



Picture Main Street

Village of Williamsville, NY

5.3.2013



Picture Main Street, Williamsville, NY

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Objectives for Main Street

Encourage Pedestrian use

Create an environment supportive of business/ community

Create a signature street identity

Create a safe environment for all users

Create an environment that supports economic development

1.0 Why are changes needed?

Housing, businesses, open spaces, natural resources and community activity areas physically define Williamsville. The natural waterfront, business district, historic buildings, civic celebration spaces, neighborhoods, parks and open spaces create a human scale environment. The Village's traditional "grid street pattern" not only defines its neighborhood character, it also provides safe and efficient access to all areas of the community for pedestrians, bicyclists and motorists.

While Williamsville's neighborhoods and side streets embody its form, in many ways, Main Street plays the prominent role in defining the identity and character of the Village and Village life. The presence of Main Street presents challenges and opportunities for planning development and redevelopment in the Village. As a transportation corridor, Main Street is the primary east-west traffic corridor for the Village of Williamsville as well as a main commuter route for people living both east and west in the Town of Amherst and neighboring communities.

During peak commuter times the traffic on Main Street backs up and is congested creating difficulty for both drivers and pedestrians. This congestion, in turn, impacts circulation and parking throughout the Village and affects the quality of life and commerce for Village residents and businesses. Alternatively, the character and scale of development along Main Street are valued assets that are viewed as the cornerstone of its "Village Character". Village Stakeholders consistently cited a need to "strike a balance" between mobility and character so that a revitalized Main Street could fulfill its role as a transportation corridor while enhancing its character and sustaining its role as a center of civic business, commerce and social life for both the Village and the Town of Amherst; to achieve this balance, a "context sensitive approach" to transportation planning was employed to form a vision for Main Street and its Business District.

Regional travel patterns on highways that are adjacent or connect to the Village also have a significant influence on traffic along Main Street and other Village streets. There





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are currently several regional transportation initiatives that involve these highways; these initiatives also have potential to play an increasingly important role in managing transportation and traffic in the Village. They include moving the Williamsville Toll Plaza east on the Thruway, improvements in local mass transit and a new regional plan: "One Region Forward".

The Community envisions a Main Street that provides greater balance between function and form to create a renewed center of civic activity with a more vibrant business district. Redesign of the street will create an attractive walkable boulevard that reinforces Main Street as the social and economic center of the community.

The corridor is envisioned to support a diverse mix of pedestrian-oriented living, retail, office, civic and entertainment. One of the main objectives for transportation in the Main Street area is to transform an auto-oriented and dominated arterial that serves as the Village Main Street into a more balanced, walkable and pedestrian-oriented boulevard that supports and encourages economic revitalization.

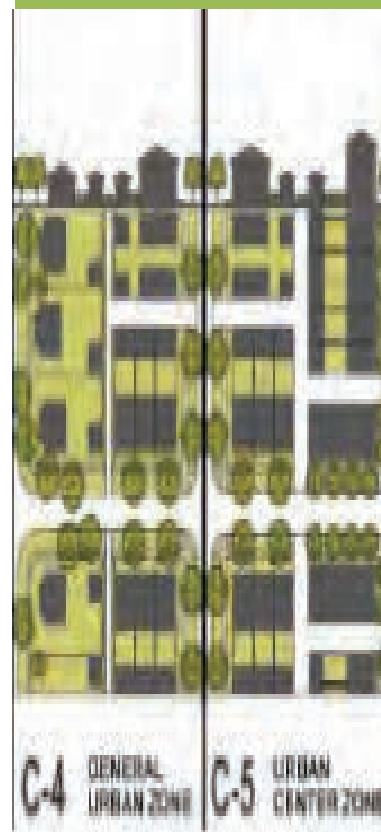
Context sensitive solutions, or CSS, is a way of involving the community in the planning and design process to achieve a balance in the competing needs of the stakeholders involved. It is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits within its physical setting, and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility.

CSS is an approach that considers the total context within which a transportation facility exists. The CSS approach was applied to the consideration of Main Street for the Village's Community Plan, integrating traffic considerations within the context of Main Street and its physical and economic characteristics. The preliminary analysis of existing and potential future traffic and circulation characteristics of Main Street provided parameters and context for the community discussions on land use and economic development in the Village.

'Context Sensitive Solutions'

"A philosophy wherein safe transportation solutions are designed in harmony with the community".

- New York State
Department of
Transportation





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Intimidation:

in·tim·i·date
[in-tim-i-deyt]

1. to make timid; fill with fear.
2. to force into or deter from some action by inducing fear

72' feet of
asphalt

36,000 vehicles
a day

750 vehicles per
lane per hour

moving between
35 and 40 mph

Land uses and the built environment often create a sense of place along highways, and the most important places are usually located near the center of a settlement or built up area. The importance of movement of motor vehicles can vary along the length of a highway and can change over time. Movement and place considerations are important in determining the appropriate design speeds, speed limits, and road geometry. Similarly, the form and character of the adjacent context must also be considered.

1.1 Williamsville Toll Barrier

While Main Street is the primary transportation corridor through the Village, there are other highways that traverse the Village and have significant influence on the quality of life for Village residents. Williamsville is situated adjacent to the crossroads of major highways of regional importance that could have a significant influence on traffic within the Village.

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) has prepared a Long Range Plan for 2030 that includes some significant transportation improvements that have the potential for removing or altering traffic along Main Street and other roadways within the Village. Improvements and projects under consideration include relocation of the Williamsville Thruway toll Barrier, removal of the Thruway toll barriers at Transit Road and construction of a new interchange at Youngs Road, and reconstruction of the I-90 / I-290 interchange. The schedules for completion of studies and beginning of construction have not been developed. It is recommended that Village officials work closely with the GBNRTC, the NYSDOT and other regional transportation agencies to ensure that the Vision and plans for Main Street and other Village streets are considered and reflected in plans for regional transportation.



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1.2 Existing Main Street Profile

Main Street, also known as New York State (NYS) Route 5, is an arterial highway under the operational and maintenance jurisdiction of New York State. The roadway features a five-lane undivided pavement section with the following characteristics.

Functional classification: Principal arterial

Right-of-way: 100 ft. typical

Sidewalks both sides: 4ft. - 6ft.

On-street parking: 9 ft. wide parking lane on both sides

Center turn lane: 12 ft. two-way left turn lane

Travel-way width: 72 ft. with four 10 - 11 ft. travel lanes

Speed limit: 35 - 45 mph

Transit: Bus service on a regional route

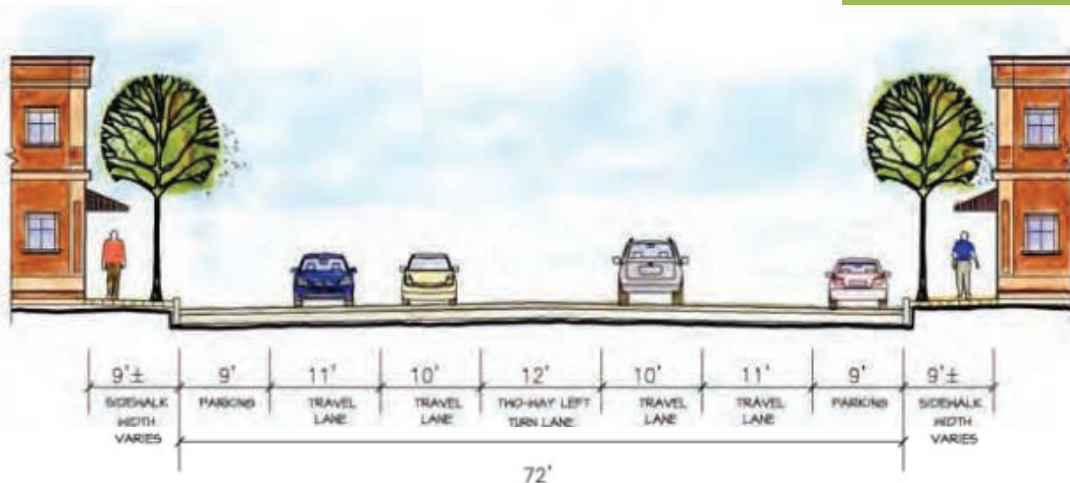
Current traffic along Main Street can be characterized by consideration of the actual speeds, traffic volumes and composition of vehicles, these characteristics include:
85th Percentile Speed during peak traffic times: 35 mph
85th Percentile Speed during off-peak traffic times: 40 mph

Average Daily Volume:

**36,000 +
vehicles per day**

**Peak hour
volume: 750
vehicles /hour
/lane**

**Traffic
composition:
3% trucks**





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The volume of traffic traversing Main Street through the Village of Williamsville is among the highest of any similar highway in New York State and higher traffic volumes are typically constant throughout the day. During the morning and afternoon peak hours, intersections along Main Street operate at 61.5% to 106.3% and 58.0% to 107.0% of their capacity respectfully. During the PM peak hour in particular, many of the intersections approach capacity. Main Street is the primary east-west traffic corridor for the Village of Williamsville as well as a main commuter route for people living both east and west of the Village in the Town of Amherst and neighboring communities. During peak commuter times the traffic on Main Street backs up and is congested creating difficulty for both drivers and pedestrians in the corridor. This congestion, in turn, impacts circulation and parking throughout the Village, adversely affecting the quality of life for Village residents and vitality for businesses.

Pedestrian circulation along Main Street is significantly constrained by vehicular congestion and the resulting difficulty for pedestrians at crossing locations. There are sidewalks along both sides of Main Street throughout the Village, however, they are too narrow to be used efficiently in many locations. Bicycle trails exist throughout the Village with no connection to Main Street. There are no provisions on Main Street for bicyclists other than to travel with the motor vehicles sharing the travel lanes.

Main Street is wide (approximately 72 ft.), and the long crossing combined with high traffic volumes and vehicle speeds makes crossing Main Street difficult for pedestrians. A reduction in the number of lanes at the intersections without reducing the existing traffic volumes would result in over-capacity conditions and significantly greater congestion throughout the corridor. Pending changes to regional traffic patterns or reduction of traffic volumes along Main Street, it would be challenging to undertake significant changes to roadway width and lane configurations to better accommodate pedestrian traffic. The CSS approach focuses on consideration of improvements to both the highway and the roadside as a means of improving conditions for pedestrians, businesses and motorists.

A street can be subdivided into three main areas: the "Traveled way", the "Roadside" and the "Context". The Traveled Way is defined as the public right-of-way between the curbs. It includes parking lanes, travel lanes for all types of wheeled vehicles (including bicycles), and medians. The CSS approach calls for highway planning work from the edges, or context, into the highway, or the Traveled way. The "Context" of Main Street is established and sustained through land use planning and the application of appropriate development regulations.





Picture Main Street, Williamsville, NY

The Village has recently adopted appropriate land use regulations in a hybrid form-based zoning along the entire corridor.

Plans to guide the development of the Roadside and Traveled Way often take the form of profiles and cross sections. Figure 8 illustrates the existing profile or cross section of Main Street. The following sections describe the plan and illustrate the desired form and characteristics of Main Street's Roadside and Traveled Way.

The "Roadside" is where the "pedestrian realm" is located, and this is the area of the street where business and social activities of the corridor can occur. The pedestrian realm is comprised of four zones. The Edge Zone is the area between the curb and adjacent furnishing zone that is used to provide a clearance area between parked vehicles (or travel lanes) and landscaping/furnishings. The Furnishings Zone, in turn, provides a buffer between pedestrians and vehicles and typically contains landscaping, street furniture, transit stops, utilities, etc. The Throughway Zone is the area for walking and must remain clear both vertically and horizontally. Finally, the Frontage Zone is the area between the Throughway and the building edge. It is mainly used to buffer pedestrians from window shoppers and doorways. This area is not to be confused with sidewalk widths, which are much narrower with typical widths of 4 to 6 feet. The Pedestrian Realm in context zones C-4 or C-5 are typically 12 ft. wide, along Main Street the width of this area varies but is typically 9 ft – 15 ft wide. Opportunities exist throughout the corridor for improving the Pedestrian Realm. Alternatives enhancement to the pedestrian realm were considered and are presented with recommendations for the entire corridor below.

As noted in the discussion above, Main Street's "Traveled Way" is wide, frequently congested, noisy, and often intimidating to motorists and pedestrians who visit and work in the Village. The heavy volumes of traffic along Main Street are a day-long phenomenon and generally subside in late evening after the daily commuting period has ended. The Traveled Way along Main Street has been designed to facilitate vehicular movement, often at the expense of

"The Village of Williamsville's new initiative, Picture Main Street, is well worth the relatively meager amount of state or federal assistance it needs to fully implement the project."

"The result could mean safer streets for pedestrians and more walkability in what should be a walkable area but often isn't. In fact, walking along the village's Main Street can be downright dangerous."

-The Buffalo News





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"The key is influencing those in state government to realize that they're in charge, that whatever language they create can then be inserted in a local street system that happens to involve state funding. In some states, the total street system, from an alley to a lane to an arterial, is set by state guidelines."

-Dan Burden
recognized authority
on walkability,
bicycle & pedestrian
programs

pedestrian movement and convenient access to businesses that line the corridor.

The configuration and context of Main Street presents both issues to confront and opportunities to pursue. Many issues and opportunities were identified through the public involvement process, they include:

- Safety
- Excessive through traffic volumes

As noted in the discussion above, Williamsville's Main Street must fulfill many roles. For instance, while pedestrian mobility and amenities are desired, this street must continue to facilitate safe and efficient movement of traffic through the Village. Based on an analysis of the existing and projected conditions, alterations to Main Street that reduce the number of lanes would result in significant congestion that would lead to high levels of frustration for drivers and pedestrians alike. At the same time, Williamsville's Main Street is a destination for goods and services and an environment that is attractive for pedestrian access and movement. Efforts to "tip the scale" back to a more equitable balance between pedestrians and automobiles involve choices and trade-offs, these include the following.

