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Acknowledgments



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Executive Summary

Purpose & Intent

The purpose of this Plan is to provide guidance to decision-makers within the Town and its partners in the region to help improve the existing network of pedestrian and bicyclist connections and accommodations. The intent is to develop a master plan for a safe, accessible, and comprehensive townwide network of pedestrian and bicycle facilities. All efforts during the implementation of this Plan should align with each of the goals listed below:

- 1. Improve safety & comfort of pedestrians & bicyclists
- 2. Increase connectivity & accessibility between neighborhoods, businesses, & community resources
- 3. Enhance the public realm as well as the overall aesthetics & character of the community
- 4. Improve multi-modal options & expand the choices of travel options available to residents
- **5.** Promote healthy & active lifestyles within the Town
- **6.** Realize the economic benefits of biking & walking
- 7. Protect the environment & foster sustainability

Study Areas

This Master Plan makes recommendations for the entire Town of Chili. In addition, it identifies connections to the bicycle and pedestrian networks in adjoining towns or to regional trail facilities (e.g. the Genesee Valley Greenway). However, the Plan also includes a detailed analysis and set of recommendations for three focus areas within the Town. These areas include:

- » Chili Center
- » North Chili
- » West Chili

Public Input Process

In an effort to ensure that the Plan also addressed the desires and concerns of the public, many opportunities were provided to engage Town residents and stakeholders in the development of the Master Plan. A series of community workshops were held in the first phase of the project to solicit input from the general public, as well as the senior and youth populations. Furthermore, the Town utilized an online survey to ask specific questions of residents who walk and bike around Chili.



A complete focus area map can be found on page 9.



Community Survey

The survey was made available online in the Summer of 2014. In total there were 463 respondents to the survey. The majority of these respondents indicated that they were 30 to 50 years old (68%), and that they lived within the Chili Center focus area (44%). Nearly 60% identified themselves as both walkers and bikers. The graphics to the right indicate the share of each user group who took the survey, as well as the length of their trips.

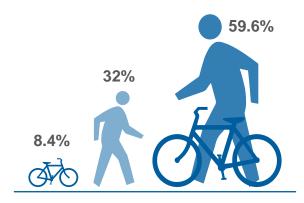
Almost all respondents, regardless of user type, said they never made trips via walking or biking to transit, school, or work. Overwhelmingly, each user group indicated that they typically walk or bike four or more times a month for leisure or fitness. Most respondents indicated that they feel safe walking and biking within Chili, and that fear of crime had little to no impact their activity level.

Senior Workshop

In March 2014, a Senior Workshop was held at the Town of Chili Senior Center. As part of a brainstorming exercise, attendees were asked to identity destinations they frequent and existing travel routes they take by foot or bike. Additionally, attendees were asked if there were any bicycle or pedestrian access barriers or conflicts they have experienced on these routes. Overall the workshop attendees expressed a concern for the lack of sidewalks and a desire for more formalized pedestrian or bicycle connections, especially along major roadways between activity generators.

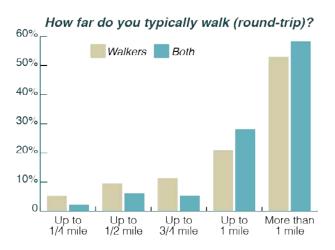
Youth Workshops

In order to reach the young population, the Consultant Team visited two high schools in the Chili School Districts in the spring of 2014. The students were asked to identify places they frequented within the Town and their overall experience in terms of comfort and ability to walk or bike to these destinations. Most cited local parks and restaurants as afternoon and weekend hangouts, and discussed some of the difficulties they experience in walking or biking from their neighborhoods to school or between destinations, such as heavy traffic and sidewalk gaps.



Share of Survey Respondents

Respondents were asked to identify themselves as bikers only, walkers only, or both.





For a more detailed summary of the Community Survey results, see page 20.



Community Workshop

All residents and stakeholders were invited to attend a Community Workshop in May of 2014. Opportunities were given to attendees to submit general comments at each table as well as mark focus area maps for site-specific comments. Much of the input from attendees included observations about the conflicts and barriers that cyclists face when riding through Chili, especially in terms of roadway and traffic conditions along Chili Avenue, Union Street, and Buffalo Road.

Open House & Town Board Presentation

In February of 2015, an open house was held to provide the public with an opportunity to comment on the preliminary set of recommendations. The attendees of the open house were also asked to prioritize the final list of projects. The results indicated the projects that benefit Chili Center received the most interest. Upon completion of the draft Plan a presentation of the final recommendations was made to the Town Board in June of 2015.

Recommendations

The recommendations contained in this Plan are divided into three general categories:

- Capital projects,
- Policy and programs, and
- Zoning and regulatory considerations.

This approach provides for a more comprehensive set of recommendations to achieve a more complete transportation network for non-motorized travel throughout the community.

Capital Projects

These projects generally consist of on-road improvements to existing streets as well as the development of off-road trail facilities. The design and accommodations recommended for each road segment depends on the preferred alternative to be applied. The transportation improvement alternatives identified include Complete Streets (A2 or A1), Wide Shoulders (B2 or B1), Shoulders Only (C), Shared-Use Lanes with Markings (D), and Off-Road Trails

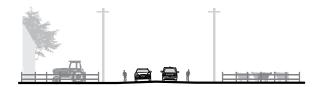




P Wide Shoulders & Sidewalks (sidewalk on both sides)



Shoulders Only



Separated Multi-use Trail (separated bicycle and walking trails)



For more information on this Plan's proposed alternatives and recommendations, see Page 51.

(T2 or T1). The numeral indicates the number of pedestrian pathways provided, if any. The cross sections above provide a visual example of the potential application of each alternative.





Key Recommendations

The following road segments serve the largest concentration of the Town's population; therefore, they should provide the highest level of bicycle and pedestrian accommodations, which includes bike lanes and sidewalks on both sides of the road:

- » The "four corners" area of North Chili (e.g. intersection of Union Street and Buffalo Road)
- » The "four corners" area of West Chili (e.g. intersection of Union Street and Chili Avenue)
- » Chili Avenue in Chili Center from West Chili to Westside Drive
- » Paul Road from Chestnut Ridge to Carriage House Lane

Other Key Recommendations:

- » Bike lanes and a sidewalk on the north side of Buffalo Road from Riga to Attridge Road to increase the comfort of students walking to North Chili from the Churchville Chili School Campus
- » Sidewalks on one side of the road in areas where residential development is predominately located on one side of the road and the opposite side is parkland or farmland
- » Better access from Chili Center to the Genesee Valley Greenway
- » Widening shoulders in the southern portion of the Town where the residential development is relatively sparse

Policies & Programs

This section includes a number of public policies or programs that the Town and its partners should consider adopting and implementing over the next decade. Examples of policies include developing pedestrian zones, a complete streets policy, or forming a bicycle and pedestrian committee. Program recommendations include implementing street tree requirements, reducing turning radii at critical intersections, and implementing bicycle boulevards where appropriate.

Zoning & Regulatory Considerations

There are also a number of zoning and regulatory modifications that the Town should consider to create the legal basis for future actions. These recommendations will ensure that private development positively contributes to the transportation network by requiring bicycle and pedestrian improvements are put in place as residential and non-residential projects are constructed. This section articulates some preliminary language that may be desirable to incorporate into the existing Town Code, such as requiring the development of off-site connections that tie into the existing pedestrian and bicycle network and across parcels or sites.

Funding

In order to successfully implement the recommendations contained in this Plan the Town should pursue outside funding assistance from various federal and state sources. If the Town is successful in obtaining grant funds to expand its bicycle and pedestrian network, it can greatly reduce the number of local dollars necessary to construct the proposed improvements. A complete list of potential funding sources, their annual deadlines, and the amount of funding available is contained in Figure 19 of this Plan.





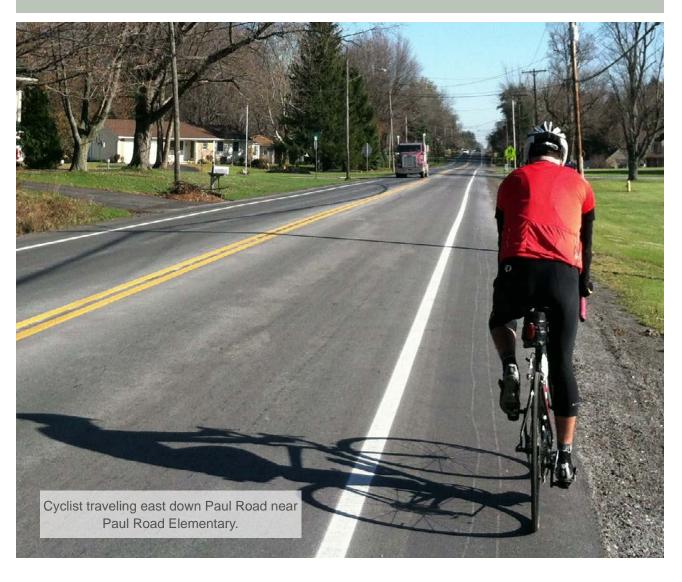
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TOWN OF CHILI INTRODUCTION

Introduction



If the Millennial-led decline in per-capita driving continues for another dozen years, total vehicle travel in the United States could remain well below its 2007 peak through at least 2040—despite a 21 percent increase in population. (2013 Study by the U.S. PIRG Education Fund).





Why is this Plan important to Chili?



his Master Plan serves to provide a framework for the Town of Chili to identify areas in which the community can improve and enhance their bicycle and pedestrian networks, and make recommendations to achieve better bicycle and pedestrian infrastructure. Improving the ability of residents within a community to walk or bike between home, work, and recreation can have significant positive impacts on a community. A community that offers increased mobility options, especially in the form of walking and biking, can improve the overall health of its residents, economy, environment, and social equity.

53% of adult men and 64% of adult women never get more than 10 minutes of vigorous physical activity per week.

- National Health Interview Survey¹

Physical Health

The connection between walkable and bikeable neighborhoods and resident health has received national attention in recent years. Physically active individuals tend to have lower rates of stress, sleep better, and maintain a healthy weight than those who are not. Small increases in light to moderate activity, like walking for 30 minutes a day, can help prevent

heart disease, obesity, high blood pressure, and many other health issues. Therefore, communities that can facilitate increased physical activity, whether it is for recreation or for transportation, can help improve the physical health of their residents.

Economy

The ability to walk and bike within communities has an economic benefit. According to the National Association of Realtors (NAR) 2013 Community Preference Survey, walkable communities have become increasingly desirable to homebuyers.² Not only does walkability attract new residents and increase local foot or bike traffic, but it also helps improve home values. Neighborhoods that provide pedestrian and bicycle infrastructure connecting residents to nearby commercial or recreational opportunities are likely to have higher property values and see more growth.

60% of the National Association of Realtors survey respondents indicated that walkable neighborhoods were more desirable than those that require driving between home, work, and recreation.²



Survey data from the U.S. Department of Transportation show that half of all trips in the United States are 3 miles (5 kilometers) or less in length, a distance widely regarded as bikeable for most adults. Yet 72% of those trips are made in cars; less than 2% are made by bicycle. Even for trips of a mile or less, private vehicles account for 60% of trips in the United States.

- World Watch, Power to the Pedals

Environment

Automobile transportation will remain a necessity for much of our population for the foreseeable future; however, it is possible to reduce its overall environmental impact. Burning fossil fuels for transportation is the second highest contributor to greenhouse gas emissions in the US, accounting for approximately 30% of emissions in 2012.³ By providing increased opportunities for residents to walk or bike throughout the community, their reliance on cars for short, local trips is diminished. By encouraging residents to walk and bike, environmental costs can be reduced.

Equity

Finally, increased mobility options help improve the social equity of communities. Traditional transportation networks that primarily focus on motorvehicle traffic and do not place enough emphasis on multi-modal travel under-serve the populations that may not use a car due to age or income restraints. This often includes the youth and senior residents of a community, which typically represent a significant portion of the local population.

Additionally, comfortable and inviting streetscapes in a community are more likely to have increased activity on the street. This means that residents and visitors are interacting with each other, getting to know their neighbors, and providing an additional layer of "eyes on the street." In many places the level of walking and ability to see people on the street is considered an indicator of a community's livability—associating higher levels of pedestrian activity with friendly, safe places to live or visit.

U.S. Department of Transportation Federal Highway
 Administration. *Pedestrian and Bicycle Information Center*.
 http://www.pedbikeinfo.org/data/factsheet_health.cfm

http://www.pedbikeinfo.org/data/factsheet_health.cfm
2. National Association of Realtors. NAR 2013 Community
Preference Survey. http://www.realtor.org/reports/
nar-2013-community-preference-survey

nar-2013-community-preference-survey
3. U.S. Environmental Protection Agency. Sources of Greenhouse Gas Emissions. http://www.epa.gov/climatechange/ghgemissions/sources.html

Bikeability & Walkability It is important to note that when this Plan talks about bicycle or pedestrian connectivity, it is referring to more than the basic concept of an individual's ability to bike or walk from one place to another. Connectivity, as it relates to bicycle and pedestrian planning, should consider three major factors: the existence of destinations and

activity centers that draw users, the relative proximity of users to their destinations, and the degree of physical connection and access users have to their destination.



Purpose & Goals



he purpose of the Town of Chili Bicycle and Pedestrian Master Plan is to provide guidance to decision-makers within the Town and its partners in the region to help improve the existing network of pedestrian and bicyclist connections and accommodations. The intent is to develop a master plan for a safe, accessible, and comprehensive townwide network of pedestrian and bicycle facilities. The Plan will contribute to an integrated system of sidewalks, on-road bicycle facilities, off-road trails, and linkages to local, county, and regional trails and park facilities. In addition, the Plan will coordinate and extend these alternative transportation networks to adjacent municipalities to enhance the region's appeal and to help promote "green energy" principles.

All efforts during the creation and subsequent implementation of this Master Plan should align with each of the Town's bicycle and pedestrian planning goals listed to the right.

- 1. Improve safety & comfort of pedestrians & bicyclists
- 2. Increase connectivity & accessibility between neighborhoods, businesses, & community resources
- 3. Enhance the public realm as well as the overall aesthetics & character of the community
- 4. Improve multi-modal options & expand the choices of travel options available to residents
- 5. Promote healthy & active lifestyles within the Town
- **6.** Realize the economic benefits of biking & walking
- 7. Protect the environment & foster sustainability

Planning Process



he planning process utilized to accomplish the Town of Chili 2015 Bicycle and Pedestrian Master Plan was overseen by the project's Steering Committee. The Steering Committee for the Plan consists of individuals who volunteered their time and effort to take on this important process. The Committee included Town Staff and many members of the Town's existing Traffic and Safety Committee, as well as representation from the Finger Lakes Health Systems Agency, Genesee Transportation Council, New York State Department of Transportation, and Monroe County. The role of the Steering Committee was to provide a preliminary direction for the Plan and help draft and review documents throughout the process. The general timeline of key milestones associated with the planning process are outlined below:

February, 2014	Steering Committee Kick-off Meeting
March, 2014	Senior Workshop
April – May, 2014	Youth Workshops
Summer, 2014	Preliminary Public Input Summary
August, 2014	Final Community Survey
September, 2014	Community Survey Results
October, 2014 Dra	ft Needs & Opportunities Assessment
January, 2015	Draft Preliminary Alternatives
February, 2015	Community Review Opportunity
June, 2015	Draft Plan
June, 2015	Town Board Presentation
Summer, 2015	Public Hearing & Plan Adoption



Commonly Used Acronyms

AASHTO American Association of State Highway and Transportation

Officials

DOH Department of Health

DOT Department of Transportation
DPW Department of Public Works
FHWA Federal Highway Administration
FLHSA Finger Lakes Health Systems Agency

GFLRPC Genesee Finger Lakes Regional Planning Council

GTC Genesee Transportation Council

MC Monroe County NYS New York State

RGRTA Rochester-Genesee Regional Transportation Authority

SEQRA State Environmental Quality Review Act

US United States

Photo: Example of a temporary sign installed by Town on a two week basis to improve driver awareness in residential areas with documented traffic related concerns.



Project Background

or the last five years, the Town of Chili has actively taken steps to begin addressing the lack of town-wide bicycle and pedestrian connections and accommodations throughout the Town.

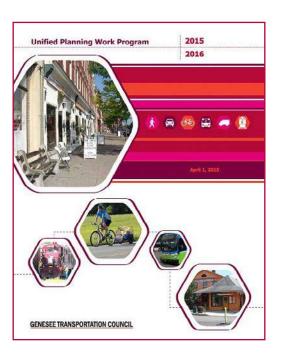
In 2008, the Town Board submitted an application for grant funding under the NYSDOT Transportation Enhancements Program; a project entitled "Town of Chili Union Street Sidewalk Program." This first attempt to provide funding for sidewalks within West Chili was not successful, due in part to the lack of clearly defined community-wide goals for alternative transportation solutions.

In **2009**, the Town Board began the process of updating the "Town of Chili 2010 Comprehensive Plan." One of the early recommendations of the Plan that has since been adopted is implementation of sidewalks and other on-road trails as part of the Planning Board's approval procedures. Since 2009, the Planning Board has required sidewalks as part of all site plans occurring along Chili Avenue and within Chili Center.

In November **2011**, the Town Board adopted the Comprehensive Plan Update entitled "Town of Chili 2030 Comprehensive Plan." This document provides official policies for alternative land use patterns, transportation patterns, and implementation actions intended to achieve increased energy efficiency and heightened environmental awareness. One of the specific implementation actions contained in the Comprehensive Plan is the preparation of an Official Sidewalk Master Plan. A Sidewalk Master Plan for the Town was developed as part of this planning effort and is shown on page 93 of this Plan.

In **2012**, Chili applied for and received funding through the Genesee Transportation Council (GTC) to complete a Bicycle and Pedestrian Master Plan. The funding secured for this Plan comes from GTC's 2013-2014 Unified Planning Work Program.

n anticipation of the implementation of this Master Plan, a "Sidewalk Fund" has been created utilizing a portion of the Payment in Lieu of Taxes (PILOT) funds the Town receives from various sources, including the University of Rochester and payments from developers and applicants who would ordinarily be required to provide sidewalk connections on their site, but due to existing conditions sidewalk development is deemed unnecessary at the time of application. Overtime, it is also anticipated that the Town will take advantage of potential grant opportunities to strengthen implementation efforts.



Project Study Area



hili is located in Monroe County adjacent to the southwest border of the City of Rochester, abutting the Greater Rochester International Airport in the Town's northeast corner. Bordering Chili to the north are the Towns of Gates and Ogden along the eastern and western portions respectively. Spanning the entire length of the western border is the Town of Riga, and to the south is the Town of Wheatland. The Genesee River creates the eastern border for Chili, adjacent to the Towns of Brighton and Henrietta. See Figure 1 on the following page for a detailed map of the Town's location.

At 39.7 square miles, Chili is the fifth largest town by total land area in Monroe County, with a reported 2010 population of over 28,000 residents. Due to the Town's location between some of the highest density (Rochester, Brighton, Gates, Henrietta) and lowest density (Ogden, Riga, Wheatland) communities in the County, Chili's development pattern changes fairly drastically as you move from north to south. Generally to the north of Black Creek the Town has a suburban feel, due to the presence of large concentrations of single-family subdivisions and commercial developments.

Over 65% of Chili's population lives north of the Conrail Railroad line, in approximately 1/3 of the Town's total land area.

The area to the south of Black Creek, however, is much more rural in character as it is predominantly multi-acre residential lots, agricultural and limited commercial land uses. Further development south of Black Creek is limited due to the existence of floodplains.

The combination of the developed portion of the Town north of Black Creek and the rural character south of the Creek creates a population density of approximately 717 people per square mile, which is below the average for the County as a whole.

Quick Facts!

2010 Population28,625
2000 Population27,638
Land Area39.7 sq. mi.
Density717 people/sq. mi.
Median Age41 years
Median Income\$61,378

Chili is home to Black Creek Park, a park owned and maintained by Monroe County, as well as the following local parks and recreation facilities:

- >> Hubbard Park
- >> Union Station Park
- Widener Park
- >> Memorial Park
- >> Davis Park
- Yolanda Park
- >>> Ballantyne Park
- Chili Heights Nature Trail
- Senesee Riverway Trail
- >> Genesee Valley Greenway Trail
- >>> Brookdale Preserve

Throughout the northern portion of the Town are both older and newer neighborhood developments. Some of them have sidewalks that connect residents to adjacent development, but most do not provide a sidewalk or other designated pedestrian facility to nearby destinations. The result is residents typically walking along the shoulders of many of the Town's more heavily traveled roadways. This is a concern for the community as many of the pedestrians are students and seniors.

The school age population (ages 5 to 17) is an important cohort to consider in this Plan as they make up approximately 17% of the Town's 2010 population. As much of this age group cannot obtain a drivers license yet, they are typically a significant user group of the pedestrian and bicycle network within a community.

Throughout the Town there are four school districts, Caledonia-Mumford Central, Churchville-Chili Central, Gates-Chili Central, and Wheatland-Chili Central, located generally in the southwest, northwest, northeast, and southeast quadrants of the Town respectively. Consideration will be given to the appropriate level of connectivity between the local schools, facilities, and their adjacent neighborhoods.

