



A VISION FOR THE FUTURE OF IRVINGTON, NY

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Prepared by Saratoga Associates, New York, NY (2014) ©  
 In collaboration with Weidlinger Associates.  
 With grateful acknowledgement of the active participation of the  
 Village of Irvington, Main Street Streetscape Master Plan Steering Committee



Existing



Proposed

## Summary Master Plan Recommendations:

The following list summarizes recommendations made in the body of the Master Plan document:

1. Update crosswalks to incorporate fresh cross-walk markings with bold easy to see lines framing attractive stamped asphalt such as StreetPrint™ with a textured brown-red brick color and pattern. The color should be selected on site and be checked for compatibility with surrounding architecture.
2. Plan intersections as a whole. Incorporate ADA compliant handicapped accessible pedestrian curbs traveling north-south as well as east west. Update sidewalk corners to bring Irvington into compliance with the 2010 ADA Standards for Accessible Design as published by the Department of Justice. NYS DOT has established the local standard for curb ramps in New York State which sets the limits for slopes, flairs, widths, landings, and requires detectable warnings. Handicapped parking spaces on Main Street must also conform to the ADA standards including provision for signs, an accessible curb ramp and painted side aisle.
3. Prior to making costly improvements to sidewalks and roadbed, have a clear understanding of the condition and capacity of utilities buried under Main Street and adjacent sidewalks including water, sewer, stormwater, gas, and fiber optics. Model future needs for these utilities as well as those carried by utility poles; electric, telephone, and cable communications wires. Compare the existing conditions with a prediction of future needs. With a clear understanding of what the long-term needs of the community and for future utilities; determine if burial of overhead wires can be accomplished in tandem with other “in the roadbed” upgrades. Compare that information with an order of magnitude cost estimate to bury the wires and remove the utility poles. Note that several of the existing utility poles are in need of replacement. It is highly desirable to bury the overhead wires and eliminate the utility poles.
4. Follow up with owners of utility poles and wires to insist on a program of regular maintenance and upkeep. Broken or redundant poles are to be removed to free up valuable sidewalk space. Abandoned or unused wires are to be removed. Abandoned or unused panel boxes, brackets, or other attachments are to be removed. Require the utility companies to provide

an annual report of the condition of the poles, wires and appurtenances identifying any items which are not in good condition with a schedule of when those items will be corrected. Let the utilities know that the Village is concerned about the safety and appearance of their facilities.

5. Preserve existing trees with good form and remove trees which are in decline. Plant new street trees in continuous tree pits. These pits, covered with permeable pavers, promote water infiltration and gas exchange between the soil root zone and the air; and provides expanded soil area for healthy root growth. Plant a diverse selection trees from an approved list of street trees selected for their environmental hardiness; assuming a trend for more extreme weather patterns, and tolerance to known pests. Species selection should be mindful of not blocking views of the river and historic architecture. Offset tree locations to prevent conflict with underground connections and access to street to property water, sewer, gas, electric, and communications lines. Maintain offsets of trees from street lighting and fire hydrants. A table of customary tree offsets is appended to the Master Plan. Do not plant street trees or tall vegetation where it can block the critical cone of vision for motorists.

6. Improve pedestrian safety by clearly marking pedestrian crosswalks, reducing the crossing distance by implementing sidewalk extensions where feasible. Make use of sidewalk extensions to create small social spaces that include plantings, benches, and tables and chairs where possible. Sidewalk extensions to shorten crosswalk lengths and increase pedestrian safety. (curb-height or flush with pavement TBD). At locations of very active loading zones, sidewalk extensions can be placed at grade with special pavement treatments to identify that the location is not parking and not travel way. An example of this is placement of rough granite block pavers to provide a visual, tactile and audible cue not to drive over the extension. Fourteen sidewalk extensions would displace thirteen parking spaces. Raised sidewalk extensions may require modifications to snow removal practices at some locations. Sidewalk extensions would give side street drivers better view around parked cars when turning onto Main Street.

7. Provide distinctive sidewalk patterns where driveways cross the sidewalk to alert pedestrians to possible car crossings.

8. Provide distinctive street pavement coatings or pavements to distinguish gateways to the Village such as at Astor Street at the railroad passenger pick-up and drop-off area and at the Old Croton Aqueduct trail crosses Main Street. The OCA trail location encompasses the War Memorial island which is envisioned as a significant civic ceremonial gathering and celebration space.
9. Improve Main Street lighting. Update 30' ht street lights from Cobra head lights attached to wooden poles to a Flatbush Style metal streetlight with attachments for holiday decorations and flags. Provide pedestrian level lighting, especially at mid-block locations on the south side where there is inadequate illumination.
10. Enhance the Historic character of the designated Historic District. Bury the overhead wires and remove the wooden utility poles to reduce visual clutter and allow the historic architecture to be clearly seen. Recommend use of period appropriate paint colors (1890 to 1930). Recommend use of commercial signs with low level lighting. Follow Local Law 7 of 2013 amending the Village Code with Respect to Signs and Awnings.
11. Provide sitting areas, pocket parks or plazas of varying sizes to enhance social interaction, enliven the streetscape, welcome visitors and stimulate local business. Make use of underutilized open space to create social spaces and sitting areas. Recommended spaces for improvements:  
Broadway bus stop (Broadway Gateway)  
OCA trail intersection / linkage  
School hillside next to Village Hall  
Side yard of the Recreation Center  
Astor Street Transportation Gateway
12. Establish a palette of site furnishings that reinforces compliments and promotes historic Irvington's character and image.
13. Reduce visual clutter on the street by reviewing signs related to street parking and rules at least every five years and retire / remove signs if they are no longer relevant.
14. Establish a restrained and elegant program of signs for street signs, welcome and orientation, destination signs, and interpretive signs. The signs should be limited and carefully selected to avoid contributing to visual clutter and should help visitors orient themselves and find significant destination points including; welcome to Main Street Irvington Historic District, the Historic Society, the Farmers' Market, the OCA trailheads, Village Hall, the Tiffany Reading Room, the Irvington Theatre (related parking at School), the Irvington Library, the train station, Trent Building, and access to waterfront businesses and park(s).
15. In place of interpretive signs of text and photos, make use of small art items and / or panels (on walls or on pavements) to celebrate and interpret Irvington's historic past. Make use of internet based technologies to call up text, images, and recordings related to historic storytelling and avoid installing traditional interpretive signs.
16. Reduce stormwater runoff entering the storm water system and encourage ground water recharge through infiltration strips, bioswales and expanded tree pits. Bioswale plantings can be used to introduce flowering plants and add seasonal interest.
17. Consider reinstating a commuter shuttle bus service during peak commuting times to alleviate the problem of parking.
18. Identify opportunities to locate Village employee and proprietor parking off of Main Street. A remote parking location may be supported by a commuter shuttle bus.
19. Identify potential options to expand future parking off of Main Street as part of any plans for repurposing of Village land at the DPW site, the Firehouse, or the EMS garage.

## Master Plan Introduction & Summary

- The Village of Irvington embarked on a serious discussion about revitalizing Main Street during the summer of 2013. Now, in July 2014, one year later, the Village has a conceptual Main Street Streetscape Master Plan. In the interim a number of very significant things have happened. The Main Street corridor has achieved Historic Designation by the National and State Historic Preservation Commissions. It is within this context that the Village solicited consultant bids and hired Saratoga Associates to conduct a master planning process for the Village to create a vision for the future of the Main Street streetscape that will provide for a vibrant social center, an attractive business district, and a sustainable infrastructure that is sensitive to the context and historic qualities of this special river village.
- Saratoga Associates, Landscape Architects, Architects, Planners and Engineers; were joined by Weidlinger Associates, an engineering firm, to carry out the Master Plan process. At the outset a Streetscape Steering Committee, consisting of 12 Irvington residents, including three with businesses on Main Street, was convened. This group met four times with the Saratoga team lead by William Kuhl, FASLA, and Harriet Grimm RLA, ISA, LEED<sup>AP</sup>; accompanied by other professionals from their firm and their Weidlinger colleague, Peter Bakarich, PE. The team made interactive public presentations after each of the three steering committee meeting to reach as wide an audience of Irvington community members as possible. The first presentation focused on existing conditions and identification of Main Street opportunities and issues. The second presentation introduced concepts for enhancement of the Streetscape including concepts for traffic calming, pedestrian safety, pavement materials, and treatment of street trees, lighting, and site furnishings. Locations and general programming for potential social spaces were identified. Following that meeting, a web-based survey was conducted to gain a sense of community responses and preferences. At the third public meeting concepts or visions for how the street and social spaces can be enhanced were refined and presented. A Fourth public presentation was made to the Board of Trustees with particular emphasis placed on a discussion of an option to bury overhead utility wires. Following each meeting, presentation materials were posted to the Village website and linked to the Village Facebook page. At each of the three public Streetscape Master Plan meetings, each with more than 30 in attendance, there were opportunities for public comments and suggestions. Email exchanges and 184 survey participants rounded up the public engagement to date with the process.

## Master Plan Introduction & Summary



Existing



Project area

# Project Introduction & Summary

- Main Street in Irvington is the original unifying spine along which the Village of Irvington developed. It was originally laid out with dead ended A, B, C streets running from the public dock on the Hudson River to the top of the hill where Broadway runs north /south. Eventually the cross streets were given names after early settlers and others of the area; Astor, Buckhout, Cottenet, Dutcher, Eckar, and Ferris. The Village, originally named Dearman, was re-named Irvington in 1854 in recognition of its famous resident, author, Washington Irving. The Village has also been home to other notable persons including Charles Lewis Tiffany, Madam C.J. Walker, Cyrus W. Field, and John Jacob Astor III and past enterprises have included Lord & Burnham (maker of boilers and greenhouses) and Cosmopolitan Magazine. Currently headquartered in Irvington are Columbia University's Nevis Laboratory and fashion designer Eileen Fisher.
- The roadway rises steeply from Astor to Cottenet and then is less steep as it approaches Broadway to the East.
- There is a mix of commercial, multi-family residential and single family homes along Main Street. Most buildings on Main Street are recognized as contributory to the New York State designation as a Historic District and the Main Street has been added to the list of National Register of Historic Places. The period of the designation is from 1890 to 1930.
- The view westward down to the Hudson River from Main Street is beautiful and retains the historic connection of the Village to the River. Commerce and transportation along the river was part of the original settlement pattern for the village. With the advent of the rail road, separating the downtown from the River, the railroad became the hub of transportation, connecting to New York City and Albany and as a commuter connection to New York City, 40 minutes to the south.
- In the mid-20<sup>th</sup> Century development of interstate highways and the Tappan Zee Bridge, a few minutes away, has placed Irvington in close proximity to regional transportation corridors.
- Irvington transportation is served by the MTA Metro North Railroad and the Westchester County Bee-Line bus service.
- Irvington is an affluent suburban village in the Town of Greenburg in Westchester County, New York. It has a population of 6505 persons (2012) with a household median income of \$96,467.
- Main Street is bisected by the Old Croton Aqueduct which is part of the NYS Old Croton Trailway. The Aqueduct is a National Historic Landmark.

