3	35	20.0	8.0	5.0	5.0	1.02	A
53.0	Weiland	Latona	Long Pond	1.10	EB	2	U	5,500	2	35	13.0	1.0	3.5	3.5	3.60	D
53.0	Weiland	Latona	Long Pond	1.10	WB	2	U	5,500	2	35	13.0	1.0	3.5	3.5	3.60	D

APPENDIX D: SUPPORTING EXISTING CONDITIONS INFORMATION
Town of Greece Bicycle and Pedestrian Master Plan

Total Population, Housing Units, Land Area, and Population Density
Monroe County, New York, 2010
2010 Census: Public Law 94-171 Data

NAME	Population Total	Housing Units			Land Area (Sq. Mi.)	Density (Persons/sq. mi.)
		Total	Occupied	Vacant		
Monroe County	744,344	320,593	300,422	20,171	657.2	1,132.6
Rochester city	210,565	97,158	87,027	10,131	35.8	5,884.9
Towns:						
Brighton town	36,609	17,087	15,904	1,183	15.4	2,374.8
Chili town	28,625	11,685	11,263	422	39.5	724.7
Clarkson town	6,736	2,529	2,420	109	33.2	203.0
East Rochester town	6,587	2,992	2,834	158	1.3	4,972.6
Gates town	28,400	12,462	11,979	483	15.2	1,868.4
Greece town	96,095	41,190	39,407	1,783	47.5	2,022.3
Hamlin town	9,045	3,632	3,380	252	43.5	208.1
Henrietta town	42,581	16,078	15,449	629	35.4	1,204.5
Irondequoit town	51,692	23,612	22,554	1,058	15.0	3,445.9
Mendon town	9,152	3,613	3,457	156	39.5	231.9
Ogden town	19,856	7,660	7,396	264	36.5	544.4
Parma town	15,633	6,309	5,994	315	42.0	372.0
Penfield town	36,242	15,290	14,562	728	37.2	974.0
Perinton town	46,462	19,709	18,869	840	34.2	1,359.1
Pittsford town	29,405	10,744	10,341	403	23.2	1,268.5
Riga town	5,590	2,232	2,152	80	35.0	159.9
Rush town	3,478	1,412	1,361	51	30.3	114.7
Sweden town	14,175	5,190	4,919	271	33.7	420.9
Webster town	42,641	17,860	17,152	708	33.5	1,271.7
Wheatland town	4,775	2,149	2,002	147	30.4	157.0
Villages:						
Brockport village	8,366	2,679	2,528	151	2.2	3,870.5
Churchville village	1,961	851	820	31	1.2	1,700.3
East Rochester village	6,587	2,992	2,834	158	1.3	4,972.6
Fairport village	5,353	2,467	2,369	98	1.6	3,369.2
Hilton village	5,886	2,459	2,351	108	1.8	3,307.1
Honeoye Falls village	2,674	1,274	1,184	90	2.5	1,051.5
Pittsford village	1,355	631	610	21	0.7	2,013.7
Scottsville village	2,001	880	836	44	1.1	1,849.0
Spencerport village	3,601	1,535	1,474	61	1.3	2,692.7
Webster village	5,399	2,491	2,337	154	2.2	2,451.6

Notes:

Census figures for each Township include their respective Villages. For population by Township only, Village figure must be excluded.

Source: U.S. Census Bureau. 2010 Census Redistricting Data (PL 94-171). Released March 24, 2011
Data Compiled by Empire State Development
Table Prepared by Monroe County Department of Planning and Development.