Seniors are another population group that is important to address as part of this Plan. Nationally, the population is getting older. Many communities are seeing significant growth rates in the 62 and over age group. This is also true in the Town of Chili where the senior population has increased at a rate of 31% from 2000 to 2010. Furthermore, the 55 to 64 year old age group grew 45% in the same decade, indicating that the aging population issue will continue to be a concern for the coming decades in the Town of Chili as well

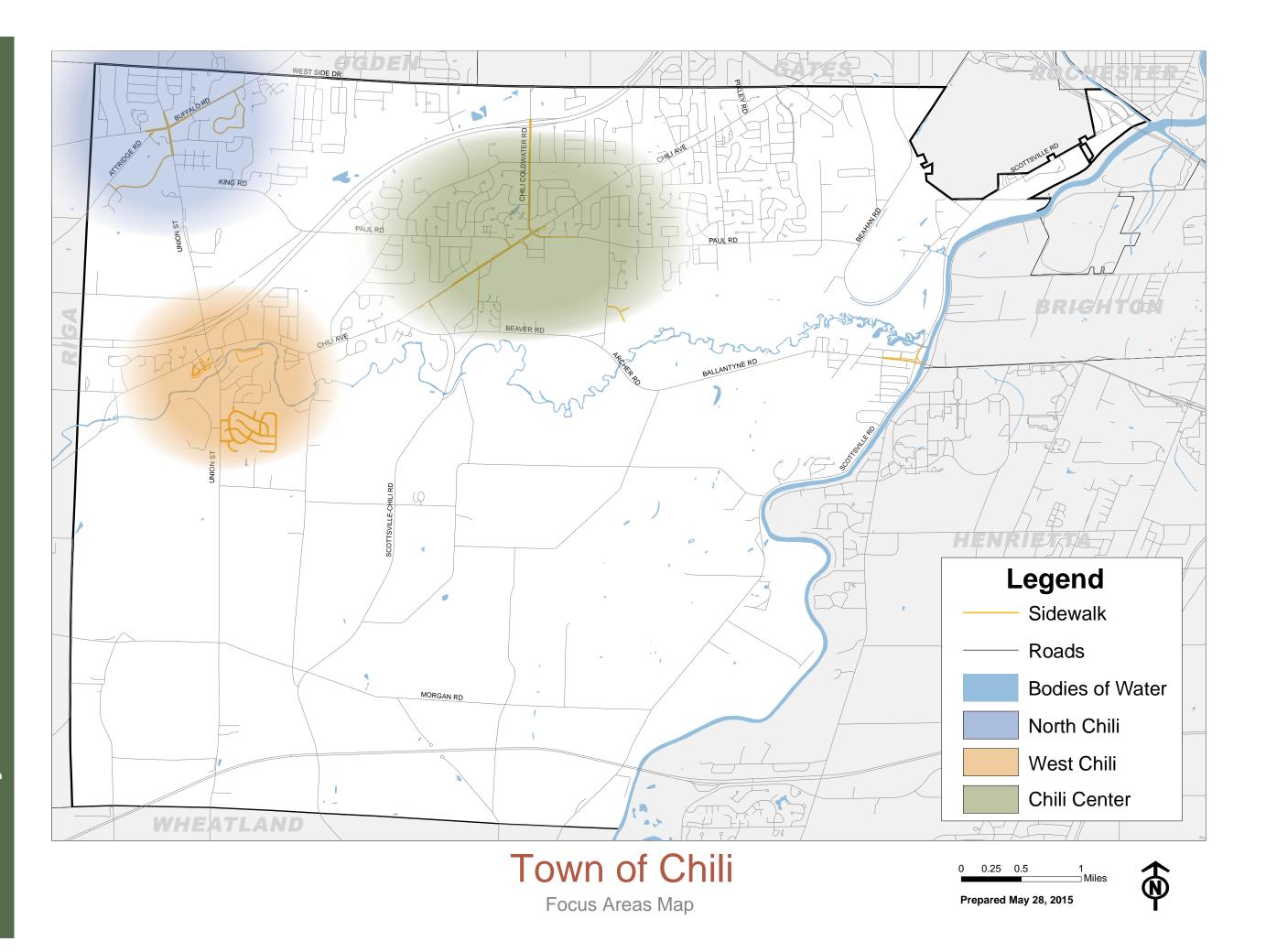
Project Focus Areas

n whole, the Bicycle and Pedestrian Master Plan will address the entire Town of Chili, as well as linkages to other town, county, and regional trails. However, the Plan will also include a detailed analysis and set of recommendations for three focus areas within the Town. These areas include:

Chili Center North Chili West Chili

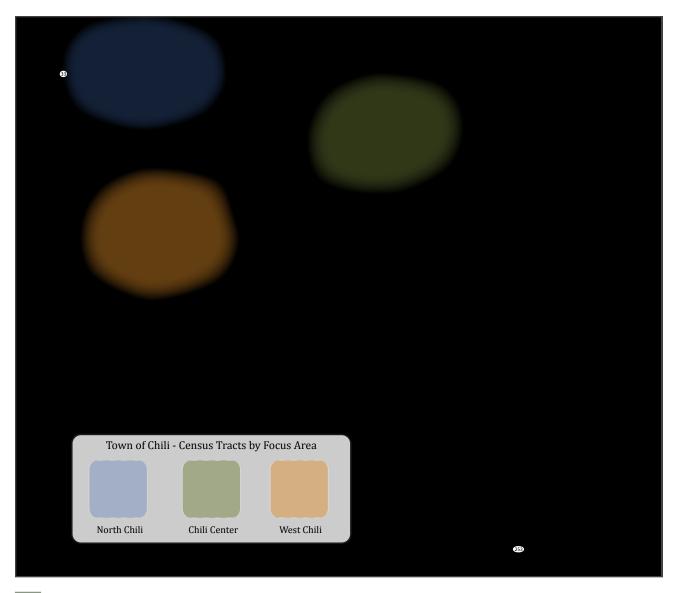
roviding an individualized analysis for these areas was deemed necessary due to the fact that they encompass a large majority of the Town's population and happen to be three of the most prominent commercial centers in Chili. Recommendations for each of these focus areas will be tailored to the individual needs of that area, as they are unique in their respective mixes of residential, commercial, industrial, public, and/or institutional land uses. Figure 1 on the following page shows the general location of each focus area.

& Pedestrian Master Plan Bicy Figure 5



Focus Area Profiles





he Town of Chili is broken up into seven separate census tracts, as shown in the above map. Although the focus areas do not align with some of these tracts in their entirety, the following table provides a general snapshot of demographic data for each focus area based on its noted census tract designation.

Table 1: Key Demographics by Focus Area

2008 - 2012 American Community Survey Data	Town of Chili	Chili Center (145.01, 145.03, 145.04)	North Chili (145.05)	West Chili (146.01)
Population	28,614	13,236	5,355	5,390
Median Household Income	\$61,378	\$69,582	\$61,107	\$58,618
Unemployment Rate	7%	7%	9%	6%
Poverty Rate	4%	2%	9%	3%
% of Owner-Occupied Units	77%	90%	67%	69%
% of Renter-Occupied Units	23%	10%	33%	31%
% of Households with No Car	4.5%	3%	6.5%	5%



Chili Center

The focus area of Chili Center is generally located within a half- to one-mile radius of the intersection of Chili Avenue (NYS Route 33A) and Paul Road. The Chili-Paul Plaza, K-Mart Plaza, and Wegman's Plaza together form the largest commercial center of all the focus areas, which serves the daily needs of residents and visitors. Due to the variety of commercial offerings, this commercial activity center is frequented not only by residents from adjacent neighborhoods, but also by residents from across the Town and nearby communities.

Community resources within the focus area include, but are not limited to, Memorial Park, Davis Park, Town Hall, and Paul Road Elementary. Both Memorial and Davis Park are frequently used sites for youth athletic programming and local team sports.

Chili Center holds the largest share of the Town's population (approximately 40%) and also has a relatively dense development pattern compared to the other focus areas. Apart from the agricultural

Walkshed (noun) [wawk•shed]:

1. The area within a designated walkable radius (e.g. 1/4 mile) of a particular point of interest.

and open space properties located to the south and southeast, the majority of development within Chili Center is comprised of single-family detached homes. There are, however, a number of higher density residential developments, including Springlake Apartments, Cedars of Chili, and Blueberry Hill Apartments in the focus area.

Many Chili Center neighborhoods are located within a 20 minute walkshed of the area's commercial core. However, due to the lack of neighborhood connections and pedestrian facilities the walk is often longer.

North Chili

The North Chili focus area generally falls within a radius of three quarters of a mile from the intersection of Buffalo Road (NYS 33) and Union Street (NYS 259). Its northern and western boundaries are approximately at the Town-line. The southern and western boundaries are generally King Road and Brian Drive. A little less than 20% of the Town's population lives within the North Chili focus area, which helps support its many diverse commercial and recreational offerings.

Nearly 7% of households in North Chili have no vehicles available for everyday transportation use.

North Chili has a well-developed commercial activity center at its core. The Town Plaza and many other restaurant and retail outlet buildings line the major corridors. The commercial core is a draw for

residents of both the Town and nearby communities, such as Riga, Churchville, and Ogden. North Chili is also home to recreational and institutional offerings including Hubbard Park, Community Center, Fire Hall, and Roberts Wesleyan College.

The predominate land use pattern of North Chili is single-family detached homes. However, the area also has the highest share of renter-occupied housing out of the three focus areas. This is largely due to the diverse selection of multi-family and senior housing options such as Meadow Farm Apartments and Cottage Grove.

There are a number of gaps in the existing sidewalk network that provide barriers to residents walking to local destinations. These gaps, combined with the lack of other pedestrian and bicycle facilities, increase the concern for conflict with vehicular traffic along the major thoroughfares.





West Chili

Generally the boundaries of West Chili are Davis Road to the north, Chestnut Ridge to the east, Black Creek Park to the south, and Stuart Road to the west. The focus area spans a half- to one-mile radius, centered just south of Interstate 490 at the intersection of Chili Avenue and Union Street. At this intersection is a small commercial node comprised mainly of auto-oriented uses, including a convenience store and two multi-tenant shopping centers along Chili Avenue.

The development pattern of West Chili consists mostly of large lot, single-family detached homes to the northwest, northeast, and southeast of the Chili Avenue and Union Street intersection. The southwest corner is occupied by multi-family development, open space, and Black Creek Park. There are two multi-family developments located within West Chili: the Parklands Apartments (located to the south of Chili Avenue and to the west of Union Street), and the Chili Heights Apartments (located along Chili Avenue just east of Black Creek).

Black Creek is a highlight of this focus area, as it runs through its center. The Creek connects two existing Town parks, Chili Heights Nature Trail and Union Station Park, as well as Black Creek Park, which is maintained by the County. The natural features of these areas are a great amenity for nearby residents as well as other visitors.

Less than 20% of the Town's population lives within West Chili; however, there is a significant opportunity for future development within the area. Therefore pedestrian and bicycle improvements should consider both existing and potential future needs for the area.



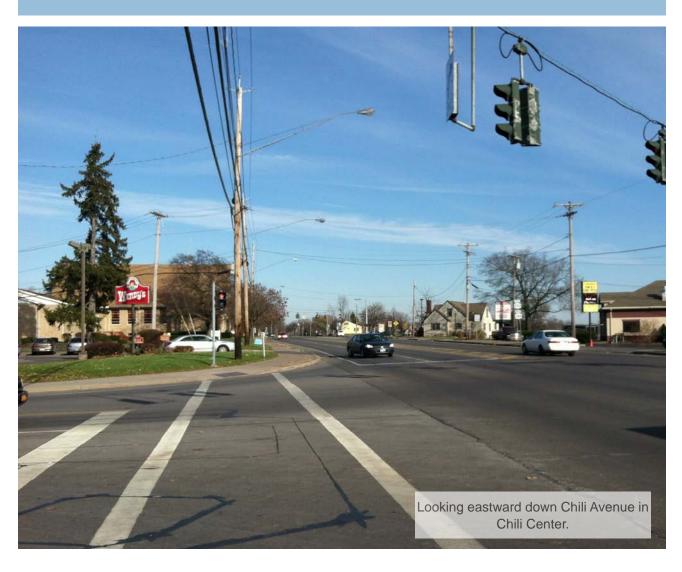


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Inventory & Analysis



It was estimated by the 2008 - 2012 American Community Survey that approximately 625 people living within the Town of Chili currently walk, bike, or take public transportation to work.



Public Input Summary



n an effort to ensure that the Plan also addressed the desires and concerns of the public, many opportunities were included to engage Town residents and stakeholders in the development of the Master Plan. A series of community workshops were held in the first phase of the project to solicit input from the general public, as well as the senior and youth populations. Furthermore, the Town utilized an online community survey to ask specific questions of residents who walk and bike around Chili. This section includes a brief summary of each public outreach effort.

Key Destinations Identified by Workshop Attendees

North Chili

Hubbard Park
Community Center
Roberts Wesleyan College
Senior Communities
Fire House
Town Plaza
Churches
Restaurants
Gas Stations
Convenience Stores

Chili Center

Memorial Park
Davis Park
Library
Town Hall
Senior Center
Paul Road Elementary
Senior Communities
Churches
Restaurants
Wegman's
Target
K-Mart
Chili-Paul Plaza
Chili Fest

West Chili

Black Creek Park
Union Station Park
Chili Nature Trail
Chestnut Ridge Elementary
Senior Communities
Senior Community Parks
Byrne Dairy
Chili Hots



Senior Workshop

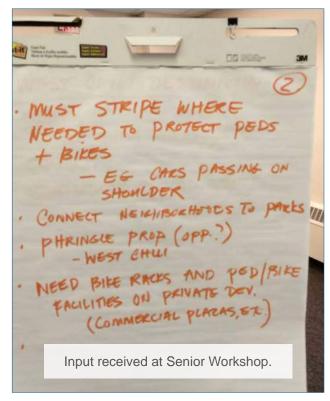
In March 2014, the Consultant Team along with selected Steering Committee members conducted a Senior Workshop at the Town of Chili Senior Center. As part of a brainstorming exercise, attendees were asked to identity destinations they frequent and existing travel routes they take by foot or bike. Additionally, attendees were asked if there were any bicycle or pedestrian access barriers or conflicts they have experienced on these routes in the three focus areas, or Town in general. Maps showing the Town and each focus area were provided for discussion purposes.

Overall the workshop attendees expressed a concern for the lack of sidewalks and a desire for more formalized pedestrian or bicycle connections, especially along major roadways between activity generators. There were also a number of suggestions to extend sidewalk connectivity from existing senior living communities, such as Cottage Grove or College Green, to nearby plazas or commercial activity centers. In the North Chili focus area, it was noted that there is an existing informal footpath from Cottage Grove to the Town Plaza that may be an opportunity to provide a formalized connection.

Attendees of the Senior Workshop also stated that getting into and around the plazas in Chili-Center can be difficult for pedestrians and bicyclists. Wegman's and the Chili-Paul Plaza are especially difficult due to the turning movements of vehicles along Chili Avenue. For a more detailed summary of the comments received as part of the Senior Workshop, the minutes have been provided in the Appendix.



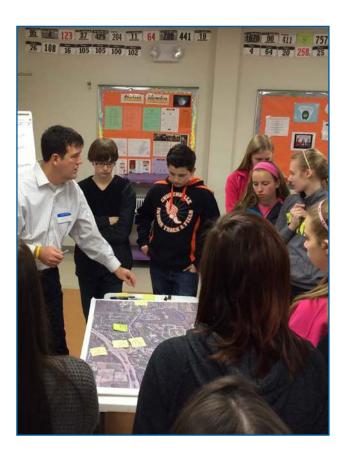




Youth Workshops

The youth of a community can often provide a unique perspective not only about growing up in the area, but also what the Town has to offer in terms of things to do, places to go, and ways to get around without a car. In order to reach the young population, the Consultant Team visited two high schools in the Chili School Districts. These Youth Workshops were conducted with two Churchville-Chili High School health classes (April 2014) and one Gates-Chili High School local government class (May 2014).

Utilizing town-wide and focus area maps, the students were asked to identify places they frequented within the Town and their overall experience in terms of comfort and ability to walk or bike to these destinations. Most cited local parks and restaurants as afternoon and weekend hangouts, and discussed some of the difficulties they experience in walking or biking from their neighborhoods to school or between destinations.





Two of the biggest issues raised by the students were concerns over heavy, fast moving traffic on major roadways, and the lack of sidewalks throughout the focus areas. Students walking to and from the North Chili focus area and Churchville-Chili High School, for example, will utilize Westside Drive to avoid the heavy traffic along Buffalo Road, even though it takes longer.

In addition, the students noted that they often will avoid crossing at the major intersections of each focus area. Many choose to cross beforehand to avoid the traffic along roadways like Buffalo Road and Union Street, but also because they feel that it takes too long to cross at the formalized intersection. To read a complete list of comments made by the students as part of the Youth Workshops, review the minutes included in the Appendix.



Community Workshop

In an effort to reach out to other community members, the Town held a Community Workshop in May 2014, at the Department of Public Works building. All residents and stakeholders were invited to attend via announcements on the Town's webpage, flyers distributed through the community, and interest group email lists. A Town-wide map was provided at the entrance to the workshop where attendees were encouraged to mark the location of their residence. The results indicated that the workshop attendance included resident representation from each focus area.

The Community Workshop was held in an open house format; therefore, attendees had the opportunity to come and go at their leisure. Maps of the Town and each focus area created four stations where stakeholders could interact with members of the Steering Committee or Consultant Team. Additionally, there was a video showing footage of a bike ride through the Town from a bicyclist's point-of-view.

Opportunities were given to attendees to submit general comments at each table as well as mark the maps for site-specific comments. Much of the input from attendees included observations about the conflicts and barriers that cyclists face when riding through Chili, especially in terms of roadway and traffic conditions along Chili Avenue, Union Street, and Buffalo Road. The condition of the shoulders was a major concern for cyclists, as they are often are covered with dirt, debris, or glass.

Other attendees provided ideas like connecting adjacent neighborhoods and cul-de-sacs with paths or sidewalks, and many expressed their desire for off-road trails and the realization of the Black Creek Trail. Furthermore, comments were made about the potential for future connections to the existing trails leading to and from the City of Rochester, including the Genesee Riverway Trail and Genesee Valley Greenway Trail.







A complete summary of the comments received at the Community Workshop, in addition to comments submitted by residents who were unable to attend, is included in the Appendix.

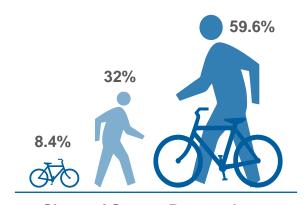
Community Survey

Based on the input that was received from the previous public outreach efforts, a community survey instrument was drafted to help the Steering Committee gather more specific information on the habits of pedestrians and bicyclists in and around the Town of Chili. It was determined that an online survey would be the most beneficial as it can be easily distributed and advertised, as well as allow for a more detailed approach based on the preferences of respondents. The survey was made available in the Summer of 2014, utilizing the survey tool Survey Monkey. Residents and interested parties were able to access the link on the Town's website and Facebook pages.

Who Took the Survey?

In total there were 463 respondents to the survey. The majority of these respondents indicated that they were 30 to 50 years old (68%), and that they lived within the Chili Center focus area (44%).

In an effort to keep the questions relevant to each type of user, the survey began by asking respondents to identify as a "walker," "biker," or "both." Not surprisingly, the largest number of users identified themselves as both walkers and bikers (Nearly 60%).



Share of Survey Respondents

Bikers

The "biker only" group was the smallest of the survey respondents at 8.4%. The top three reasons among the cyclists for choosing not to walk were that there is a lack of pedestrian facilities, lack of destinations within walking distance, and that it takes too long.



It is worth noting that of the respondents who identified themselves as "bikers," 60% indicated that they were advanced riders, meaning comfortable in most or all traffic situations. Whereas, 72% of those who identified themselves as "both" indicated they were a basic level cyclist, meaning they prefer riding off-road or on roads with low traffic.

Additionally, nearly 30% of the "biker only" group indicated that they typically bike more than 15 miles round trip. In contrast, only 9% of the joint group indicated that they travel that far via bicycle.

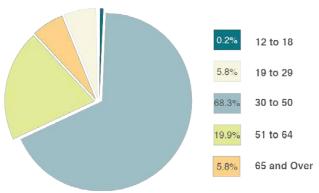
Bikers and the joint group also varied in their top responses for improvements most likely to increase their current bicycling activity. Cyclists indicated that bike lanes and wider shoulders were the two most important improvements. Whereas the top choice for the walker and biker group indicated that the development of more trails and paths would have a bigger impact on increasing their level of activity. This is not surprising due to the difference in each group's skill level and comfort riding along with traffic.

Walkers

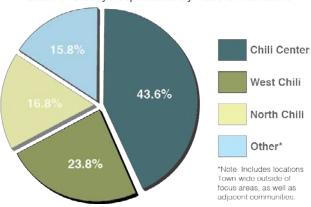
Of those that indicated they were "walkers only," 74% said that they typically walked up to one mile or more round-trip. Approximately 86% of the joint group also indicated that they typically walk up to or more than one mile. This is significant to the Plan's focus areas as they each span about a one-mile radius from their commercial centers.



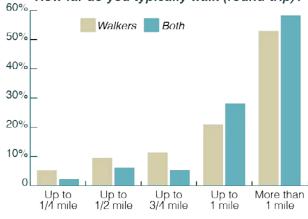
Share of Respondents by Age Group







How far do you typically walk (round-trip)?





Although some walkers indicated that they choose not to bike because they do not enjoy riding a bicycle, the majority of walkers cited issues or conflicts with auto traffic as their main deterrents. The top three reasons walkers said they don't bike included that auto traffic is too heavy or fast to bike, there is lack of or poor on-road bicycle facilities, and motorists don't exercise caution around bicyclists.

Furthermore, both the "walkers only" group and the joint group indicated that the lack of sidewalks, auto traffic, and poor pedestrian facilities each had a major impact on their level of activity. Both walker groups also indicated that additional sidewalks (filling in gaps), off-road shared use paths, and improved pedestrian crossings would have the largest impact on increasing their level of activity respectively.

Top Answers!

- **1.** Almost all respondents, regardless of user type, said they never made trips via walking or biking to transit, school, or work.
- 2. Overwhelmingly, each user group indicated that they typically walk or bike four or more times a month for leisure or fitness.
- **3.** Most respondents indicated that they feel safe walking and biking within Chili, and that fear of crime had little to no impact their activity level.

Open House & Town Board Presentation

In February of 2015, an open house was held to provide the public with an opportunity to comment on the preliminary set of recommendations. The attendees of the open house were also asked to prioritize the final list of projects. The results indicated the projects that benefit Chili Center received the most interest. Upon completion of the draft Plan a presentation of the final recommendations was made to the Town Board in June of 2015.

Previous Plans & Studies

🗻 rior to the start of this Bicycle and Pedestrian Master Plan, the Town of Chili has completed a number of other planning efforts. The following is a brief summary of the previous plans and studies adopted by the Town that not only relevant to this Plan, but will serve to inform future decisions and recommendations as part of this Plan.

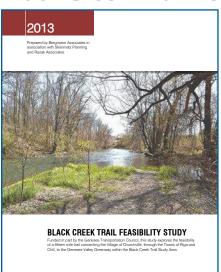
Parks and Recreation Master Plan - 2007

The Parks and Recreation Master Plan provides a detailed summary of the Town's existing open space, parks, and recreation facilities, as well as providing recommendations for future passive and active recreational opportunities. The development of nature trails and increased connectivity to existing parks is highlighted by the Plan. Specifically, the Master Plan suggests the creation of a Trails Committee to prepare a long-range plan for acquiring, financing, developing, maintaining, and promoting a network of trails for a variety of recreational purposes.

Additionally, the Master Plan states that any future plans for Town trails should strive to optimize linkages with the Genesee Valley Greenway, the Erie Canal, and Black Creek Park. Other goals of the Parks and Recreation Master Plan include:

- » Providing better trail identification and park signage;
- » Develop a pedestrian entrance to Davis Park at Bucky Drive;
- » Complete a trail and bridge over Black Creek to Union Station Park from the Chili Nature
- » Continue to develop the Union Station Park walking path (currently approximately 4,400 feet of path in place); and
- » Consider opportunities for recreational uses like hiking and biking trails on the Baker Property (now named Widener Park located on Chili-Scottsville Road).

Black Creek Trail Feasibility Study - 2013



This Study was completed as part of the Genesee Transportation Council's Regional Trails Initiative. In its entirety the trail spans approximately 15 miles, beginning in the Village of Churchville, running through the Towns of Chili and Riga, and eventually tying into the Genesee Valley Greenway Trail. The goal of the Trail is:

To provide a non-motorized transportation facility which connects neighborhoods, parks, schools, retail and service establishments and employment centers, and to provide a connection to other existing and planned trails and the larger regional trail network.

There are two segments of the proposed trail that will run through the Town of Chili, Segments B and C, which run from Black Creek Park to Chili-Scottsville Road and from Chili-Scottsville Road to the Genesee Valley Greenway Trail respectively. The preferred Trail alternative is shown on following page in Figure 2. This specific trail alignment was

highlighted as the preferred route because it provides the greatest level of connectivity, safety, and quality of life enhancements while still balancing all other development factors and local community values.

KING RD PAUL RD BEAVER RD **Black Creek Trail Key Existing Trail** Preferred Trail Alignment Alternate Trail Alignment Potential Connection to Existing Trail Potential Neighborhood Connection MORGAN RD Proposed Pedestrian Bridge 0 0.25 0.5 **Prepared October 2015** WHEATLAND

Town of Chili Black Creek Trail Preferred Alignment

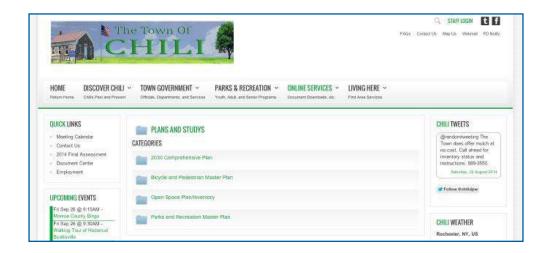
Town of Chili Comprehensive Plan - 2030

Adopted in November of 2011, the Town of Chili Comprehensive Plan - 2030 is an all-inclusive document that lists the Town's assets, opportunities, and threats as well as its existing conditions, goals, and recommended actions. Within the Comprehensive Plan, efforts to enhance bicycle and pedestrian facilities are listed under the housing, built environment, commercial and light industrial land uses, and transportation goal areas.