## A SUCCESSFUL STREETScape IS . . . .

- A Place for People
- A Place of Civic Pride
- A Place to tell a Story
- A Place for Artistic Expression
- A Place to Touch Nature
- A Place to Tell Time
- A Place for Everyone
- A Place for Celebration
- A Place that Knits a Village Together
- A Place to See and Be Seen



Master Plan Vision for Main Street

## Project Methodology

### Project Methodology:

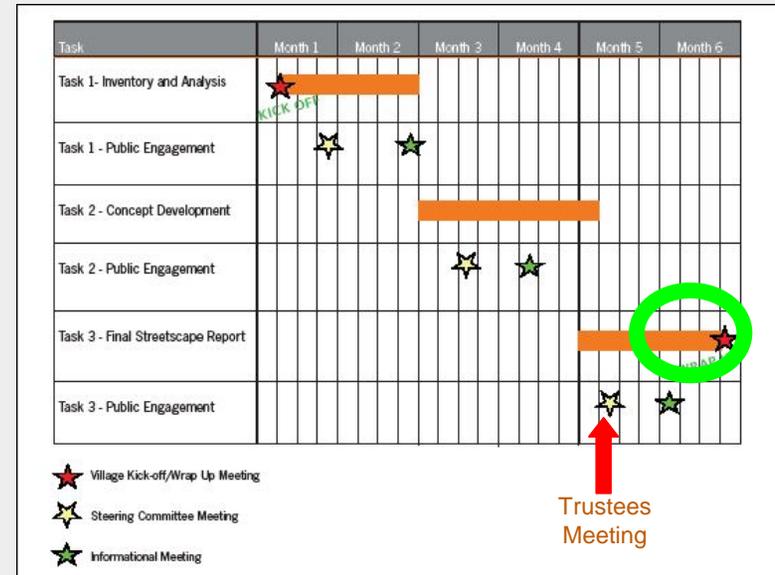
The Saratoga Associates team comprised of landscape architects, planners and architects was joined by civil engineers from Weidlinger Associates to engage the residents of the Village of Irvington in a master planning process to develop a Master Plan for the improvement of the Main Street Streetscape.

This report is the end product of that planning process. Along the way, however, there were a number of key elements including an investigation of existing conditions, an analysis of existing conditions, identification of desired program elements, the creation of possible design concepts and the establishment of future implementation goals and priorities.

This is a process that made regular use of public outreach and community input to synthesize and vet the information gathered and the ideas generated. To insure that the planning process was guided by the people of Irvington, the project began with the establishment of a 12 person steering committee. This committee met at regular intervals throughout the planning process. Saratoga Associates and Weidlinger staff participated in these meetings bringing together landscape architectural, planning, architectural and engineering expertise. Steering committee members and it's chair person maintained contact with the planning and design team throughout six months of planning and design. At regular intervals Saratoga Associates conducted public meetings explaining the information gathered and the ideas generated. Each meeting allowed for public responses both written and verbal. An email address was set up to collect additional comments and questions.

Once a critical mass of plan concepts were generated; an electronic survey was circulated to persons who attended steering committee and public meetings. The same survey was also posted to the Village Facebook page. In total 184 individuals responded to survey questions to gain feedback and suggestions regarding concepts explored.

The Master Plan is the synthesis of the findings of the Master Plan. Goals and recommendations have been thoroughly vetted with the twelve member Steering Committee. The steering committee included the following persons; Ann Acheson, Ken Bernstein, Michael Bradley, John Canning, Steve Caporal, Larry Frascella, Ellen Galano, Connie Kehoe (Chairperson), Kenneth Lewis, Anne Meyers, Eve Prime, Larry Schopfer, Gerrie Shapiro and Amy Sherwood.



A Steering Committee Meeting

## Existing Conditions

### Topography

Main Street slopes down from East to West toward the River. The slope west of Cottenet is in excess of 8.33%. The street commands a very good view of the Hudson River below.

Steps, stoops and building entrances are modified to adjust to the sloping sidewalks.

Drainage is quickly concentrated along sidewalk curbs / gutter lines and sometimes overtops the curbs at parked car tires.

### Existing Pavements & Curbs

Main Street is an asphalt roadway with several layers of asphalt topping over a thick concrete base. Restoration repaving without the benefit of milling off the surface has resulted in reducing curb reveals from a standard 6" height to less than 4" in many places. Sidewalks including curb are 13 feet on the North side and 12 feet on the south side.

Curbs on Main Street are short sections of granite. Curbs on side streets are typically bluestone.

Handicapped access ramps are provided running in an east to west direction; but almost all north to south crossings do not accommodate handicapped persons. Ramps in general do not meet the current ADA 2010 guidelines.

Crosswalks are marked for north / south crossing at Astor Street (E), Buckhout (W), Cottenet (E), Dutcher (W&E), Eckar (E), Ferris (E), Croton Place (W) and Broadway (W &E). Markings are worn and faded and in need of re-marking as soon as possible.

Hydrant zones, driveways and various loading zones are marked with yellow diagonal stripping.

Active driveways cross sidewalk areas at four locations on the north side and ten locations on the south side.

Less than half of all sidewalk areas on Main Street are in Good condition. A majority of sidewalk areas are in fair to poor condition with evidence of cracking and spalling.



### Existing Parking Conditions

Limited parking is of great concern to Main Street businesses and residents. Both are dependent on spaces on Main Street as their only convenient option for parking.

There is one small municipal lot by permit on Main Street and the Village leases another lot on N. Astor Street to the MTA.

Diagonal parking spaces with very limited visibility for backing up is provided on the north side while parallel parking is provided on the south side. All parking is time limited as indicated by signs.

## Existing Conditions

### Circulation

- Main Street is the primary point for access and egress to the Village community. Most side streets are dead ended or have limited through connections.
- Lack of circulation options results in the need to make a greater than normal number of U-turns on Main Street, especially at the intersections with Ferris and Cottenet Streets.
- The presence of diagonal parking on the north side of the street significantly narrows the travel way east / west.
- Designated parking spaces on the south side are very close to street corners limiting visibility of oncoming vehicles and making turning and recovery turning difficult.
- The location of the rail road station at the bottom of Main Street makes for hurried driving through Main Street past the school, recreation center, Village Hall, and many homes and businesses. Residents express a concern that crossing Main Street is unsafe.
- Main Street is posted with signs indicating the state law that pedestrians have the right-of-way. This was reinforced by movable plastic crosswalk signs which have been placed to the side because they keep getting hit by cars.
- Traffic waiting to turn on to Broadway at the light gets backed up during peak commuter travel times.
- School busses make several pick ups along Main Street and use the school parking lot for school drop off and turn around.
- Significant numbers of vehicles enter Main Street traveling to Bridge Street to get to Bridge Street Properties and Scenic Hudson Park. Others are traveling to offices at the Trent Building on South Buckhout Street. Fire, EMS, Police and DPW vehicles travel on Main Street to and from their garages. All but DPW are immediately adjacent to Main Street.



### Accessibility

Curb ramps are provided for east / west street crossings, but only one ramp is provided for north / south crossing of Main Street. Handicapped parking is provided but without required curb cuts and pedestrian ramps. Pedestrian curb ramps do not meet 2010 ADA guidelines. Slopes greater than 1:12 on the west end of Main Street make wheelchair access along the public sidewalk very difficult without assistance. Diagonally parked cars on north side of Main Street make visibility of oncoming cars very difficult for children and persons in a wheelchair.

## Existing Conditions

### Street Trees and Green Infrastructure

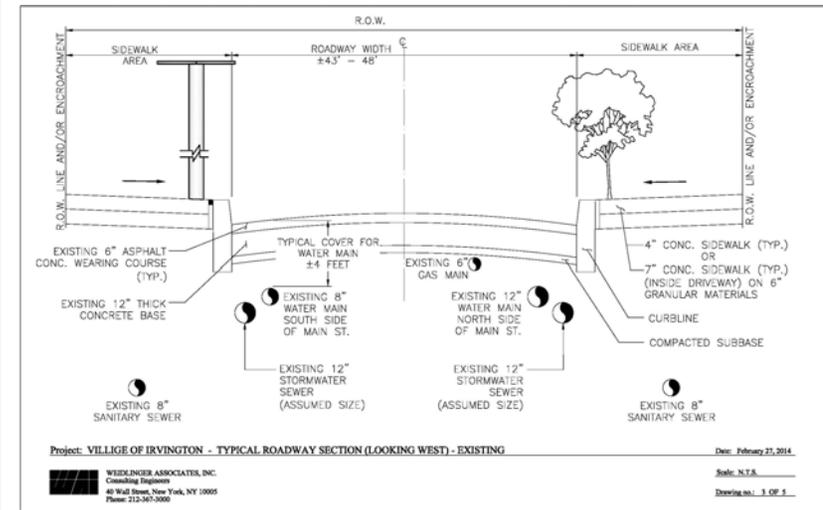
- A tree inventory was conducted on Main Street finding a total of 55 trees planted in tree pits behind the curb along the sidewalk. Another 18 empty tree pits were also found.
- Existing trees included Red Maples, Oaks, Callery Pear, Zelkova, and Ginkgo.
- Of the 55 trees recorded 14 were found to be in good condition, 33 in fair condition and 8 in poor condition.
- Trees located below overhead utility lines are deformed by extensive utility pruning practices.
- Tree pits are generally undersized (less than 5' x 5' openings).
- Tree pits are not uniform. Some are bare earth, gravel, bricks or cobbles.
- Some trees are located too close to street lights, i.e. within 25 feet of street lights.
- Empty tree pits are not consistently covered to avoid a tripping hazard.

### Overhead Utilities

- Overhead utilities are carried on steel utility poles at Broadway where they are transferred to wooden utility poles running east-west on both sides of the street. Some utility wires cross diagonally crossing over Main Street.
- Con Edison maintains electrical wires, transformers and related panel boxes and cross bars at the tops of utility poles.
- Verizon and Cablevision carry wires at a mid and lower level on utility poles.
- Utility poles also carry Cobra-head street lights at corners and midblock on the south side of the street.
- Utility poles are also mounting positions for holiday lights, flags, street signs and traffic signs.
- Some utility poles are secured in place by a secondary pole.

### Historic District Designation

- Main Street was placed on the National Register of Historic Places in 2014.
- Main Street received New York State designation as a Historic District (1830 to 1930) in 2013.
- The majority of buildings on Main Street are contributory to the historic designations.
- The Lord & Burnham Building, Village Hall, and the McVikar House are each individually listed on the National Register of Historic Places.