- Lack of Parking
- Challenges for pedestrian crossing
- Lack of shared parking
- Lack of bicycle lanes
- Refuge for pedestrians on a median refuge vs. wider sidewalks and pedestrian realm
 - Unrestricted accommodation of left-turns vs. restricted left-turns with medians and access management
 - Short medians vs. longer medians
 - Provision of maximum on-street parking vs. median, bulb-outs and wider roadside pedestrian realm
 - Accommodate transportation needs within existing right-of-way vs. right-of-way acquisition to accommodate desirable features
 - More convenient automobile travel in an auto-oriented right-of-way vs. less convenient automobile travel in a pedestrian friendly right-of-way.





Picture Main Street, Williamsville, NY

Main Street Zoning

The Village has implemented a new hybrid-form based zoning code for the Main Street Corridor. The code collected 5 separate zones on Main Street and combined them into a single Mixed Use District (MU) and created a set of graphic standards for future re-development of the corridor.

The zoning sets up a pedestrian oriented built environment and brings creates the opportunity for a denser, more robust multi-modal facility.

Buildings must be brought to the street, drive-through windows can only occur on the rear of the building, curb cuts must be limited and the building must address the public realm with transparency.

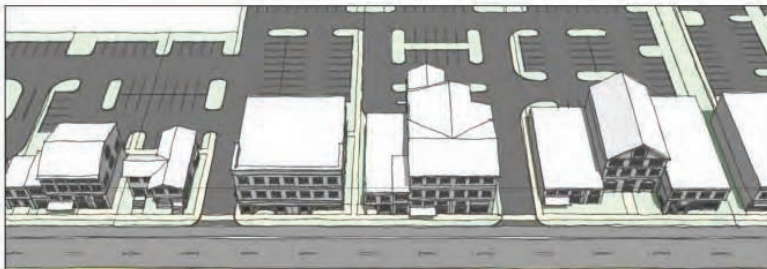
The code represents a commitment from the community to become a more pedestrian-oriented environment, the community's hard work needs to be coupled with physical transformation of the street.



VILLAGE OF WILLIAMSVILLE

MIXED USE DISTRICT DESIGN STANDARDS

§ 112-16



MU Zoning Design Objectives

Devote street level facades to retail, service and office uses.

Maximize transparency between the sidewalk and building interior.

Design attractive and engaging buildings that address the public realm on all visible sides.

Improve pedestrian experience and safety through the provision of public amenities such as ample sidewalks, buffer landscaping, seating, public art and crossing aids.

Favor pedestrian safety and experience while balancing the needs of the automobile.

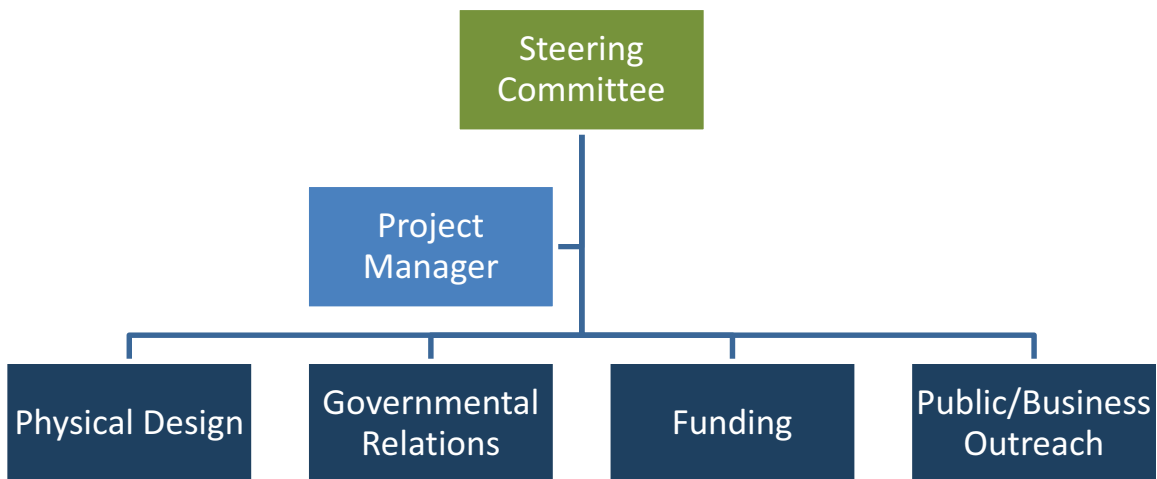




2.0 How have we arrived at the this plan?

The Village of Williamsville adopted a Comprehensive Plan in April of 2010. That plan established a firm vision to guide future development in the areas of economic development, urban design, housing, transportation, recreation and open space, and historic preservation. Among the topics covered was Streetscape enhancements on Main Street.

2 years later, in January of 2012, the Village began working on a more detailed plan for Main Street. The Village Board of Trustees adopted a project charter and put into place a massive 48 person committee that included a steering committee of 10 with the entirety of the Village Board represented on the steering committee, along side residents and business leaders. This plan is a result of that committee. It has been just over a year in the making and we thank NYSDOT, Greenman Pederson, Joy Kuebler Landscape Architects, Wendel Companies, Jaeckle Fleischmann, Amherst IDA, the Town of Amherst and the Williamsville Business Association for their support in its preparation.



48 Committee Members
4 Work Groups & 1 Steering Committee
1 AUDIT GROUP
12 Months

NYSDOT & Business Association at every Meeting





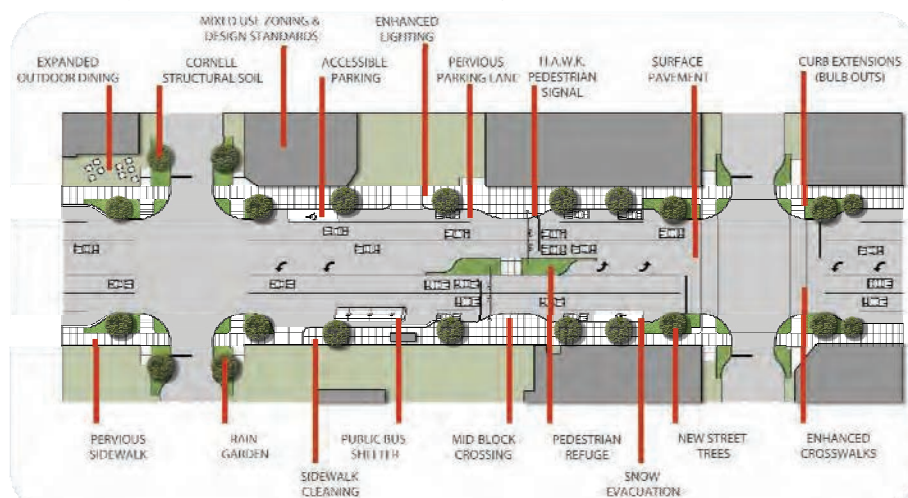
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3.0 What is being Proposed for Main Street?

The plan for the Main Street must address traffic and transportation issues; it must also address opportunities to complement and enhance the entire "street", not just the Traveled Way. The plan seeks to reclaim Main Street for the pedestrian, while preserving Main Street's ability to safely and efficiently handle the large volumes of traffic that traverse the Village each day.

Village Residents and Businesses have recognized the relationship between an attractive, well maintained streetscape and a competitive business environment. Quality sidewalks and public spaces, bright pedestrian lighting, and an abundance of trees, seasonal flowers and green space all enable and encourage people to take advantage of what Main Street has to offer. An aesthetically appealing Main Street provides an inviting place that can attract new businesses as it enhances the quality of the environment for people to live, work, and play.

These concepts represent physical alterations to the configuration of the Traveled Way and the Pedestrian Realm along the Main Street corridor. A number of modifications to Main Street circulation involving changes to traffic light signalization, turning movements and the installation of a traffic signal at Spring Street and Main Street are also discussed in more detail at the conclusion of this section. These supplementary modifications can occur in conjunction with any of the highway alternatives discussed .



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Main Street

Re-Tree the Main Street Corridor

Use Bulb-outs to Shorten & Make Safer Crossings.

Re-envision Street Furnishings & Lighting for Aesthetics

Create Pocket Parks for Conversation and Rest

Create New Wayfinding Through Apps, Banners, Signage & Gateways

Lower the Speed Limit to 30 MPH

Install NYS's first H.A.W.K. Signal

Step-up Village Snow Removal & Cleaning Efforts



3.1 Trees

Trees should be selected in consideration of the following: Provide enough variety in the plantings in each district yet create and maintain cohesiveness through repetition of plant material; a massive monoculture is discouraged because a single blight / disease can exterminate an entire block of trees.

- Install primary street trees of the same species on each block or series of blocks along the same street
- Vary selection of street trees
- Integrate smaller ornamental trees into the overall planting scheme.

When choosing tree species for specific blocks, consider micro-environments (shade, winds, space limitations, etc.), condition and species of existing trees within the block, as well as existing trees within the local neighborhood of each district.

Healthy existing trees should be saved during new streetscape improvements construction. These existing trees may not be the same species as the new street tree plantings; however, preservation of existing trees is encouraged. Factors to consider when evaluating whether existing trees should remain in the new streetscape include:

- size (caliper and height)
- tree form/canopy
- health
- age
- integration with proposed improvements
- construction impacts

Structural Soil

Structural soil is a stone based planting material with a reduced soil content that replaces uncompacted fill underneath pavement areas. The soil mix includes gravel, shredded clay loam, hydrogel, and water. Structural soils may be compacted to engineering standards while still supporting root growth. The soil volume is inadequate to fill all the void spaces which tree roots occupy allowing the stone to be compacted to bearing capacities while still providing treerooting opportunities. The Village thanks the Urban Horticultural Institute at Cornell University for the information.

The installation of structural soils beneath sidewalks allows for the potential of a continuous connection between tree pits. Structural soils are placed in a trench about 30" deep and can be as wide as the sidewalk or as narrow as the tree pit.





Picture Main Street, Williamsville, NY

A typical 4" sub-base of stone material is compacted on top of the structural soil and the sidewalk's concrete base and paving are then installed. Proper subsurface drainage and aeration are important to this planting detail as in all street tree plantings. A drainpipe is installed at the bottom of the trench and tied into a storm sewer. A smaller pipe is installed approximately 8" below the finished grade adjacent to the root ball for aeration.

Plant Selection

The appropriate selection of plant species is critical to the health and longevity of the Village's urban forest. The Village will develop a list of urban tolerant plantings that be used to establish individual identities in certain "neighborhoods" within the districts.

Village Main Street Re-tree Project

One of the first projects that the Village took on was to re-tree Main Street. Over the course of several years, many of the tree pits along Main Street sat empty. Trees help with safety, protection and are aesthetically pleasing among other benefits.

The Village Tree Board along with liaison Trustee Dan DeLano, have helped to make the re-treeing of Main Street a complete success. In the fall of 2012, the Village DPW planted 53 trees along Main Street. Just recently at the end of March 2013, another 56 trees were planted, again by the Village DPW.

The trees that were selected for planting on Main Street were carefully selected due to their hearty tolerance for issues on heavily traveled streets and the winter salt. Tree recommendation came from the NYS DOT. The DOT has been very helpful with all aspects of this project. The DOT provided all the necessary permits to DPW for the trees on Main Street. DOT's Landscape Architect, Mike Christner has been working with Dan DeLano and the Tree Board, recommending tree species. In the fall of 2012, the tree species chosen were London Planetree, Accolade Elm, Little leaf Linden and Ivory Silk. In the spring of 2013, the tree species chosen for Main Street were Lacebark Elms and Callery Pear Chaticeleer. All were balled and bur lapped.

The Village received a grant from New York State for the Cornell Soil that was used with the planting of the Main Street Trees. This covered the cost of the Cornell Soil 100%. The Village received a grant from the NYS DEC for Urban & Community Forestry. This grant is a 50% funding up to \$12,337.00.

Additionally, the Village of Williamsville is working on restoring the right-of-way areas that have been lost to sidewalks, parking lot, blacktop, etc. At this time, concentration is in the areas close to Main Street.





Picture Main Street, Williamsville, NY

Table 3.1 Village Main Street Re-Tree Plan

Fall 2012:

Schichtel's Nursery - 53 Trees purchased	\$7,235.00	
Mark Cerrone, Inc. - Cornell Structural Soil	\$4,720.00	
Ed Young's - Tarps for Cornell Soil	\$211.45	
Adam's Nursery - 6' Tree Stakes	\$249.10	
Adam's Nursery - Poly Lock	\$59.90	
Phillips Bros. Supply - Caution tape	\$33.30	
United Rentals - Excavator rental	\$997.35	
John Deere Landscapes - Gator Bags	\$508.50	
Mallare Enterprises - Hauling soil from Main St.	<u>\$1,600.00</u>	
		\$15,614.60

Spring 2013:

Russell's Tree Farm - 56 Trees	\$7,866.00	
Russell's Tree Farm - 18 Trees	\$2,532.00	
Keyston Bldrs. Supply - 3' Tree Stakes	\$64.50	
United Rentals - Excavator rental	\$940.00	
Kelley's Lawn & Irr. Supply - Gator Bags	<u>\$1,108.52</u>	
		<u>\$12,511.02</u>
		\$28,125.62

Funding:

11/15/2011	National Grid - 10,000 Trees Project	\$2,500.00	
10/4/2012	National Grid - 10,000 Trees Project	\$2,800.00	
	Cornell Structural Soil Grant	\$4,720.00	
	DEC Urban & Community Forestry Grant	<u>\$12,337.00</u>	
			\$22,357.00

Net Cost on Main Street Tree Plantings:	\$5,768.62
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Note: All prep work & planting provided by the Village DPW





3. 2 Streetscape Enhancement

To create a high quality and attractive environment throughout Main Street that evokes a sense of pride, care and safety for people who live, work and visit in The Village of Williamsville. To keep Williamsville's business environment competitive by implementing major pedestrian improvements that:

- encourage and expand pedestrian use of Main
- reinforce current private and public sector
- encourage new investment

The following Streetscape concepts have been developed to create a comfortable, attractive and maintainable pedestrian environment.