It is recommended that the Town establish neighborhood design standards that include pedestrian and bicycle amenities. Furthermore, the Plan suggests that the Town work with developers to ensure that there is an adequate bicycle and pedestrian network throughout the Town's commercial districts, light-industrial districts, and office parks.

The Transportation objective section holds the most significance in relation to this Master Plan effort. The following is a sample of the pedestrian and bicycle network recommendations included:

- » Prepare a Pedestrian/Bicycle Circulation Plan as part of overall Transportation Plan to guide Capital Highway Improvement Projects as well as others
- » Establish a Town Trails Committee to champion a Trails Master Plan
- » Provide highway shoulders that can be used for bike traffic
- » Complete detailed streetscape Plan for Chili Avenue Corridor to include pedestrian and bicyclist amenities
- » Consider establishment of sidewalk districts throughout the Town
- » Develop Town-wide Sidewalk Plan and Map and establish a Sidewalk Fund
- » Work with local municipalities, major employers, and institutions to promote walking and biking activity
- » Where possible, physically separate pedestrian paths and bikeways from roads carrying large volumes of traffic
- » Employ appropriate signage and traffic controls for multi-modal transportation system



The Town has posted digital copies of each of these Plans on their web page in the "Document Center"

Zoning Summary



Within the Town of Chili Zoning Code, consideration is given to pedestrian and bicycle access when in the context of special uses, planned unit development districts, site plan approval, mobile home parks and subdivisions. A majority of the language, however, focuses on pedestrian traffic only. The following is a summary of each Town Code section with respect to the goals of this Plan.

Ch. 500: Zoning

§29 Special Use Permits

As part of the approval standards for a Special Use Permit, the Town Planning Board must give consideration to the circulation of said proposed special use. Section 500-29(R)(5) states:

"The interior circulation system shall... provide for the convenience and safety of vehicular, pedestrian, and bicycle movement within the site and in relation to adjacent areas or roads."

§22 Planned Unit Development District

When providing a recommendation to the Town Board for the consideration of a PUD District, the Planning Board must include a summary of the compliance of the proposed roadway and pedestrian system with regard to the Town's design principles in their report.

§39: Preliminary Site Plan Approval

Preliminary site plan applications must include a statement on vehicular and pedestrian facilities and access and any existing or future problems expected. In order for the Planning Board to approve a preliminary site plan, they must consider the adequacy and arrangement of pedestrian traffic access and circulation.

§41: Special Requirements

This section outlines additional requirements for the Site Plan Approval of multi-family or other multi-residential developments. The following excerpt from Section 500-41(D)(4) states that internal sidewalks shall be provided within all newly developed multi-family sites:

"Sidewalks shall be provided and be integrally designed so as to provide safe and convenient access between buildings, and between buildings and internal recreation, parking, and service areas."

§57: Trailers and Mobile Homes

Trailers and mobile homes are permitted within the Town of Chili as part of a Trailer Home Park. The Street, Parking, and Walkway Requirements of Trailer Home Parks state that all parks shall have paved walkways at least four feet in width. The Planning Board shall determine the location of said sidewalks.

Ch. 439: Subdivision of Land

§24: Street Improvements

The street improvement requirements of the Subdivision of Land Chapter with regard to pedestrian facilities are as follows:

"Concrete sidewalks at least five feet wide shall be required on both sides of all arterial and collector level streets. They may also be required within pedestrian easements through blocks to provide a system of pedestrian walkways to schools, parks and other community facilities. Sidewalks should be two feet from the property line inside the right-of-way..."

As described in the Town of Chili Comprehensive Plan, the Town's Architectural Advisory Committee (Chapter 12 of the Town Code) could play a more active role in providing recommendations to the Planning Board for implementing the increased pedestrian and bicycle access goals of this Plan.

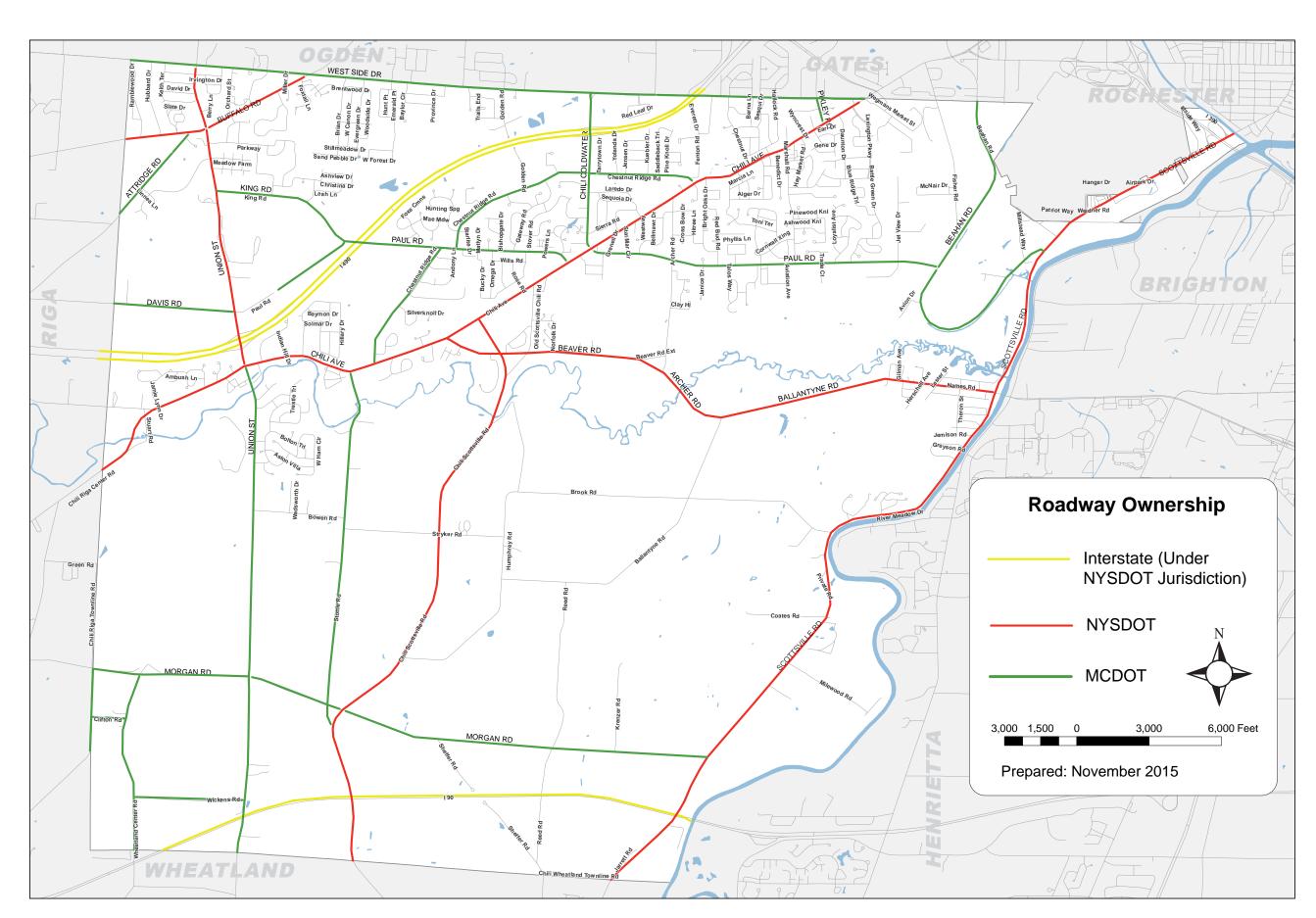
Roadway Ownership

The Town of Chili's road network is comprised of town, county, and state roads as well as two interstate highways. Figure 3 on the opposing page is a map indicating roadway ownership throughout Chili. The Interstates include I-490 spanning the northwest quadrant and I-90 running across the southernmost portion of the Town. The agencies in charge of all state and county roads include the NYS Department of Transportation and Monroe County Department of Transportation respectively.

Maintenance of each of these roadways is generally left to the care of the owning-agency; however, the Town has agreed to maintain the existing sidewalk network. When the Town begins to implement the recommendations contained within this Plan, coordination with the appropriate DOT will be necessary to determine the extent of bicycle and pedestrian facility improvements as well as individual maintenance responsibilities.

F&

& Pedestrian Master Plan Bicycle 3 Figure 5 201



Traffic Summary

The map on the following page (Figure 4) has been included to provide a snapshot of existing traffic conditions for the major roadways within the Town of Chili. The information contained on this map will help to identify the Town's needs and opportunities, as well as the feasibility of the Plan's recommendations.

Crash Data

According to the crash data provided by the Genesee Transportation Council, there was a total of 19 bicyclist collisions and 13 pedestrian collisions from 2009 to 2012 within the Town of Chili. The exact locations of these accidents is show in Figure 4 on the following page with red user icons.

Traffic Volume Data

Also shown in Figure 4 is the overall traffic volume data for the Town's major roadways. The Annual Average Daily Traffic (AADT) estimates are based on 2012 data from the NYSDOT. Based on this information, Buffalo Road, Chili Avenue, and Union Street north of Chili Avenue all carry an AADT of more than 6,000 vehicles, which indicates that they are the more heavily utilized roadways.

Additionally, the map indicates that there are a number of low-volume roadways, like Old Scottsville Road, Chestnut Ridge Road, and Ballantyne Road that carry an AADT between 1,001 and 3,000 vehicles. As a result, these roadways may be able to provide alternate routes for pedestrians and bicyclists that wish to avoid heavier traffic conditions elsewhere in the Town.



Buffalo Road and Union Street intersection (North Chili) looking east.



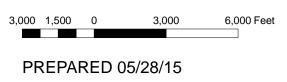
19 Recorded Accidents Involving Bicyclists from 2009-2012



13 Recorded Accidents Involving Pedestrians from 2009-2012

Traffic Volume & Crash Data 0 - 1,000 AADT 1,001 - 3,000 AADT 3,001 - 6,000 AADT 6,001 - 14,000 AADT **Collision with Bicyclist Collision with Pedestrian**







Existing Pedestrian Network



To improve walking, it is important to measure the current road conditions affecting the pedestrian experience. Pedestrian Level of Service (PLOS), a measure of pedestrian comfort in a road segment, is an important tool to gauge overall road environment across several variables. It is determined by both design and performance factors using an industry standard formula that produces a numerical score (1-5.5), which is then converted to a letter rating (A-F). The following factors contribute to the PLOS rating, listed in no particular order:

- » Amount of travel lanes per-direction
- » Width of outside travel lane
- » Width of shoulder, bike lane, or parked area
- » Annual Average Daily Traffic (AADT) count
- » Speed limit
- » Percentage of heavy vehicles (Class F4-F13 vehicles)
- » Federal Highway Administration Pavement condition rating
- » Percentage of road with occupied on-street parking
- » Percentage of road with sidewalks
- » Sidewalk width
- » Width of sidewalk buffer (often the tree lawn or gutter area)
- » Average distance between street trees in the right of way

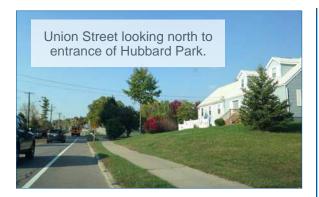
After each factor is recorded and calculated, the rating is assigned. The table below describes each rating in further detail.

Rating	Low	High	Compatibility Level
Α	1	1.5	Extremely High
В	1.51	2.5	Very High
С	2.51	3.5	Moderately High
D	3.51	4.5	Moderately Low
Е	4.51	5.5	Very Low
F	5.5		Extremely Low

After PLOS is calculated, the community benefits from a stronger understanding of the strengths and weaknesses in its walking network. Further, the PLOS can inform future investments in the transportation network, such as building new sidewalks in low-performing areas, planting street trees, or planting new tree lawns.

Presence of sidewalks and street trees are major factors in the PLOS rating. Unfortunately, many of the Town's arterials and collector roads do not have

sidewalks and there are few trees fully within right-of-ways. Many of the arterial and collector roads were given a PLOS rating of "D", or moderately low level of service. To improve the PLOS, sidewalks should be considered on roads like Chili Avenue (Route 33A) and Paul Road in the northeast section of Chili. These roads serve residential, commercial, and community service land uses. Sidewalk development in these areas is more likely to improve the quality of life than in less developed areas.



Shoulder space along roadways may be used by both pedestrians and bicyclists, as well as vehicles for emergency pull-off or on-street parking where permitted and sufficient space exists. Pedestrian level of service, however, is improved where designated facilities have been provided for pedestrian use, such as paved sidewalks separated from vehicular travel lanes by curbs, grass lawns, or street trees (see image to the left).



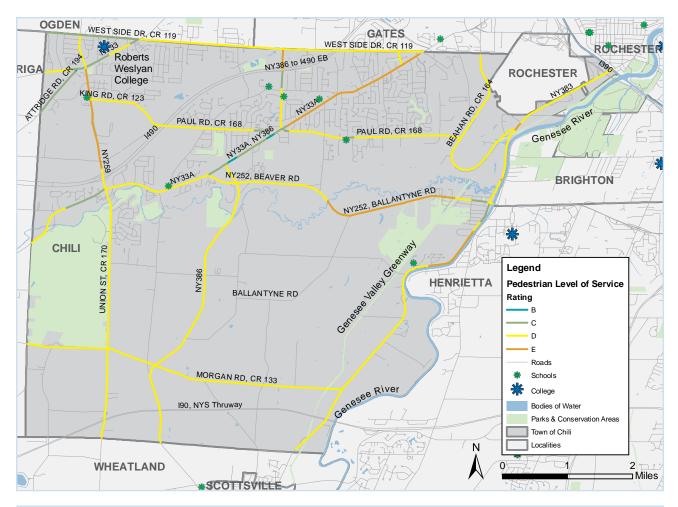


Figure 5: Existing Pedestrian Level of Service Ratings

As an example of how physical changes can improve PLOS consider Paul Road near the Paul Road Elementary School. The table below illustrates the impact of adding sidewalks and street trees on the PLOS rating.

Paul Rd (Paul Road Elementary School)	Existing PLOS	Potential PLOS
Existing Conditions – no sidewalks or street trees	D (4.25)	
1) Add sidewalk on one side		D (3.66)
2) Add sidewalk on one side and street trees		C (3.50)
3) Add sidewalks on both sides		C (3.08)
4) Add sidewalks on both sides and street trees		C (2.76)

NOTE: Data for the PLOS was provided by Monroe County Department of Transportation and New York State Department of Transportation. Additionally, some data was collected using Google Earth.

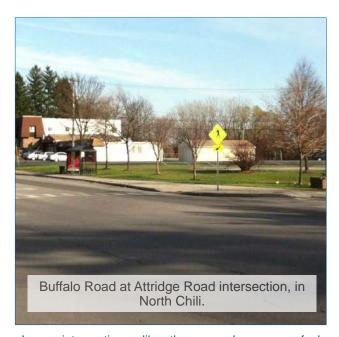




Sidewalk connectivity is a pedestrian issue within the Town. Like the photo above, some sidewalks have been developed in segments that end abruptly, where the potential exists to tie into the existing network.



Pedestrian safety and comfort is increased when sidewalks have a buffer from traffic, like the grass in the photo above.



Large intersections, like the one above, can feel uncomfortable for pedestrians. Clearly marked crosswalks and signage can help increase their safety.

WalkScore®

WalkScore is a free online tool that helps measure the walkability of a particular street or address. In order to calculate the WalkScore of an area the site evaluates the following:

- » Pedestrian friendliness measured by urban planning metrics (e.g. average block length and intersection density)
- » Proximity to commercial, recreational, and educational destinations
- » Ability to complete errands on foot
- » Availability and proximity to public transit

Because the land use, average block length, and intersection densities within the Town of Chili vary so greatly, the WalkScore changes from neighborhood to neighborhood. This can be seen in the WalkScore summaries for each of the Plan's focus areas to the right.

An individual home's assessed value could increase anywhere from \$700 to \$3,000 for every one-point increase in that neighborhood's WalkScore.

- CEOs for Cities, 2009 Report

orth Chili is considered a "somewhat walkable neighborhood" with an overall WalkScore of 63. Some errands within

this focus area can be completed on foot, as there is a relatively significant offering of restaurants and retail destinations within a 15 minute walk of the area's core. The focus area also provides access to two transit stops on the number 8 line Chili / East Main. Neighborhoods south of Buffalo Road and north of Westside Drive, however, generally have a much lower WalkScore of about a 10.

hili Center has an overall WalkScore of 37, which indicates that it is a "car dependent" focus area. Due to the vehicular oriented

WalkScore 37

nature of the area and lack of ability for residents to reach most retail and restaurant offerings within a 15 minute walk of the commercial core, most errands require residents to use a car.

There are, however, 14 transit stops within the focus area, 10 of which are located along Chili Avenue for the number 8 line. Anywhere outside of a quartermile of the focus area's main intersections causes the WalkScore to drop significantly to the low teens.

est Chili is also a "car dependent" focus area with a WalkScore of 17. By far the least walkable of all the focus areas, West Chili has no availability of transit and a very limited availability of retail or restaurant offerings. Additionally, the overall lack of sidewalks throughout

WalkScore 17

the neighborhoods in the area contributes to the low WalkScore, which is pretty consistent throughout the entire focus area.

Existing Bicycle Network









Bicycle Level of Service (BLOS)

To improve bicycling, it is important to measure the current road conditions affecting the bicycling experience. Bicycle Level of Service (BLOS), a measure of bicycle comfort in a road segment, is an important tool to gauge overall road environment across several variables. It is determined by both design and performance factors, and like the PLOS, is identified through a numerical score (1-5.5) and a letter rating (A-F). The following factors contribute to the BLOS rating:

- » Amount of travel lanes per-direction
- » Width of outside travel lane
- » Width of shoulder, bike lane, or parked area
- » Annual Average Daily Traffic (AADT) count
- » Speed limit
- » Percentage of heavy vehicles (Class F4-F13 vehicles)
- » Federal Highway Administration pavement condition rating
- » Percentage of road with occupied on-street parking

After each factor is recorded and calculated, the rating is assigned. The table below describes each rating in further detail.

Rating	Low	High	Compatibility Level
Α	1	1.5	Extremely High
В	1.51	2.5	Very High
С	2.51	3.5	Moderately High
D	3.51	4.5	Moderately Low
Е	4.51	5.5	Very Low
F	5.5		Extremely Low

Shoulder width and AADT are major factors in the BLOS rating. Fortunately, many segments of the Town of Chili's arterials and collector roads have sufficiently wide shoulders and relatively low traffic volume, which contributes to a "C" or better rating. However, the shoulder conditions can vary greatly on some roads, such as Chili Avenue. Overall, most received a "B", "C", or "D" rating. Additionally, road segments with high traffic volume and heavy vehicles present unique challenges to bicyclists, such as Chili

Avenue where it runs through Chili Center. In many of these busy areas the provision of wider shoulders that are well-maintained or the addition of dedicated bike lanes will serve to improve the overall accommodations for bicyclists.



The condition and size of roadway shoulders has a significant impact on the level of service for bicyclists. The photo to the left shows a teen riding on a shoulder of moderate width. A larger space between the rider and traffic would increase the BLOS as well as the rider's level of comfort, while supplemental pavement markings or signage would also improve biker awareness of the need to ride in a direction with traffic and not opposed to it.





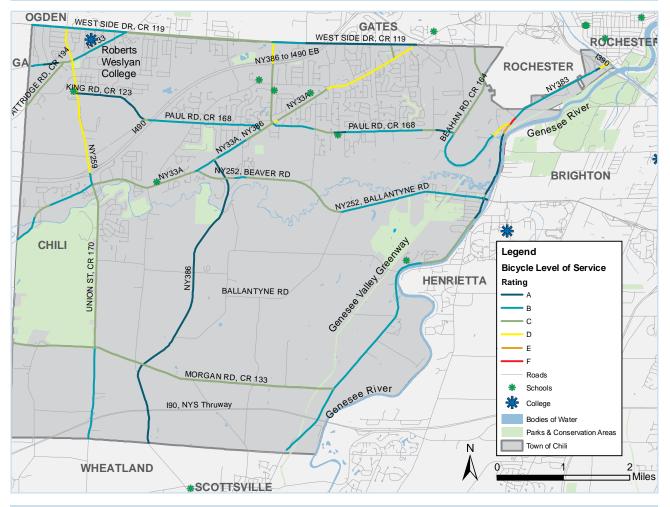


Figure 6: Existing Bicycle Level of Service Ratings

As an example of how physical changes can improve BLOS consider Union Street near Black Creek Park. The table below illustrates how extending the width of the paved shoulder would have a positive impact on the BLOS rating.

Union Street (near intersection of Fulham Place)	Existing BLOS	Potential BLOS
Existing Conditions – 4' paved shoulder	C (2.85)	
1) Extend paved shoulder to 6'		B (2.01)
2) Extend paved shoulder to 8'		A (1.01)

NOTE: Data for the BLOS was provided by Monroe County Department of Transportation and New York State Department of Transportation. Additionally, some data was collected using Google Earth.

Bicycle Network Resources







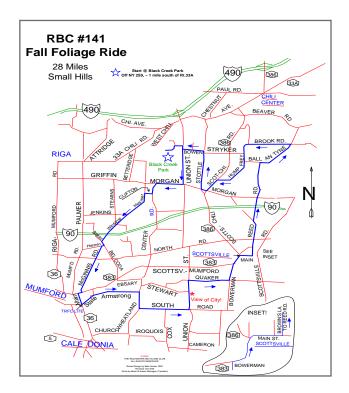


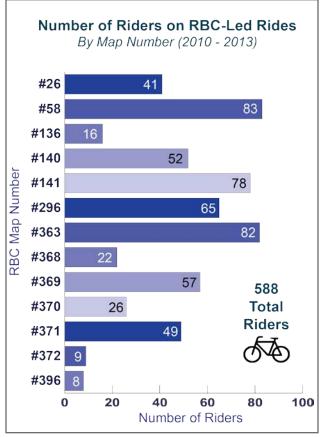


The Rochester Bicycling Club (RBC) is a resource for cyclists all throughout the Finger Lakes Region. Membership to the RBC has many benefits for cyclists, whether they ride for sport, recreation, health, or transportation. Included in these benefits are member submitted maps that depict tested bike routes of varying lengths and intensities traveling across the many towns and villages of the region.

There are 13 RBC rides that take cyclists in and through the Town of Chili. These maps were created based on member submitted rides. As part of this Bicycle and Pedestrian Master Plan, RBC provided the Town with maps of the following routes:

- » 026 Bergen Swamp Ride
- » 058 Chili Center Caledonia
- » 136 Chili Avon
- » 140 North Chili Churchville
- » 141 Fall Foliage Ride
- » 296 Six Towns Tour
- » 363 Black Creek Fowlerville
- » 368 Paul Road to Clifton
- » 369 Paul Road to Mumford
- » 370 Paul Road to Rush
- » 371 Paul Road to Scottsville
- » 372 Chili Counter Clockwise Course
- » 396 Chili Center Oatka Creek

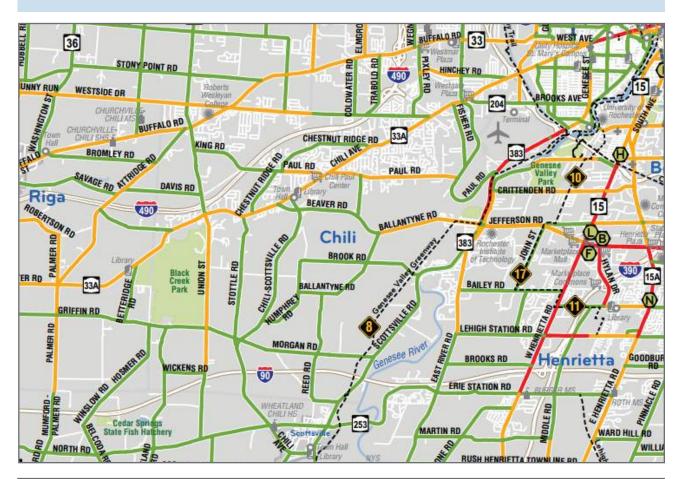




The map to the left is an example of the type of map made available to RBC members. Reproduction of this map is prohibited without permission by RBC.