### Underground Utilities

- Diagrams of underground utilities for water and sewer were obtained from the Irvington DPW. Area enlargements are included in the appendix. Maps and diagrams for gas and fiber optics could not be obtained from the village DPW, Town Office, West Chester County, or from Con Edison, Verizon, or Cablevision.
- Underground utilities include an 8" sanitary sewer under sidewalks, stormwater which is connected from catch basins to an assumed 12" collector pipes on both sides of the street, a 8" water main on the south side of Main Street, a 12" water main on the North Side of Main Street and a 6" gas main running on the North side of Main Street.
- The road bed is asphalt pavement over a 12" deep concrete base.
- Depths / inverts for utilities are not known.

## Street Infrastructure

### Utility maintenance:

Follow up with owners of utility poles and wires to insist on a program of regular maintenance and upkeep. Broken or redundant utility poles should be removed to free up valuable sidewalk space and reduce visual clutter. Abandoned or unused wires should be removed. Abandoned or unused panel boxes, brackets, or other attachments should be removed.

Village leaders should request that the utility companies provide an annual report of the condition of the poles, wires and appurtenances identifying any items which are poor condition and identifying when these items will be corrected.

Put the utility companies on legal notice that the Village is concerned about the safety and appearance of their facilities.



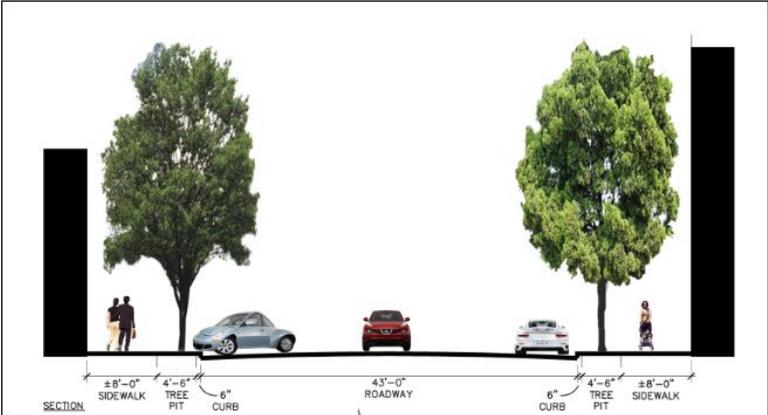
# Street Infrastructure

## Street Infrastructure

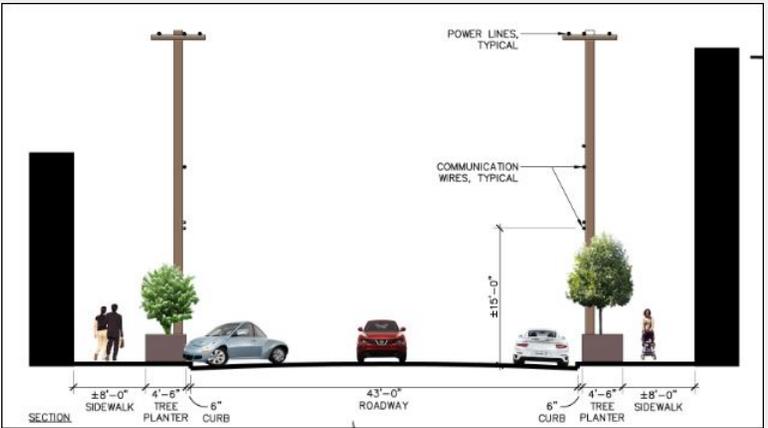
- Prior to making costly improvements to sidewalks and roadbed on Main Street, it is important to have a clear understanding of the condition and capacity of existing utilities buried under Main Street and the adjacent sidewalks. These utilities include water, sewer, stormwater, gas, and fiber optics. Each utility system has a material life-cycle which requires replacements over time. Cost of a planned replacement/upgrade that could also include burial of the overhead wires would be less costly than continual, haphazard emergency-driven replacements. It will be prudent to model future demands for these utilities as well as those carried by utility poles: electric, telephone, and cable communications wires.
- It is unquestionably highly desirable to bury the overhead wires and eliminate the utility poles. It is also expensive.
- A decision to bury overhead wires or retain them can best be made in the context of understanding what future needs will be and what work will be required in the street in coming years. It would make most economic sense to bury overhead wires when this can be accomplished in tandem with other “in the roadbed” upgrades.
- If wires are not buried, pedestrian-level Worlds Fair Light Poles cannot be installed. Additional lighting on the sidewalk may be accomplished by adding ground level lighting in planters. See the illustration below.



Sidewalk planter with ground level lighting.



Wires Buried: Standard trees planted in tree pits



Wires and utility poles retained: Small trees, large shrubs planted in pots

### Site challenges:

The major challenge for re-envisioning Main Street is to utilize the early 19th Century street layout in the context of a late 19th to early 20th Century History District and to provide a 21st Century sustainable green infrastructure while still trying to live with the cars that have come to dominate the late 20th and early 21st Century. We envision a future Main Street less dominated by cars and less fettered by the tangle of power and communication wires that have obscured the intact and charming architecture of the period of 1830 to 1930. It is this architecture and the view of the river which gives the Village so much character and charm. All plans should look to celebrate and enhance the views of the River which was once the link between the Village and the world beyond.

Lack of off street parking throughout the Village presents significant challenges in a car- and convenience-dominated national culture. There is limited parking for residents on Main Streets and adjacent side streets which places an even greater demand on parking for Main Street retail. This high demand for parking has resulted in diagonal parking on the north side of Main Street making an already narrow travel way east and west even more narrow. Limited vision around diagonally parked cars makes for difficult pedestrian street crossing. Limited loading and unloading areas makes it difficult for local businesses to receive or send goods. Dead end streets off of Main Street present problems for trash pick up, snow removal as well as deliveries to these streets.

Layers and layers of overhead power and communication wires, utility poles, transformers and panel boxes lining both sides of Main Street detract from the views of striking late 19th and early 20th Century architecture and the grand view of the Hudson River beyond. Plans for future upgrading of buried infrastructure should also consider burial of overhead wires. Burial of wires would provide greater resiliency to winter storms with fewer downed wires.

Sloping topography is a factor to be addressed all along Main Street in planning placement of street furnishings.

Residents need to have a more vibrant street on which to safely and pleasurably walk, exercise, and meet daily living and social needs without driving to another town. Increasing numbers of residents and businesses will telecommute in the coming decades and the value of living in an attractive, compact, and green riverside community will continue to increase.



Aging infrastructure in the bed of the street needs to be surveyed and inventoried. Plans need to be in place over the course of the next decade to upgrade utilities. Work below ground needs to be coordinated with work to make Main Street safer, greener and more attractive to business and visitors. Breakdowns and emergency repairs to underground utilities are both costly and disruptive.

Investments in roadway, curbs, sidewalks and site furnishings are best made as part of street-bed improvements to insure the long, undisturbed life of new surface treatments. An inventory and evaluation of existing underground utilities in the bed of Main Street will be indispensable to the Village Trustees to identify the needs for repairs, replacements, and upgrades in the foreseeable future and beyond. Long-range planning and funding strategies are desirable especially since it is likely that the Village will need to fund projects that can be reimbursed later. A discussion of funding strategies is in a later section of this Master Plan.

The challenge will be to maintain the smooth flow of traffic while improvements are made. Project planning and timing is of the utmost importance as unplanned capital work is costly and disruptive.

## Site Opportunities

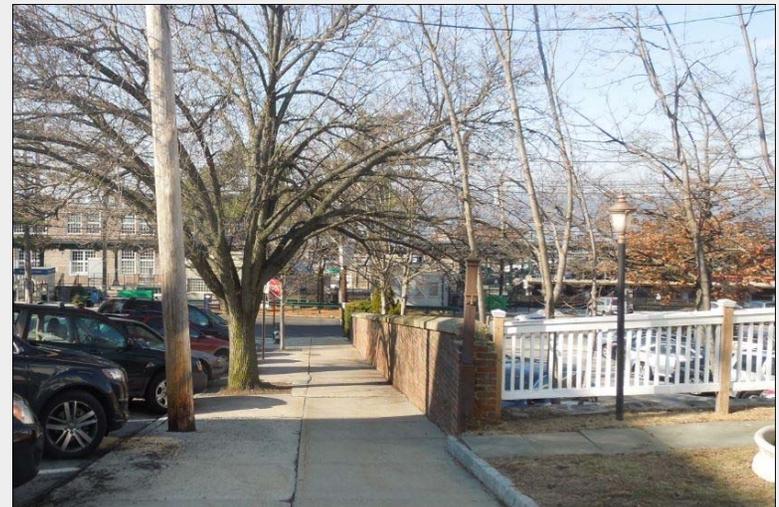
Main Street, with close access to public transportation, the waterfront, and a State recreational trail system has opportunities to provide stronger transit linkages that do not require heavy dependence on private transportation.

Village services including Fire, Emergency Medical Services and the Department of Public Works as well as the local gas station, occupy valuable land which may one day provide needed affordable housing, 'walk-to' food shopping and a lowered carbon footprint lifestyle which is anticipated in the first half of the 21<sup>st</sup> Century.

Underutilized locations including the hillside between the Main Street School and Village Hall, the lot on North Ferris Street behind the Theatre and the lot next to the I.K. Benjamin Recreation Center may provide much needed green, social open space. The location of the war memorials, the sitting areas along the Old Croton Aqueduct Trail and the rear of the parking lots at the trail connections to NYS recreation trail may afford space for benches and social spaces.

Parking facilities such as the lot at the NE corner of North Astor and Main Street can double their capacity by adding a parking deck. Existing grade conditions would make it possible to allow access to and from the upper deck from Main Street and a separate access point from North Astor to the lower level.

Main Street can be envisioned as a safer more pedestrian friendly place for children and seniors who are likely to spend a full 24-hour day within the Village. Increasingly telecommuters will seek places to live that also afford the benefits of a walkable Village with a variety of green outdoor spaces and small local venues that can support the social, emotional, and business support needs of a future affluent work from home workforce.