Sidewalks

The quality and condition of the sidewalk is a major determinant of the quality of the streetscape. Well maintained inspected sidewalks should be concrete and unit pavers, which allow for more seamless repairs, shall be used in all spaces between concrete sidewalk and curb, unless the area is vegetated. Adjacent landowners will continue to be ultimately responsible for construction, maintenance, and snow removal, though the Village will provide frequent cleanings and snow removal.

Bulb-outs

Bulb-outs reduce the distance that pedestrians must cross to get from one side of Main Street to the other, and provide more area for landscaping or the pedestrian realm in certain locations.

Objectives for Spring Street

Encourage
Business District
Growth

Create a New
England Style
"Off Main Street"
Business District

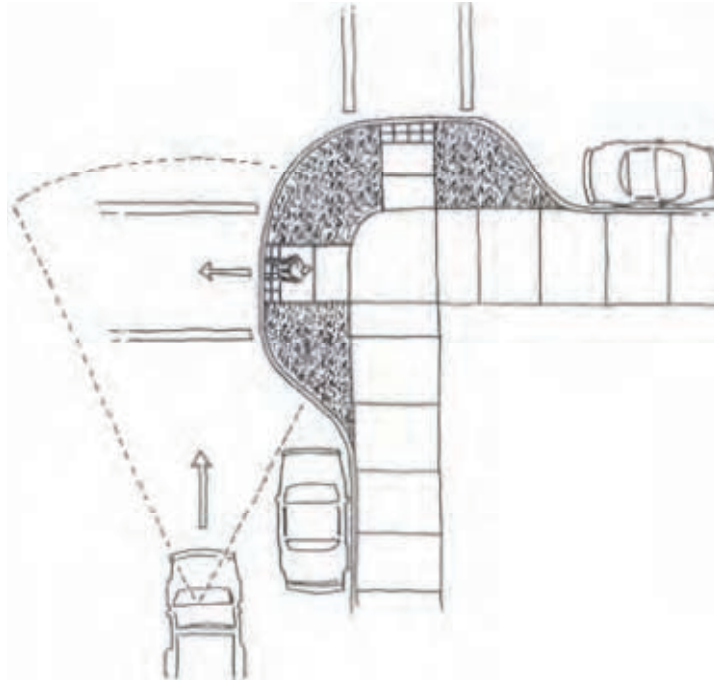
Capture, Collect
& Remediate
Stormwater

Provide New
Access Points
into Glen Park

Create Lively Mill
& Event District

Create
Permanent
Home for
Farmer's Market





Bulb-outs or Curb extensions improve visibility between pedestrians and motorists and make it easier to install perpendicular curb ramps with level landing. Regulations that prohibit parking at the corner can also improve blocked sight lines

Universal Design

People have differing abilities: A variety of users need to access the sidewalk system. Their abilities vary in agility, balance, cognition, coordination, endurance, flexibility, hearing, problem solving, strength, vision, and walking speed.

Designing for all abilities: The design of sidewalk environments is important to all pedestrians, but is particularly important to those with disabilities who have limited travel choices and rely most on the pedestrian environment. For example, older adults, persons with vision impairments, and children frequently rely on the sidewalk to travel independently within their community for shopping, recreation, exercise, and walking to school.

Traditionally, design parameters have been based on the "standard pedestrian," an agile person with good vision, hearing, and mobility. These design parameters do not meet the needs of the growing disabled population. The Bureau of Census data indicates that:



Picture Main Street, Williamsville, NY

Universal design principles are based on creating an environment that is usable for people of all abilities. Incorporating these principles into all aspects of sidewalk development can eliminate the barriers and create a truly functional sidewalk system.

Movement and Informational barriers may limit an individual's access to the sidewalk environment:

Movement barriers restrict an individual's ability to physically move along or within an environment. They may limit the individual's movement from one side of the intersection to the other, or ability to use the push button to activate the pedestrian signal. Movement barriers within the pedestrian environment include curbs, steep slopes, obstacles within the path (poles, etc.), and widths too narrow to pass through.

Information barriers restrict an individual's use of information contained in the pedestrian environment. These barriers limit the pedestrian's ability to recognize and receive information (e.g., loss of vision prevents the individual from utilizing visual signs), or understand the information received and decide on a course of action. Information barriers within the environment include complex intersections, diverted paths (e.g., in work zones), and lack of street crossing information.

Conflicting Pedestrian Needs To create a truly accessible sidewalk network that is usable by all pedestrians, designers need to understand how the users' abilities are impacted by their design decisions. Pedestrians have varying needs, therefore, changing a design to enhance access for one group can create additional barriers for other individuals. The goal should be to make all sidewalks accessible to the largest possible number of pedestrian users by incorporating the principles of universal design.

The "Sidewalk Corridor" is the portion of the pedestrian system from the edge of the roadway to the edge of the right-of-way (property line or building edge), generally parallel to the street. Attributes of the Main Street sidewalk corridor design will include:

Approximately 20 percent of all Americans have a disability, and that percentage is increasing.

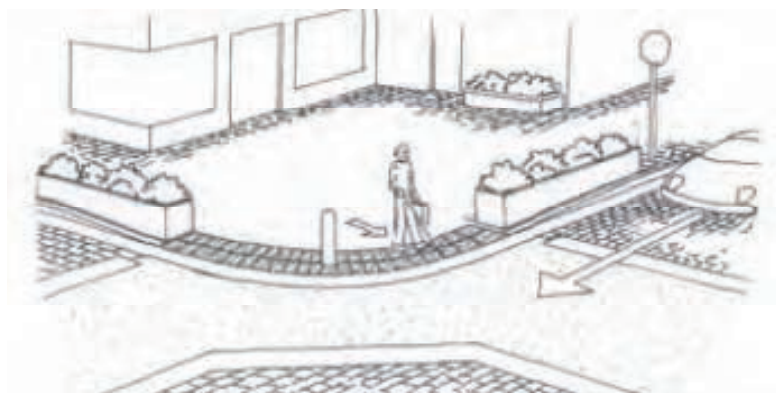
By the year 2030, one in five Americans will be 65 years or older.





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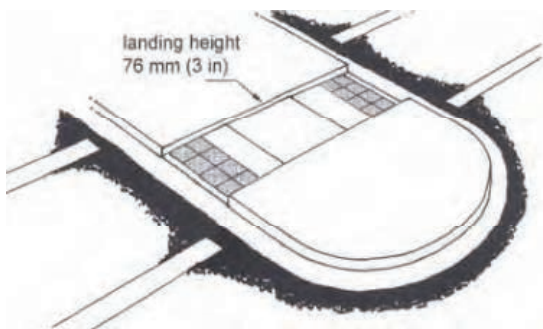
- Accessibility by ALL users.
- Adequate width.
- Safe to use (sidewalk users should not feel threatened by adjacent traffic or by the environment).
- Continuity and connectivity.
- Landscaping to create a buffer space between pedestrians and traffic and also provide shade.
- Social space (area where pedestrians can safely participate in public life).



Detectable warnings, contrasting surface materials, and barrier posts are measures that will be used to convey the transition between the street and sidewalk at depressed corners. This corner would be a good location for accessible signals.

Medians/Pedestrian Refuge Islands

Medians generally reduce crossing exposure and allow pedestrians to negotiate vehicle traffic one direction at a time. Medians should be curbed or barrier medians to physically separate pedestrians and motorists rather than painted flush. Furthermore, all medians should be accessible to pedestrians. The nose of the median should be extended beyond the crosswalk. If a cut through is



provided, it should be at least 6 ft long and 5 ft wide. This allows 2 wheelchair users to pass each other. In addition the edges of the cut through must be perpendicular to the street being crossed. **GOOD DESIGN:** The height of this median does not exceed 3 in. This design allows for the construction of shorter curb ramps and a longer level landing.





Picture Main Street, Williamsville, NY

Ramped medians should have a curb ramp at either end and a level landing at least 5 ft x 5 ft. For all medians, cut through or ramped, a 2 ft strip of detectable warnings should be located at the entrance and exit.

HAWK Beacon

A HAWK beacon (High-Intensity Activated crossWalk beacon) is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is officially known as a "pedestrian hybrid beacon".

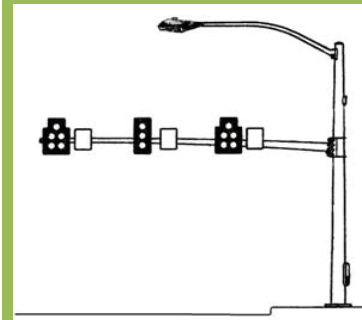
The vehicular signal faces suspended above the roadway have two round red lenses side-by-side, above a single yellow lens. There must be at least two HAWK beacons facing each vehicular approach to the crossing. Unlike an ordinary traffic signal, the HAWK beacon only lights when activated by a pedestrian who wishes to cross.

Generally, activation is by a push-button. The HAWK beacon first flashes yellow, then displays steady yellow, and finally steady red over a period of several seconds. Pedestrian signal heads at either end of the crosswalk display the upraised hand (don't walk) signal until the HAWK beacon displays the steady red signal. At this time, the pedestrian heads display the walking-person (walk) indication.

As at conventional signalized crossings, the pedestrian signals display flashing "don't walk" indications when typical pedestrians no longer have enough time to cross before the HAWK beacon releases cross traffic. At the same time as the "don't walk" indication, the HAWK beacon displays a flashing red indication to vehicular traffic (the equivalent of a stop sign, indicating that vehicles on the roadway must stop), and may proceed after yielding to pedestrians in the crosswalk. When vehicle traffic is about to restart, the pedestrian signal goes to steady "don't walk". Then, the HAWK beacon goes dark and the pedestrian signal remains in "don't walk" mode until the signal is activated by another pedestrian.

HAWK Beacon

The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed.



Research has shown motorists' compliance with the HAWK beacon at up to 97%, higher than with traditional un-signalized crossings.

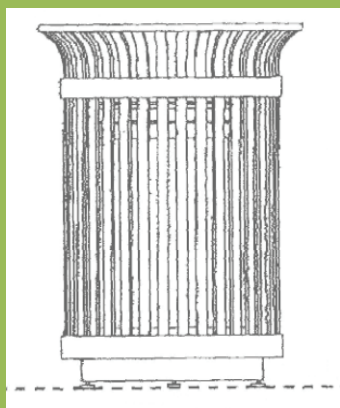




Picture Main Street, Williamsville, NY

Objectives for Spring Street

Encourage
Business District
Growth



Typical Waste
Receptacle



Co-mingled
recycling, trash
with compaction

3.3 Street Furnishings

In order to create a unified streetscape image, standardization of street furniture is required. Special consideration must be given to the appropriateness of all street furniture. While most street furniture is optional, and considered an improvement, too many elements or an incorrectly located element may be a detriment to the streetscape. The primary goal of street furniture is to add functional and aesthetic enhancement without creating visual clutter. Street furniture items include the following:

- Benches
- Planters
- Trash receptacles
- Newspaper corrals
- Bicycle bollards

Benches

Benches are important public resources that contribute to making the City an enjoyable space for pedestrians who live, work and visit. All benches shall be permanently mounted to the sidewalk with tamper-proof bolts. 72" long, 28" deep, and 34" high. Standard black, powder-coated finish. Generally, but not always, oriented away from the street, within the building zone. If benches are located in the curb zone, they should be a minimum of two feet from the curb face. Benches must have at least three feet clear on all sides from any standing object including, but not limited to lights, power and sign posts.

Trash Receptacles

Trash receptacles are among the most ubiquitous elements of street furniture. In general, the number of trash receptacles should be based on a specific pedestrian use and reviewed on a block-by-block basis. The Village will work with Modern Disposal to integrate co-mingled recycling units and possible trash receptacles with integral compaction units





News Paper Corrals

While newspaper boxes serve an important function on Main Street, they can become problematic if placed improperly or in poor locations. There are many locations where numerous boxes have been placed at a particular street corner or at a major building entrance that obstruct natural pedestrian movements and visibility. The aluminum corral should be designed to hold a minimum of four permitted publications and a maximum of six permitted publications and be black powder-coated finish.

- Generally, but not always, located very near the Clear Zone of the sidewalk. They are not encouraged at the building facade unless in an alcove.
- The goal is not to have more than two corrals placed next to each other to minimize pedestrian circulation obstructions; however, if more than one corral is needed, a minimum of two feet clear is required between each corral, when expanded to maximum capacity.
- Corrals are to be located parallel to the curb face with access from the building side, not the roadway side

Bollard Bike Racks

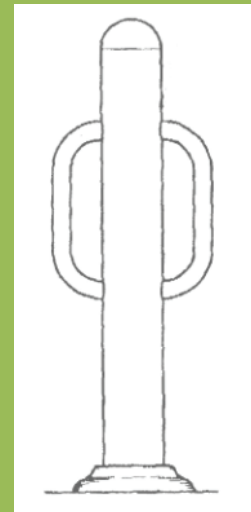
Bike racks should be used frequently throughout the corridor. The steel bollard shall have two loops for bike storage. 36" in height. All bollards shall be permanently imbedded into the sidewalk. Standard black, powder-coated finish.

- If located in the curb zone, bollards shall be placed such that the arms of the bollard are perpendicular to the curb face and maintain a minimum clear distance of six feet between all freestanding objects and a parked bicycle.
- If located in building zone, bollards shall be placed such that the arms of the bollard are perpendicular to the building face.

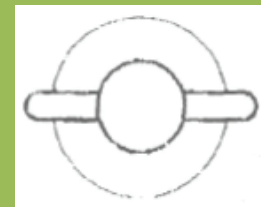
Pocket Parks

Bollard Bike Rack:

Bollard CycLoops
#2172 by
TimberForm Site
Complements



Elevation View



Plan View





Picture Main Street, Williamsville, NY

Library Pocket Park

Property Transfer
from Town of
Amherst



Infill will Provide
Village Commons

3.4 Pocket Parks

Library Pocket Park

The Village has entered into a memorandum of understanding with the Town of Amherst to use the driveway between the Library and Village Hall.