Genesee Transportation Council (GTC)





Above is an excerpt of the 2014 Greater Rochester Area Bicycling Map prepared by the Genesee Transportation Council that has been edited to show the bike ratings for the Town of Chili. The bicycle ratings are provided by volunteer members of the Rochester Bicycling Club who are experienced cyclists. These individuals rate the major roadways on existing road conditions and features such as pavement width, traffic volumes, presence and type of shoulders, and posted speed limits. The complete version of this map can be found online at **www.gtcmpo.org**.





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Needs & Opportunities



Based on the 2008-2012 American Community Survey estimates, 4.5% of households within the Town are zero-car households, this translates to over 500 households with an average size of 2.4 people per home.





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Needs & Opportunities

he purpose of this section is to outline the needs and opportunities identified during the first phase of the planning process. These observations are based upon the information discovered through the completion of the inventory and analysis and the input gathered from the community. This input was provided by the Steering Committee, through the results of the community survey, and at the senior, youth, and community workshops. A set of observations was compiled for the Town as a whole, as well as for each focus area. These observations represent potential opportunities for improvement to the existing bicycle and pedestrian network. To better appreciate these observations, maps of each focus area have been created that highlight not only the location of these opportunities, but also a snapshot of existing bike and pedestrian conditions for context.

The following opportunity maps are not intended to serve as the Plan's recommendations, but rather provide a base for discussion of the future potential of Chili's bicycle and pedestrian transportation network. The options for addressing these needs and capitalizing on these opportunities will be identified in the various alternatives to be developed in the next phase of the planning process. Ultimately, the preferred alternatives will serve as the basis for the Plan's recommendations.

In order to develop a more bicycle and pedestrian friendly transportation network within Chili, physical improvements need to be made both within and outside of the public right-of-way. A preliminary assessment of the available rights-of-way has been competed by Lu Engineers. Based upon this assessment, there is generally enough right-of-way to accommodate all of the opportunities identified in this section. In order to be truly successful, the Town must also address needs and opportunities outside of the public right-of-way. As a result, this Plan will determine public and private actions that will need to be undertaken such as policy and regulatory changes, building and site design standards, and the provision of facilities on private property.



Sign installed by the Town on a temporary two week basis to improve driver awareness in areas with documented traffic related concerns.

Retrofit vs New Construction

The Town has always been an attractive place to live and do business. Over the past three to four decades a significant amount of residential and non-residential development has occurred in Chili. The pace of this growth has fluctuated but new housing, commercial establishments, and industrial facilities are continuing to be built. As a result, Chili has two types of needs and opportunities. The first is associated with "retrofitting" existing built areas. This will require partnerships with property owners to improve bicycle and pedestrian accommodations. The second type consists of requiring a higher level of bicycle and pedestrian facilities during the development approval process.



Complete Streets







What are they?

Complete streets are those that are designed for all types of users, regardless of age or ability. They accommodate a balance of pedestrians, bicyclists, motorists, public transportation users by addressing the needs of each within the public and private space available. There are no specific design guidelines for a complete street, rather the context of the community is used to dictate the type and nature of the facilities that will be provided.

Benefits

Complete streets improve safety for all modes of transportation by providing for each type of user when appropriate. They promote an active lifestyle by making easier and attractive it for users to walk or bike on streets. They improve connectivity and accessibility within communities. Finally, also foster strong communities by bringing more people to the street, creating a safe, friendly environment for local residents and visitors.

Types of Facilities

- Sidewalks
- Bike Lanes
- Bicycle Boulevards
- Wide, paved shoulders
- Bus Lanes
- Accessible and Comfortable Bus Stops
- Median Islands
- Frequent and Safer Crossing Opportunities
- Curb Extensions
- Narrower Travel Lanes
- Accessible Pedestrian Signals
- Shared use lanes





Creating a "complete street" does not require the addition of facilities for every type of user (bus, car, bike, and pedestrian). The intent of complete streets is to accommodate users in a way that balances the type of roadway facility and level of traffic, with the anticipated non-vehicular traffic and surrounding land uses.

For example, the images to the left are both complete streets, but each utilize different facilities due to the size and use of each roadway. The image to the top is a neighborhood street that added sidewalks and bike lanes to improve walker and bicyclist safety, while the bottom image is a more heavily utilized collector street turned boulevard with designated space for cars, buses, walkers, and bicyclists.

Photos: New Jersey Bicycle & Pedestrian Resource Center - Madison, NJ (Top). North Carolina DOT Complete Streets - East Boulevard Road, Charlotte, NC (Bottom).

Town-wide

As previously stated, a majority of Chili's population is located north of Black Creek in well established neighborhoods in close proximity to key travel routes. These routes include Paul Road, Chili Avenue, Buffalo Road, Chili Center Coldwater Road, and Union Street. Over the next decade the Town has an opportunity to focus bicycle and pedestrian improvements on these key travel routes. This approach will serve to connect neighborhoods to destinations and promote walking and biking as a means of transportation. The following includes a series of needs and opportunities that apply not only within each focus area, but also throughout the Town as a whole.

Bicycle & Pedestrian Facilities

- » Improve pedestrian crossings and enhance sidewalk connectivity throughout Chili.
- » Develop an off-road trail network that connects neighborhoods, existing trails, and points of interest throughout the Town and focus areas. The proposed Black Creek Trail, abandoned railroad rights-of-way, as well as the existing Genesee Riverway Trail and Genesee Valley Greenway could be utilized to accomplish this.
- » Foster greater pedestrian and bicyclist safety and connectivity between West Chili and Chili Center.
- » Identify and establish alternative bike routes that provide an alternative route around major thoroughfares and intersections. Roadways with an existing high bicycle level of service would be ideal.
- » Re-stripe or widen major thoroughfares to improve shoulder widths or add bike lanes to improve the level of comfort for bicyclists.
- » Provide bicycle parking and storage at public facilities and private businesses.
- » Provide better bicycle accommodations at major intersections to increase the comfort and visibility of cyclists.

Regulatory Considerations

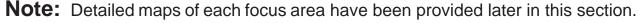
- » Require on-site pedestrian connectivity as part of all new development proposals and Site Plan Review applications. New projects should ensure that the on-site circulation network connects to any existing sidewalks.
- » Draft and adopt a Complete Streets Policy for application to current and future transportation network improvements.
- » Reduce the minimum front setback requirement in commercial and residential areas where a high level of walkability is desired (current standard is a 60 foot minimum setback in all Zoning Districts, and a 75 foot minimum along major roadways). This will serve to create a more comfortable and interesting streetscape and foster pedestrian activity.
- » Utilize the recent increase of residents walking or biking to educate and encourage others.



Need: Chili Avenue between the Chili Center and West Chili focus areas has little to no onstreet facilities for bicyclists and pedestrians (See Opportunity #16).

& Pedestrian Master Plan Bicycle 5 201

Town of Chili Needs & Opportunities (#)Opportunity West Chili Focus Area 1/4 Mile Radius (10 min walkshed) North Chili Focus Area 1/2 Mile Radius (20 min walkshed) Chili Center Focus Public Transit Stop **Existing Pedestrian** Signals Bicycle Accident Pedestrian Accident Level of Service Bike/Pedestrian **Existing Sidewalks**



- 1 Install a bridge over the rail line on Paul Road to improve connectivity.
- **2.** Widen bridge and accommodate better access for bikes and pedestrians.
- 3. Improve Chestnut Ridge south of Paul Road, as it is currently not as comfortable for pedestrians or bicyclists as compared to the north side.
- 4 Improve connection of Genesee Riverway Trail (4a) to Town and Genesee Valley Greenway across Route 383 (4b).

- **5.** Allow crossing of greenway and connect to Route 252A, then focus on Route 383 improvements.
- **6.** Widen shoulder on Route 252A as you approach Route 383 to improve bicycle accommodations.
- **7** Build bike path adjacent to CSX right-ofway from Archer Road to Union Street.
- **8.** Sweep shoulders along Route 383 more often.

- Provide sufficient shoulder width from Beaver Road to Jefferson Road for comfortable biking to RIT, etc.
- **10** Create more bicycle and pedestrian access points into Davis Park.
- 11 Improve crossing on Chili Avenue at Chestnut Ridge Road and/or Stottle Road.
- 12 Create signage to inform cyclists of CSX rail crossing on Chili Avenue.
- **13** Create shortcut for bicyclists and pedestrians through Paul Road loop by airport and/or behind the EcoPark.

- **14.** Sweep shoulders along Chili Avenue more often.
- **15.** Sweep shoulders along Paul Road more often.
- 16 Enhance Chili Avenue to better accommodate bicycle and pedestrian traffic from Union Street to the Town Hall (within Chili Center).
- 17. Enhance Union Street to better accommodate bicycle and pedestrian traffic from Chili Avenue (West Chili) to Buffalo Road (North Chili).

Chili Center

Chili Center has one of the highest concentrations of residential and commercial development within the Town. Therefore, efforts to provide additional bicycle and pedestrian accommodations in the focus area would positively impact the lives of a large number of residents. There are a number of pedestrian facilities already in place, such as sidewalks, crosswalks, and pedestrian actuated traffic signals. These facilities can serve as the basis of a more comprehensive transportation system. Other needs and opportunities within the focus area include:

- » Increase the role of Paul Road in the Town's bicycle and pedestrian network.
- » Utilize Chestnut Ridge as pedestrian and bicycle connection between neighborhoods and to Paul Road.
- » Improve turning maneuvers for bicyclists and pedestrians along Chili Avenue.
- » Utilize targeted speed enforcement along Paul Road to improve safety.
- » Complete a Master Plan for the Chili Center focus area.
- » Create pedestrian connections for neighborhood cul-de-sacs that back up to each other.



Need: Many plazas have public sidewalks passing immediately adjacent to their site. However, there are no pedestrian facilities guiding you into or through the parking lots to the buildings (See Opportunity #6).



Opportunity: Improve coordination of existing pedestrian facilities adjacent to the Memorial Park entrance along Old Scottsville Road (See Opportunity #14).



Opportunity: Paul Road is used by many students to get to the Elementary School and could be a strong candidate for a complete street (See Opportunity #9).



Need: Bikers have a hard time navigating through traffic at this entrance to the Wegman's plaza (See Opportunity #11).

& Pedestrian Master Plan Bicycle $\ddot{\omega}$ **Figure** 5 201

Paul Road Wegmans Elementary Plaza School



- **2.** Address cut-through traffic and speeding issues in neighborhoods.
- **3.** Install crosswalk across Bucky Road to provide safe access to Davis Park (west, off map).
- **4.** Develop Paul Road as a complete street from Davis Park to Chili Avenue.
- **5.** Formalize existing pedestrian and bicyclist cut-through from Paul Road to Chili-Paul Plaza.

- 6. Improve pedestrian and bicycle crossing along Paul Road to Chili-Paul Plaza.
- **7.** Create formalized pedestrian and bicyclist connection from Pumpkin Hill neighborhood to K-Mart Plaza.
- Develop Chili Avenue as a complete street throughout entire focus area and extend to Westside Drive towards Walmart (northeast, off map).
- **9.** Develop Paul Road as a complete street from Chili Avenue to Paul Road Elementary.

- **10.** Designate bike route along Archer Road and Beaver Road (south, off map) as a bypass for cyclists.
- 11. Install markings and bike accommodations to protect cyclists turning into Wegmans.
- **12.** Develop an off-road trail connection from Memorial Park to Wegmans.
- **13.** Improve pedestrian connections to and throughout Chili-Paul Plaza, especially from Chili Avenue.
- **14.** Create safer crossing environment to Memorial Park.

Chili Center Needs & Opportunities



Opportunity



1/4 Mile Radius (10 min walkshed)



1/2 Mile Radius (20 min walkshed)



Public Transit Stop



Existing Pedestrian Signals



Bicycle Accident



Pedestrian Accident



Level of Service Bike/Pedestrian



Existing Sidewalks

- **15.** Create safe crossing environment between Memorial Park and McDonald's.
- 16. Consider retrofitting cut-through neighborhoods with sidewalks that connect to Davis Park.
- 17. Formalize connection between Shrubbery Lane and Chili Avenue using the existing drainage-way.
- **18.** Extend sidewalks to Union Street, in the West Chili focus area.



North Chili

North Chili has two primary travel routes in and out of the focus area; Buffalo Road and Union Street. The area surrounding the intersection of these two roads is referred to as the "four corners." The four corners area does have pedestrian accommodations including sidewalks and a pedestrian traffic signal. There is an opportunity to build upon the existing sidewalk network to improve the connectivity throughout the focus area and beyond. Other needs and opportunities within the North Chili focus area include:

- » Improve the level of comfort for students that walk or bike from the Churchville-Chili Campus to the four-corners area.
- » Extend the public sidewalk network to connect to existing and future residential neighborhoods to the four-corners area.
- » Explore opportunities to create additional street crossings on Buffalo Road and Union Street prior to arriving at the four corners area.
- » Sweep the shoulders of major roadways more often to improve their condition for cyclists and other users.
- » Engage with neighboring municipalities to create unified approach to shared roadways and increase connectivity between towns.



Opportunity: Residents of the Cottage Grove Senior Community have created a cut-through to the Town Plaza that terminates in an underused parking lot (See Opportunity #4).



Need: The four-corners is a wide intersection with heavy traffic that is difficult to navigate on bike or foot (See Opportunities #10 & 11).

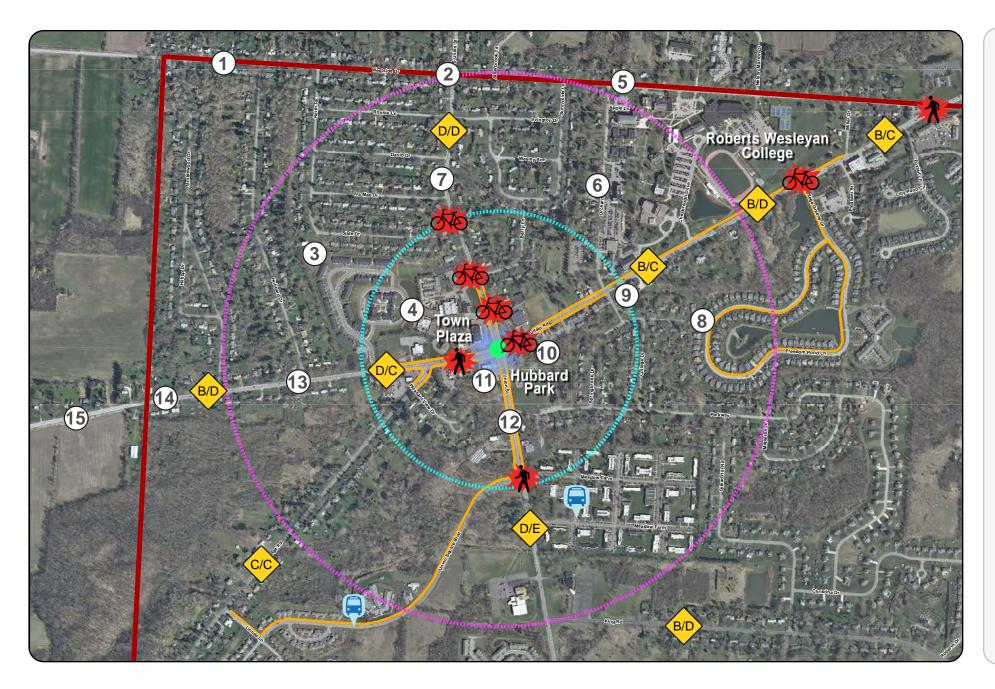


Opportunity: Lower traffic volumes along Westside Drive make it a popular alternative route to and from the Churchville-Chili campus for students (See Opportunity #1).



Need: The internal Cottage Grove sidewalk currently terminates at the shoulder of Buffalo Road (See Opportunity #13).

Pedestrian Master Plan රර Bicycle 0 dure 5 20



North Chili Needs & Opportunities



Opportunity



1/4 Mile Radius (10 min walkshed)



1/2 Mile Radius (20 min walkshed)



Public Transit Stop



Existing Pedestrian Signals



Bicycle Accident



Pedestrian Accident



Level of Service Bike/Pedestrian



Existing Sidewalks

- 1. Work with Riga, Ogden, and MCDOT to make Westside Drive a multi-modal facility for students coming from the Churchville-Chili campus.
- **2.** Improve bicycle facilities at this intersection.
- **3.** Formalize path through secondary fire access from Slate Drive to Cottage Grove community as a pedestrian and bicycle connection.
- **4.** Formalize existing cut-through from Cottage Grove to the Town Plaza.

- **5.** Develop crosswalk to entrance of the cross country running trail.
- **6.** Add sidewalks to Orchard Street to accommodate pedestrian traffic from northeast quadrant to four-corners.
- **7.** Add bike lanes or widen shoulders of Union Street.
- **8.** Formalize existing cut-through from Springbrook Drive to College Green community.
- Develop a crosswalk across Buffalo Road at the intersection with Orchard Street.
- **10.** Add bicycle accommodations to the four-corners intersection.
- 11. Improve overall crossing time for pedestrians and cyclists at the four-corners by enhancing the existing facilities.
- **12.** Develop a crosswalk near Hubbard Park or the Fire Hall to accommodate users that cross south of the four-corners.

- **13.** Develop a crosswalk here or at Cottage Grove to accommodate users that cross west of the four-corners.
- **14.** Add bike lanes or widen shoulders along Buffalo Road to help make cyclists feel more comfortable riding with heavy, fast moving traffic.
- **15.** Work with the Town of Riga to add sidewalks to Buffalo Road in an effort to connect the Churchville-Chili school campus to the existing sidewalk network of the four-corners.



West Chili

West Chili has two primary travel routes in and out of the focus area; Chili Avenue and Union Street. The area surrounding the intersection of these two roads is referred to as the "four corners." West Chili has the least amount of pedestrian accommodations of the three focus areas. There is only one small segment of sidewalk along the two primary travel routes near the four corners area. It is located on the south side of Chili Avenue and extends from Willowbend Drive to the Byrne Dairy. As a result, there is no current system in place to build upon as one needs to be established and then extended over time. Other needs and opportunities within the West Chili focus area include:

- » Upgrade the four corners area to include pedestrian and bicycle accommodations.
- » Create a public sidewalk network that connects existing and future residential neighborhoods, Black Creek Park, and Union Station Park to the four corners area.
- » Create off-road connection to the Rochester Institute of Technology.
- » Improve conditions of shoulders for cyclists and other users on Union Street and Chili Avenue with more frequent street sweeping.
- » Construct portions of the proposed Black Creek Trail within West Chili.



Need: The existing entrance to Black Creek Park includes a crosswalk, but lacks sidewalk connections.



Need: The wide shoulder across from Fulham Place occasionally creates a conflict between southbound traffic and bicyclists (See Opportunity #8).

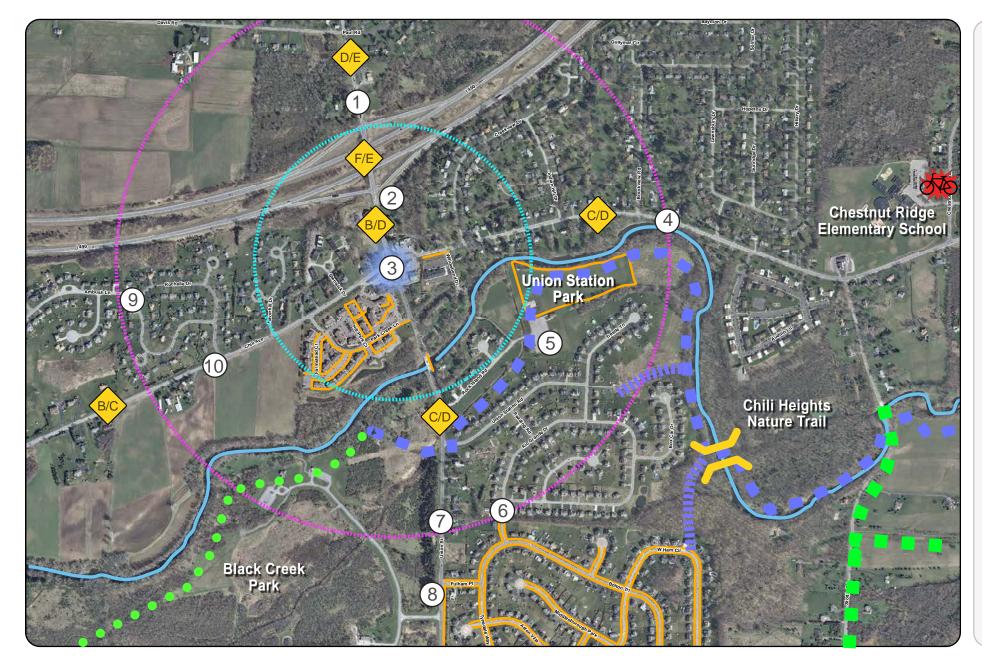


Need: Currently there are no crosswalks, pedestrian signals, or bike accommodations at the four-corners (See Opportunity #3).



Need: The Union Street bridge is often used by West Chili residents to walk or bike to North Chili and vice versa. However, it lacks any designated accommodations (See Opportunities #1 & 2).

Pedestrian Master Plan ර Bicycle Figure 2 201







Bicycle Accident



Opportunity



Level of Service Bike/Pedestrian



1/4 Mile Radius (10 Min Walkshed)



"Four-corners" Area



1/2 Mile Radius (20 Min Walkshed)



Black Creek Trail Key









Proposed Pedestrian Bridge



- - Alignment
 - 10_Install sidewalks along south side of Chili Avenue as development occurs.

- Add pedestrian and bicycle facilities to Union Street Bridge over Route 490 when it comes up for replacement.
- Add sidewalks from four-corners to Route 490 in anticipation of future bridge improvements.
- Improve pedestrian and bicycle crossings at the four-corners.
- Add sidewalks and bike lanes to Chili Avenue so neighborhoods and Chestnut Ridge Elementary are connected.
- Add sidewalk down Rock Island Road to improve access to Union Station Park.
- As opportunities arise, retrofit neighborhood streets that currently do not have sidewalks.
- Add sidewalks and bike lanes to Union Street on both sides from Everton Run (south, off map) to the four-corners.
- Address the conflict of shoulder use created by vehicles turning left onto Fulham Place.
- Add sidewalks to the north side of Chili Avenue from Jamie Lynn Drive (west, off map) to connect neighborhoods to four-corners.





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Alternatives & Recommendations









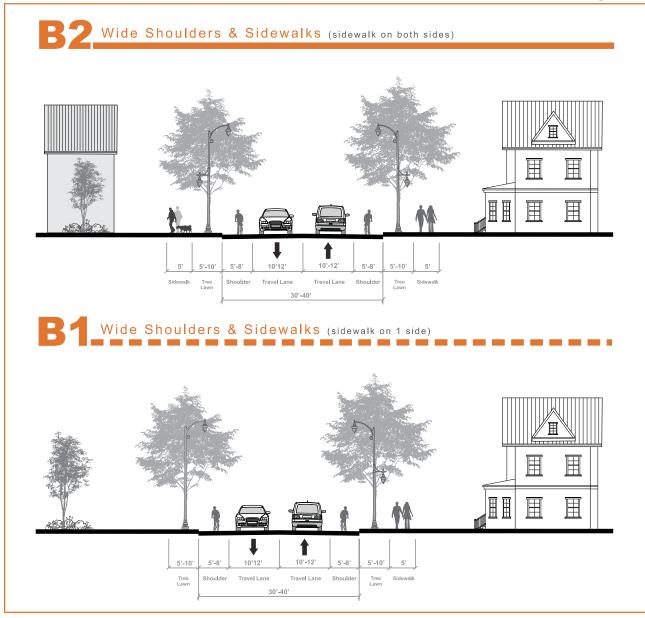
Alternatives

The following cross sections have been developed in response to the needs and opportunities articulated in the previous section of this Master Plan. Each cross section serves as a potential alternative and provides varying levels of bicycle and pedestrian accommodations in order to address a wide range of on-street and offstreet concerns. The alternatives have been categorized into Complete Streets (A2 or A1), Wide Shoulders (B2 or B1), Shoulders Only (C), Shared-Use Lanes with Markings (D), and Off-Road Trails (T2 or T1). The numeral indicates the number of pedestrian pathways provided, if any. For example, an alternative that includes the number 2 is recommending sidewalks or off-road trail facilities on both sides of the road segment.