# Project Goals

## Pedestrian Safety

### Pedestrian Safety

#### Existing Conditions:

Pedestrian safety on Main Street is compromised by a number of factors. Traffic travels up and down Main Street with only one traffic light at the top of the hill at Broadway and a stop sign at the bottom at North and South Astor Streets. Between those two points, cars stop only for pedestrians in the crosswalks. Movable paddle signs intended for placement at the center of the crosswalks are set to the side because they are regularly hit by cars. First time visitors may not be aware of the rule, in spite of it being a New York State regulation to stop for pedestrians in a cross walk. Crosswalk striping is faded and in need of a fresh coat of traffic paint. Cars make very frequent U-turns on Main Street because there is no convenient outlet back to Broadway and only two convenient driving loops from which to reverse direction. Cars entering Main Street from side streets have difficulty seeing on coming vehicles because diagonally parked cars on the north side of the street and cars parked too close to corners on the south side reduce visibility. Drivers may lurch out into the pedestrian zone quickly to enter Main Street. First time visitors and others traveling from east to west may be distracted by the special views downhill from Main Street to the Hudson River. Pedestrians have difficulty seeing around diagonally parked cars on the north side of Main Street and drivers have an equally difficult time anticipating their movements. Vehicles backing up and out of diagonal spaces have difficulty seeing westbound vehicles approaching. One of the key destinations for west bound vehicles is the railroad station. Commuters rushing to the train are typically traveling at peak pedestrian times as well. East bound traffic is often congested at the traffic light. It is common to see as many of eight cars stacked at the stop light during commuter times. Between traffic peaks, traffic is light and cars tend to drive too fast. While the Irvington Police are stationed on Main Street, ticketing of speeding cars is reportedly infrequent.

#### Recommendations:

- Improve pedestrian safety by clearly marking pedestrian crosswalks.
- Re-stripe N/S and E/W crossings with white paint in the near future.
- Announce the stopping for pedestrians in crosswalk rule at the top of Main Street with a fixed sign.
- Provide a color, textured asphalt such as Endurablend™ or StreetPrint™ bounded by white striping to clearly call out the pedestrian zone. The high contrast color can be adjusted to be harmonious with the historic architecture.
- Reduce the crossing distance by providing sidewalk extensions where feasible. Sidewalk extensions would give side street drivers better view around parked cars when turning onto Main Street.

Existing



Example of proposed Endurablend™

# Project Goals Universal Access

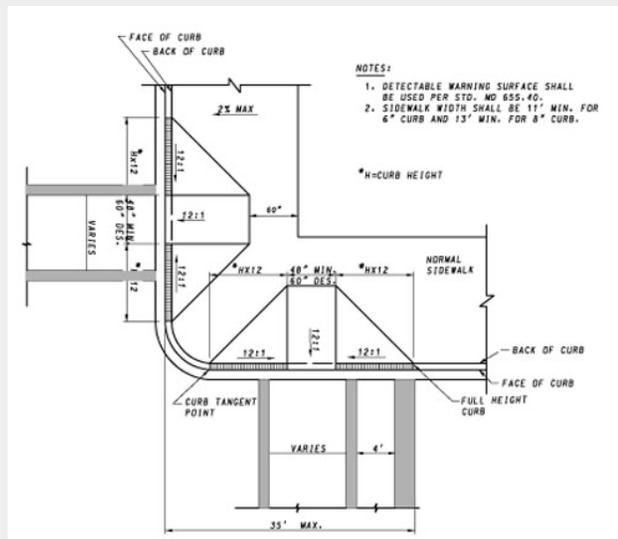
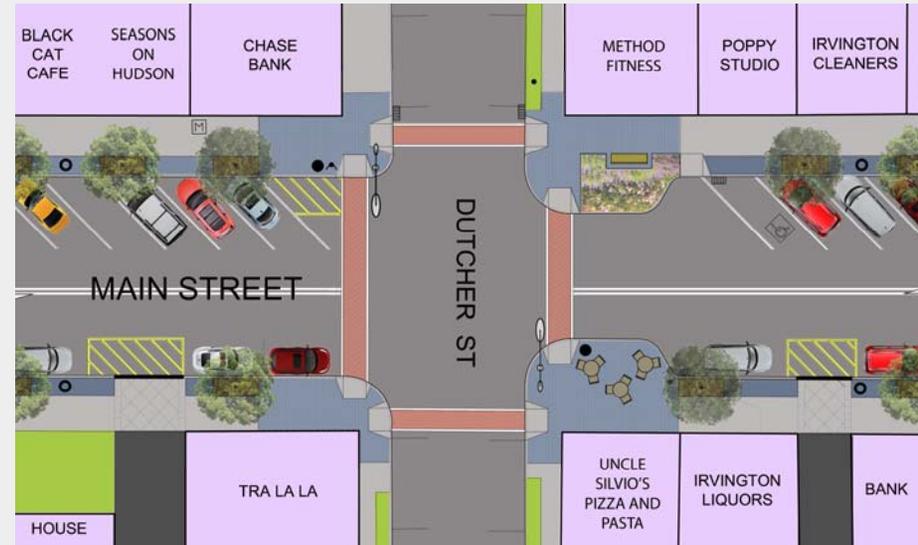
## Universal Access (ADA)

### Existing Condition:

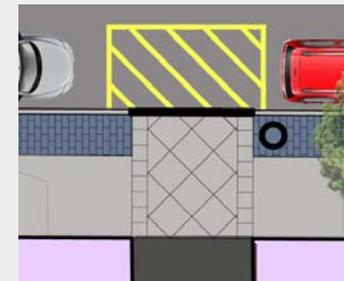
Few intersections are ADA compliant for providing handicapped access to sidewalks. There is only one curb ramp crossing N/S and ramps provided crossing E/W are not compliant with 2010 ADA guidelines.

### Recommendations:

- Plan intersections as a whole.
- Incorporate ADA compliant handicapped accessible pedestrian curbs traveling north-south as well as east west.
- Update sidewalk corners to bring Irvington into compliance with the 2010 ADA Standards for Accessible Design as published by the Department of Justice. NYS DOT has established the local standard for curb ramps in New York State which sets the limits for slopes, flairs, width, landings and requires detectable warnings.
- Handicapped parking spaces on Main Street should also be made compliant with ADA standards including provision for signs, accessible curb ramps and painted side aisle.



Detectable warning



Provide a distinctive pavement where driveways cross sidewalks as a warning to pedestrians

# Project Goals

## Traffic Calming

### Existing conditions:

- Main Street off of Broadway is the main entry into the Historic District and the Business district of the Village of Irvington. As such it is the destination for a steady flow of traffic. Main destinations include the Irvington Metro North Railroad Station, Village Hall, the Trent/Cosmopolitan building, Bridge Properties waterfront business area, Scenic Hudson Park, Mathiesen Park, the Post Office, the Main Street School, the Old Croton Aqueduct Trail, and a number of small popular restaurants.
- Sidewalk extensions or “bulbouts” are a technique for calming traffic by calling greater attention to pedestrian crossings. They slow or “calm” traffic.
- Sidewalk extensions are typically at sidewalk level. Raised sidewalk extensions are effective for traffic calming and provide a location for benches or other social amenities. They can also be made flush with the street pavement by painting a graphic on the ground or providing an alternative textured pavement. Sidewalk extensions flush with the street do not provide social space, are less effective at slowing traffic but do not present the same restrictions on vehicular turning radius, street sweeping, and snow removal that raised curbs do.

### Recommendations:

- Provide sidewalk extensions to shorten crosswalk lengths and increase pedestrian safety as selected locations to be resolved with the aid of a topographic survey. (curb-height or flush with pavement TBD)
- Provide flush or painted sidewalk extensions at locations of active loading zones. An example of this is placement of rough granite block pavers to provide a visual, tactile and audible cue not to drive over the extension.
- Fourteen sidewalk extensions would displace thirteen parking spaces.
- Raised sidewalk extensions may require modifications to snow removal practices at some locations.



Proposed sidewalk extension with curb.



Example of a flush sidewalk extension

## Project Goals

### Enhancement of the Historic District

The Village of Irvington is in the enviable position of having more than 80 percent of the buildings on Main Street contributing to its designation as a Historic District for the period 1890 to 1930. The charming late century architecture paired with the spectacular views of the Hudson River all contribute the visual quality of Main Street. Any enhancements to Main Street must be sensitive to the significance of the historic character of the Village and must not distract or detract from it. At present, broken pavements, irregular tree pits, missing and disfigured street trees abundant and redundant utility poles with layers and layers of overhead wires detract from the historic character. Combined, these negative elements cause the beautiful village to have an unnecessarily neglected appearance.

#### Recommendations:

- Bury overhead wires, remove wooden utility poles, and reduce visual clutter to allow historic architecture to be revealed and visually unencumbered.
- Establish zoning code updates in conjunction with guidelines developed by the Historic District Committee. Task the Architectural Review Board with enforcement of Historic District Zoning regulations.
- Recommend preferential use of period appropriate paint colors (1830 to 1930).
- Follow Local Law 7 of 2013 amending the Village Code with Respect to Signs and Awnings to ensure signs and lights are in harmony with the historic architecture.
- Enhance the physical and natural beauty of the Village by ensuring the creation of street graphics that are appropriate to the historic and architectural character of Irvington.
- Avoid lighting or similar features that create glare. Do not over illuminate the sidewalk or street areas.
- Select street furnishings with simple, straightforward colors, textures, and elements of the period.
- Remain cognizant that Irvington was developed as a working-class community in support of the local Lord & Burnham factory. Overly ornamental Victorian elements are not appropriate.
- Utilize materials such as tinted concrete sidewalks, simulated bluestone pavers, granite or bluestone curbs, and permeable pavers in charcoal, grey, and light grey tones.
- Street furnishings should be coordinated and uniform to provide amenity without drawing specific attention to itself.
- Provide pedestrian level lighting.
- Provide a restrained and limited amount of way finding signs and orienting fixtures.



Photo rendering showing an example of a village streetscape with granite curbs, porous pavers, and blue slateface pavers.

# Project Goals Enhancement of the Historic District

## BEHRENS BLOCK:

Source:  
IRVINGTON,  
THEN & NOW,  
Spikes & Leone

Behrens Buildings, constructed 1905 to 1910



Early 20<sup>th</sup> Century



Existing 2014

### Existing condition:

The Behrens Block is a group of buildings constructed between 1905 and 1910. Pictured above is a historic photo showing the original buildings with cornice ornaments, newly planted street trees and new electrical wires strung high overhead. In the photo at left is a photo taken in 2014 showing the existing condition of the Behrens Block which has been very well preserved. Also visible are the layers and layers of overhead utility wires, house connections, and severely pruned street trees. Not visible in this image are the three empty tree pits where trees have died and been removed.

## BEHRENS BLOCK: WIRES BURIED

## Project Goals Enhancement of the Historic District

### Recommended:

This edited photograph shows what the Behrens Block would look like if overhead wires are buried in the street. The architectural features of this and other buildings of interest would be visually unencumbered and would more fairly represent the historic period. It is anticipated that burial of the wires would dramatically improve the appearance of Main Street and the Historic District. In images that follow, artistic renderings show how the Behrens Block would look in fifteen years after planting of standard size street trees.