There will be a pathway, a patio/hard-scape for use by the Library, chess tables, Lounge chairs, free WIFI, new trees and no curb cut. The front of the Library, front of Village Hall will be landscaped to create a continuous Village commons, where people can meet and escape the sound volumes of Main Street.

The result will be a greening of our Main Street Corridor and reduction of asphalt/impervious surface.

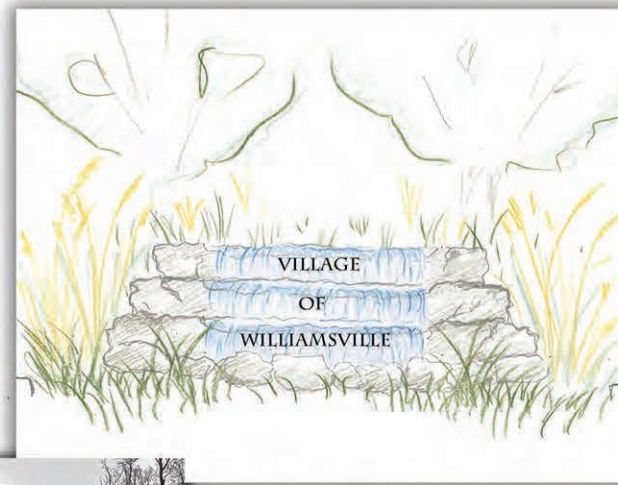
The Village is partnering with a not-for-profit, Friends of Williamsville Parks for funding and will utilize a balance of DPW and volunteers labor to break out the asphalt and put in new plantings and amenities.

The current plan is to begin construction in June (2013) and work through the Summer to complete project in the Fall of 2013.

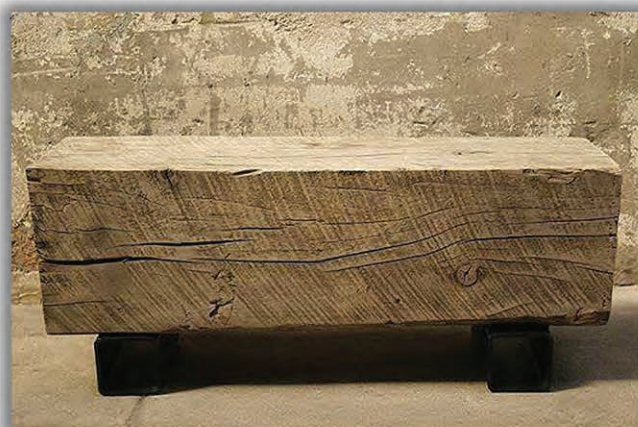




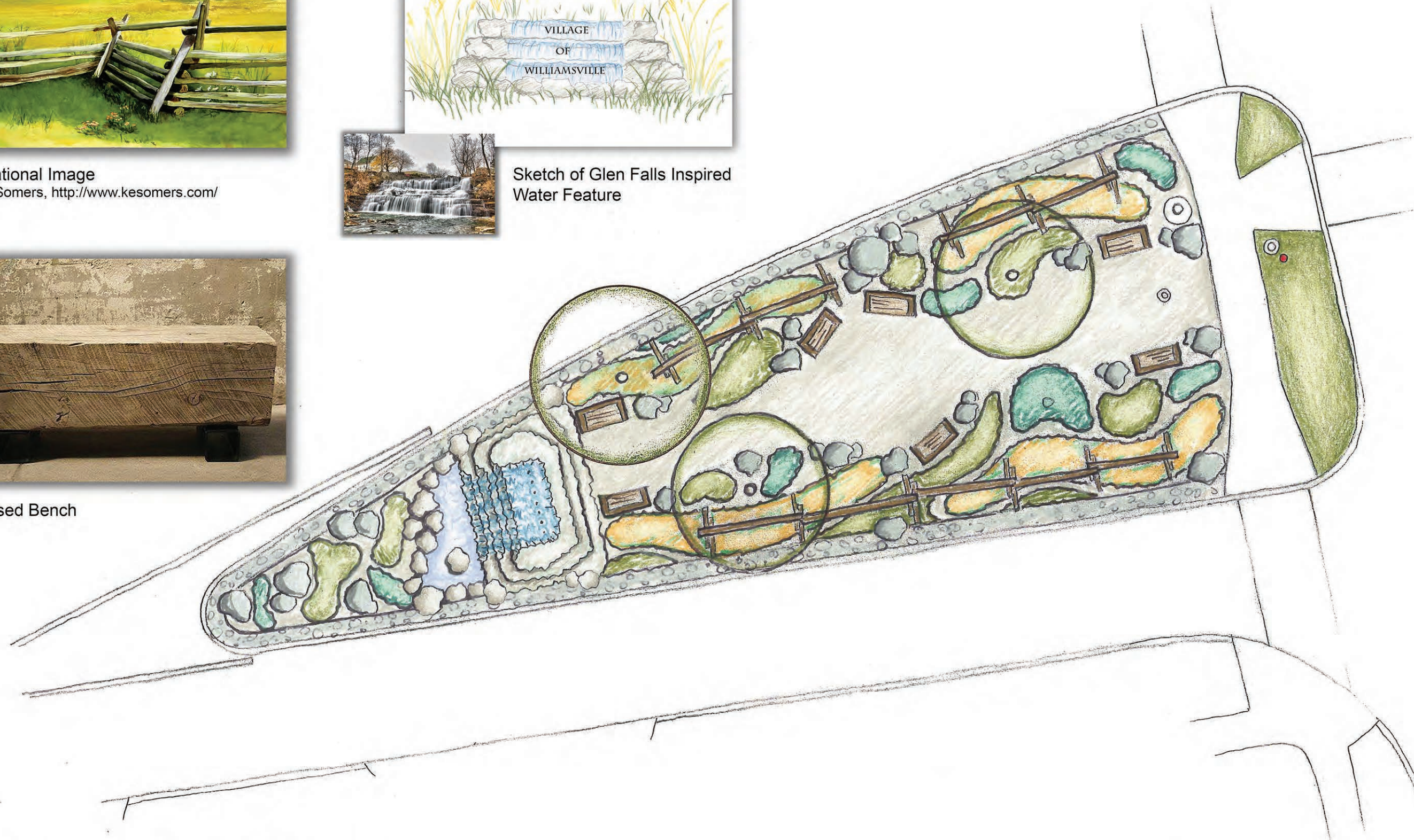
Inspirational Image
©Kate Somers, <http://www.kesomers.com/>



Sketch of Glen Falls Inspired Water Feature



Proposed Bench



Main and Evans Triangle Village of Williamsville, New York





Picture Main Street, Williamsville, NY

Evans Triangle – 1812/1813 Honorary Garden

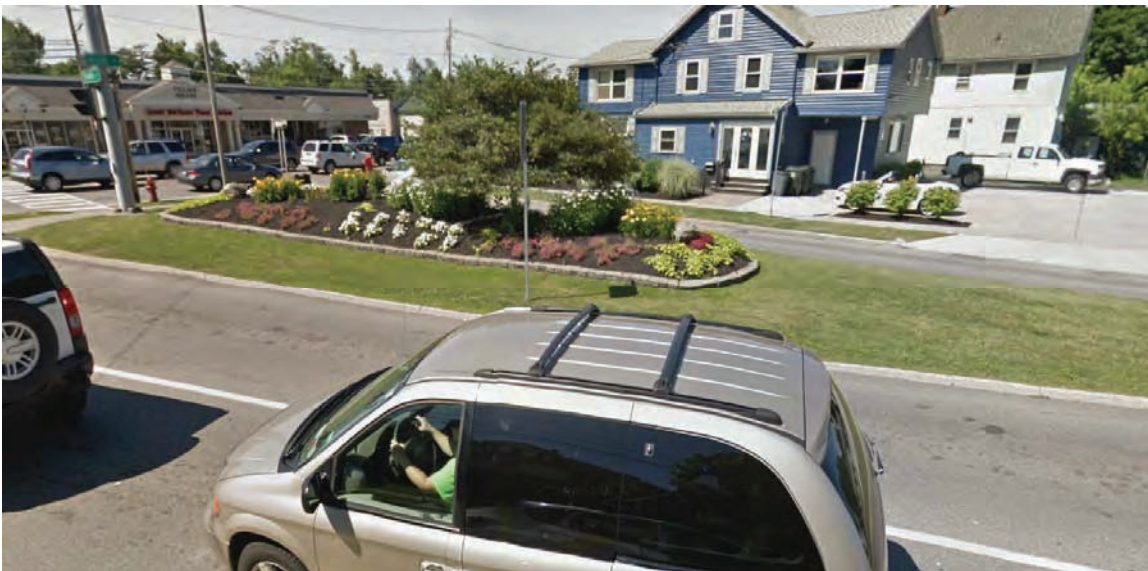
The Village has maintained the Triangle at Main and Evans with an annuals bed for the past 20 years. The Beautification Committee has traditionally pulled the plans in and out of the garden and maintained the beds.

In Summer of 2013 the Village will remove the existing beds and construct a memory garden in the triangle, with a waterfall feature at the north tip of the triangle, meant to serve as a gateway.

The plans include construction of an 1812 era, hand hewn, wood fence. The fence will be used to buffer and screen the interior of the triangle and will be partnered with native tall grasses to create a sound barrier to create a more pleasant seating environment which will be complete with vintage, hand hewn benches and mulch ground cover.

The Triangle will serve to commemorate the Village's heritage as the headquarters for the Northern War effort in 1813 and 1814, it will feature all native perennial plantings, lace bark elm trees and wood species that would have been milled in the Village during that time.

The Park will serve as a moment of respite to escape the immediacy of the Main Street right of way. It's meant to be a place to stop and have a conversation, or take a momentary rest.



Dual Head Streetlight



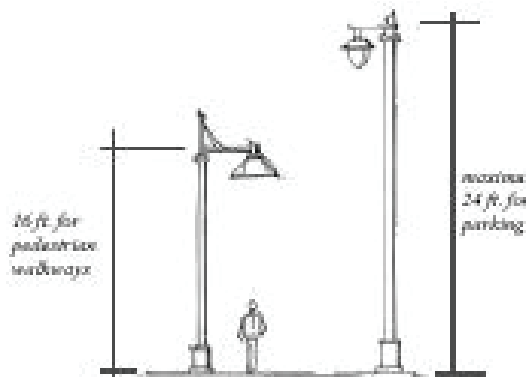
3.5 Street Lighting

Generally, all streetlights should be located in the curb zone of the sidewalks. Where wider sidewalks and plazas exist, additional lights may be located in the building zone as long as a 6' pedestrian zone is maintained.

The locations of vehicular streetlights are at the discretion of NYSDOT, however, attempts should be made at the next design phase to work with NYSDOT on the quantity and location of these lights should an opportunity to change style or frequency occur in the future.

There should also be thought given in the future to provide pedestrian lighting. The typical spacing of pedestrian streetlights is 40' - 60' on center, paired across the street or, 80' - 120' on center in a staggered pattern. They should be centered on a line 20 inches from the face of curb. When new pedestrian streetlights are installed across the street from an area where vehicular streetlights exist, spacing of new lights should relate to the existing spacing.

These spacing guidelines will need to provide a logical rhythm or cadence. Minor adjustments will be necessary to avoid utilities, vaults, and other conditions. Mature tree canopy size should be considered when spacing streetlights which should be centered between trees whenever feasible. Streetlight spacing may also need to be adjusted to relate to the design of building entryways. To achieve a consistent look and avoid spottiness of pedestrian lights, a minimum of four streetlights is recommended on a block face.





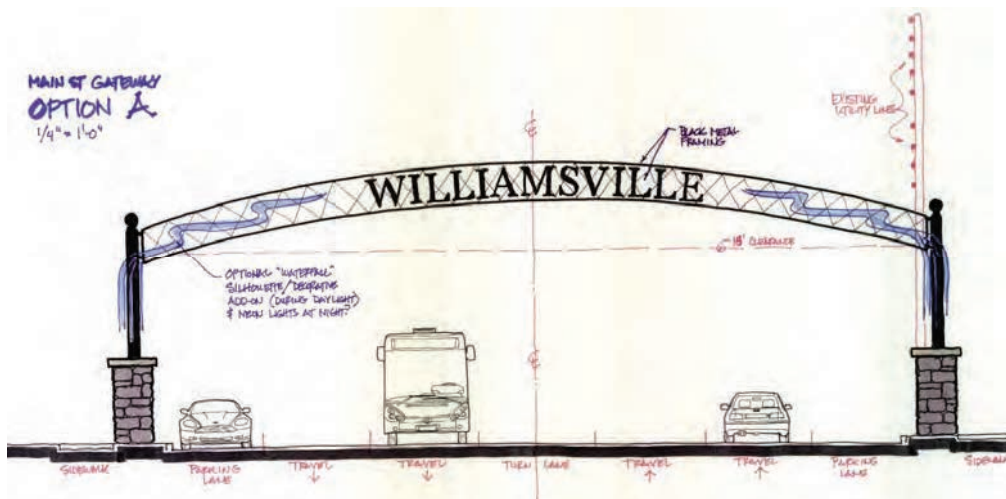
Picture Main Street, Williamsville, NY

3.6 Gateways

There is a tradition on Main Street throughout the Town of Amherst, of having gateways, or landscape markers to demarcate place. These gateways act as way finding elements, they serve as thresholds, and can create a level of detail that gives the civic realm distinct vertical moments to relate to the horizontal and planar components.

The Village will study vertical markings in the form of gateway elements as it moves forward with Main Street Projects. Critical moments for these markers include the Main & Union "Western gateway" and the intersection of Main and Hirschfield which is shared with the Town of Amherst and Williamsville Central Schools (Williamsville South High School) at the Easter end of Main Street in the Village.