The initial application of these alternatives was completed by the project team and presented to the Steering Committee for their review and consideration. The preferred application of these alternatives was determined by the Steering Committee based upon each segment's level of service, traffic volumes, proximity to destination centers, the adjacent land uses, as well as comments received in the initial public outreach effort of this Plan. Generally it was preferred that segments with a higher potential for connectivity to residential and commercial activity centers be improved to the maximum extent practicable via the Complete Streets approach (A2). In areas where such investments were not warranted due to reduced traffic volumes, right-of-way constraints, or lack of demand, the alternative was adjusted to meet anticipated user needs.

Figure 11 Bike Lanes & Sidewalks (sidewalk on both sides) Sidewalks (sidewalk on 1 side)

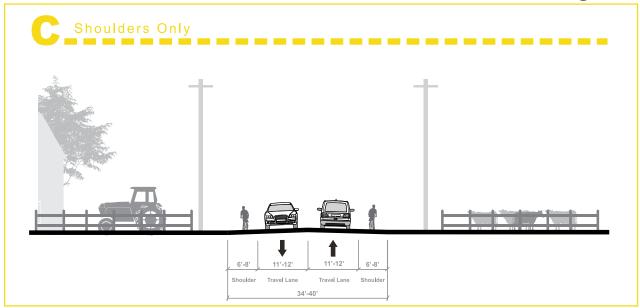




Note!

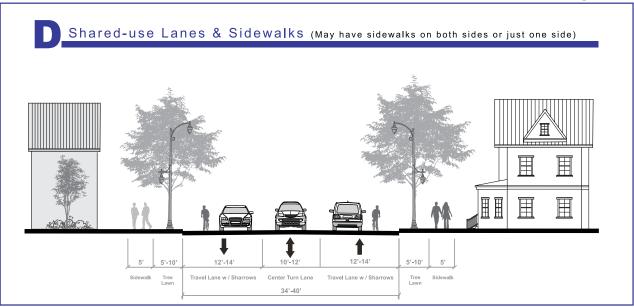
Based upon the needs and opportunities identified as part of this planning process, it is recommended that designated bike lanes (Alternatives A1 and A2) be provided along certain roadways owned and maintained by the NYSDOT and the MCDOT. The Town acknowledges that current MCDOT design policy does not support the provision of designated bike lanes along its roadways. Furthermore, based on discussions with MCDOT staff their current policy is that if sidewalks and parking spaces do not exist that they prefer to provide multi-use shoulders, which in their opinion are on-street bike facilities as well as pedestrian facilities where no sidewalk exists. MCDOT stated that at this time they support the provision of bicycle space along their roads through the use of multi-purpose shoulders. Therefore, absent of a change in this policy, any future bicycle accommodations along County roadways would likely be developed in conformance with current MCDOT policy by providing a minimum five-foot shoulder space or curb off-set (Alternatives B1 and B2). In the event that MCDOT modifies its policy regarding bike lanes then this Plan's initial recommendations will assist the Town in identifying which shoulders should be converted to bike lanes (B1 or B2 to A1 or A2).

In locations where dedicated bike lanes are recommended along a state roadway, the exact timing and construction of such facilities will depend on the financially feasibility of the project. The addition of bike lanes may be a short or long term undertaking depending on the type of work that is required. Due to the limited funds that the State has available, moving curbs or adding width to current roadways may not be possible at this time. In the event that a project with marked bike lanes is not financially feasible, sufficient alternative accommodations should be provided for bicyclists on the road segments where marked bike lanes are proposed.



NOTE: Shoulder space along roadways, such as those noted in Alternative C, provide onstreet accommodations for both pedestrians and bicyclists, as well as emergency pull-off space and on-street parking where permitted and sufficient space exists.

Figure 14

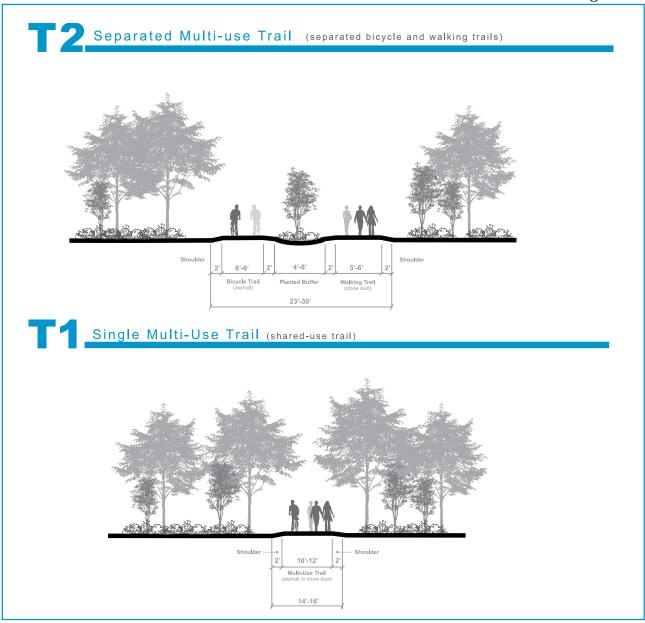


NOTE: Alternative D has been provided as a substitute on-road bicycle facility option for areas where bike lanes or a wide shoulder may not be desirable or feasible (e.g. Roads with pavement widths of less than 14 feet). More information about Shared Use Lanes has been provided on page 96.



Off-road bicycle and pedestrian facilities recommended as part of this Plan could include a separated multi-use trail or a single multi-use trail. There have been no specific determinations for which of the following cross sections is most applicable to the proposed off-road trail projects. Therefore, at the time of project implementation the Town should consider the desirability and feasibility of each alternative in order to determine the most effective trail design.

Figure 15



Recommendations

This Section of the Bicycle and Pedestrian Master Plan contains a set of recommendations to improve the accommodations for biking and walking within Chili. These recommendations are divided into three categories: 1) capital projects, 2) policy and programs, and 3) zoning and regulatory considerations. This approach will serve to provide a more complete transportation network for non-motorized travel throughout the community. The recommendations on the following pages are outlined below for ease of reference.

Capital Projects

MON MON MON MON

These projects generally consist of on-road improvements to existing streets as well as the development of offroad trail facilities. The map on the opposing page shows the type, location, and extent of the recommended alternatives for the three sub areas as well as the town as a whole. The projects are discussed in the following sequence:

- → North Chili Projects 1 to 7
- → West Chili Projects 8 to 11
- → Chili Center Projects 12 to 18
- → Town-Wide Projects 19 to 24

The following project pages are intended to provide a starting point for discussions regarding alternations to roadway design with the appropriate DOT agency upon the initiation of each project by the Town.

Policies & Programs

These recommendations outline a number of public policies or programs that the Town and its partners should consider adopting and implementing over the next decade. The cumulative impact of these actions will help support the development of a more complete bicycle and pedestrian network. The specific policies and programs included are as follows:

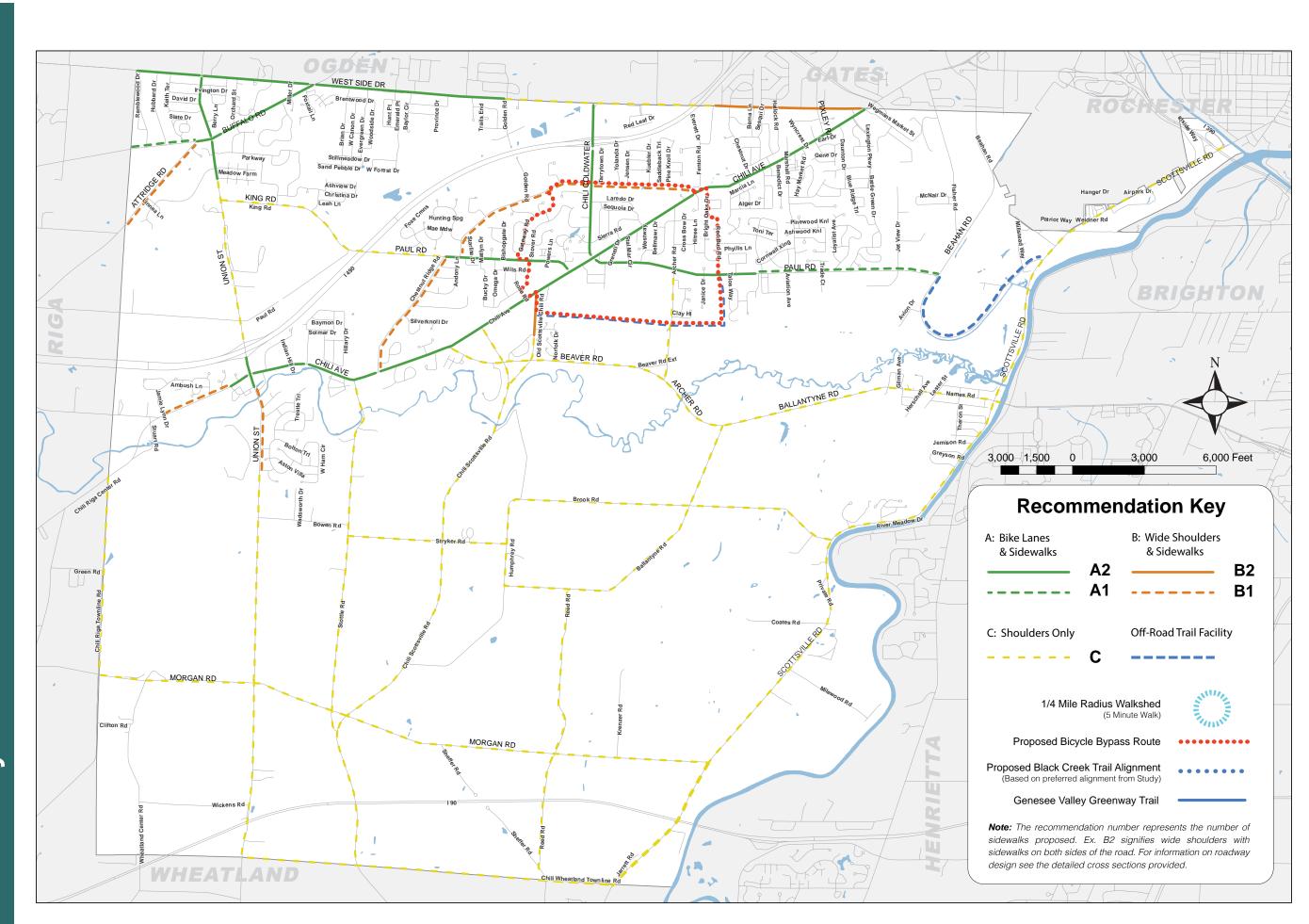
- → Pedestrian Zones
- → Advocate Groups
- → Bicycle & Pedestrian Committee
- → Maintenance of Bicycle & Pedestrian Infrastructure
- → Complete Streets Policy
- → Street Tree Requirements
- → Reduction of Turning Radii
- → Bicycle Boulevards
- Bike Lanes
- → Shared Lane Pavement Markings or Sharrows
- Neighborhood Connections

Zoning & Regulatory Considerations

As previously mentioned in this Plan, (Zoning Code summary on page 25), there are a number of zoning and regulatory modifications that the Town should consider to create the legal basis for future actions. These recommendations will ensure that private development positively contributes to the transportation network by requiring bicycle and pedestrian improvements are put in place as residential and non-residential projects are constructed. This section articulates some preliminary language that may be desirable to incorporate into the existing Town Code.

The map on the following page is intended to serve as the key for the preferred application of all alternatives as identified in the following project sections.

Pedestrian Master Plan ර 16: Bicycle Figure 2









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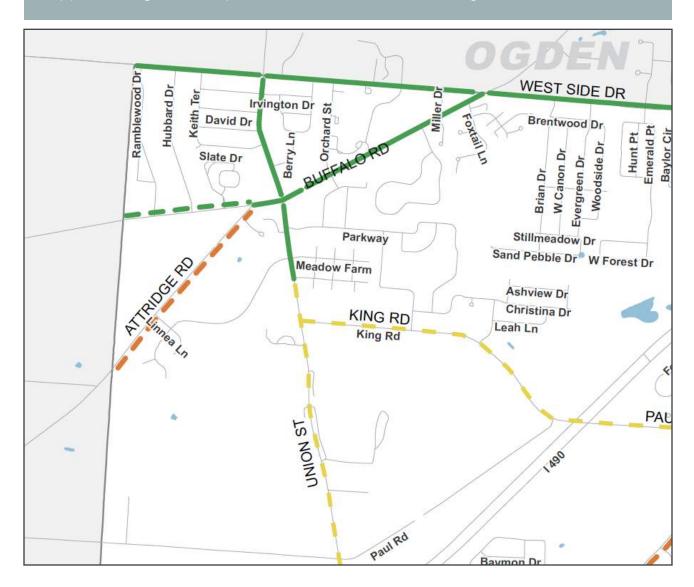
TOWN OF CHILI PROJECTS

Recommendations for North Chili

塔

Notes:

- (1) All public right-of-way measurements provided within this section are for planning purposes only as they are estimates based on measurements taken from key roadway segments identified in this Plan. Proper field checks and measurements will be necessary for each project prior to implementing the following recommendations.
- (2) At the time of each project's initiation an evaluation of truck traffic will need to be conducted to determine the minimum drive lane width requirement in projects where a reduction in drive lane width is recommended (e.g. 11 foot drive lane to 10 foot).
- (3) All existing conditions photos in this Section credited to Google, accessed 2015.



Project 1



Buffalo Road: Riga Town Line to Attridge Road

The section of Buffalo Road west of Union Street (shown in red on the map) serves to connect the center of North Chili with the Churchville-Chili Middle School and High School Campus located in Riga. Students regularly walk along this route to get to and from their neighborhood, the school campus, Hubbard Park, as well as to patron the various commercial establishments that encompass the four corners.

Currently vehicular speeds along this stretch of Buffalo Road make for an uncomfortable walking and biking environment. It is recommended that bike lanes be added to both sides and a sidewalk be placed on the north side of Buffalo Road. The proposed sidewalk will provide a connection to the existing residential neighborhoods that are concentrated in the northwest quadrant of North Chili. As

development occurs in the southwest quadrant, consideration should be given to extending sidewalks along the south side of Buffalo Road as well. The addition of a sidewalk and bike lanes will improve the safety and level of service of pedestrians and bicyclists utilizing this travel route.

Streetscape Design Standards	Existing Conditions		Alternative A1	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	-
Buffer/Tree Lawn	-	-	10 ft	10 ft
Bike Lane	-	-	5 ft	5 ft
Shoulder	8 ft	8 ft	-	-
Drive Lane	12 ft	12 ft	11 ft	11 ft
Total ROW Required	40 ft 66 ft		57 ft	
Total ROW Available			66 ft	

Roadway Ownership for this Segment: New York State





Project 2





Buffalo Road: Intersection with Union Street

This section of Buffalo Road begins at Attridge Road and terminates approximately 500+ feet east of the Union Street intersection (shown in red on the map). The intersection of Buffalo Road and Union Street currently includes sidewalks, crosswalks, and pedestrian activated crossing signals on all approaches. These facilities provide the infrastructure necessary to safely accommodate foot traffic. However, streetscape amenities such as additional street trees and benches should be added to improve the comfort of pedestrians. Consideration should also be given to reducing the turning radii at this intersection to decrease the crossing distance for pedestrians as well as the speed of turning vehicles. For more information on optimal turning radii, see page 95.

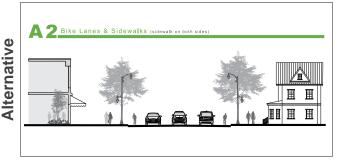
A review of the safety data obtained for this study indicates that there have been two accidents involving bicyclists at this intersection (see page 29 for more information). It is recommended that designated bike lanes be added to this intersection to improve the existing level of service and to increase vehicular awareness of cyclists passing through North Chili. All approaches currently include paved shoulders that range in width from five to six feet. As a result, bike lanes can be provided without any reconfiguration of the intersection.

	Strootooono Dooign Standardo	Existing Conditions		Alternative A2	
ı	Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
	Sidewalk	5 ft	5 ft	5 ft	5 ft
	Buffer/Tree Lawn	6 ft	7.5 ft	8 ft	8 ft
	Bike Lane	-	-	5 ft	5 ft
	Shoulder	5 ft	6 ft	-	-
	Drive Lane	12 ft	12 ft	11 ft	11 ft
	Total ROW Required	58.5 ft		58 ft	
	Total ROW Available	66	i ft	66	ft

Note: Turning lane requirements are not included in this assessment.



Roadway Ownership for this Segment: New York State



Project 3



Buffalo Road: *Union Street Intersection to Westside Drive*

The section of Buffalo Road east of Union Street (shown in red on the map) is a primary travel route in North Chili. It connects Roberts Wesleyan College, the College Green Senior Living Community, and adjacent single family neighborhoods to the commercial establishments along Buffalo Road and to those that encompass the four corners. Currently there is a single sidewalk running along the north side of Buffalo Road from Union Street to Miller Avenue. This sidewalk segment links the College to the sidewalk system that is in place throughout the four corners of North Chili. It is recommended that this sidewalk segment is continued eastward to Westside Drive.

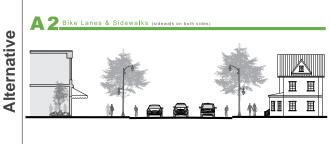
Additional recommendations include the following:

- → Extend the existing sidewalk on the south side of Buffalo Road from Orchard Street to Westside Drive.
- Designate the existing paved shoulders as bike lanes. (The existing shoulders generally exceed seven feet in width.)
- Plant street trees along both sides of Buffalo Road. It should be noted that the south side has some physical constraints that may make the creation of a continuous tree lawn impractical. However, the final design should maximize the presence of a tree lawn to the extent practicable.

Strootooono Dooign Standarda	Existing Conditions		Alternative A2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	5 ft	5 ft	5 ft	5 ft
Buffer/Tree Lawn	6 ft	6 ft	10 ft	10 ft
Bike Lane	-	-	6 ft	6 ft
Shoulder	5.5 ft	6.5 ft	-	-
Drive Lane	11 ft	12 ft	11 ft	11 ft
Total ROW Required	57	7 ft	64 ft	
Total ROW Available	60	6 ft	66	ft .

Roadway Ownership for this Segment: New York State









Union Street: Westside Drive to Southern Driveway of Meadowbrook Farm

Union Street is a major north-south arterial that connects North Chili to West Chili and Black Creek Park. In North Chili, this section of Union Street (shown in red on the map) connects the existing residential neighborhoods in each of the quadrants of North Chili to the four corners area. The current pedestrian and bicycle accommodations in this section of Union Street consist of unimproved gravel shoulders and narrow paved shoulders (2± feet in width). A review of the safety data indicates that there have been two accidents involving bicyclists and one involving a pedestrian (see page 29 for more information.) In order to improve conditions for pedestrian and bicyclists, it is recommended that sidewalks, designated bike lanes, and tree lawns be added along both sides of Union Street from Westside Drive to Southern Driveway of Meadowbrook Farm.

Streeteene Decign Standards	Existing	Existing Conditions		tive A2
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	5 ft	5 ft	5 ft	5 ft
Buffer/Tree Lawn	6 - 7 ft	3.5 - 6.5 ft	10 ft	10 ft
Bike Lane	-	-	6 ft	6 ft
Shoulder	5.5 ft	5.5 ft	-	-
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	53.5 ft		64 ft	
Total ROW Available	66 ft		66 ft	

Note: Turning lane requirements are not included in this assessment.





Alternative

Roadway Ownership for this Segment: New York State



Westside Drive: Riga Town Line to Union Street

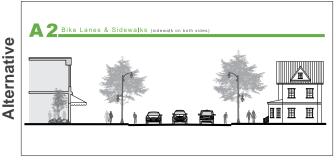
This segment of Westside Drive (shown in red on the map) has traffic volumes and vehicular travel speeds that are lower compared to Buffalo Road between the Riga town line and Union Street. As a result, this is the preferred route to walk or bike to and from campus by many Churchville-Chili Students. It is recommended that a sidewalk and designated bike lanes be added to both sides of the road. These improvements can increase bicycle and pedestrian user safety and comfort while connecting existing neighborhoods to the greater bicycle and pedestrian network.

It should be noted that Westside Drive represents the municipal boundary between the Towns of Chili and Ogden. The completion of this project and any other improvements (e.g. sidewalks and bike lanes) will need to be coordinated with the Town of Ogden and MCDOT.

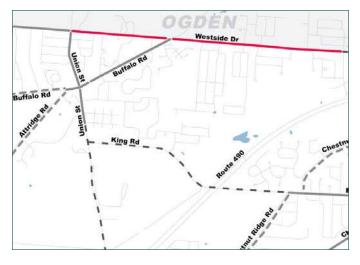
Ctuantagena Daniem Ctandauda	Existing C	conditions Alternative		tive A2
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane	-	-	5 ft	5 ft
Shoulder	5 ft	5 ft	-	-
Drive Lane	11 ft	11 ft	10 ft	10 ft
Total ROW Required	32 ft		50 ft	
Total ROW Available	50 ft		50	ft

Roadway Ownership for this Segment: *Monroe County*









Westside Drive: Union Street to Golden Road

This segment of Westside Drive connects existing single family and multi-family residential neighborhoods and Roberts Wesleyan College to the four corners via Union Street and Buffalo Road. Students, residents, and touring cyclists utilize Westside Drive on a regular basis. It is recommended that designated bike lanes, sidewalks, and street trees be installed on both sides of Westside Drive between Union Street and Buffalo Road. As previously stated, Westside Drive is the shared Town boundary between Chili and Ogden. Therefore, it is recommended that the two municipalities coordinate with Monroe County

DOT when future opportunities arise to complete the proposed bicycle and pedestrian facility improvements.

Streeteene Decian Standards	Existing (Conditions	Alternative A2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane or Bike Accommodations	-	-	5 ft	5 ft
Shoulder	6 ft	5.5 ft	-	-
Drive Lane	10 ft	10 ft	10 ft	10 ft
Total ROW Required	31.5 ft		50 ft	
Total ROW Available	50 ft		50	ft



Roadway Ownership for this Segment: Monroe County





Attridge Road: Riga Town Line to Buffalo Road

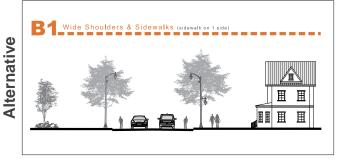
Attridge Road is a relatively low-volume travel route within the Town of Chili. The construction of Union Meadows along Union Square Boulevard has increased the number of pedestrians and bicyclists utilizing Attridge Road to travel north to Buffalo Road and into the four corners. In an effort to more comfortably accommodate these users it is recommended that a single sidewalk and street trees be installed along the east side of the road. This will create a direct connection to the existing sidewalk system constructed along Linnea Lane and Union Square Boulevard.

There is a large amount of undeveloped land to the west of Attridge Road. If a significant amount of residential development occurs in this area, the Town should consider installing a sidewalk on the west side of Attridge Road to service future residents.