Enhanced Image- wires removed

# Project Goals

## Enhancement of the Historic District

### BEHRENS BLOCK:

Source:  
IRVINGTON,  
THEN &  
NOW,  
Spikes &  
Leone

Behrens Buildings, constructed 1905 to 1910



### Recommended:

At left is an artistic rendering over an edited photograph showing what the Behrens Block can look like in fifteen years after planting of standard size street trees. Also shown are recommended street lights, pedestrian level lights, ADA compliant curb ramps and a clearly visible pedestrian crosswalk.

At top is an image of the original Behrens Block for comparison.

Enhanced Image- wires removed,  
Street trees, lights and crosswalk added.

## Project Goals Enhancement of the Historic District

### Existing Condition:

At left is a 2014 photograph of the McVickar House (built 1853) at 131 Main Street that houses the Irvington Historic Society. The house was placed on the National Register of Historic Places in 2003. Also on the Register of Historic Places are Town Hall and the Lord and Burnham Building.



Existing

### Recommended:

The image at left is an artistic rendering over an edited photograph showing what the McVickar House can look like with overhead wires buried and utility poles removed.



Enhanced Image- wires removed



## Project Goals Healthy Trees / Healthy Village

### Healthy Trees / Healthy Village

It is widely accepted that business districts with healthy street trees encourage pedestrian traffic and are attractive to business. Street trees are a valuable asset which require not only a capital investment to purchase, plant and establish, but also an asset and responsibility requiring periodic inspection and care by a qualified arborist. Annual funding for tree care is very important.

### Preferred recommendation:

If overhead wires are buried, preserve existing trees with good form and remove trees which are in decline. Plant new street trees in continuous tree pits. These pits, covered with permeable pavers, promote water infiltration and gas exchange between the soil root zone and the air and provides expanded soil area for healthy root growth. Plant a diverse selection trees from an approved list of street trees selected for their environmental hardiness; assuming a trend for more extreme weather patterns, and tolerance to known pests. Recommended street trees are shown on the following page. Species selection should be mindful of not blocking views of the river and historic architecture. Offset tree locations to prevent conflict with underground connections and access to street to property water, sewer, gas, electric, and communications lines. Maintain offsets of trees from street lighting and fire hydrants. Do not plant street trees or tall vegetation where it can block the critical cone of vision for motorists.

### Alternative recommendation:

If overhead wires are to remain, preserve existing trees with good form and remove trees which are in decline. Plant new small trees or large shrubs in above ground planting pots and irrigate the pots. Plant a diverse selection of trees from an approved list of trees. Recommended small trees or large shrubs are included following the recommended standard street trees.

A table of customary tree offsets is included in the Master Plan.



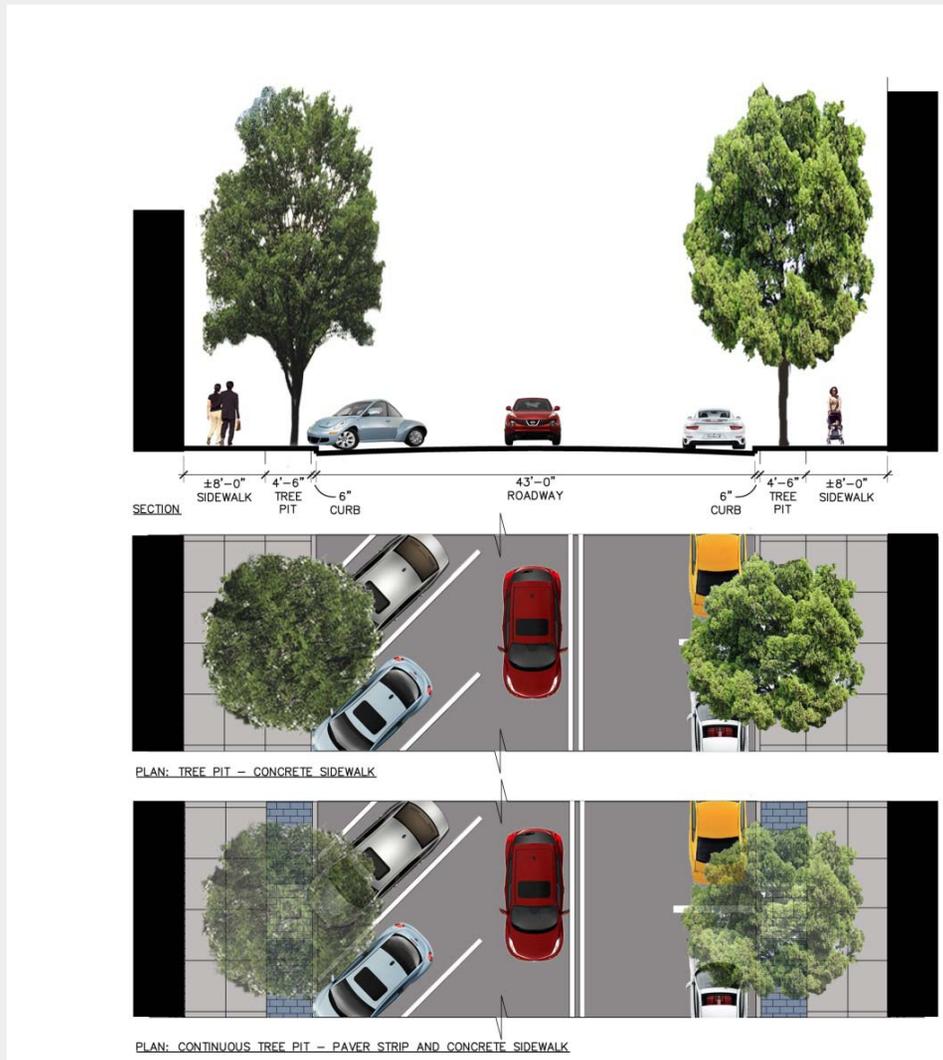
Standard trees planted in tree pits



Small trees, large shrubs planted in pots

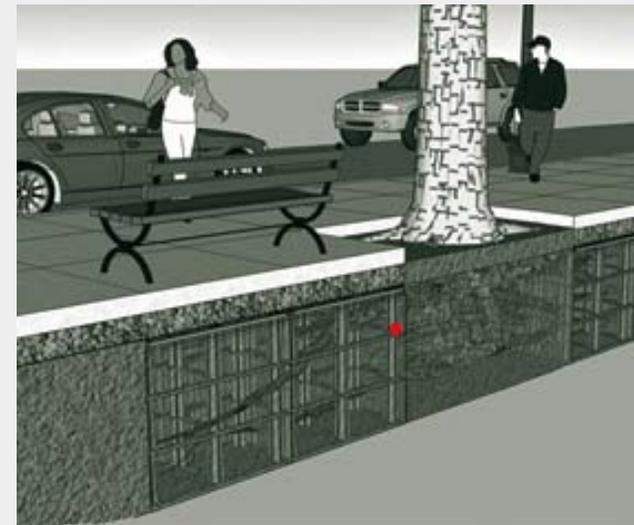
# Project Goals Healthy Trees / Healthy Village

STREET TREES IN 5'X10' TREE PITS (no overhead wires):



## Recommendations:

Remove overhead wires to allow for planting of standard street trees on Main Street. Preserve existing trees with good form and remove existing trees which are in decline. Plant new street trees in continuous tree trenches with 5 x 10 foot tree pit openings. These trenches, covered with permeable pavers, promote water infiltration and gas exchange between the soil root zone and the air. Plant a diverse selection trees from an approved list of street trees selected for their environmental hardiness; assuming a trend for more extreme weather patterns, and with tolerance to known pests. Enhance the root zone through the use of Silva Cell™ underground structures or structural soil.



Cross section revealing underground use of Silva Cell™ for root zone.

**STREET TREE OPTIONS (no overhead wires):**

**Project Goals  
Healthy Trees / Healthy Village**



*Zelkova serrata*  
*Halka*

Japanese Zelkova



*Carpinus caroliniana*

American Hornbeam



*Ulmus americana*  
*Princeton*

Princeton Elm



*Corylus columna*

Turkish Filbert



STREET TREE OPTIONS (no overhead wires):

Project Goals  
Healthy Trees / Healthy Village



*Acer rubrum*

Red Maple



*Ginkgo biloba (male)*

Ginkgo



*Pyrus calleryana*

Callery Pear



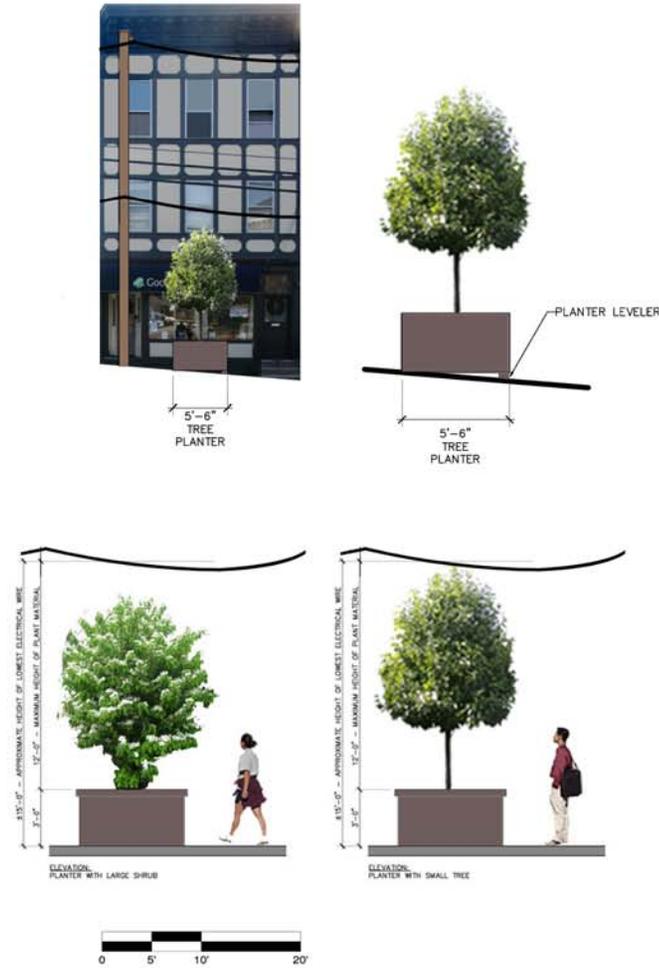
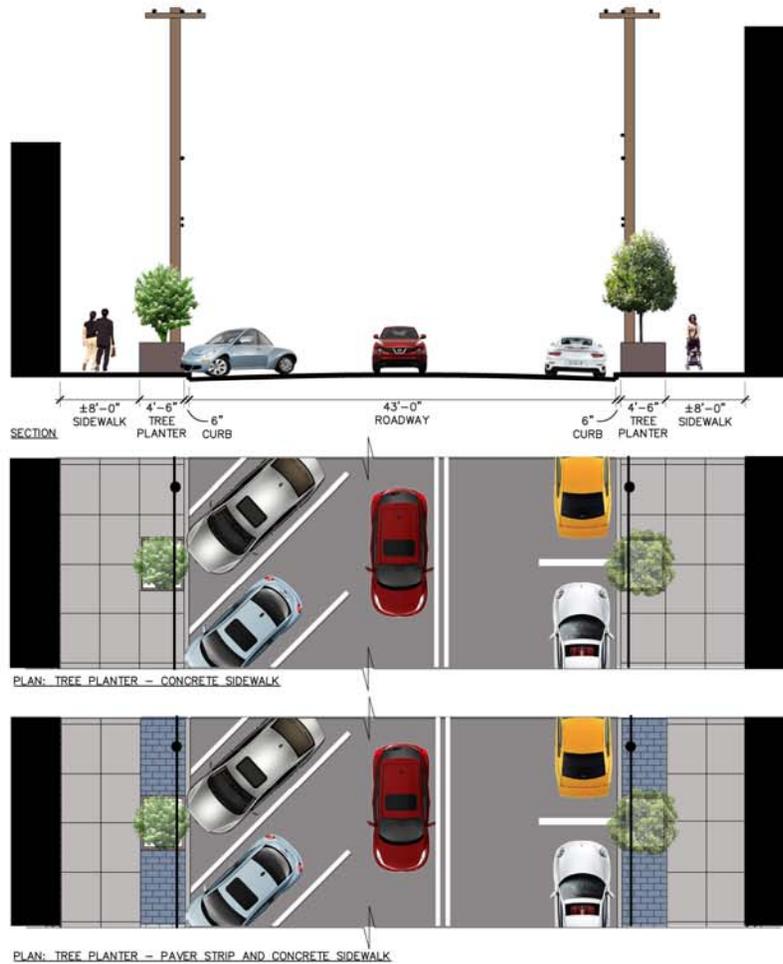
*Gleditsia triacanthos inermis*