Other locations where these elements will benefit the Village include the Main Street entrance to Glen Park, Main at South Long, as a start to an integrated pedestrian/bicycle plan that includes South long Street, South Long Park, Memorial Trail, the Historic Rail Depot and South Cayuga. The Village will turn these off Main Street sites into an "emerald necklace" of sorts and the South Long intersection will serve as threshold for that area.



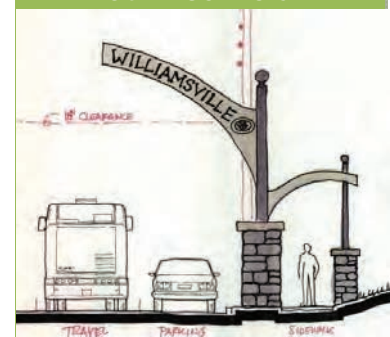
Gateways Concepts



Concept for Glen Park



Concept for Main at Hirschfield



Concept for Main at Union





Picture Main Street, Williamsville, NY

Examples of Apps from other municipalities



3.7 Main Street App

The Williamsville Main Street Mobile App, will be a straightforward directory and location-aware navigation app that informs you of what's around you and how to get there.

Launch the app, pop open a directory of antique shops, banks, bars, electronics stores, restaurants, available parking, etc.. Tap one of the locations, let's say "banks", and the app will display a list of banks in proximity to you. Tap on a bank and up pops an address, phone number and URL.

Want to know how to get there? Tap the "View in Map" button on the top of the screen and away you go, with turn-by-turn directions, to guide you.

The Village hopes to engage this trend in the retail market: Simon Property Group Inc the biggest mall owner in the U.S., offers a shopper-rewards app in about half of its 338 properties, and is developing its own app to offer group discounts. Mall owner Westfield Group launched its mobile app at most of its 55 U.S. malls last year. Citigroup Inc's Chairman and Chief Executive Officer David Simon said he would like his malls to emulate Groupon Inc., whose deal-of-the-day website has surged in popularity over the past year. The site uses email to promote group discounts offered by a range of merchants. Shoppers often have to visit one of the retailer's stores to redeem the coupons they buy.

The Village of Williamsville and the Williamsville Business Association will work collaboratively to develop the App and hope to roll it out in 2014.





Picture Main Street, Williamsville, NY

3.8 Electric Car Charging Stations

According to Governor Andrew Cuomo New York will have more than 360 electric vehicle charging stations installed throughout the state to help reduce fossil fuel use. The Village of Williamsville would like to make its Main Street one of those first locations.

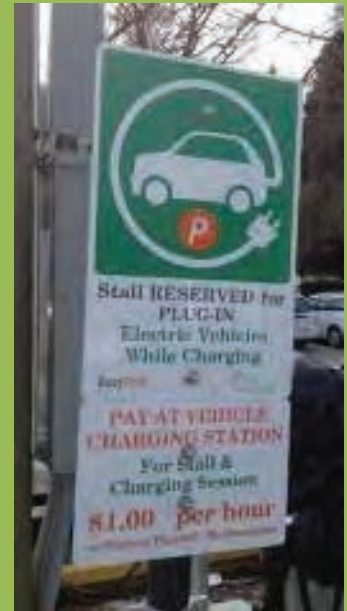
"Building this network of innovative charging stations will encourage New Yorkers to use fuel-efficient alternatives like electric vehicles as well as grow the green industry and jobs in the state," Cuomo said in a statement. The 360 charging stations are part of an initiative to create 3,000 public and workplace stations over the next five years and to put 40,000 plug-in hybrid vehicles on the road in the state.

NYS Route 5 through Williamsville is a great place to showcase the new technology, taking advantage of the enormous volume to spotlight the State's initiative.

The Village will submit a proposal to The New York Power Authority, National Grid, NYSEERDA and other private agencies in the hopes of finding a partner for the implementation of this technology on Main and possible Spring Street as well.



Public Access to Electric Car Charging





Picture Main Street, Williamsville, NY

Improved Parking Signage to Help Facilitate Use of Public Parking



3.9 Parking

Provision of conveniently located, adequate and safe parking is a key component to the success of a village business district. On-street parking along Main Street is provided within a 9 ft. continuous parking lane that is located along both the north and south sides of the street. The width of the parking lane is adequate for the C-4 and C-5 context zones. The Village will paint (Summer of 2013) new striping to create greater clarity with regard to the use and location of on-street parking. Parking inventories completed for the Inventory and Analysis indicate that much of the Village's off-street parking is located within private lots associated with nearby businesses and housing.

As shown in the figure below and Table 2, the greatest parking deficiencies occur in "Area 6" which roughly corresponds to the core area of the village (VC-CA land use classification). An increase in activity in this area of the Village, potentially around a revitalized Main Street Business District and Village Square would further exacerbate the shortage of parking.

Improved signage is extremely important to facilitate better use of municipal parking at the Town/Village complex, at South Long Park and Memorial Trail.





Picture Main Street, Williamsville, NY

Table 2 - Main Street Parking Surpluses and Deficiencies

Area	Floor Area	Parking Need	Off-Street Parking	On-Street Parking	Total Parking	Surplus/Deficiency Not Including Street Parking	Surplus/Deficiency with Street Parking
1	110,987	434	360	24	384	-74	-50
2	134,174	718	655	34	689	-63	-29
3	80,341	410	363	25	388	-47	-22
4	43,141	233	277	0	277	44	44
5	75,977	435	431	34	465	-4	30
6	177,781	964	644	37	681	-320	-283
7	53,254	272	242	26	268	-30	-4
8	78,784	487	349	0	349	-138	-138
Total Commercial Deficiencies Based on Current Zoning Code						-632	-452

Source: peter j. smith & company

VILLAGE-WIDE VALET PARKING SERVICE

The Village of Williamsville will consider implementing a Village-wide public valet parking service. Ideally, valet passenger loading areas would need to be located centrally for the public valet service to be successful.

Valet parking is primarily instituted for two reasons: 1) the service provides a convenience for patrons and if customers have to walk too far from their final destination to reach the valet service they will likely try and find their own parking space; and/or 2) the parking supply is severely limited and the supply must be maximized by parking vehicles very close together in non-standard configurations.

Additional studies are required to ascertain the specific costs of providing village-wide valet service at several locations through the village. Costs would include labor for valet personnel, management expenses, and insurance among others. Given the current fiscal situation for the Village, this service would likely require funding through a business improvement district (BID) or some other organization. In addition, this service would eliminate the use of at least two on-street parking spaces at each valet location during peak demand times.

The Village will look at the feasibility of a municipal parking garage.

Improved Parking Signage to Help Facilitate Use of Public Parking





Picture Main Street, Williamsville, NY

More Extensive
Use of Pole
Mounted Banners
for Advertising &
Way-finding by
Retro-fitting
Existing Wood
Poles & Cobra-
head Lighting



3.10 Directional Signs

Directional signs are recommended to direct visitors to parking and attractions. The recommended directional sign is a banner or sheet metal sign mounted on a bracket arm from a pole. The new street lights could provide a bracket arm that will fit this purpose, but additional brackets could also be mounted on existing wood or metal poles. While painted metal signs would be more durable, banners are cost effective and may be changed more easily for seasonal. The Village already utilizes many of our pole locations in the core for banners and have demonstrated a lot of success with the program.

3.11 Speed

Stopping sight distance and crash severity increase with speed, but the desired Village environment frequently constrains sight distance; this often points to the need to lower target speeds (highest operating speed given desired conditions) for design.

The Village thoroughfare is a complicated environment, where the needs of pedestrians, bicyclists, transit users, and street-side activities must be considered along with those of trucks, buses, and emergency response vehicles and general purpose traffic. Context sensitive urban thoroughfare design requires evaluating the needs of the users of the facility in a manner that considers mobility and safety in combination with local objectives for urban activity, economic development, and character. The selection of appropriate design criteria is key to developing suitable design solutions.

Overwhelmingly, residents and business owners in Williamsville would like to See the Speed on Main Street within the Village **reduced to 30 MPH**.





3.12 Snow Removal Process

The Village maintains 26 lane miles of roads, and several public parking lots. The current equipment list is 2 single axle International 4300 dump trucks with front plow, wing and salt spreading units. These trucks hold between 6-9 yards of salt, respectively, and also have calcium brine spray treatment units for use during below 15 degree temperatures, needed to make salt more effective at colder temperatures. These two trucks are designated to plow routes on the North and South side of the Village. Main Street NYS Route 5 is maintained by the DOT. We also use 4 pickup trucks with front plows for narrow alleys, parking lots and park paths. This year we added a front plow to the 924 Caterpillar front end loader. This unit is primarily dedicated to keeping main arterial streets open and pushing snow banks back, lessening the workload on the large plow trucks to increase efficiency.

The Village plans to maintain the areas between the proposed bulb-outs by physically removing the snow from the parking lane using the Caterpillar front loader and dump trucks. We have a location at South Long where we can mound and store snow through melt cycle.

While maintaining clear streets is our first priority, we also plow sidewalks in the Village. Our rule is 1"-3" snowfall requires us to plow sidewalks on Main street. When snowfall is more than 3" and all streets are clear, the entire Village will get sidewalks plowed. We currently have a MT Trackless unit with a front V-plow for that task. We will be adding a second unit for plowing walks and removing snow banks from parking areas. All handicapped ramps and access points will be opened up for pedestrian traffic.

3.13 Street Sweeping Process

The Village of Williamsville DPW also sweeps all impervious areas of the Village. We use a 2005 Johnston sweeper currently, and are planning to upgrade to a new highly efficient machine in the summer/fall of 2013. Our street sweeper covers all streets in the Village at least twice, (spring and fall). We sweep main street often (during early morning hours), prior to Village events, parades, and any other time needed.

The Williamsville DPW also added a front rotating broom attachment to the MT Trackless unit to sweep Main street sidewalks. This unit has been very useful after winter snow banks melt and leave debris in snow storage areas and pedestrian travel paths. Debris is swept to the curb area and working in tandem with street sweeper, the material is collected.





Picture Main Street, Williamsville, NY

Objectives for Spring Street

Encourage
Business District
Growth

Create a New
England Style
"Off Main Street"
Business District

Capture, Collect
& Remediate
Stormwater

Create Lively Mill
District

Permanent home
for Farmer's
Market



4.0 What is being proposed for Spring Street?

The Spring Street Corridor will serve as the access to an improved and lively Mill District. It is home to the Farmers Market and will be the subject of a simultaneous project by the Village.



Techniques for creating a cohesive Village center focus around establishing a "Village Square" on both the north and south sides of Main Street. A more cohesive center is created by transforming unorganized, "left over" areas of the Village center into coherent public streets and pathways off of Main Street that are inviting to visitors and which link many of the Village's attractions and uses, such as municipal buildings, parks and the historic mill. Visually appealing and prominent gateways along Main Street would indicate the presence of the parks, the mill and other attractions

At the heart of it all are the mill and a revitalized Spring Street. Building on its proximity to Glen Park and Glen Falls and the mill, Spring Street truly has the potential to be a destination. Additional stores and shops could be built to fill in the gaps of Spring Street. A more detailed With the addition of new structures, streetscape improvements and landscaping, a forgotten area of the Village can be transformed into an identifiable destination.

In order to support increased vitality in Village Square, let alone current levels of activity, parking will need to be





Picture Main Street, Williamsville, NY

included. As discussed in the Main Street section of this plan, the Village Square area of Williamsville has a particularly acute parking shortage under existing conditions. Ways to increase parking include consolidating the current patchwork of individual parking lots that are found throughout the district; striping parking spaces on Main Street; and investigating the feasibility of a parking structure. A number of potential locations for a parking structure were explored, such as the existing parking area behind Main Street facing businesses and along North Cayuga, at the terminus of Spring Street. Every location had its advantages and disadvantages. Ultimately a feasibility study should be undertaken to determine the potential need, location and short- and long-term costs of such a structure. It must be stressed that a parking ramp would require the cooperation and support of business and landowners. Moreover, any parking structure would need to be designed to be aesthetically pleasing and in keeping with the character of the area. Ground floor retail around the perimeter of the parking structure could be provided to ensure that it makes a positive contribution to the streetscape.



4.1 Williamsville Mill

The Village of Williamsville purchased the Williamsville Water Mill property in 2005 for \$450,000, as it was entering into foreclosure, in order to save the historic icon of the Village. A portion of the purchase was financed through \$50,000 in funding received with the assistance of Senator Mary Lou Rath, \$50,000 received through the assistance of NYS Assemblyman Jim Hayes, and \$150,000 in acquisition funding obtained through NYS Parks.



In 2006, The Village commissioned Bero Architecture, PC to complete an Historic Structures Report on the Mill building. \$7,000 of this \$15,000 project was funded through Preserve New York. The Bero report was then used to apply for and receive three Environmental Protection Fund (EPF) grants through the NYS Office of Parks, Recreation, and Historic Preservation. The Village received \$100,000 toward a \$200,000 project in 2008, \$100,000 toward a \$200,000 project in 2009, and \$244,824 toward a \$489,648 project in 2010.

In 2008, the Village hired Preservation



Picture Main Street, Williamsville, NY

Studios, a local preservation firm, to conduct public outreach in order to determine the preferred adaptive re-use of the property. Public meetings were held in 2009, and the final concept of a Village Square was developed. Preservation Studios assisted the Village in conducting a Request for Qualifications for an architect to complete conceptual drawings the Village Square concept. Flynn Battaglia was hired as the architect in 2010, and developed a set of drawings for this concept. Preservation Studios then assisted the Village in conducting a Request for Qualifications for Proposals for the Development of the property.

In 2011, the Village named Iskalo Development as the preferred developer of the property, and has been working cooperatively with them since.



The Village conducted work under the 2008 and 2009 EPF grants in 2011 and 2012, and will commence work under the 2010 grant in 2013. Once that work is complete and all the EPF grants are closed out, it is anticipated that Iskalo Development will take control of the property some time in 2014, with an anticipated further private investment of \$3 Million in renovations and infill development.