Ctuartagena Design Ctandauda	Existing (sting Conditions Altern		ative B1	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2	
Sidewalk	-	-	5 ft	-	
Buffer/Tree Lawn	-	-	5 ft	5 ft	
Bike Lane	-	-	-	-	
Shoulder	5 ft	5 ft	5 ft	5 ft	
Drive Lane	10 ft	10 ft	10 ft	10 ft	
Total ROW Required	30 ft		45 ft		
Total ROW Available	66 ft		66	ft	

Roadway Ownership for this Segment: *Monroe County*



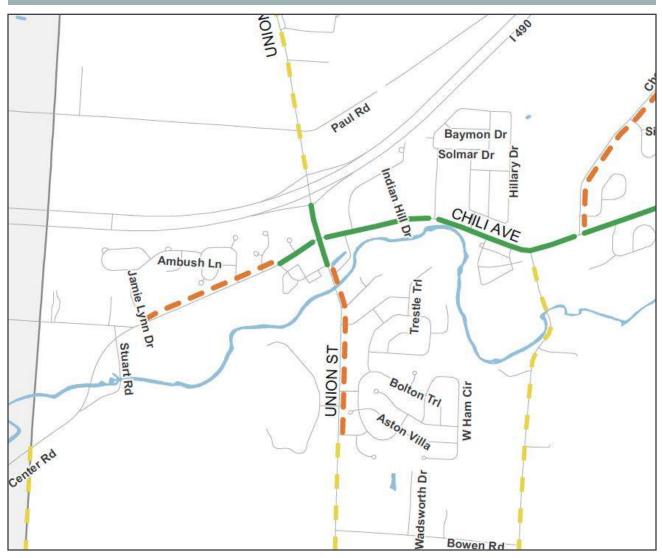


Recommendations for West Chili

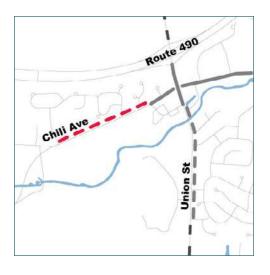
Notes:

- (1) All public right-of-way measurements provided within this section are for planning segments identified in this Plan. Proper field checks and measurements will be necessary for each project before implementing the following recommendations.

 (2) All existing conditions photos credited to Google Streetview, accessed 2015.







Chili Avenue: Jamie Lynn Drive to Park Creek Lane

Beginning in the late 1980's, several tracts of single-family homes have been constructed on the north side of Chili Avenue, west of Union Street. A large number of these homes are located along a series of interconnected streets from Jamie Lynn Drive to Rochelle Drive. Many local residents enjoy walking and cycling within the neighborhood, but feel uncomfortable traveling eastbound to the four corners area and to other destinations such as Black Creek Park on foot or by bicycle due to the lack of facilities along Chili Avenue. It is recommended that a sidewalk be placed along the north side of Chili Avenue beginning at Jamie Lynn Drive and extending to Park Creek Lane, which is located on the south side of Chili Avenue. The existing paved shoulders in this segment range from three to four feet in width. These shoulders should be widened to a minimum of five feet in width to more comfortably accommodate bicycle traffic.

There is a large amount of undeveloped land on the south side of Chili Avenue, west of Park Creek Lane. If a significant amount of residential development occurs in this area, the Town should consider installing a sidewalk on the south side of Chili Avenue to service future residents.

Streetscape Design Standards	Existing C	onditions	Alternative B1	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	-
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane	-	-	-	-
Shoulder	4 ft	4 ft	5 ft	5 ft
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	30 ft		47 ft	
Total ROW Available	66 ft		66	ft

Roadway Ownership for this Segment: New York State











Chili Avenue: Park Creek Lane to Chestnut Ridge Road

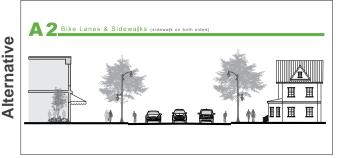
Chili Avenue is a major east-west arterial that connects West Chili to Chili Center (shown in red on the map). It connects the Chestnut Ridge Elementary School, a number of single family neighborhoods, multi-family living communities, to the commercial establishments along Chili Avenue and to those that encompass the four corners of West Chili. The current pedestrian and bicycle accommodations in this section of Chili Avenue consist of paved and gravel shoulders. The paved shoulders vary in width from two to eight feet. However, the wider shoulder sections occur sporadically and are too short in length to provide a consistent and predictable environment for walking and biking. In order to improve conditions for pedestrian and bicyclists, it is recommended that sidewalks, designated bike lanes, and tree lawns be added along both sides of Chili Avenue from Park Creek Lane to Chestnut Ridge Road.

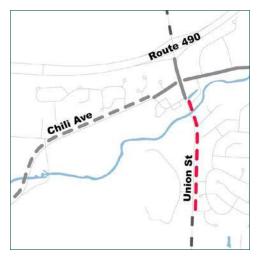
Streetscape Design Standards	Existing C	Conditions	Alternative A2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane	-	-	5 ft	5 ft
Shoulder	3 ft	5 ft	5 ft	5 ft
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	30 ft		62	? ft
Total ROW Available	66 ft		66	ft

Note: Turning lane requirements are not included in this assessment.



Roadway Ownership for this Segment: New York State





Union Street: Everton Run to Willowbend Drive

The Union Station and Park Place neighborhoods have an interconnected street pattern that helps to create a safe and comfortable setting for walking and biking within the existing housing tracts. There is also an asphalt sidewalk along the east side of Union Street that connects Fulham Place to Everton Run. It is recommended that this sidewalk be extended north to the bridge that extends over Black Creek. This facility, in conjunction with Project #11 (described in the next section) will provide a direct connection for residents to the four corners area.

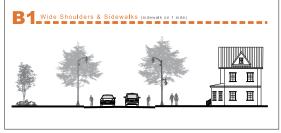
The paved shoulders are generally five feet in width on the east side of Union Street. This shoulder, combined with the low traffic volumes in this segment provides a comfortable experience for bicyclists using the east side of Union Street. By comparison, the

two to three foot paved shoulder that exists on the west side of the street is inadequate. It is recommended that it be expanded to five feet in width. Concerns were also expressed by residents over the additional pavement width on Union Street opposite Fulham Place. This pavement is intended to provide the opportunity for a southbound motorist to pass a vehicle waiting to make a left turn into Park Place. While there is no current documented safety related issue in this area, the maneuver could create a hazardous situation for bicyclists using the shoulder along the west side of Union Street since a vehicle traveling southbound and the cyclist would both be competing for the same space. A common practice to address this should it become a concern in the future would be to add a designated bike lane in the vicinity of the Fulham Place intersection with proper signage to alert motorists of the potential presence of bicyclists.

Streetseene Design Standards	Existing (Existing Conditions		tive B1
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	4 ft	-	5 ft	-
Buffer/Tree Lawn	8 ft	-	8 ft	8 ft
Bike Lane	-	-	-	-
Shoulder	3 - 5 ft	3 - 5 ft	6 ft	6 ft
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	30 ft		55 ft	
Total ROW Available	66 ft		66	i ft

Roadway Ownership for this Segment: *Monroe County*









Union Street: Intersection at Chili Avenue

This section of Union Street begins at the Route 490 overpass and terminates at Black Creek (shown in red on the map). The intersection of Chili Avenue and Union Street currently has no designated bicycle or pedestrian facilities. More specifically it lacks sidewalks, crosswalks, pedestrian crossing signals, street tress, benches, and bike lanes on all approaches. These facilities provide the infrastructure necessary to safely accommodate foot and bicycle traffic. It is recommended that these improvements be put in place at this intersection. Consideration should also be given to reducing the turning radii at this intersection to decrease the crossing distance for pedestrians as well as the speed of turning vehicles. For more information on optimal turning radii, see page

Streetscape Design Standards	Existing (Conditions	Alternative A2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane	-	-	5 ft	5 ft
Shoulder	5 - 8 ft	2 - 5 ft	-	-
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	32 ft		52 ft	
Total ROW Available	66 ft		66	i ft

Note: Turning lane requirements are not included in this assessment.

Existing Conditions



Roadway Ownership for this Segment:

North of Chili Ave - New York State South of Chili Ave - Monroe County

Alternative





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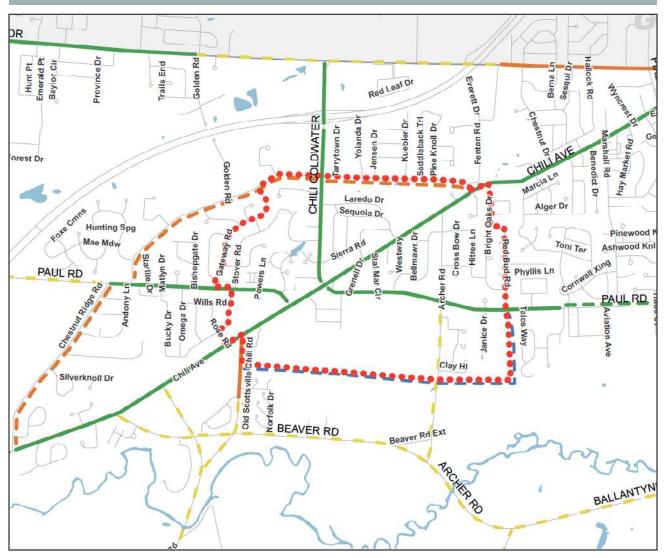
Recommendations for Chili Center

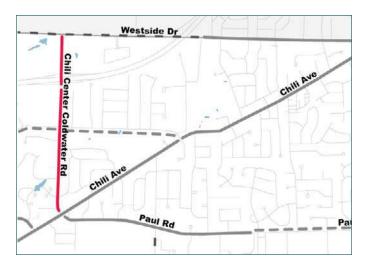


Notes:

- (1) All public right-of-way measurements provided within this section are for planning purposes only as they are estimates based on measurements taken from key roadway segments identified in this Plan. Proper field checks and measurements will be necessary for each project before implementing the following recommendations.

 (2) All existing conditions photos credited to Google Streetview, accessed 2015.





Chili Center Coldwater Road: Gates Town Line to Chili Avenue

Chili Center Coldwater Road provides one of two opportunities to access Route 490 within the Town of Chili. It provides the most direct access to Chili Center from communities located to the northeast and southwest of the Town. As a result, it carries some of the highest motor vehicle traffic volumes in Chili. North of Route 490, the existing cross section generally consists of a two lane roadway with one to three foot paved shoulders. South of Route 490, the cross section widens to include sidewalks on both sides of the road, five to seven foot tree lawns (mostly devoid of trees), four foot paved shoulders, two travel lanes, and a center

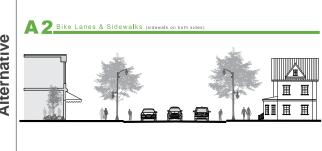
turn lane. The presence of sidewalks separated from the roadway contributes to the relatively high Pedestrian Level of Service (LOS "C") despite the large volume of motor vehicle traffic that utilizes the roadway. It is recommended that the tree lawns be widened and planted with appropriate street trees and designated bike lanes be added to this segment.

Streeteene Design Standards	Existing (Conditions	Alternative A2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	5 ft	5 ft	5 ft	5 ft
Buffer/Tree Lawn	6 ft	6 ft	6 ft	6 ft
Bike Lane	-	-	5 ft	5 ft
Shoulder	4 ft	4 ft	-	-
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	52 ft		54 ft	
Total ROW Available	48 ft		48	ft

Note: Turning lane requirements are not included in this assessment.

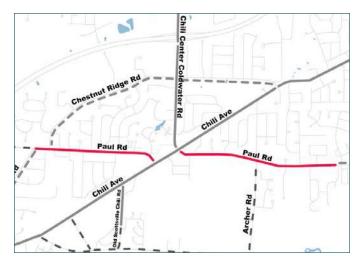
Roadway Ownership for this Segment: Monroe County





Alternative





Paul Road: Chestnut Ridge Road to Chili Avenue & Chili Avenue to Carriage House Lane

Paul Road is a major east-west transportation corridor (shown in red on the map) that connects Davis Park, a number of single family neighborhoods, multi-family living communities, to the commercial establishments along Chili Avenue in Chili Center. A review of the safety data indicates that there have been two accidents involving pedestrians in this segment of Paul Road. One in the vicinity of Chili-Paul Plaza and one near The Father's House Church (see page 29 for more information). Based upon the public input received during this planning process, many local residents access Davis Park on foot or on bike and more

residents would follow suit if the proper accommodations were put in place. In order to improve conditions for pedestrian and bicyclists, it is recommended that sidewalks, designated bike lanes (or curb off-sets), and tree lawns be added along both sides of Paul Road in this segment.

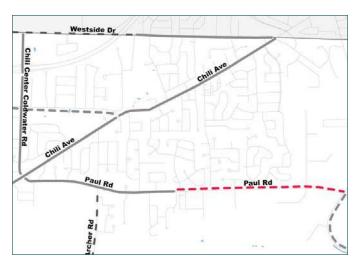
Straataaana Daajan Standarda	Existing (Existing Conditions		tive A2
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane or Bike Accommodations	-	-	5 ft	5 ft
Shoulder	4 - 6 ft	4 - 6 ft	-	-
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	34 ft		52 ft	
Total ROW Available	66 ft		66 ft	

Note: Turning lane requirements are not included in this assessment.



Roadway Ownership for this Segment: Monroe County





Paul Road: Carriage House Lane to Beahan Road

This segment of Paul Road has two very distinct land use patterns. The north side of the road is dominated by a number of single family residential neighborhoods. The south side is occupied by large scale industrial operations and institutional uses. The existing cross section consists of a two lane facility with gravel and paved shoulders. Many residents enjoy walking and cycling within the neighborhood on the north side of Paul Road but feel uncomfortable traveling along Paul Road on foot or by bicycle due to the lack of accommodations. It is recommended that a sidewalk be placed along the north side of Paul

Road to serve as a collector for pedestrians seeking to travel west to Chili Avenue or east to the Genesee Valley Greenway.

The existing paved shoulders in this segment range from two to four feet in width. These shoulders should be widened to accommodate designated bike lanes on both sides of the roadway.

Ctrostocomo Dociam Ctondordo	Existing (Conditions	Alternative A1	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	-
Buffer/Tree Lawn	-	-	5 ft	5 ft
Bike Lane or Bike Accommodations	-	-	5 ft	5 ft
Shoulder	4 ft	4 ft	-	-
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	30 ft		47 ft	
Total ROW Available	66 ft		66	ft

Roadway Ownership for this Segment: Monroe County





Westside Dr Paul Rd

Westside Drive: Fenton Road to Chili Avenue

This segment of Westside Drive (shown in red in the map) is bordered by well-established, single family neighborhoods to the north and south of the roadway. As a result, it is recommended that sidewalks be installed on both sides of Westside Drive to provide a designated pedestrian facility.

East of Burna Lane, there are paved shoulders on both sides of the roadway that are generally five to six feet in width. West of Burna Lane, the travel lanes and paved shoulders are separated by concrete gutters. The paved shoulders are generous in width, varying from seven to nine feet.

However, the paved shoulders are sloped towards the center of the road. This pitch makes it awkward to use for walking or biking. Shoulders that are more level and a minimum of five feet in width should be provided for bicyclists in this section.

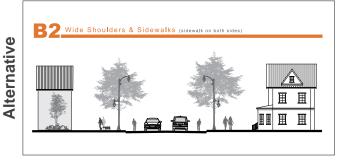
It should be noted that Westside Drive represents the municipal boundary between the Towns of Chili and Gates. Any improvements will need to be coordinated with the Gates and the Monroe County DOT.

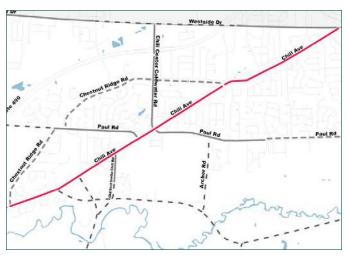
Streeteene Deeign Standarde	Existing (Conditions	Alternative B2	
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2
Sidewalk	-	-	5 ft	5 ft
Buffer/Tree Lawn	-	-	5 ft	5 ft
Shoulder	5 ft	6 ft	6 ft	6 ft
Drive Lane	11 ft	11 ft	11 ft	11 ft
Total ROW Required	33 ft		54 ft	
Total ROW Available	66 ft		66	i ft





Roadway Ownership for this Segment: Monroe County





Chili Avenue: Chestnut Ridge Road to Westside Drive

The section of Chili Avenue (shown in red on the map) is a primary travel route in Chili and it serves as the commercial spine for the community. It connects the largest number of single family neighborhoods and multi-family living communities to the businesses located along Chili Avenue. In addition, there are a number of community facilities within this segment such as the Town Hall Campus, the Senior Center, and the Library. Chili Avenue is also the Town's ceremonial "Main Street" serving as the travel route for the Memorial Day Parade and the site of the Fourth of July Chili Festival. As a result of the mix of land uses and

civic activities concentrated in this segment, it is critical that this section of Chili Avenue become the Town's most "complete street". The Town recognizes the importance of this section of Chili Avenue and has initiated the development of a Chili Center Master Plan to guide future investment in this area.

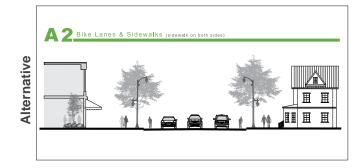
There are currently four different cross sections within this segment of Chili Avenue. They generally consist of the following configurations:

- 1. Chestnut Ridge Road to the Railroad Crossing is a two lane facility with paved and unpaved shoulders. Paved shoulders vary from three to five feet in width.
- 2. Railroad Crossing to Paul Road varies from three to six lanes (including turn lanes) and includes sidewalks, tree lawns, and paved shoulders on both sides of the road. The tree lawns are inconsistent and have been eliminated in certain locations to accommodate turning lanes. The tree lawns range in width from two to four feet and are generally devoid of trees. Paved shoulders vary from four to five feet in width.
- 3. Paul Road to Maureen Drive is a two lane facility with paved shoulder that are typically eight feet wide.
- 4. Maureen Drive to Westside Drive three lane facility with one lane in each direction and a center turn lane. Paved shoulders vary from three to five feet in width.

It is recommended that the existing sidewalk network along Chili Avenue be extended to the entire length of the segment. To the extent practicable, tree lawns should be a minimum of five feet in width to support the growth of mature street trees. Designated bike lanes should also be installed. These improvements will provide a consistent experience for pedestrians and bicyclists from Chili Center to West Chili.









Chili Avenue: Two Lane Sections

Ctuartagana Dagian Ctandauda	Existing (Conditions	Alternative A2		
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2	
Sidewalk	5 ft	5 ft	5 ft	5 ft	
Buffer/Tree Lawn	3 ft	3 ft	3 ft	3 ft	
Bike Lane	-	-	5 ft	5 ft	
Shoulder	4 ft	4 ft	-	-	
Drive Lanes (2 per side)	22 ft	22 ft	20 ft	20 ft	
Total ROW Required	68 ft		66 ft		
Total ROW Available	66	6 ft	66	ft	

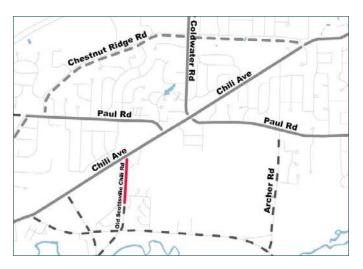
Chili Avenue: Single Lane Sections

Ctrostocopo Decimo Ctondordo	Existing (Conditions	Alternative A2		
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2	
Sidewalk	-	-	5 ft	5 ft	
Buffer/Tree Lawn	-	-	5 ft	5 ft	
Bike Lane	-	-	5 ft	5 ft	
Shoulder	5 - 10 ft	5 - 10 ft	-	-	
Drive Lane	11 ft	11 ft	11 ft	11 ft	
Total ROW Required	42 ft		52 ft		
Total ROW Available	66 ft		66 ft		

Notes: (1) Turning lane requirements are not included in this assessment. (2) Two lane sections assume reduction in design criteria to 10 foot driving lane.

Roadway Ownership for Segments:

New York State



Old Scottsville Road: Chili Avenue to Wind Willow Way

This segment of Old Scottsville Road provides access to a wide range of land uses including but not limited to Memorial Park, the Senior Center, the Blueberry Hill and Cedars of Chili multi-family residential living complexes, and the commercial establishments located along the Old Scottsville Road and on Chili Avenue. The current bicycle and pedestrian accommodations in this section are inconsistent. For example, there is a single sidewalk on the west side of the road from Wind Willow Way to opposite Memorial Park; in front of a portion of Memorial Park there are sidewalks on both sides of the road; and from Memorial Park to

Chili Avenue there is a single sidewalk on the east side of the road. It is recommended that sidewalks be added to both sides of this segment to improve the connectivity to and from the various pedestrian generators and destinations.

The existing cross section consists of paved and unpaved shoulders of varying widths typically ranging from two to three feet. It is recommended that these shoulders be widened to a minimum of five feet to better accommodate bicycle traffic.

Ctuantanana Danian Ctandauda	Existing (Conditions	Alternative B2		
Streetscape Design Standards	Side 1	Side 2	Side 1	Side 2	
Sidewalk	5 ft	-	5 ft	5 ft	
Buffer/Tree Lawn	-	-	5 ft	5 ft	
Shoulder	4 ft	4 ft	6 ft	6 ft	
Drive Lane	11 ft	11 ft	10 ft	10 ft	
Total ROW Required	35 ft		52 ft		
Total ROW Available	66 ft		66 ft		

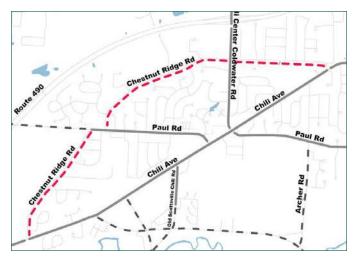
Roadway Ownership for this Segment: Town of Chili





Alternative





Chestnut Ridge Road: Chili Avenue to Paul Road, Paul Road to Chili Coldwater, Chili Coldwater to Chili Avenue

This segment consists of the portion of Chestnut Ridge Road that begins at Chili Avenue in West Chili, crosses Paul Road, continues across Chili Center Coldwater Road, and terminates at the eastern segment of Chili Avenue (shown in red on the map). Residents have indicated that this road is a popular route for recreational biking and walking. It also serves as a primary connection from the residential neighborhoods located along Chestnut Ridge Road to Davis Park. This can partially be contributed to the wide, paved shoulders that exist along Chestnut Ridge Road. These shoulders are

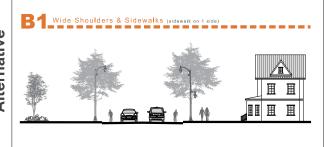
typically five feet in width but can be as large as ten feet in certain locations.

In order to better accommodate pedestrian traffic, it is recommended that a sidewalk be installed on one side of Chestnut Ridge Road. It is preferable that the sidewalk be installed on the east and south side of the road where practicable. This will serve to provide direct access to the sidewalk for the maximum amount of residents since the largest number of homes are located between Chestnut Ridge Road and Chili Avenue. Wide shoulders should also be continued along both sides of the road to accommodate bicycle traffic.

	Evisting (Conditions	Alternative B1		
Streetscape Design Standards	LAISHING	Jonathons	Alternative D1		
	Side 1	Side 2	Side 1	Side 2	
Sidewalk	-	-	5 ft	-	
Buffer/Tree Lawn	-	-	5 ft	-	
Shoulder	5 - 10 ft	5 - 10 ft	6 ft	6 ft	
Drive Lane	10 ft	10 ft	10 ft	10 ft	
Total ROW Required	40 ft		42 ft		
Total ROW Available	50) ft	50	ft	



Roadway Ownership for this Segment: *Monroe County*



Shoulders Only - All Road Segments with "C" Recommendation

The Town of Chili recognizes and accepts that it cannot afford to install and maintain sidewalks throughout the Town. However, it supports the development a transportation system that provides a comfortable environment for residents that choose to travel on foot or by bicycle. Alternative "C" consists of widening the existing paved shoulders to a minimum of five feet in width. As road improvements are undertaken in the Town, this approach should be applied to the road segments that are highlighted using a dashed yellow line. The Town should also consider the use of signage and rumble strips along the outside white lines (see photo) to increase driver awareness of pedestrians and bicyclists.