Honeylocust



Small trees or large shrubs in containers under overhead utility wires. Requirements are to avoid eye level injuries and maintain a height that will not require regular, unattractive pruning.

## Project Goals Healthy Trees / Healthy Village



Project Goals  
Healthy Trees / Healthy Village

OPTIONS: SMALL TREES AND LARGE SHRUBS FOR LARGE POTS



*Viburnum plicatum v. tomentosum*

Doublefile Viburnum



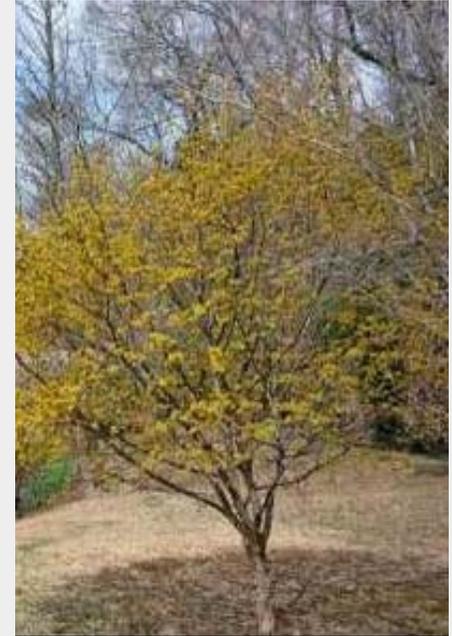
*Hamamelis x intermedia Jelena*

Jelena Witch Hazel



*Malus sargentii Firebird*

Firebird Crabapple



*Cornus mas , Golden Glory*

Golden Glory Cornelian  
Cherry Dogwood

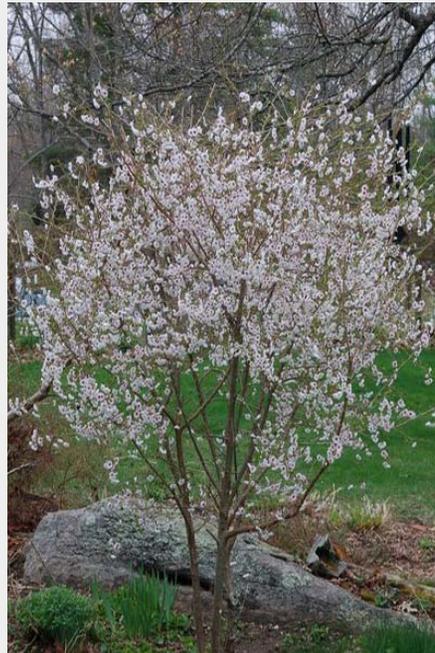
Project Goals  
Healthy Trees / Healthy Village

OPTIONS: SMALL TREES AND LARGE SHRUBS FOR LARGE POTS



*Crataegus crusgalli*  
*'inermis'*

Thornless Cockspur  
Hawthorn



*Prunus x HOLLY*  
*JOLIVETTE*

Holly Jolivette  
Flowering Cherry



*Amalanchier*  
*canadensis*

Shadblow Serviceberry



## Project Goals Visual Quality

### Existing Condition:

Main Street has an unnecessarily worn and neglected appearance. Visual clutter created by an abundance of traffic rule signs attached to wooden utility poles contribute to an unplanned appearance on an otherwise very orderly and attractive street flanked by late 19th and early 20th Century buildings. Parked cars crowd and dominate the street. The presence of broken pavements, irregular tree pits, missing and disfigured street trees abundant and redundant utility poles with layers and layers of overhead wires detract from overall visual quality of the street. In turn, this lack of visual quality detracts from the attractiveness of the Village and to honoring the newly claimed Historic District.



Existing

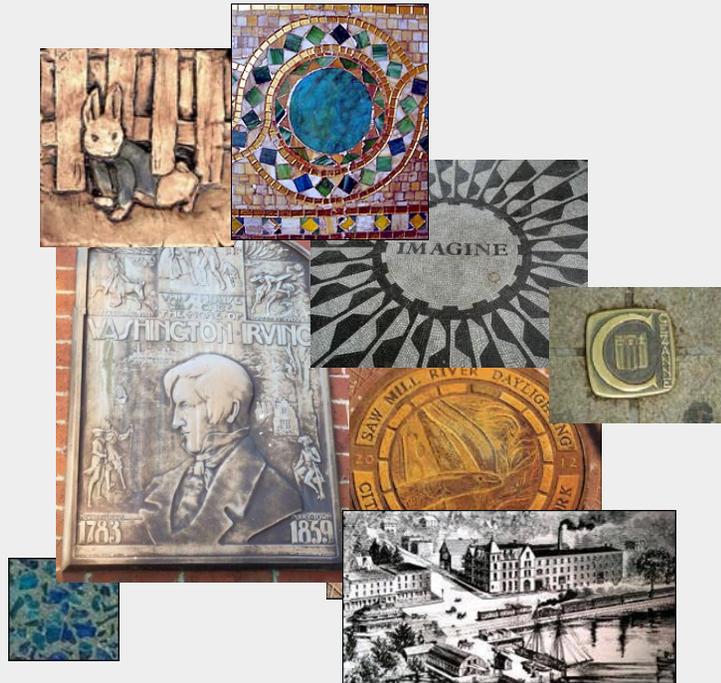
### Recommendations:

It is well within the grasp of the present community to dramatically transform the appearance of Main Street by investing in selected updates that will help reveal the enduring, historic character and aesthetic of the Village. This is best achieved through edits, deletions and restraint, not additions or embellishment. The most striking visual improvement that can be made is the establishment of a healthy stand of mature street trees. This can best be accomplished by moving overhead utility wires underground. Providing a uniform palette of simple street tree plantings, pavers, sidewalks, street lighting, signs and furnishings can also greatly enhance the visual quality of the street. These elements should be of simple lines and durability. They should not draw attention to themselves. The architecture of the Village should be allowed to stand out and represent itself. A serviceable early 20<sup>th</sup> century industrial look will service the community well. Refreshment of pavements, crosswalks and lighting will give the community a fresh, vibrant appearance. Renewed vitality on the street is good for business and will likely attract a growing work from home workforce that will patronize local businesses.



Proposed.

## Project Goals Improved Signs & Wayfinding



### Signs that tell a story:

Irvington is a village of historic significance from the early days of the Revolutionary War through to the time of early industry on the Hudson River and well into the hey-day of the Golden Age. It is also a place that has been home to many interesting people. There is a lot to be shared about this special place. The intact architecture and setting should be allowed to speak for itself without the imposition of museum-like interpretive signage with images and text.

In place of interpretive signs of text and photos, the use of small art items and / or panels (on walls or on pavements) evocative of Irvington's historic past would be most appropriate.

Where communicating specific stories of the past with the use of text, images, and recordings is strongly desired, use of an internet based system of QR codes can link residents and visitors to information geared to any age group and in many languages.

QR Code



### Way-finding and orientation signs:

Irvington has a plethora of different kinds of signs. There is a welcome sign on the SE corner of Broadway and Main Street announcing theatre and community events. Similar signs are found in front of Village Hall and the Recreation Center. They are primarily geared to residents that know to look for information there; and there are no true signs welcoming visitors to Main Street.

Welcome signs are needed at Broadway and at Astor Street where most visitors arrive. A sign directing visitors to after school parking at the school parking lot would also be useful. At the sidewalk level, signs with maps welcoming visitors and orienting them to popular destinations should also be placed at the crossing of the Old Croton Aqueduct trail. Signs directing visitors to popular destination points should include Village Hall and the Tiffany Reading Room, the Village Theater, the Rail Road Station, the Library, the Trent (Cosmopolitan) Building, Scenic Hudson Park, and the Post Office. The Bridge Street complex (with its offices, restaurants) and Matthiessen Park should be noted on wayfinding signage. The Way Across the Metro North tracks (pedestrian tunnel, and car/bike bridge options) should also be indicated. In general, a Map of destinations in the Village would be useful at the three proposed welcome sign locations. A printed visitors map could be made available at the kiosks, library, village hall and online.

Street signs should be replaced within the allowable rules of the Manual on Uniform Traffic Control Devices and which are supported by brackets and frames similar to early 20<sup>th</sup> Century Street Signs. A majority of traffic rule signs tacked to wood utility poles should be reviewed and reduced. A program for reviewing and retiring signs should be implemented as a cooperative effort of the Village administration with the Department of Public Works and the Village Police Department.

A signage usage and style guide should be developed by a graphics designer with experience working in historic districts.

## Project Goals

### Improve circulation and parking

#### RE-ESTABLISH A COMMUTER SHUTTLE BUS:



Examples of commuter shuttle buses in Connecticut and California.

#### Existing condition:

Heavy commuter times to and from the railroad station creates a lot of traffic at peak commuter times.