The plan is to transform the Mill area into a "Town Square", creating a permanent home for the Village's Farmer's Market and opening new retail and accommodations opportunities, providing public access to the historic facility.

Creating a New Vision for the Mill



Village Creates Town Square Concept



Village & NYSHPO Perform begin Restoration



Village Creates Spring Street Concept Plans





Picture Main Street, Williamsville, NY

'Large Scale Green Infrastructure'

Large scale green infrastructure is an engineering solution that utilizes traditional grey functions, (i.e.: pipes and drains) but allows for much of the stormwater to be captured and, through natural filtration, released back into the groundwater aquifers through wetlands, bioswales, and retention ponds.

- Buffalo Niagara Riverkeeper

4.2 Stormwater Management

The stormwater management for the project area presently flows directly over the top of the bedrock ledge at the Mill and flows to the creek below the Mill causing erosion of the bedrock and extreme sedimentation of the creek. The intention of the stormwater system for streetscape improvements on East Spring will focus on green infrastructure to the greatest extent possible.

The design concept is to utilize green infrastructure to reduce the stormwater impacts to the site and the creek. The rock depth on the site is deep enough to allow for water to be slowed and cleaned in raingardens before eventually out-falling to Ellicott Creek beyond the Mill. The extreme slope of E Spring Street is allowing the run-off to easily escape over the edge of the bedrock ledge where the Mill presently sits. To decrease the volume of water flowing over the edge of the rock ledge during large storm events, a series of rain gardens will be placed along the curb edge of E. Spring Street. These raised planters will be walled with storm water from the street edge entering through a curb inlet that will then direct the water to the planting medium. Wall inlets will allow sidewalk storm water to enter as well.

E. Spring has a significant slope and these planters will likely "step" down as they progress down the street.





Picture Main Street, Williamsville, NY

The area in front of the Mill becomes shallower and allows for a lateral pipe to feed adjacent trees with stormwater from the raised planters on E. Spring. The trees can be planted in structural soil and fed with storm water from below. Excess water at the end of this treatment area will be connected to additional methods noted below.

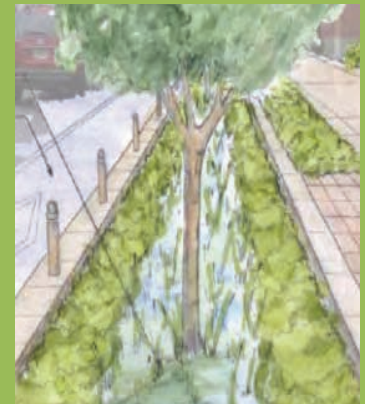
The roadway presently has three drainage inlet structures that are presently clogged and not functioning. These lines would be cleaned and surface water would be able to drain to these structures. The outfall for these pipes can be directed to a series of terraced rain gardens as part of a bedrock wall stabilization effort. These terraced planters will slow and clean water coming from the drainage inlets and excess water from the raised planters along E. Spring before discharging in the creek area at the bottom of the mill building.

Water flowing from the parking areas will be captured through two main mechanisms. A set of raingardens will line the North and South sides of the roadway. Water flowing from the parking areas will be diverted to several rain gardens on the south side of the street. Any water that flows past these will be channeled to the rain gardens on the north side of the street. Additionally, water from the roadway will travel to the rain gardens on the north side. The rain gardens on the south will be planted with shrubs, perennials and grasses that will emphasize the pedestrian walk on that side of the roadway. These planters will be colorful and in keeping with the Village of Williamsville's intent for plantings in the Village Center. The rain gardens on the north side of the street will allow the feel of the Park to pull up onto the new sidewalk area, extending the view and feel of the park into the stormwater management system. These plantings will incorporate trees as well as shrubs and perennials.

Raingardens and green spaces on Rock Street will better define the pedestrian areas from the vehicular as well as provide the necessary stormwater management. From Rock to Cayuga Streets, raingardens along the north side of the road will be used for the stormwater management. These gardens can rely partially on infiltration as well as overflow piping into the existing stormwater system.

"The Buffalo Niagara region is quickly becoming one of the nation's leaders in freshwater management, protection, and Great Lakes restoration."

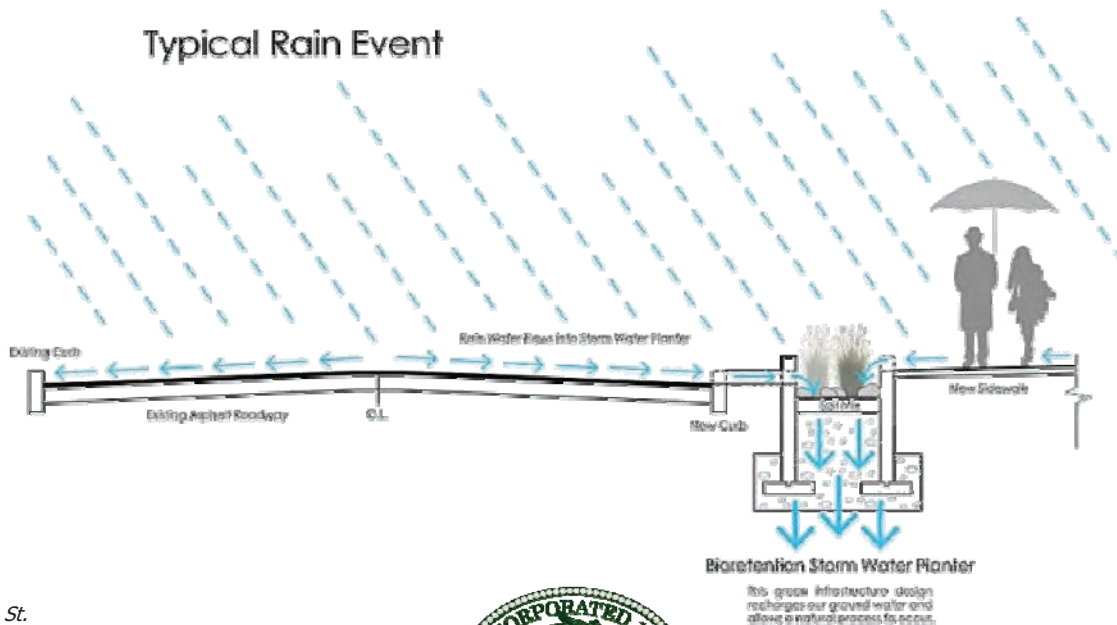
- Buffalo Niagara Riverkeeper



Costs have been reviewed and proportioned down to the ROW widths on East Spring Street and Rock Street. A higher cost was allocated for the East Spring Street (N-S Section) and (E-W-Section) to Rock Street closer to the Mill. A lower cost was allocated for Rock Street and East Spring Street (Rock to N. Cayuga). A separate cost was calculated for the Mill Plaza Area. All construction dollars are in 2013 dollars. A 20% Contingency was also applied. The total cost was calculated to be \$3,300,000.



Typical Rain Event





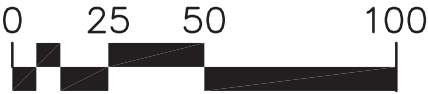
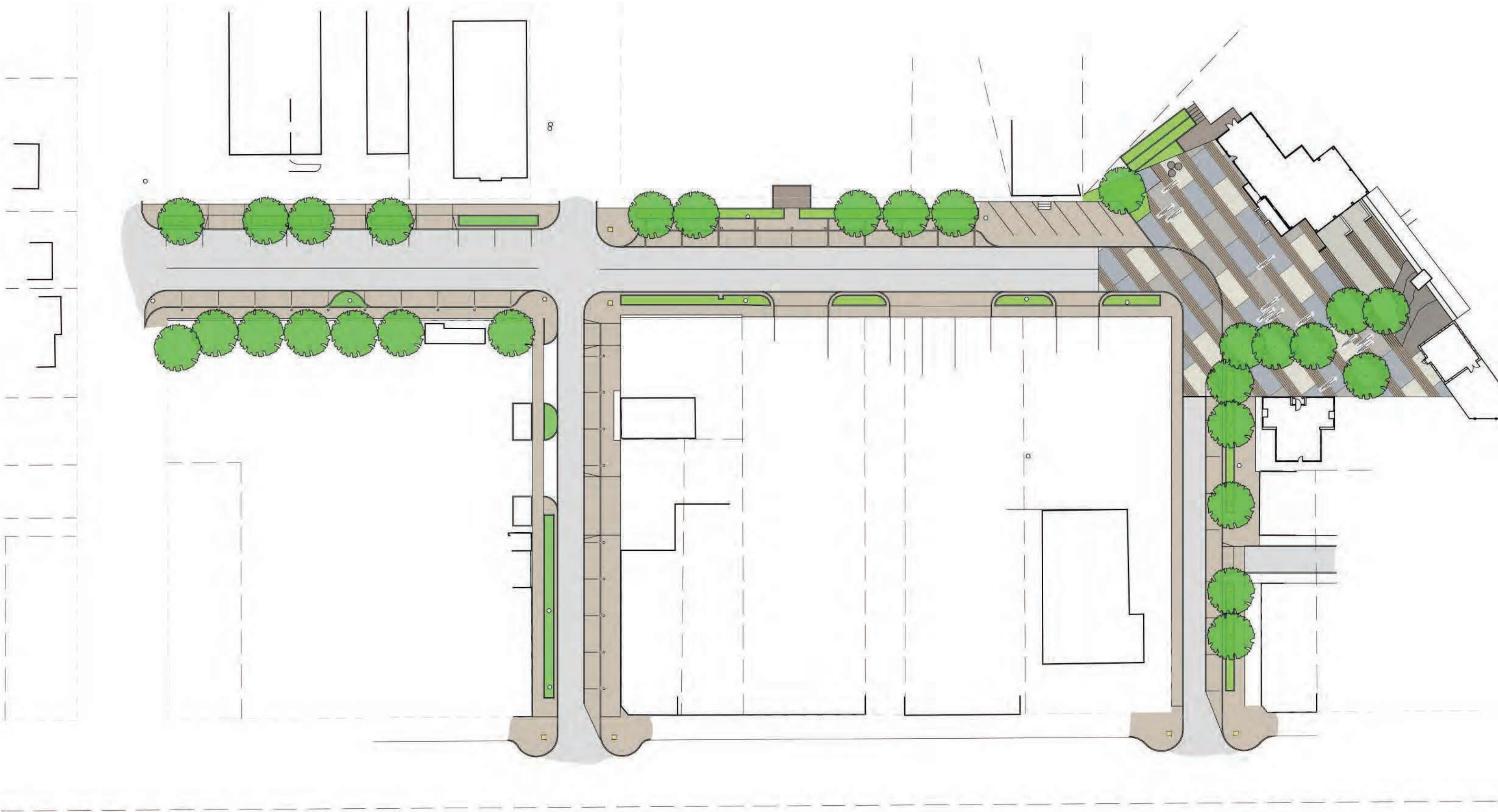
Picture Main Street, Williamsville, NY

EAST SPRING STREET PRELIMINARY ESTIMATE					
					3/26/2013
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATED UNIT PRICE	COST
	CONSTRUCTION DOCUMENTS (6%)	LS	1	\$180,000.00	\$180,000.00
	CONSTRUCTION ADMINISTRATION (4%)	LS	1	\$120,000.00	\$120,000.00
017100	MOBILIZATION AND DEMOBILIZATION (4%)	LS	1	\$110,000.00	\$110,000.00
022100	SURVEY AND STAKEOUT	LS	1	\$8,000.00	\$8,000.00
024116	DEMOLITION AND PATCHING	LS	1	\$40,000.00	\$40,000.00
033000-1.2	EXPOSED AGGREGATE PIGMENTED CONCRETE SIDEWALK	SY	2500	\$100.00	\$250,000.00
033000-1.2	EXPOSED AGGREGATE CONCRETE SIDEWALK	SY	1750	\$90.00	\$157,500.00
033000-2	CONCRETE CURBING	LF	2200	\$55.00	\$121,000.00
033000-3	HANDICAP ACCESSIBLE RAMP THROUGHOUT PROJECT AREA	LS	1	\$40,000.00	\$40,000.00
129300-4.1	BENCH - TYPE 1	EA	8	\$2,000.00	\$16,000.00
129300-4.2	BENCH - TYPE 2	EA	10	\$2,000.00	\$20,000.00
129300-5	TRASH RECEPTACLES	EA	10	\$400.00	\$4,000.00
129300-6	BIKE RACKS	EA	5	\$1,000.00	\$5,000.00
260500	LIGHTING, CONDUITS, RECEPTACLES & CATENARY LIGHTING	LS	1	\$600,000.00	\$600,000.00
261000	RELOCATING UTILITIES UNDERGROUND	LS	1	\$300,000.00	\$300,000.00
312300-1	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	5000	\$20.00	\$100,000.00
312300-2	SUBBASE COURSE	CY	2800	\$40.00	\$112,000.00
312300-2	ASPHALT PAVEMENT	TON	1500	\$100.00	\$150,000.00
321400-3	CONCRETE PAVERS AT RAISED CROSSWALK ON CONCRETE BASE	SY	80	\$300.00	\$24,000.00
328400-1	POTABLE/NON POTABLE IRRIGATION SYSTEM TBD	LS	1	\$50,000.00	\$50,000.00
329113-2	CU SOIL MIX	CY	500	\$100.00	\$50,000.00
329113-3	BIO RETENTION SOIL MIX	CY	800	\$50.00	\$40,000.00
329300-1.1	TREES	EA	40	\$1,500.00	\$60,000.00
329300-2.1	GROUND COVER	EA	3000	\$22.00	\$66,000.00
329300-3.1	BULBS	EA	2500	\$1.00	\$2,500.00
329300-4.1	SHRUBS	EA	150	\$150.00	\$22,500.00
331219-1	HYDRANT REPLACEMENT	EA	2	\$4,000.00	\$8,000.00
331219-2	WATERLINE STUB OUTS	EA	2	\$2,000.00	\$4,000.00
334100-1.2	6" DIA. CPPP (UNDERDRAIN)	LF	2200	\$14.00	\$30,800.00
334100-1.3	8" DIA. CPPP (UNDERDRAIN)	LF	75	\$16.00	\$1,200.00
334100-1.4	10" DIA. CPPP (UNDERDRAIN)	LF	60	\$20.00	\$1,200.00
334100-2	12" DIA. PERF. PVC PIPE	LF	500	\$44.00	\$22,000.00
334100-3	EXISTING UTILITY PIPE REMOVAL	LF	200	\$20.00	\$4,000.00
334100-4	8" DIA. SOLID PVC PIPING	LF	200	\$16.00	\$3,200.00
334400-1.1	DRAINAGE INLETS	EA	11	\$2,200.00	\$24,200.00
334400-1.2	TRENCH DRAINS	EA	10	\$1,000.00	\$10,000.00
334400-2	MODIFY EXISTING UTILITY STRUCTURES	EA	4	\$800.00	\$3,200.00
334400-3	ADJUST EXISTING CLEANOUTS	EA	3	\$250.00	\$750.00
334400-4	UTILITY STRUCTURE REMOVALS	EA	6	\$1,200.00	\$7,200.00
335000	OVERLOOK STRUCTURE / TERRACED RAIN GARDEN	LS	1	\$380,000.00	\$380,000.00
336000	COMMUNITY BEAUTIFICATION ENHANCEMENT	LS	1	\$20,000.00	\$20,000.00
340100	MAINTENANCE AND PROTECTION OF TRAFFIC	LS	1	\$50,000.00	\$50,000.00
344000	SIGNS	EA	8	\$225.00	\$1,800.00
203.18	CLEANING CLOSED DRAINAGE SYSTEMS	LF	200	\$15.00	\$3,000.00
688.010000	WHITE REFLECTORIZED PAVEMENT MARKING STRIPES	LF	1500	\$4.00	\$6,000.00
PRELIMINARY ESTIMATE TOTAL					\$3,229,050.00