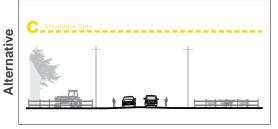
It is to be expected that the Town will re-stripe many of these segments prior to any type of surface maintenance being necessary. As re-striping occurs, the Town should stripe the road to include two travel lanes less than 13 feet in width and place shared use markings in the travel lanes and add signage. This approach will also increase driver awareness until such a time that a wide shoulder and rumble strips can be installed. On roadways with travel lanes that range from 13 to 14 feet in width, the Town should strive to provide a 10 foot travel lane with three to four foot shoulder.

In 2011, the NYSDOT Office of Design published A Systematic Crash Analysis for the use of Shoulder Rumble Strips on Secondary Highways. According to this study, "Rumble strips are a proven countermeasure that could significantly reduce lane departure deaths and serious injuries." The Town should consider installing shoulder audible roadway delineators or SHARDs along the roadways designated with alternative cross-section "C." According to the NYSDOT crash analysis, roadways "with 6' or wider shoulders allow for a 4' wide smooth shoulder surface for cyclists and an offset between the edgeline and the shoulder rumble strip."



Avid cyclists, like those in the Rochester Bicycling Club, currently frequent the more rural routes of the Town. (Photo: http://cycle20ten.blogspot.com/2010_07_01_archive.html)



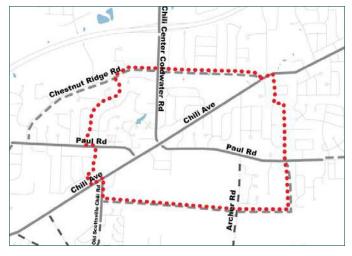


A review of the Recommendations Map (on page 57) indicates that a majority of the road segments identified for shoulder improvements are located south of Chili Avenue in the more rural portions of the Town. The three road segments that are north of Chili Avenue include the following:

- Union Street from Meadow Farm to Route 490;
- King Road From Union Street to Paul Road; and
- → Westside Drive from Golden Road to Fenton Road.

As of the writing of this plan, it is recommended that the Town strive to provide paved shoulders that are at least five feet in width along these roadways. However, as development continues in the Town and traffic increases along these facilities, consideration may be given to providing sidewalks and bike lanes on these segments due their proximity to the three focus areas.





Chili Center Bikeway

It is recommended that a bicycle bypass route be established to provide a convenient and comfortable travel route for bicyclists within Chili Center. The proposed bicycle bypass route is indicated with a red dotted line on the Recommendations Map and in the image to the left. This facility will serve to connect the residential neighborhoods situated in the four quadrants of Chili Center.

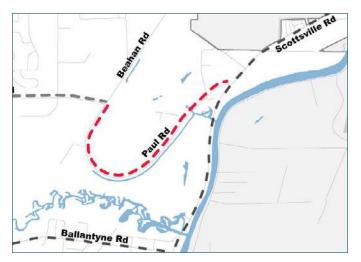
The route should be highlighted using signage and pavement markings to increase driver awareness of bicyclists on residential streets. The neighborhood streets that have been included in the bypass route are Gateway Road, Bright Oaks

Drive, Chestnut Ridge Road, Rose Road, and Shrubbery Lane. Each of these facilities has travel lanes that are less than 14 feet in width. Therefore, it is recommended that shared use lane markings be used along these roads.



Potential Chili Center Bikeway Signage

The Bikeway may be designated as a Local Bicycle Route per the NYS Supplement to the MUTCD utilizing customizable signage like the one picture above at right. Although the Chili Center Bikeway does not meet the standards for a bicycle boulevard, it should still function and be signed in a manner to provide an alternative route to casual, risk averse or younger bicyclists including "In Lane" signage as pictured above. For more information on bicycle boulevard accommodations, see page 95.



Paul Road: Beahan Road to Scottsville Road

Providing a connection for bicyclists and pedestrians from Chili Center to the Genesee Valley Greenway and the Genesee Riverway Trail was identified as a community priority during the public input sessions held during the first phase of this planning process (see Page 43, Item #4). In order to provide this connection there were two acceptable alternatives.

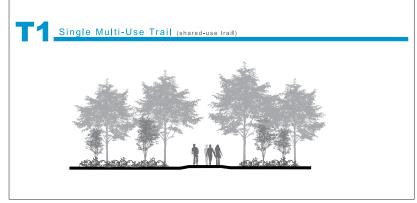
The first consists of an on-road facility along Paul Road to Scottsville Road. Currently there is a five foot shoulder that may be utilized by pedestrians and bicyclists. However, the preferred alternative (an off-road trail facility T1 or T2) takes advantage

of the large tracts of land to the west and south of Paul Road. According to the Monroe County Real Property System, the land needed to accommodate an off-road facility is owned by the Monroe County Airport. It is recommended that the Town work with Monroe County to provide an off-road connection in this area. The exact alignment and design of the connection will require additional engineering beyond the level that is necessary to complete this Plan.



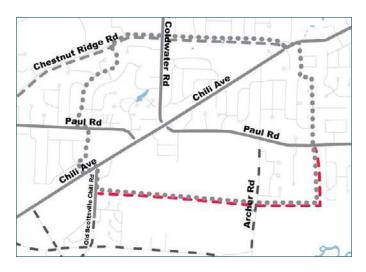


Alternative



Project 22 K





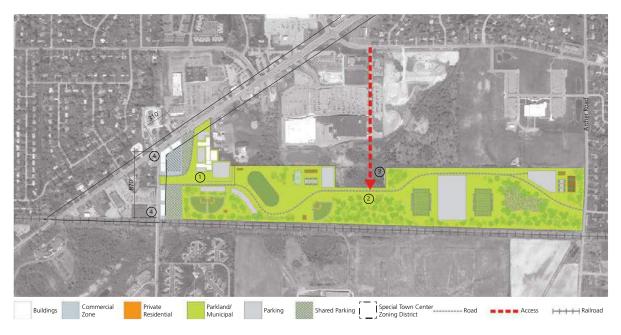
Chili Center Trail: *Memorial Park to Paul Road Elementary School*

Based upon the public input received throughout the planning process, there is a strong desire for off-road trail facilities within the Town. The Chili Center Trail (indicated with a dashed blue line on the Recommendations Map) would provide a designated route for bicyclists and pedestrians that would serve to connect Old Scottsville Road, Memorial Park, the Senior Center, Archer Road, the Paul Road Elementary School Campus, and Paul Road. The Town currently owns approximately half of the land needed to accommodate the western portion of the trail from Old Scottsville Road to Archer Road. The Town should capitalize on any

opportunity to obtain the land or easement necessary to provide a continuous trail from Old Scottsville Road to Archer Road. The exact alignment and location the Archer Road crossing would need to be determined as the land or easement is obtained.

The land necessary to connect Archer Road to the Paul Road Elementary School Campus is currently owned by the Monroe County Department of Pure Waters. The Town should coordinate with the County and the School District to determine the preferred design and location of the trail in order to ensure that it connects to the proposed on road facilities along Paul Road.

It should be noted that in 2012, the Town completed a Future Use Study for the former highway garage. As part of this effort several conceptual plans were developed the potential expansion of Memorial Park to the east. One of the alternative layouts is shown in the graphic below that was developed as part of the study process. The proposed alternative does not indicate a dedicated trail facility. Any expansion of the Park should include an off-road trail facility.



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Project 23

Chili Utility Corridor Trail Concept

There may be an opportunity to extend the proposed Chili Center Trail (Project 22) to the east and west utilizing the existing utility corridor. Figure 17 shows the potential trail concept and connections in purple. This trail concept, in conjunction with the Black Creek Trail and Genesee Valley Greenway, could create a significant off-road bicycle and pedestrian network connecting many of the parks, schools, trails, and activity centers within the Town, including:

- → Black Creek Park;
- Union Station Park;
- Chili Heights Nature Center;
- → Pfrengle Property;
- → Hubbard Park;
- → Davis Park;
- → Memorial Park:
- → Chestnut Ridge Elementary School;
- → The Senior Center;
- → The existing sidewalk network and commercial establishments within the Focus Areas;
- → Paul Road Elementary School;
- → Ballantyne Park;
- → The Genesee River; and
- → The Genesee Valley Greenway.

A review of the ownership information provided by the Monroe County Real Property Information System, indicates that a majority of the land necessary to accommodate the trail within the Utility Corridor is owned or controlled by public or quasi-public entities (e.g. Rochester Gas and Electric, Churchville Chili School District, etc).

The exact alignment and design of the trail would require additional engineering beyond the level that is necessary to complete this plan. Therefore, it is recommended that the Town complete a feasibility study for the Chili Utility Corridor Trail Concept to identify the preferred alignment and costs associated with each.

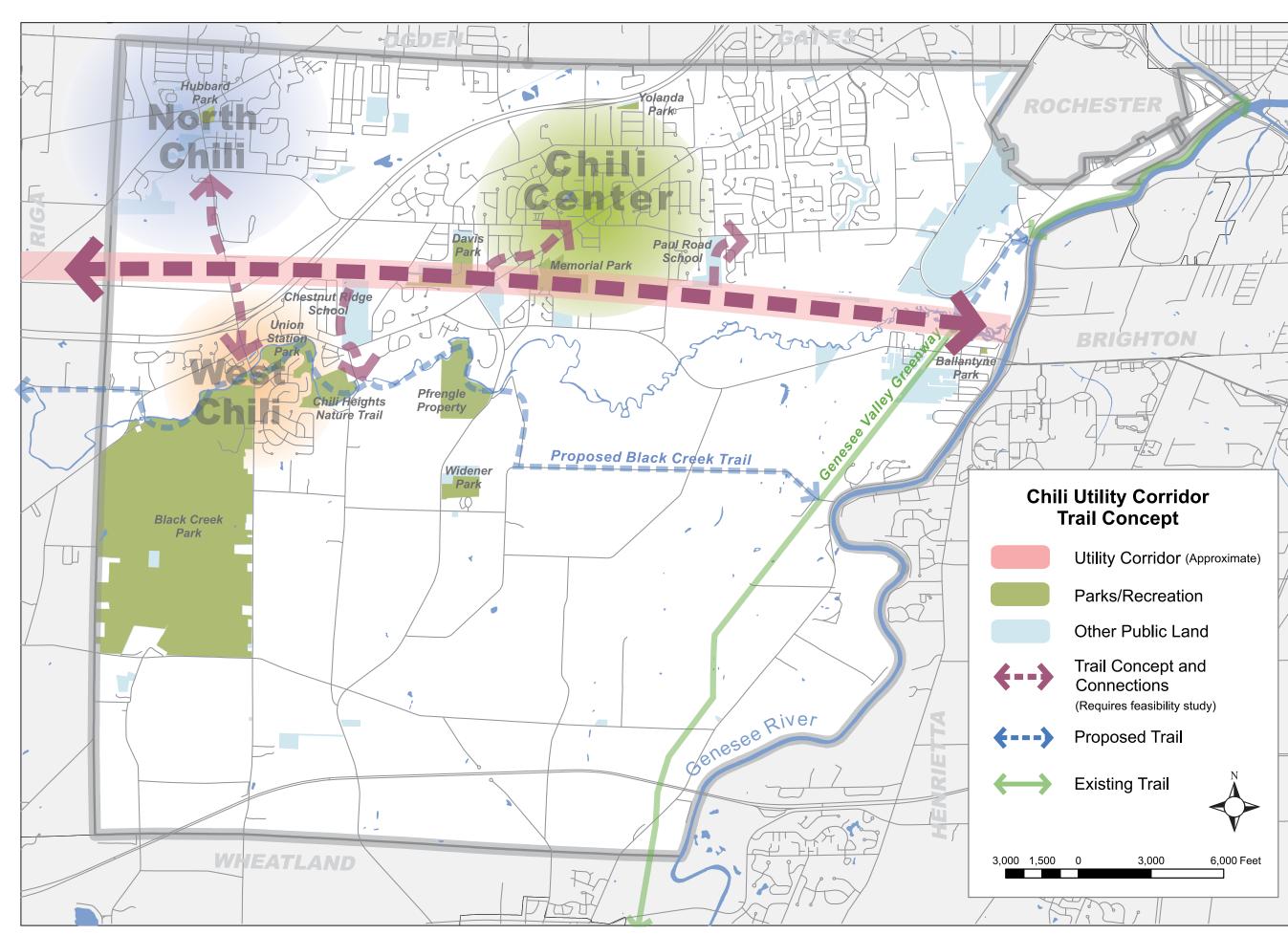
Genesee Valley Greenway Connection

There is an existing gap in the Genesee Valley Greenway within the Town of Chili. Eliminating this gap has been identified in the 2015 Greater Rochester Regional Trails Initiative (RTI). Listed in the RTI as the Genesee Valley Greenway/Scottsville Road Connection, the recommendation is for a multi-use trail connecting the Genesee Valley Greenway from Scottsville Road to Ballantyne Road. The estimated project cost for this connection is approximately \$382,000; which would include a stone dust surface for the 1.4 mile segment. This project in conjunction with the proposed Chili Utility Corridor Trail Concept would connect West Chili and Chili Center to the regional trail system.



The photo at left shows the area where a connection to the Genesee Valley Greenway from Scottsville Road may be accommodated. (Looking south along Scottsville Road from the Paul Road intersection).

Plan Pedestrian Master ර Bicycle **Figure** 2 201

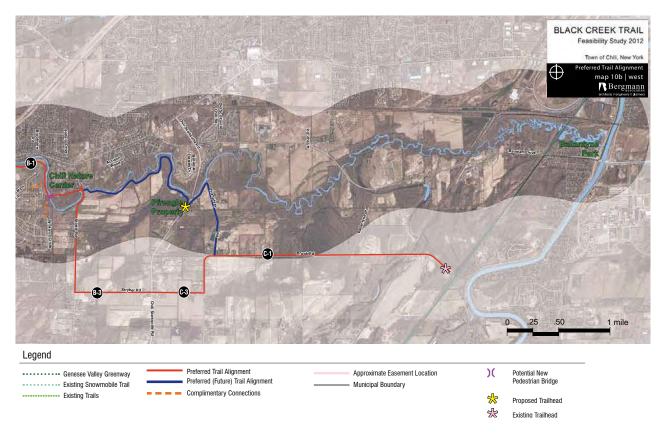




Black Creek Trail

As previously stated, the Black Creek Trail Feasibility Study was completed in 2013 as part of the Genesee Transportation Council's Regional Trails Initiative. The preferred trail alignment is identified on the Recommendations Map with a blue dotted line. The development of this trail will provide an east/west transportation option for recreational purposes and as a travel route for non-motorized traffic. As portions of this trail are completed, the Town should consider improving bicycle and pedestrian accommodations from the Trail to Chili Avenue along Stottle Road and Chili Scottsville Road. More specifically, it may be necessary to upgrade from Alternative "C" to Alternatives "B1" or "A1" to enhance the connectivity from the trail to West Chili, Chili Center, and to the proposed Chili Utility Corridor Trail Concept.

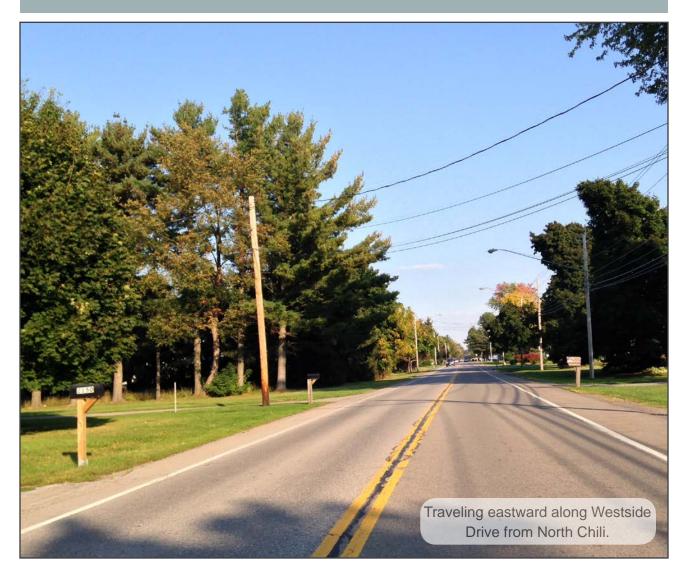
For more information on Black Creek project and trail costs see the 2013 Black Creek Trail Feasibility Study.



The map above shows the Black Creek Trail Feasibility Study's preferred alignment of the trail through the eastern portion of the Town of Chili.

Policy & Program Recommendations







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Public Policies

he Town of Chili must develop and support a comprehensive policy and education program to support" physical bicycle and pedestrian improvements recommended by this plan. A healthy bicycle and pedestrian network demands that all users understand how and why they should use the system. The information below briefly describes the roles of three major groups:

- Government Town of Chili, Monroe County Sheriff, New York State Department of Transportation, Monroe County Department of Transportation, Regional Transit Service, etc.
 - → Plan and maintain safe, infrastructure for each travel mode
 - → Consistently enforce traffic, zoning, and other laws concerning mobility
 - → Educate the public on safety and the benefits of biking and walking
 - → Study the use of driving, walking and biking
 - Provide transit service
- **Citizens -** Pedestrians, Bicyclists, Motorists, Transit Users, etc.
 - → Learn traffic laws and best practices regarding mobility
 - → Use the network in a safe and legal manner
- **Private Organizations –** *Non-profit organizations, businesses, etc.*
 - > Partner with government and citizens to promote walking and biking through education
 - Advise government agencies and boards on decisions affecting bicyclists, pedestrians, and road infrastructure

The policies and program recommendations on the following pages are not an exhaustive list. The Town along with local pedestrian and bicycle advocacy groups and organizations should work together to not only implement the recommendations in this Plan but also develop additional policy and programs that further the active transportation culture in Chili.

Consider Developing Pedestrian Zones

A town-wide policy requiring property owners to build sidewalks as part of all new developments can often prove to be problematic for towns due to the long-term cost of sidewalk maintenance. As an alternative, the Town of Chili should consider a sidewalk policy aimed at building a sidewalk network based on community destinations and major streets. There are a number of community destinations that would attract pedestrians if sidewalks were available. Places like libraries, schools and parks are good examples. The Town of Perinton has a similar program. Perinton implemented a pedestrian zone policy (i.e. 'PED Zone') aimed at increasing the scope of the sidewalk network around parks, schools and along collector and arterial streets. It has an Official PED Map which designates the areas where sidewalks must be built. As an alternative to building sidewalks, the property owner may be required to contribute to a sidewalk fund, which is used to build and maintain sidewalks in any area deemed necessary by the Town. In addition, the Planning Board may require the construction of sidewalks along streets not within PED Zones at its discretion. A policy or a program similar to this could help the Town of Chili focus its efforts on developing a sidewalk network that is both effective and affordable.



Coordinate and Support Existing Advocate Groups

Fortunately, existing bicycle and pedestrian organizations have made and continue to make major contributions to bicycling and pedestrian conditions. Local groups such as the Rochester Cycling Alliance and the Rochester Bicycling Club have engaged in educational and promotional events that help curious people try moving through their communities without a car. The Town of Chili should increase its support of and dialogue with these existing groups, and cooperate when possible. For more information on the Rochester Bicycling Club and its routes through the Town of Chili, see page 36.

Form A Bicycle and Pedestrian Committee

Adopting a bicycle and pedestrian master plan is an early step toward fully embracing pedestrian and bicycle culture. While the adoption of a plan is critical, it is even more important to have a dedicated, passionate community group working to realize the goals of the plan. A 'Bike/Walk Chili Committee' could take this leadership role. Members of the committee could advise the Town Board, Department of Public Works, Planning Board, or other government bodies when confronted with decisions that affect walking and biking. Further, the committee could actively engage the Chili community on ways to increase their use of active transportation by holding special events and promoting safe practices. The 'Bike/Walk Chili Committee' could be a sub-committee of the Town's Traffic and Safety Committee or be completely independent.

Schedule Ongoing Maintenance of Pedestrian and Bicycle Infrastructure

This plan calls for larger shoulders, new sidewalks, and other infrastructure improvements in key locations throughout the Town. The Town of Chili, Monroe County Department of Transportation, and New York State Department of Transportation must each maintain their respective infrastructure. The Town should continue to monitor sidewalk condition and replace segments as necessary. Increased attention should be paid to clearing debris from road shoulders and sidewalks. Although it is important to build new infrastructure it is just as important to keep the roads and sidewalks safe for use.

Consider Developing a Town of Chili Complete Streets Policy

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. Since 2011, numerous New York State towns, cities, and villages have implemented complete streets policies or resolutions. These policy statements identify the need to consider all users in the design of public streets. Although New York State Department of Transportation currently implements this policy for State routes in Chili, a similar town policy could greatly benefit the development of Chili as a safe community for bicyclists and walkers. If the Town implemented a Complete Streets policy, local roads would be designed with walkers and bicyclists in mind. See page 41 for more discussion on Complete Streets.

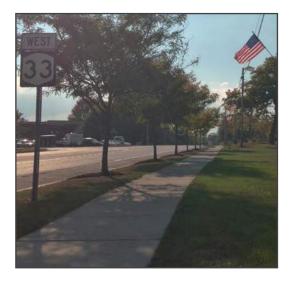
Sidewalk Master Plan

As previously stated, the Chili Comprehensive Plan identifies the, "preparation and adoption of an Official Sidewalk Master Plan and Map" as a High Priority Action Item. This Bicycle and Pedestrian Master Plan will serve to fulfill this Comprehensive Plan recommendation. The Sidewalk Master Plan Map located on the following page illustrates the existing and proposed sidewalk network within the Town. The existing sidewalk network (shown in red) is generally located in North Chili, West Chili, and Chili Center. The proposed sidewalks are shown in green. It is recommended that the Town submit a list of the proposed sidewalks along state-owned roadways to NYSDOT so they may be added to their Sidewalk Candidate Locations List. Please note that inclusion on the candidate list is not a guarantee that pedestrian facilities will be constructed, merely that they will be considered.

The proposed sidewalk network will serve to connect the existing residential neighborhoods to the existing commercial centers and community resources within the Town. The Sidewalk Master Plan will likely take decades to implement. As residential development continues to occur in the Town, additional sidewalk segments may be warranted.

Currently, a 300 unit residential subdivision is breaking ground along the east side of Archer Road, north of the Beaver Road extension. There are seven planned phases of development for this project that will each include sidewalks, some of which have already been included (see Figure 18). As development continues, the Town may wish to provide a sidewalk(s) along Archer Road to the north connecting this neighborhood to Paul Road. This connection has not been included in this Plan's recommendations, however, as the need for a pedestrian accommodation is contingent upon the completion of all development phases.

It is imperative that the Town review this Master Plan on a regular basis to ensure that the sidewalk network is expanded to reflect new and changing development trends that may occur over the next twenty or thirty years.