The flow of traffic to and from the station is greatly constrained by limited vehicular turn around areas and looping roads.

One the key access roads; Station Road is constricted by a one-way tunnel connection to Broadway.

Commuters who park their cars at the Station or on nearby side streets limit the number of parking spaces available for active customers at local Main Street businesses.

Irvington is a compact Village and convenient to the commuter station. The presence of the hill is somewhat of an inconvenience.

#### Recommended:

Reestablish a commuter shuttle bus; especially during peak commuter times.

The shuttle could be used during off hours to support the seniors program and regularly scheduled shopping and excursion trips for all ages.

Participation in the commuter program may be most effective on a subscription basis rather than on a per-fare basis.

The shuttle could transport Village employees to work from an alternative parking area off of Main Street and adjacent side streets.

# Creation of Social Spaces

## Recommended locations to create social spaces:

One of the principle goals of this Master Plan for Main Street is to enliven Main Street, attract people to make use of it. Creation of social spaces of varying scales is critical to bringing life to the street. The plan below indicates spaces to provide sitting areas, pocket parks or plazas of varying sizes to enhance social interaction, enliven the streetscape. Social spaces welcome visitors and stimulate local business. Make use of underutilized open space to create social spaces and sitting areas.

- At sidewalk extensions
- Astor Street at the Railroad Station
- 71 Main Street at the Village Recreation Center
- Between Village Hall and the Main Street School
- At the Old Croton Aqueduct Trail
- At the Broadway Bus Stop



### Parking:

Limited parking locations is one of the greatest challenges facing the Main Street business district at this time.

Identify potential options to expand future parking off of Main Street as part of any plans for repurposing of Village land at the DPW site, the Firehouse, or the IVAC garage.

Identify opportunities to locate Village employee and proprietor parking off of Main Street.

Reestablish a commuter shuttle bus to relieve pressure on business district parking space, side street parking space, and provide a shuttle for Village employees from an alternative parking location.

## FUTURE OPPORTUNITIES

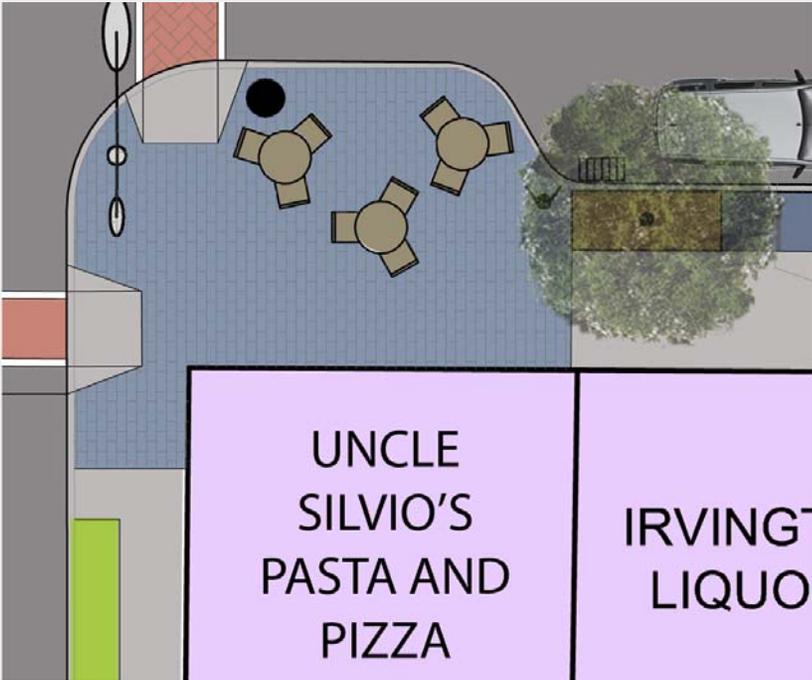
Areas shown in green offer potential locations for expanded green social spaces. Areas in orange suggest opportunities for future reuse of Village assets.



# Creation of Social Spaces At Sidewalk Extensions

## Sidewalk extensions can create small social spaces:

Sidewalk extensions have been proposed for traffic calming and to reduce the crossing distances on Main Street. These small extensions can also provide space for limited seating, plantings, and enough additional space on the sidewalk to allow for seasonally available outdoor tables and chairs.



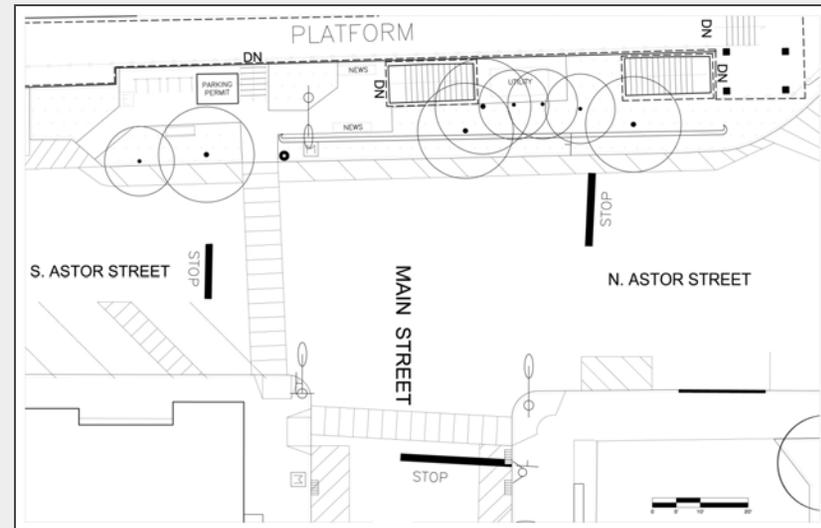
# Creation of Social Spaces Astor Street at Rail Road Station (existing)

## Existing Conditions:

Astor Street, north and south mark the beginning of Main Street. Originally termed A Street, Astor Street runs parallel to the railroad and the railroad parallels the river. This is a major hub of rail transportation and while it is a relatively short walk from nearby homes; it is a busy commuter station with a lot of vehicle traffic at peak commuter times. There is no clear drop off or pick up area. Narrow curb ramps lead directly into the street and there is only one crosswalk heading east to Main Street. There is no continuous sidewalk next to the train station on the west side of the street and a guide beam rail limits places to stand. A yellow striped no parking zone can be found on the roadway. The wide street provides a difficult, but active turn around space for vehicles reversing their direction on Main Street.

## Recommendations:

Propose to the MTA to make improvements to the pedestrian conditions and the drop-off and pickup area at the railroad station. Provide a walkway along the west side of the street, protected by steel bollards in place of the steel guide rail to allow for free circulation. Provide two pedestrian crosswalks from the station eastward to Main Street. At the NE and SE corners of Main and Astor, provide sidewalk extensions, both raised and flush, to provide space for benches, plantings, and a sense of welcome and arrival. Enhance the sense of arrival and a village square by providing an attractive super graphic on the pavement at the center of the intersection. Welcome and orientation signs should also be provided.



# ASTOR STREET GATEWAY: PROPOSED CONCEPT



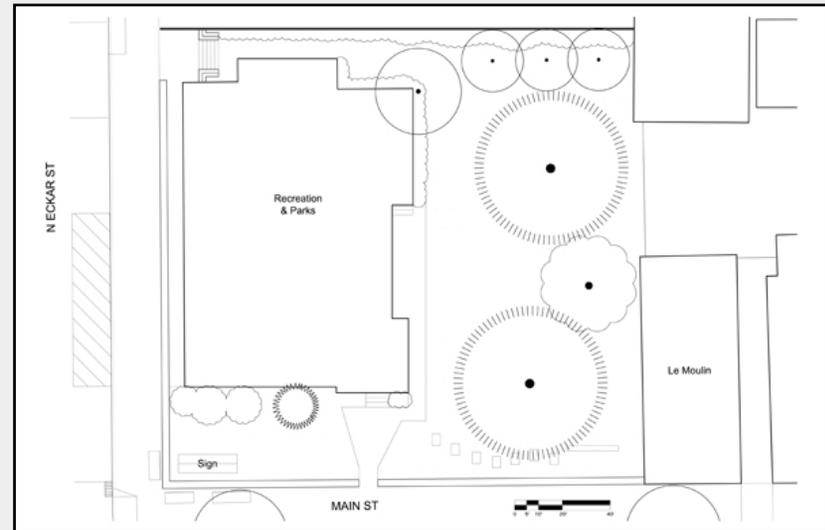
# Creation of Social Spaces 71 Main Street at Recreation Center (existing)

## Existing conditions:

The front yard and side yard at the I. K. Benjamin Recreation Center are elevated from Main Street and made level by an attractive stone retaining wall. The wall is topped with a protective iron railing. An evergreen tree next the front door serves as the holiday tree for the Village. Foundation plantings of dense evergreen shrubs flank the building.

The side yard is dominated by large evergreens and a flowering Styrax tree.

We recommend reuse of these spaces for public sitting areas for people of all ages. One large evergreen and some shrubs would need to be removed. The flowering Styrax should be preserved. A proposal for two sitting areas including a small tot lot are provided on the following page.



## CONCEPTUAL SOCIAL SPACES/ MINI PARKS

The proposed concept for the front and side yards at the Recreation Center is to provide sitting areas; one passive with a bench and two chess / checker tables and the second gated with a small tot play area on safety surface and near new lawn with four new benches and three small tables with chairs. The location would be made ADA accessible via a ramp running along the east side. The ramp would also provide convenience for those arriving with strollers or carriages to participate in the young babies programs held at the Recreation Center.



Kenneth Lynch  
Chess/checker table  
With benches.



Kompan  
"Playhouse Slide"



Proposed Recreation Center Mini Park Concept

# Creation of Social Spaces Next to Main Street School

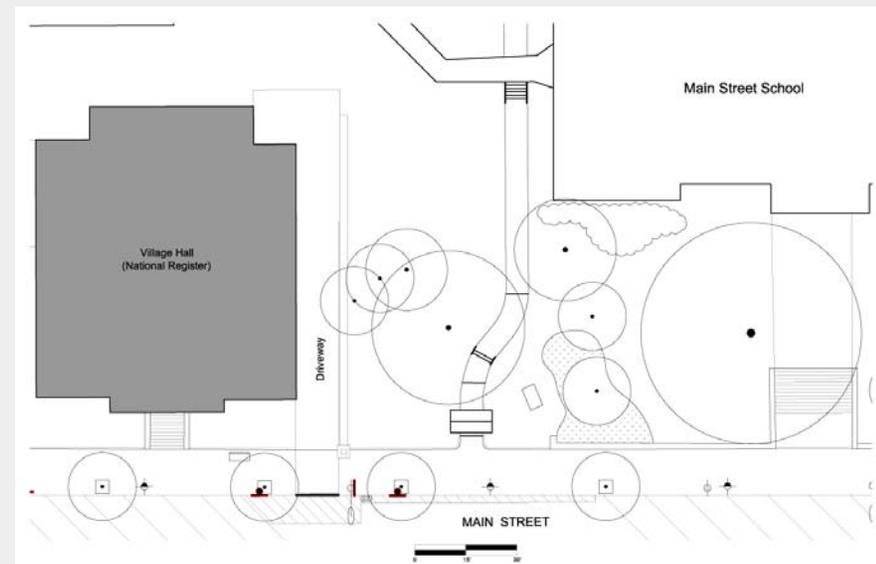
## Existing Conditions:

The lawn area between Village Hall and the Main Street school is best known for its fulltime resident; a sculpture of Washington Irving's Rip Van Winkle. A hillside garden with a background of flowering trees and a spectacular Copper Beech tree make this one of the prettiest green views in downtown Irvington. The proposed project area is graced by a very large Linden tree and several ornamental apple trees. The area is bounded by retaining walls to the east and west. A large utility structure is located in the lawn near Main Street.