EAST SPRING STREET
Williamsville, New York

option 3A





Picture Main Street, Williamsville, NY

5.0 Where are the proposed changes?

5.1 Union to California

Union Road is the Western most boundary of the Village. The intersection is the busiest and most congested. It is not a welcoming threshold. The NFTA park and ride on the South West corner of Main feeds many bus passengers across both Union and Main Street to a stop located on the North East corner of Main Street. The problems are exacerbated by the presence of a major supermarket, fast food chain, large national pharmacy and gas station. The goal of the project will be to create a gateway element that will help downplay the poor visuals provided by a sea of traffic, while implementing curb extensions to provide safer pedestrian crossings and eliminating illegal (and amoral) right hand turns during pedestrian crossings and turn arrows.

The intersection of main and South Long is the first opportunity for motorists to experience the Village, having survived the Main and Union Experience. This intersection, while somewhat non-descript is the direct connection from Main Street south to the Historic Rail Depot, South Long Park and Memorial Trail. The intersection is in need of improved way-finding information delivery and must signal the presence of these Village treasures. South Long itself is in need of attention and street-scaping to give order to the pedestrian experience and to facilitate use of these facilities. That same streetscape ought to have a presence at the intersection at Main.

From Reist Street to Los Robles, the Village has a dense, mixed use environment anchored by high density (senior) housing, coffee shops, salons, a large Roman Catholic Church and a major hotel. These uses promote heavy pedestrian use and crossing instances. The site is an ideal location for a HAWK pedestrian midblock crossing. The area would benefit from improved public realms to bolster significant private investment. Street trees, plantings would provide much needed visual relief and shade. The number of small business and general lack of curb cuts may make this an ideal spot for median treatment. Attention to pedestrian access across and down Village Park Lane needs to promote pedestrian access to South Long park. Way-finding implementations should announce public parking available at the north end of the park. Village Park Lane needs to feel less like a service alley and more like a Village street, it is one way, that direction might be best served reversed (this option should be considered).





Picture Main Street, Williamsville, NY

5.2 Los Robles to Mill

The Los Robles Intersection is among the most prominent crossings for pedestrians. Curb extensions would provide a safer crossing and would provide some relief at corners where buildings are built to zero setbacks.

The heart of the Village is set between South Cayuga Road and Ellicott Creek. Dense mixed-use, historical character, access to 2 major parks, and the location of Village Hall, Town Hall and the Library, make this an important focus area. At South Cayuga, curb extensions will create safer pedestrian crossings. A Mid-block (HAWK Signal) crossing needs to be planned for a sit between the Library and Town Hall and Spring Street. The pedestrian crossings in this area are tremendous in spite of a lack of signal and it currently serves a police crossing for events held in the Village. The Library curb cut might be a possibility for elimination, creating a larger unencumbered plaza in front of Village hall and that facility. Design for public interaction must be a top priority in this focus area, way finding and gateway elements should announce the presence of Glen park, the Creek, the Mill district, the history of facilities such as the Mansion House, the Eagle House and Tuyn funeral home.

The Mill Street Intersection is an interesting study, because a quarter of the vehicles are originating within a large parking lot. Curb extensions should be utilized to give some order to the intersection, because of the wide curb cuts, the quantity of vehicles cutting sharp turns out of the lot and the amount of pedestrian crossings that occur. Screening of the lot and elimination of unnecessary curb cuts will help minimize the problems inherent in this strip mall type design for pedestrians.

5.3 Oakgrove to Evans

A rare opportunity to add parking to the Village core, Oakgrove's West side should be designed for diagonal parking. This would alleviate a vast number of double-parking situations on that road and create opportunities for aesthetic enhancements.

Evans and Garrison form the Village's second busiest intersection, traffic wise and better pedestrian experiences could be provided via curb extensions and medians. The constant right hand turn could be eliminated from Evans turning West onto Main and the triangle modified to form a large pedestrian plaza.

5.4 Academy to Hirschfield

The Village is in need of a gateway element at Main and Hirschfield. That element must announce the arrival to the Village, but also serve pedestrians crossing to Williamsville South HS. This may include curb extensions and median, however, the design may also integrate some vertical aesthetic elements.





6.0 What will it Cost?

2014 Proposed Streetscape Enhancement Project

<u>BULB-OUTS</u>	<u>Cost</u>
Main & Union (2)	\$80,000
Main & South Long (4)	\$160,000
Main & Reist (4)	\$160,000
Main & California (2)	\$80,000
Main & Los Robles (4)	\$160,000
Main & Rock (2)	\$80,000
Main & Cayuga (4)	\$160,000
Mid Block at new HAWK Signal (2)	\$80,000
Main & Spring (4)	\$160,000
Main & Mill (2)	\$80,000
Main & OakGrove (2)	\$80,000
Main & South Ellicott (4)	\$160,000
Main & Garrison/Evans (4)	\$160,000
Main & Hirschfield (4)	\$160,000

*Based on cost of \$40K each
(assumes drainage and granite curbs) \$1,760,000

RAISED MEDIANS

At HAWK Signal (75')	\$30,000
At Main and Evans (150')	\$62,000

*Based on cost of \$400/linear foot \$92,000

ENHANCED CROSSWALKS

Main and Union (n/s on east side)	\$2,000
Main and Reist (n/s on west side)	\$2,000
Los Robles/Grove (all sides) (168')	\$8,000
Cayuga (all sides) (198')	\$8,000
Spring (n/s on east and west sides) (130')	\$4,000
Mill (n/s on east side, e/w on north side) (85')	\$4,000
South Ellicott (n/s on west side)	\$2,000
Main & Evans/Garrison (all Sides)	\$10,000
Main & Hirschfield (all Sides)	\$8,000





Picture Main Street, Williamsville, NY

*Based on cost of \$2,000/crosswalk \$48,000

PEDESTRIAN SIGNAL

HAWK SIGNAL at Library \$250,000

ADDITIONAL ITEMS

Solid Painted Turn Lane \$10,000

Total of additional items \$10,000

TOTAL CONSTRUCTION COST **\$2,160,000**

Contingency (25%) \$540,000

Inspection (15%) \$324,000

Design (20%) \$432,000

Administration (5%) \$108,000

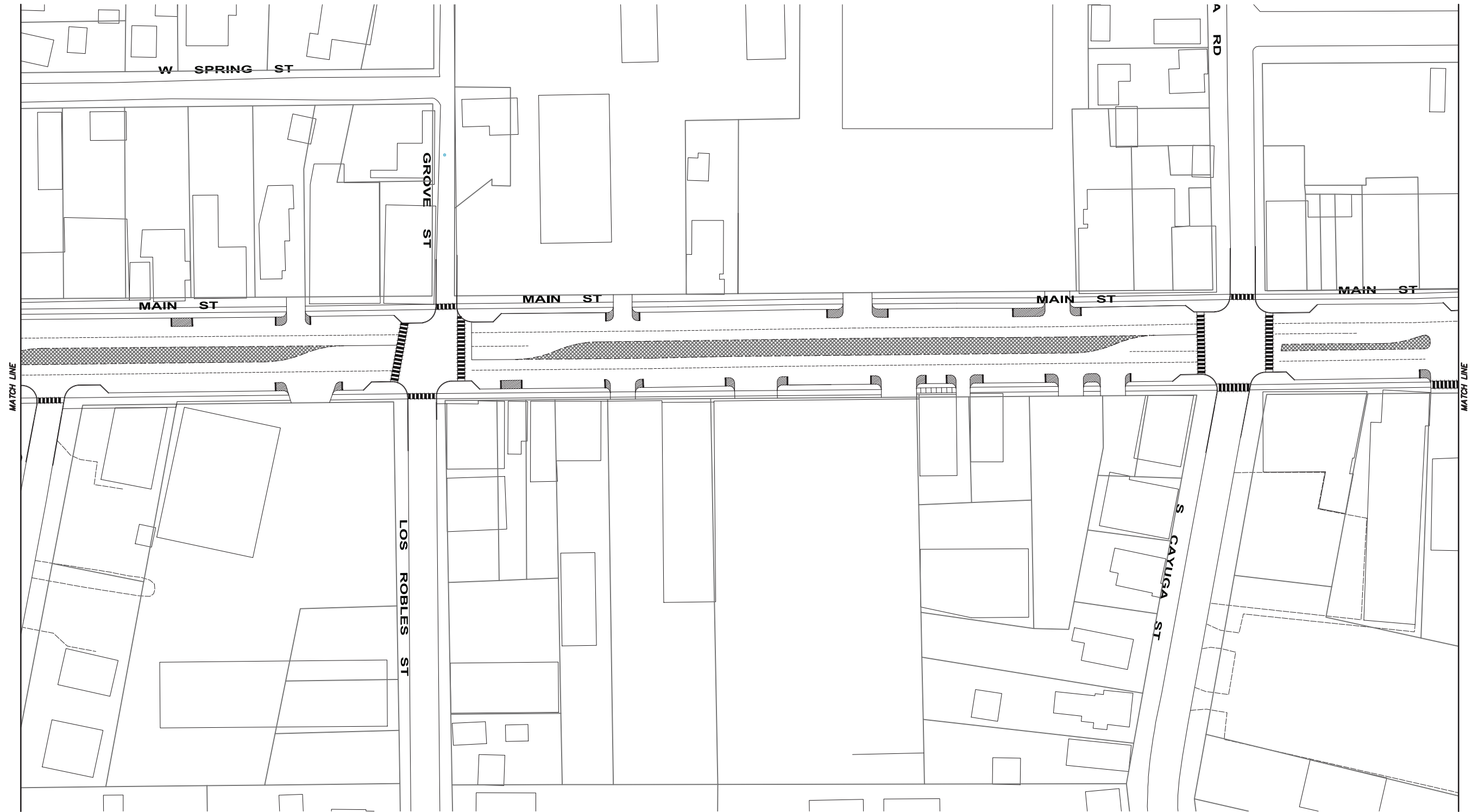
TOTAL PROJECTED COST **\$3,564,000**

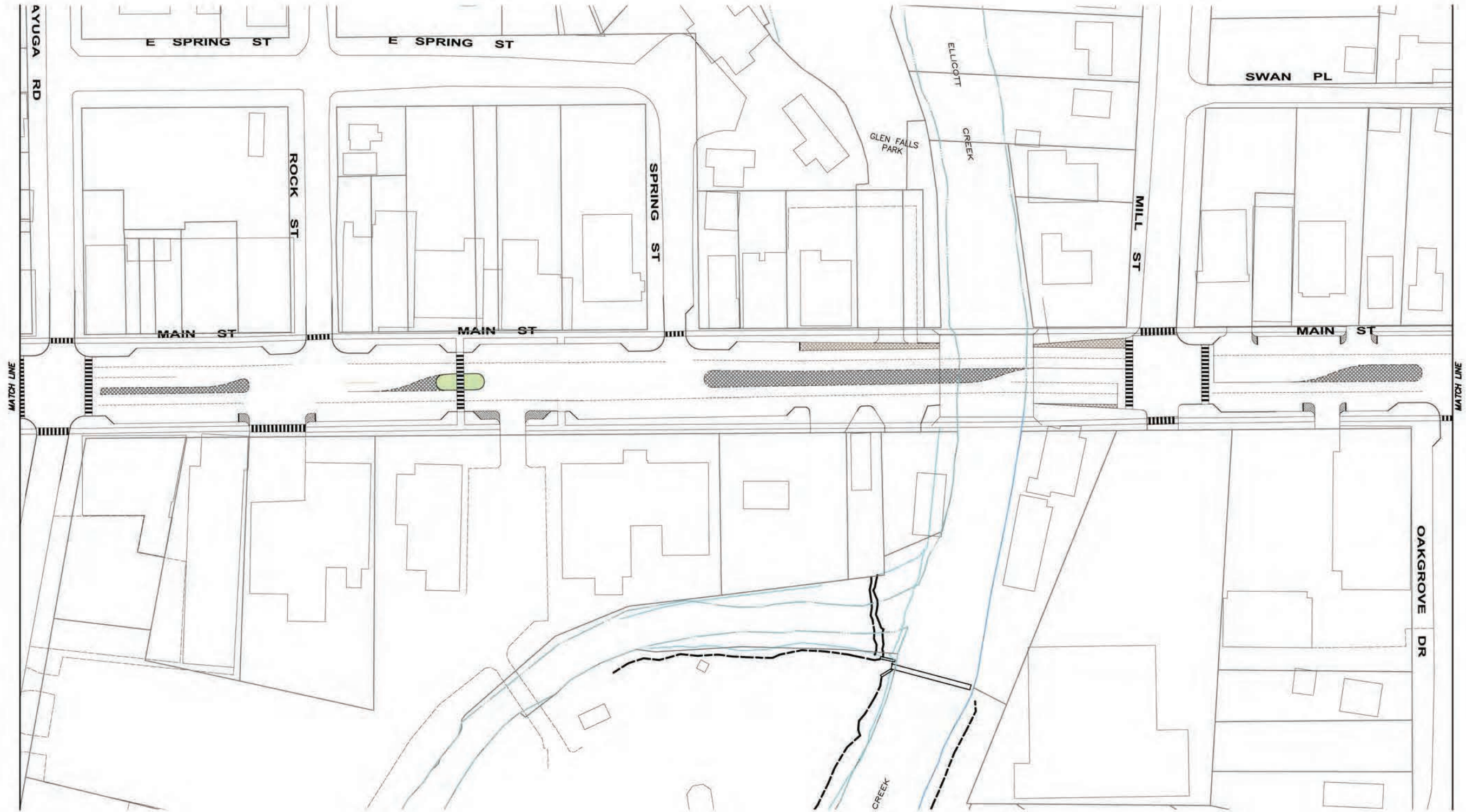
"New York's roadways should safely accommodate all pedestrians, motorists and cyclists, and this legislation will help communities across the state achieve this objective. Complete Streets designs recognize measures that will make streets safer for New Yorkers of all ages and abilities."