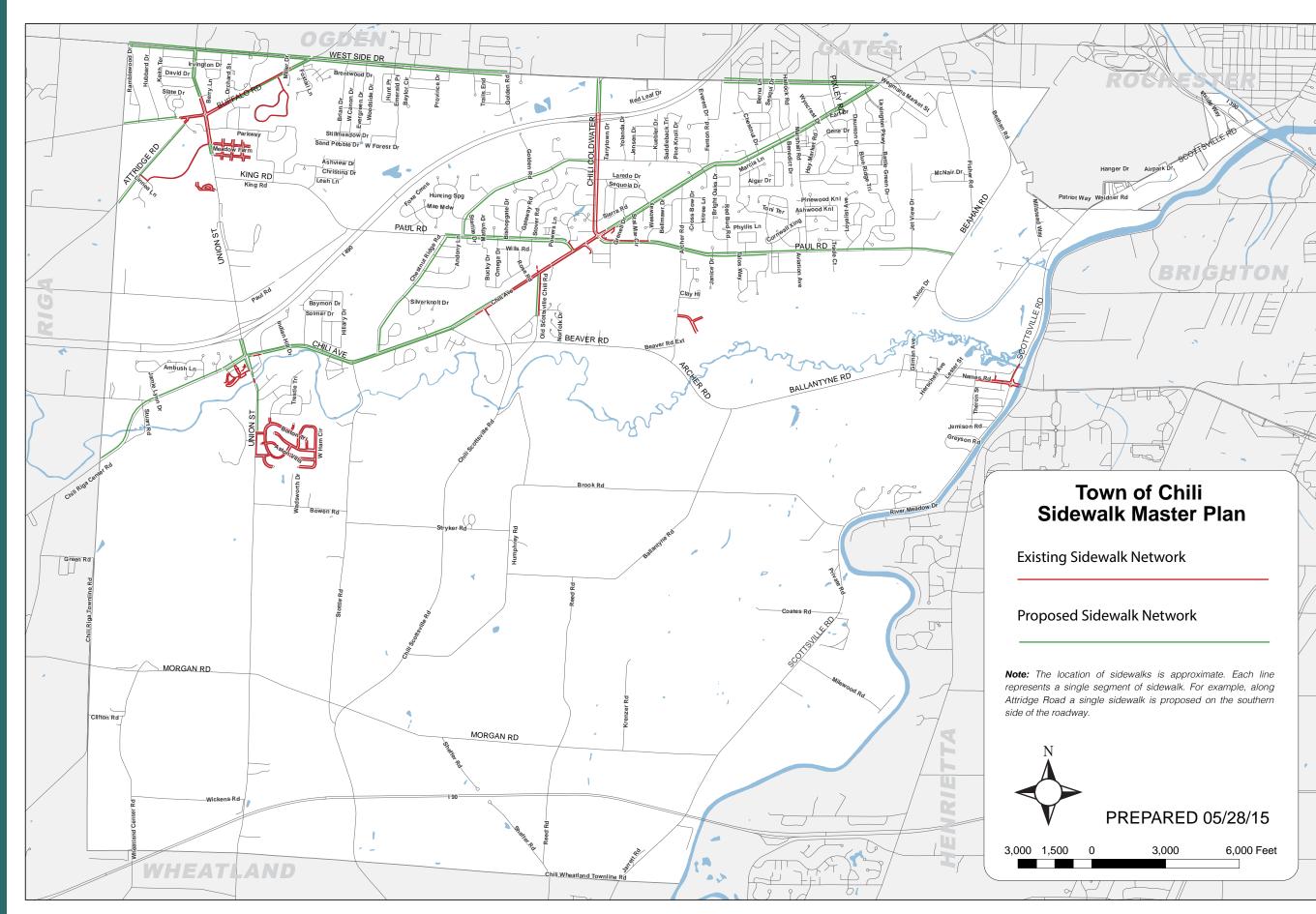


After careful consideration, there were some areas where sidewalks were not recommended at this time. These segments include:

- → Union Street from Meadow Farm to Route 490;
- → King Road From Union Street to Paul Road; and
- → Westside Drive from Golden Road to Fenton Road.

As previously stated in this Plan, the Town should strive to provide paved shoulders that are at least five feet in width along these roadways. However, as development continues in the Town and traffic increases along these facilities, consideration may be given to providing sidewalks (and bike accommodations) on these segments due their proximity to the three focus areas.

Pedestrian Master Plan ර **1**8: Bicycle **Figure** 2



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Public Realm Programs

The "public realm" includes "all streets, sidewalks, rights-of-ways, waterways, parks and other publicly accessible open spaces, and public and civic buildings and facilities." In other words, there is no one characteristic that makes a place walkable or bikeable. It takes a combination of public realm components working together. Understanding these characteristics and implementing policies and design practices is the only way to ensure that people from all travel modes are not only accommodated but are comfortable in the public realm.

Make Street Trees a Standard Component of Street and Roadway Design

Research shows that street trees improve perception of neighborhoods, can increase property values, and are preferred by pedestrians. They also provide shade which is not only beneficial to people but it extend the life of pavement. Along with aesthetic benefits, trees can improve the function and feel on the street by creating enclosure making the street feel narrower, thereby slowing traffic and enhancing pedestrian friendliness. Street trees should be spaced approximately 50 feet apart and strategically placed as to not obstruct site lines near curb cuts or merchant signs.

It is important to note that any street trees should be installed so as to avoid blocking sight distance for vehicular traffic and maintain the "clear zone" at all intersections and turning points. Below is a photo simulation showing how the addition of mature street trees may help improve the aesthetics of Chili Avenue in Chili Center.





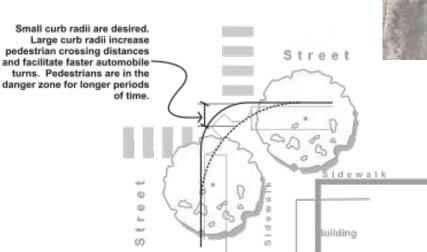
Adding street trees can make a significant improvement to walkability not only on Chili Avenue but to many streets throughout the Town.

Memorial Park



Keep Curb Radii as Tight as Possible

How we design our corners impacts the safety of pedestrians. Curb radii are often unnecessarily large, especially in areas where large trucks are not prevalent. Large curb radius facilitates faster turns by automobiles and lengthens the crossing distances for pedestrians. For example, reducing curb radii from 40 feet to 20 feet can reduce automobile turning speeds from 15 MPH to 10 MPH and reduce the crosswalk length by more than 10 feet. The Town should pay close attention to these design details as it reviews development plans and makes improvements to public facilities, such as the entrance to places like Memorial Park (see right). To truly become a pedestrian and bicycle friendly community the Town must strike a balance between designing intersections for motorist and pedestrians/bicyclists, especially in the focus areas and near parks, schools, and other community destinations.





Bicycle Boulevards



Source: Initiative for Bicycle and Pedestrian Innovation Center for Transportation Studies. (2009) Fundamentals of Bicycle Boulevard Planning & Design.

The bicycle boulevard is another treatment that the Town should consider when conditions are appropriate. Bicycle boulevard are low-volume and low-speed streets that have been optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments. Motor vehicle volumes on bicycle boulevards are typically less than 3000 vehicles per day. Roadways selected for bicycle boulevards ideally have maximum motor vehicle speeds of 25 mph and do not have a centerline.

Collaborate with State and County DOTs to Develop Bike Lanes

Bicycle lanes are on-street travel facilities exclusively for bicyclists. They are located adjacent to motor vehicle travel lanes and are identified by a white stripe, a bicycle symbol, and signage to alert all users that a portion of the roadway is for use by bicyclists only. They enable bicyclists to have their own space, travel at their preferred speed, and facilitate predictable behavior and movements between bicyclists and motorists.

Bike lanes are typically 4 to 6 feet wide, although a recommended width is 5 feet. Wider bike lanes provide additional operating space and buffers provide further separation from moving and parked vehicles. Buffers between the bike and motor vehicle lanes can be used to visually narrow a wide street and create a more attractive and comfortable bicycling environment.



However, as previously stated in this Plan (Page 53), the Town recognizes Monroe County's current position on the implementation of designated bike lanes and will work with MCDOT to ensure appropriate approved alternatives to on-street bicycle space is provided where recommended.

"Separating bicycles from car traffic with a physical barrier makes people feel safer about riding a bicycle, leading to significant increases in bicycling."

- Washington D.C. DOT

Consider Sharrows When Bike Lanes Are Not Feasible

Sharrows are short-hand for "shared use lane" markings. This pavement marking includes a bicycle symbol and two white chevrons and is used to remind motorists that bicyclists are permitted to use the full lane. There are no striped bicycle lanes on streets marked with sharrows.

Both the New York State and the Monroe County transportation departments have a policy on shared lane markings, which is consistent with the Manual on Uniform Traffic Control Devices (MUTCD). New York State's policy states that shared lane markings "should only be used to indicate the presence of a narrow lane; a narrow lane is a lane that is less than 14' wide and does not allow motorists and bicyclists to safely travel side-by-side within the lane." It also states that these marking should not be used on roadways where the speed limit is 40 mph or greater. Shared use lanes should include roadway signage in addition to sharrows. Said signage should be provided in accordance with NYSDOT policy which is included in the NYSDOT publication TSMI 13-07.

The Town of Chili should collaborate with NYSDOT and MCDOT to facilitate the use of shared lane pavement markings and signage where appropriate.



An example sharrow cross section has been included in the Alternative Section on page 54 (Alternative D).



Neighborhood Connections

Chili residents repeatedly expressed a desire to have more direct routes between neighborhoods, to public uses, and to commercial establishments. A number of opportunities exist in the Town and these were identified during this planning process (see the Needs and Opportunities Section for more detail). A prime example is the potential connection from Shrubbery Lane to Chili Avenue (shown below). The Town currently owns a parcel that spans between both roadways that functions as a drainage way during certain times of the year. This parcel could accommodate a non-motorized connection between the neighborhood and Chili Avenue. The final design of the connection would need to minimize the potential negative impacts for the adjacent residential properties.



Example Neighborhood Connection









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Zoning Recommendations







Zoning Recommendations

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🗻 reviously in this Plan, on page 25, a zoning summary was provided outlining the current bicycle and pedestrian requirements included within the Town of Chili Code. Generally, the Town has strong requirements requiring the inclusion of sidewalks or connections within new development sites. However, to provide a more complete pedestrian and bicyclist network both within and between sites, the following recommendations should be considered:

- 1. Include language that requires the development of off-site connections that tie into the existing pedestrian and bicycle network and across parcels or sites. Sample code language is provided below:
 - → An on-site system of pedestrian walkways shall be designed to provide direct access and connections to and between the following:
 - → The primary entrance or entrances to each commercial building, out-parcels;
 - → Any sidewalks or walkways on adjacent properties that extend to the boundaries shared with non-residential development:
 - → The public sidewalk system along the perimeter streets adjacent to the commercial development:
 - → Where practicable and appropriate, adjacent land uses and developments, including but not limited to adjacent residential developments, retail shopping centers, office buildings, or restaurants; and
 - → Where practicable and appropriate, any adjacent public park, greenway, or other public or civic use including but not limited to schools, places of worship, public recreational facilities, or government offices.
- 2. Require bicycle parking. Sample code language is provided below:
 - → Bicycle parking requirements shall apply to new development, building expansions or occupancy changes requiring a zoning permit where motor vehicle parking is required.
 - → Bicycle parking shall be provided at 10 percent of the motorized vehicle parking requirements but not less than 2 bicycle spaces and not more than 20 bicycle spaces for any use.
 - → Bicycle parking shall be located and clearly designated in a safe and convenient location. Bicycle parking sign shall be visible from the main entrance of the structure or facility.
- 3. Increase the Architectural Advisory Committee's role in providing recommendations to the Planning Board for implementing the goals of this Master Plan



For all future developments, the Town should continue to require internal pedestrian connections and landscaped islands like those provided in the Target Plaza of Chili Center (pictured at left).



The Importance of Internal & External Circulation Patterns

The Town should strive to have commercial and residential developments that provide connections to the existing and future off-site pedestrian and bicycle network. The following case studies compare local shopping plazas to highlight the different levels of pedestrian and bicycle accommodations.

Case Study #1 - The left-hand image below shows an entrance to the Paul Road plaza where the sidewalk terminates into the vehicular access point, leaving no clear path into the site for pedestrians. The right-hand image is of a plaza along Dewey Avenue in Greece showing an example of how a sidewalk entrance to a plaza could be provided from the existing external network.





Case Study #2 - The aerial images below show two large single-user commercial developments with existing sidewalks marked via red lines. The left image is the Kmart plaza located in Chili Center and the right image is the Walmart on Dewey Avenue in the Town of Greece.

The Kmart plaza provides sidewalks leading to the site, but does not have any pedestrian accommodations bringing potential walkers into the site. Whereas the Walmart image shows direct sidewalk connections from the external pedestrian network into the site via multiple access points. By designating separate facilities for pedestrians and/or bicyclists their ability to safely and comfortably traverse large expanses of parking.









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Implementation & Funding







Implementation & Funding

Recommendations for implementation of the proposed capital improvements are outlined in Figure 19 on the following page. This table is intended to provide a one-page summary of all 24 recommendations. They are sorted into the following categories:

- → North Chili Road Improvements
- → West Chili Road Improvements
- → Chili Center Road Improvements
- → Town-wide Road Improvements & Trail Facilities

The table also provides details on roadway location and ownership for each project, the specific facilities and improvements recommended for each project, the overall benefit each project is expected to have on the bicycle and pedestrian network in the Town, and potential funding sources. It should be noted that the addition of sidewalks to county-owned roadways, unless federally funded, would be at the expense of the Town and not MCDOT.

The Network Benefit is based upon the number of residents and potential users that will be impacted by the project as well as the input obtained from Town residents throughout this planning process. Each project was evaluated using this information to determine if results in a High, Medium, or Low benefit to the overall network. This rating is intended to assist the Town in prioritizing the projects and determining the phasing of this plan's implementation.

n order to successfully implement the recommendations contained in this Plan the Town should pursue outside funding assistance from various federal and state sources. If the Town is successful in obtaining grant funds to expand its bicycle and pedestrian network, it can greatly reduce the number of local dollars necessary to construct the proposed improvements. A complete list of potential funding sources, their annual deadlines, and the amount of funding available is contained in Figure 20. A review of these sources indicates that the Transportation Improvement Program (TIP) and Transportation Alternatives Program (TAP) are most applicable to this project.

Transportation Improvement Program (TIP)

The TIP is a staged, multi-year program of projects that identifies the timing and funding of all highway, bridge, transit, bicycle, pedestrian, and intelligent transportation system projects scheduled for implementation in the region during the next five years using federal transportation funds.

This region's TIP is developed cooperatively by GTC and the New York State Department of Transportation Region 4 (NYSDOT-4). GTC and NYSDOT conduct a complete update of the TIP every two years. Every project proposed in the TIP must also be listed in the Statewide Transportation Improvement Program (STIP) in order to receive Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) funding.

Many of the surface transportation improvements identified in this Plan are eligible for specific federal funding programs through the TIP. These include improvements along the state roads and trail segments that contribute to the regional trail system.

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Figure 19: Project Implementation Guide



		Location	Road Ownership	Recommended Improvements						
Project Number	Road Name			Sidewalk*	Tree Lawn	Bike Lane	Wide Shoulder	Other	Network Benefit	Potential Funding Sources (Page 107)
North Ch	North Chili									
1	Buffalo Road	Riga Town Line to Attridge Road	State	N	✓	\checkmark	-	-	High	NYSDOT, FHWA-CAP, CTB, CDBG
2	Buffalo Road	Intersection at Union Street	State	В	\checkmark	\checkmark	-	Reduced Turning Radii	Low	NYSDOT, FHWA-CAP, CTB, CDBG
3	Buffalo Road	Union Street to Westside Drive	State	В	\checkmark	\checkmark	-	-	Medium	NYSDOT, FHWA-CAP, CTB, CDBG
4	Union Street	Westside Drive to Meadowbrook	State	В	✓	\checkmark	-	Reduced Turning Radii	Medium	NYSDOT, FHWA-CAP, CTB, CDBG
5	Westside Drive	Riga Town Line to Union Street	County	В	\checkmark	\checkmark	-	-	High	MCDOT, CTB, CDBG, CHIP
6	Westside Drive	Union Street to Buffalo Road	County	В	✓	\checkmark	-	-	Medium	MCDOT, CTB, CDBG, CHIP
7	Attridge Road	Riga Town Line to Buffalo Road	County	Е	\checkmark	-	✓	-	Low	MCDOT, CTB, CDBG, CHIP
West Chi	li									
8	Chili Avenue	Riga Town Line to Park Creek Lane	State	N	✓	-	✓	-	Low	NYSDOT, FHWA-CAP, CTB, CDBG
9	Chili Avenue	Park Creek Lane to Chestnut Ridge Road	State	В	\checkmark	\checkmark	-	-	Low	NYSDOT, FHWA-CAP, CTB, CDBG
10	Union Street	Everton Run to Willowbend Drive	County	E	✓	-	✓	Bicycle "In Lane" Signage	Medium	MCDOT, CTB, CDBG, CHIP
11	Union Street	Intersection at Chili Avenue	State (N) County (S)	В	✓	✓	-	Reduced Turning Radii, Benches, Pedestrian Signals	High	NYSDOT, FHWA-CAP, CTB, CDBG
Chili Cen	ter									
12	Chili Coldwater Road	Gates Town Line to Chili Avenue	County	В	✓	✓	-	-	Low	MCDOT, FHWA-CAP, CTB, CDBG
13	Paul Road	Chestnut Ridge Road to Chili Avenue & Chili Avenue to Carriage House Lane	County	В	✓	✓	-	-	High	MCDOT, CTB, CDBG, CHIP
14	Paul Road	Carriage House Lane to Beahan Road	County	N	✓	\checkmark	-	-	Medium	MCDOT, CTB, CDBG, CHIP
15	Westside Drive	Fenton Road to Chili Avenue	County	В	\checkmark	-	\checkmark	Remove Gutters	Medium	MCDOT, CTB, CDBG, CHIP
16	Chili Avenue	Chestnut Ridge Road to Westside Drive	State	В	\checkmark	\checkmark	-		High	NYSDOT, FHWA-CAP, CTB, CDBG
17	Old Scottsville Chili Road	Chili Avenue to Wind Willow Way	Town	В	\checkmark	-	✓	Replacing Existing Sidewalk	Medium	CTB, CDBG, CHIP
18	Chestnut Ridge Road	Chili Avenue to Paul Road & Paul Road to Chili Center Coldwater Road	County	S/E	✓	-	✓	-	Medium	MCDOT, CTB, CDBG, CHIP
Town-wid	de									
19	Shoulders Only	See Page 57	See Page 27	-	-	-	✓	Potential Rumble Strips	Low	CTB, NYSDOT, CDBG, CHIP
20	Chili Center Bikeway	See Page 57	See Page 27				High	CTB, CDBG, CHIP		
21	Paul Road	Beahan Road to Scottsville Road	County	Off-road trail facility connecting to existing trails on Scottsville Road			Medium	CTB, MCDOT, CDBG, CHIP		
22	Chili Center Trail	Memorial Park to Paul Road School	N/A	Off-road trail facility to connect Memorial Park and Paul Road School				High	FHWA-PL, CTB	
23	Chili Utility Corridor Trail Concept	Genesee Valley Greenway to western Town- line	N/A	Town-wide Off-Road Trail Network				High	FHWA-CAP, CTB, CDBG, CHIP	
24	Black Creek Trail		See	2013 Study					High	See 2013 Study

^{*} Location of Sidewalks: B - Both Sides, N - North Side, S - South Side, E - East Side

Transportation Alternatives Program (TAP)

The TAP provides federal funding for non-traditional transportation projects that fit into one or more of six categories and two sub-categories. According to the 2014 TAP Guidebook, these categories include:

- → Construction, planning and design of on-road and off-road facilities for pedestrians, bicyclists and other non-motorized forms of transportation;
- → Construction, planning and design of infrastructure-related projects to provide safe routes for non-drivers to access daily needs;
- → Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists and other non-motorized transportation users;
- → Construction of turnouts, overlooks and viewing areas;
- Safe Routes to School; and
- Construction, planning and design of boulevards.

Sub-categories include: 1) Community Improvement Activities (including Landscaping and Streetscape Improvements), when integrated with work in another category; and 2) Environmental Storm Water Management Activities, when integrated with work in another category.

As of the writing of this plan, the long term future of the TAP is uncertain. The Federal Legislation (referred to as MAP-21) that authorizes the TAP was set to expire in May of 2015. The US Congress has passed an extension of the Program until July of 2015. Since 1991, the Federal Government has had programs in place that fund the expansion of the Country's bicycle and pedestrian network. Due to the effectiveness and popularity of these programs, it is reasonable to assume that there will be a similar funding opportunities available to the Town over the next decade.

Town Sidewalk Fund

Prior to the start of this Plan, the Town of Chili established a designated Sidewalk Fund. This fund enables the Town to collect financial contributions from developers rather than require sidewalks be installed as part of residential or non-residential construction projects. This approach provides the Town with the option of investing in sidewalks that it feels will maximize the benefit to the overall network. This fund can be used to leverage outside funding by contributing to the Town's local match for federal and state grant programs. It is recommended that this fund be continued as part of Chili's efforts to implement this Plan.



Funding Source Acronyms

CDBG	Community Development Block Grant
CFA	NYS Consolidated Funding Application
CHIP	NYS Consolidated Local Street & Highway
	Improvement Program
CTB	Chili Town Budget
FHWA-CAP	Federal Highway Administration Capital
	Improvement Funds
FHWA-PL	Federal Highway Administration Planning Funds
MCDOT	Monroe County Department of Transportation
NYSDOT	New York State Department of Transportation

Figure 20: Potential Funding Sources



Name of Funding Source	Description	Website	Application Deadline	Funding Amount Available
NYS Consolidated Funding Application (CFA)	Over the past three years, the Governor's Regional Economic Councils have awarded more than \$2 billion for job creation and community development. These funds are distributed through the Consolidated Funding Application process.	http://regionalcouncils.ny.gov/	July 31, 2015	Varies
Federal Highway Administration Planning Funds (FHWA-PL)	These funds are administered through the Unified Planning Works Program (UPWP). The UPWP is the program of federally-funded transportation planning activities (construction projects are not eligible) to be undertaken each year by Genesee Transportation Council staff, its member agencies, and other jurisdictions in the Genesee Finger Lakes Region. NOTE: FHWA-PL funds were used for the preparation of this Master Plan.	http://www.gtcmpo.org/Docs/UPWP.htm	Most recent deadline October 17, 2014	No set limit but the awards are typically \$40K-\$100K depending on the nature of the project
Federal Highway Administration Capital Improvement Funds (FHWA-CAP)	Transportation Improvement Program (TIP) - The TIP funds both highway and transit projects as well as urban and rural projects on both State and local facilities. This program is administered by the Genesee Transportation Council.	http://www.gtcmpo.org/Docs/TIP.htm	Upcoming solicitation for projects expected in the Fall of 2015	Varies
Federal Highway Administration Capital Improvement Funds (FHWA-CAP)	Transportation Alternatives Program (TAP) - The TAP provides funding for programs and projects, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation, recreational trail program projects, and safe routes to school projects. This program is administered by the NYSDOT.	https://www.dot.ny.gov/divisions/operating/ opdm/local-programs-bureau/tap/guidance	Most recent deadline June 11, 2014	\$1.6 million with a 20% local match was re-quired
New York State Consolidated Local Street & Highway Improvement Program (CHIP)	The objective of the New York State Consolidated Local Street & Highway Improvement Program (CHIP) is to assist localities in financing the construction, reconstruction, or improvement of local highways, bridges, sidewalks, or other facilities that are not on the State highway system. Projects must have a useful life of at least 10 years and be located in the public right-of-way.	https://www.dot.ny.gov/programs/chips	Municipalities are typically notified of their allotment in June	The annual allocation is calculated according to the formula specified in Section 10-c of the Highway Law.
Community Development Block Grant (CDBG)	Monroe County's CDBG funds are intended to be used in the suburban towns and villages that comprise the Community Development Consortium. Each Activity must meet one of the three broad national objectives: 1) To benefit low to moderate-income persons; 2) To aid in the prevention or elimination of slums or blight, and 3) To meet community development needs having a particular urgency (such as compliance with the American with Disabilities Act).	http://www2.monroecounty.gov/planning- community.php	Most recent deadline February 14, 2014	Not set limit but the awards are typically \$25K-\$50K depending on the nature of the project





End of Document.