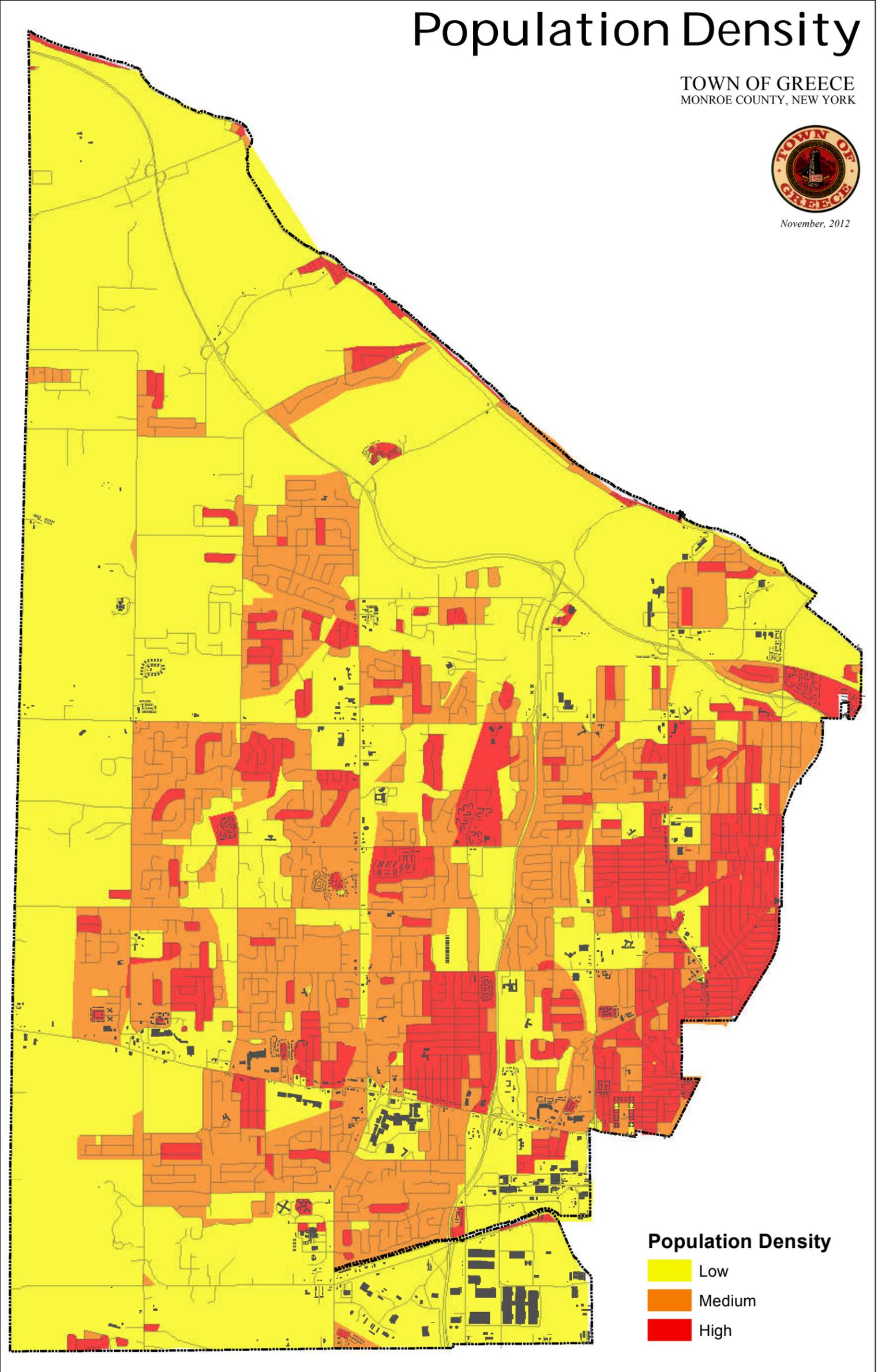


Population Density

TOWN OF GREECE
MONROE COUNTY, NEW YORK



November, 2012

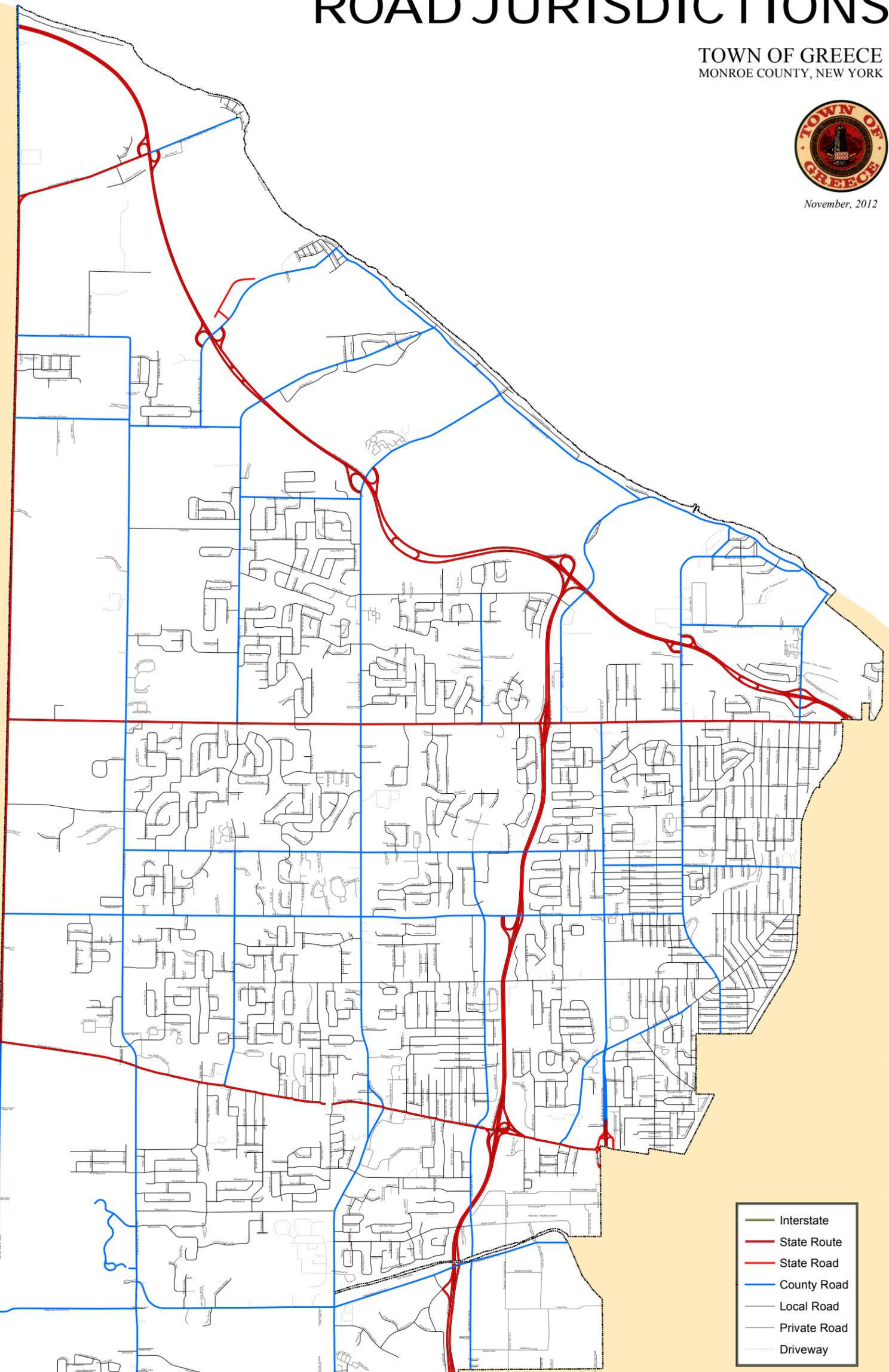


ROAD JURISDICTIONS

TOWN OF GREECE
MONROE COUNTY, NEW YORK



November, 2012



- Interstate
- State Route
- State Road
- County Road
- Local Road
- Private Road
- Driveway



Transit Routes

TOWN OF GREECE
MONROE COUNTY, NEW YORK



November, 2012