- New York State
Department Governor,
Andrew Cuomo











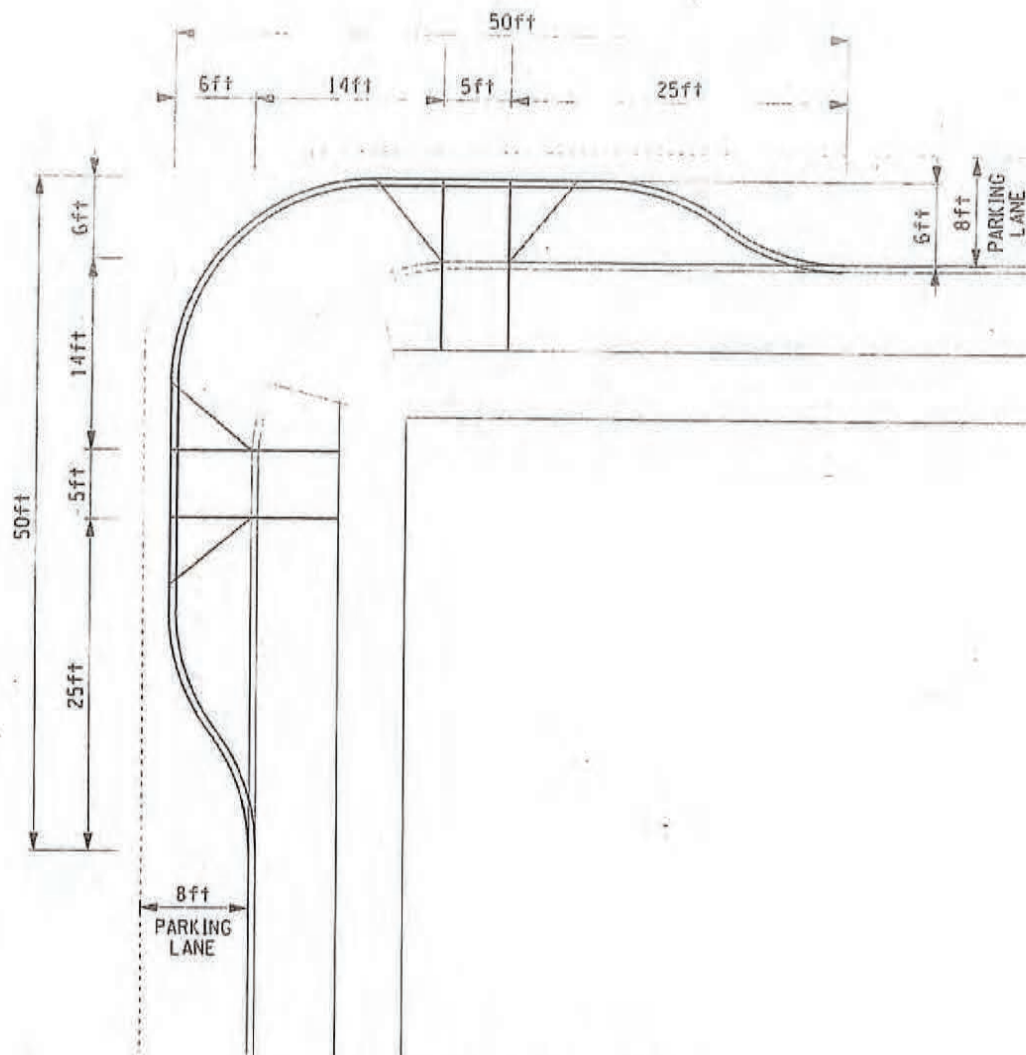


Bulb-out Construction Costs

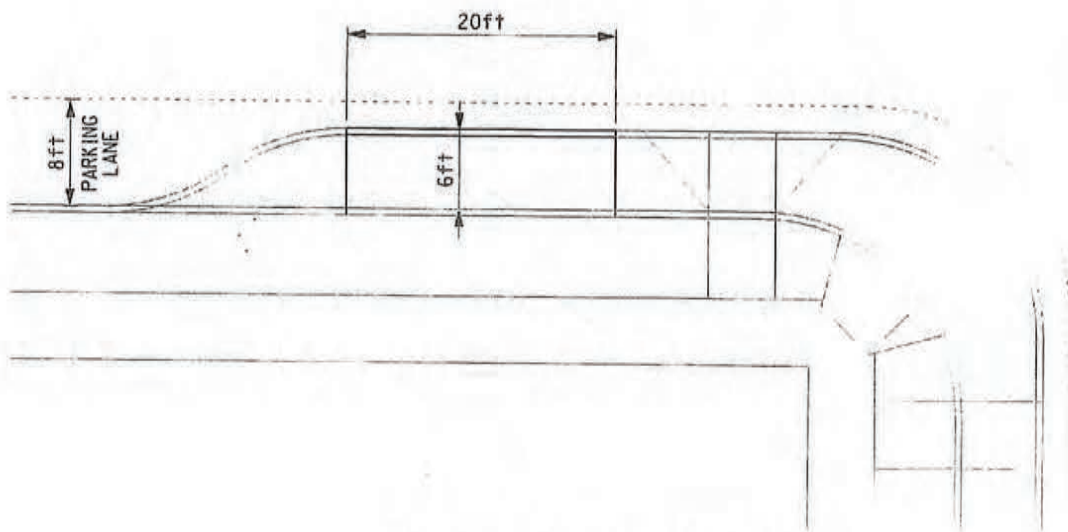
Generic Estimate of Adding Bulb-outs - Comparison				
Bulb-out Features	Double Bulb-out	Single Bulb-out	Mid-block Bulb-out	20' Bulb-out extension
with added drainage modifications	\$39,000	\$32,000	\$20,000	\$5,300
without drainage features	\$29,000	\$26,000	\$14,000	\$3,800
Added cost to upgrade to stamped concrete	\$2,300	\$1,800	\$1,040	\$520
Added cost per Tree Pit with Tree	\$3,500	\$3,500	\$3,500	\$3,500
Added cost to upgrade to Granite Curb	\$4,200	\$3,400	\$1,800	\$600

Assumptions

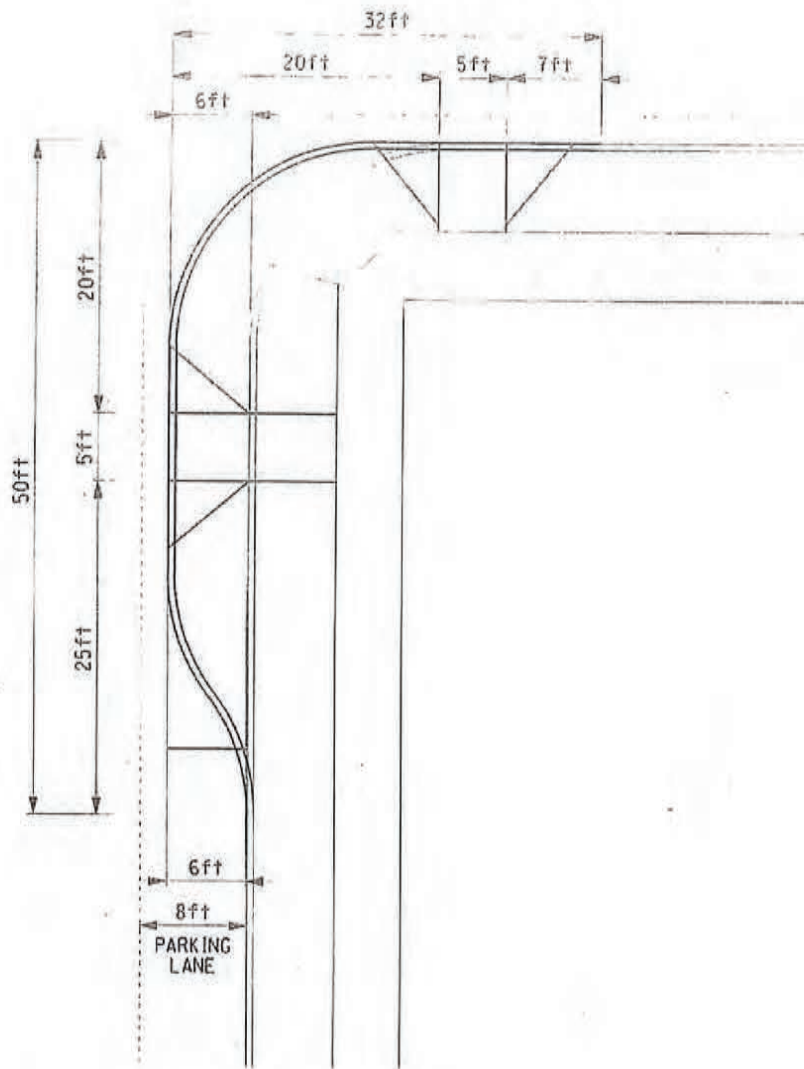
1. Each extension is on a single side of the street or a single corner.
2. Unit prices used for estimating were based on data from the price item catalogue, the Estimator program and estimated costs that the LA/E Unit put together for estimating sidewalk replacement for ADA compliance.
3. Bulb-out costs may be reduced for projects encompassing more than one intersection due to reduced costs for larger quantities of material.
4. Contingencies were not added to any of the estimate costs. Costs shown above are construction cost alone.
5. 8 ft parking lanes with a 6 ft wide extension (bulb-out).
6. New corner radii and bulb-out radii are 15 ft.
7. The cost estimated for the double bulb-out was done with and with-out adding two drainage structures.
8. The costs estimated for the single bulb-out and mid-block bulb-out were done with and with-out adding a single drainage structure.
9. The cost was estimated for the 20 ft bulb-out extension with and with-out pipe. The pipe would be if adding drainage structure to a bulb-out. (For a bulb-out extension other than 20 ft, take the cost, divide by 20 then multiply by the new length.)
10. 24" diameter storm drainage pipe was used for estimating.
11. Hardscape will be concrete or for an additional cost, stamped concrete.
12. Saw cut is 2 ft outside of proposed curb location and also around the remaining perimeter.
13. Used cast in place curb. Granite curb would be an additional cost, assumed twice as much as the cost of cast in place curb.
14. Backfill in front of new curb assumes a concrete base and 1½" asphalt top course.
15. Tree pit – includes structural soil, 2½" caliper tree, and miscellaneous items for planting and care. Cost is also based on quantity of 1-4.
16. Stamped concrete – used entire area from concrete sidewalk and cost difference of items.
17. Costs include relocation or addition of pedestrian signal features, such as push buttons and poles for push buttons.
18. Additional documentation and back-up material is located on O:\Regional\Generic Curb Bulb Out Costs



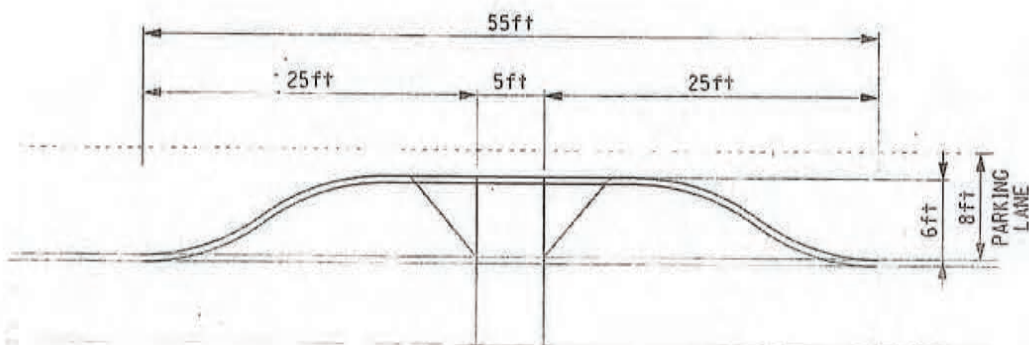
DOUBLE SIDED BULB-OUT



20' BULB-OUT EXTENSION



SINGLE SIDED BULB-OUT



MID BLOCK BULB-OUT