This location provides an ideal location for accommodating activities such as the youth string ensemble which recently performed in a driveway next to Village Hall. (Photo below).

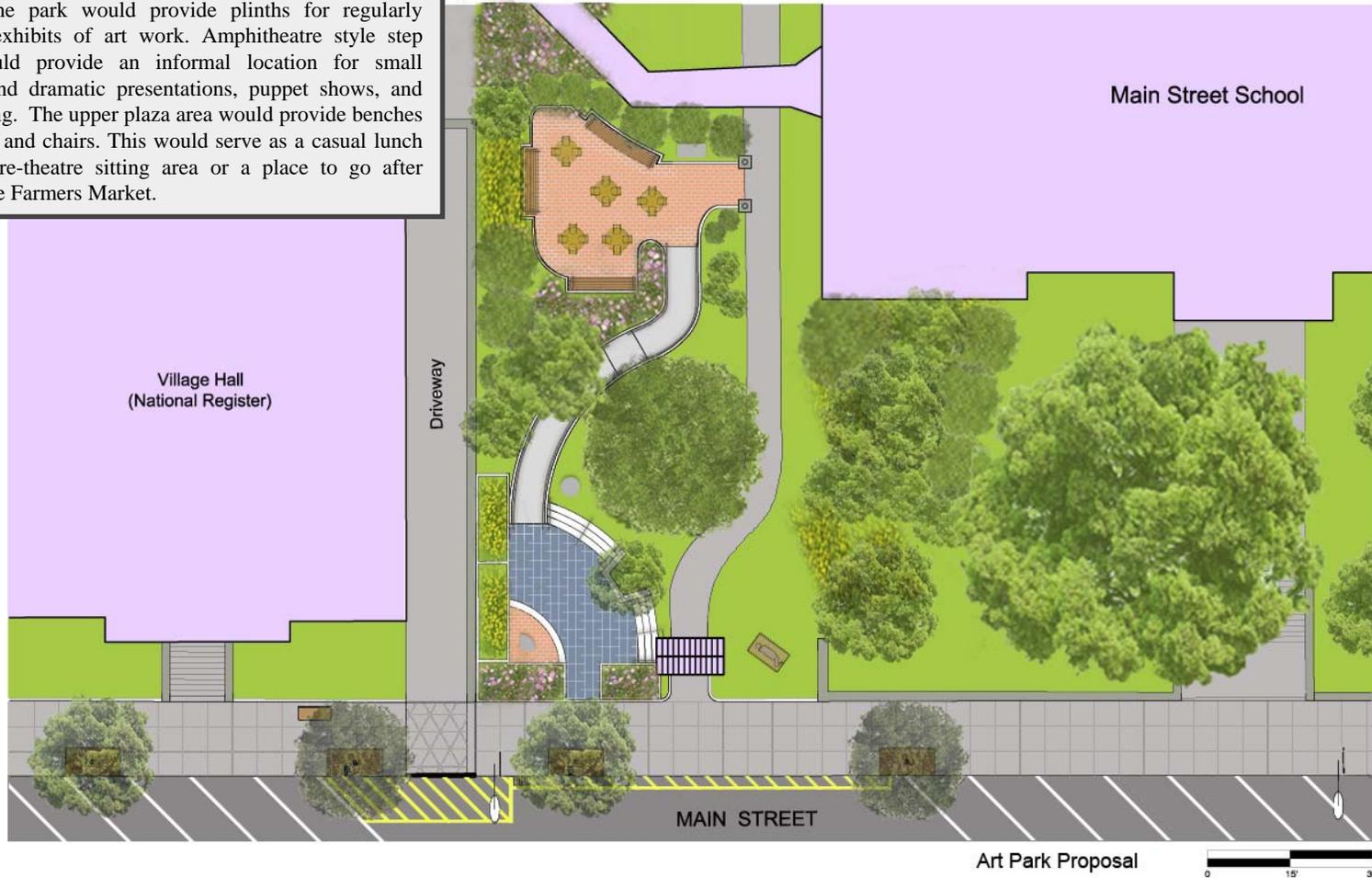


C.K.



## CONCEPTUAL SOCIAL SPACES/ MINI PARKS

This proposed concept for an “Art Park” on the existing sloping lawn area between Village Hall and the Main Street School includes two small plaza areas; one adjacent to Main Street and the other at the top of the hill. Building on the theme that Irvington is a place of Arts & Letters; the park would provide plinths for regularly changed exhibits of art work. Amphitheatre style step seats would provide an informal location for small musical and dramatic presentations, puppet shows, and story telling. The upper plaza area would provide benches and tables and chairs. This would serve as a casual lunch time or pre-theatre sitting area or a place to go after visiting the Farmers Market.



Proposed Concept for Main Street School Mini Park

## Creation of Social Spaces At Old Croton Aqueduct Trail



View to south east.



Croton Water supply manhole cover,  
(Photo: ephemeralnewyork.wordpress.com)

The Old Croton Aqueduct Trail connects Irvington to adjacent river towns. The trail follows over the top of the buried aqueduct that once supplied drinking water to New York City. The trail is owned and operated by the New York State Office of Parks, Recreation and Historic Preservation. Improvements at this location will need to be approved by Parks. The north end of the trail passes through the Main Street School's parking lot. Recommended changes will need to be vetted through the Irvington UF School District.

There is presently no visible presence of the trail where it crosses Main Street. There is no accessible trail to follow at Main Street. The trail runs through the Memorial Plaza area on the north side of the street and there is no path. The trail runs through two parking lots; a municipal parking lot on the south and a school parking lot on the north. Vegetation at the Memorial Plaza is overgrown and repairs and corrections are needed on one of the Monuments. Improved access to the Memorial Plaza and a through connection for the OCA trail are recommended.

# Creation of Social Spaces At Old Croton Aqueduct Trail

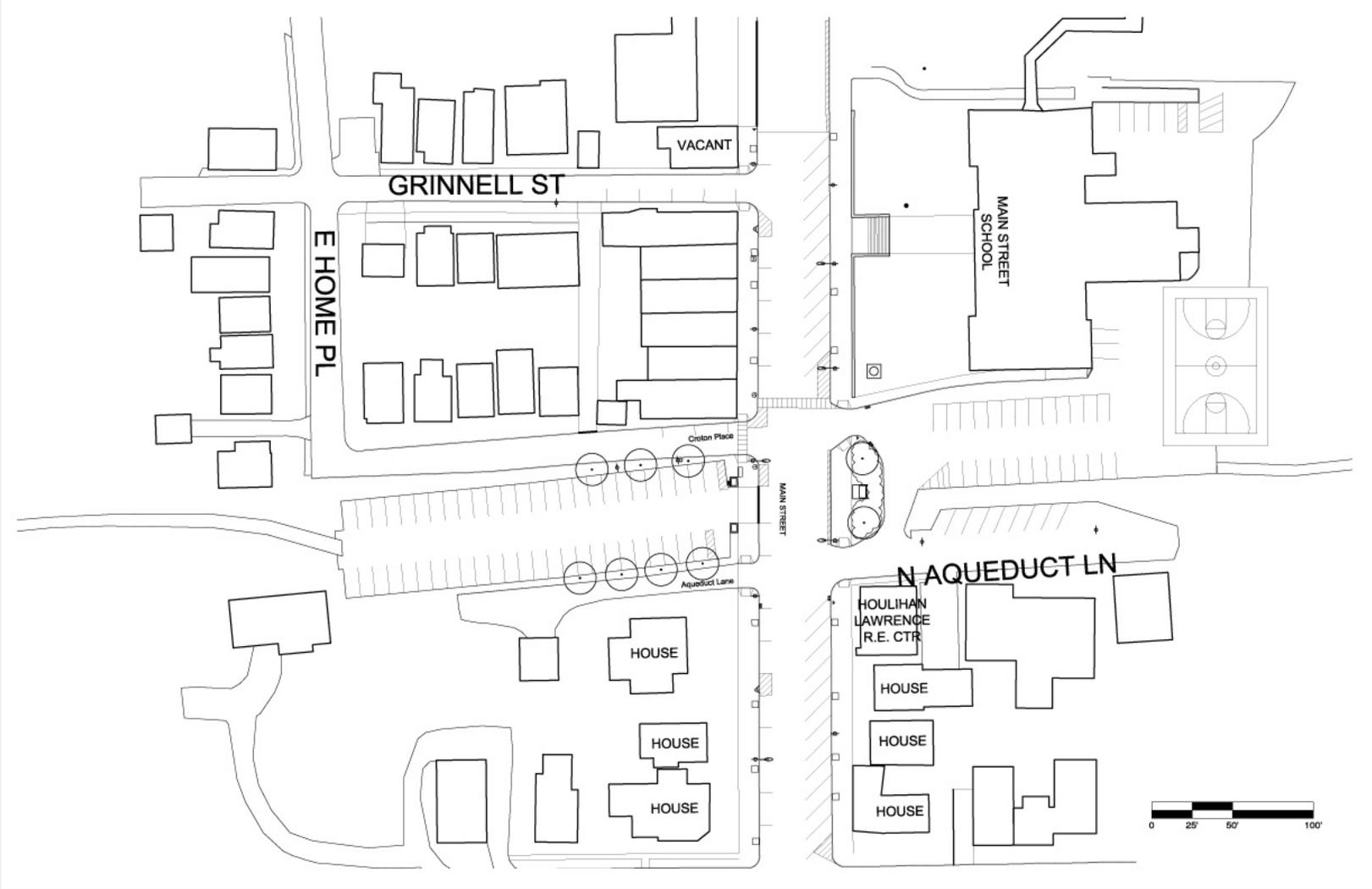


Existing view North.



Existing view South.

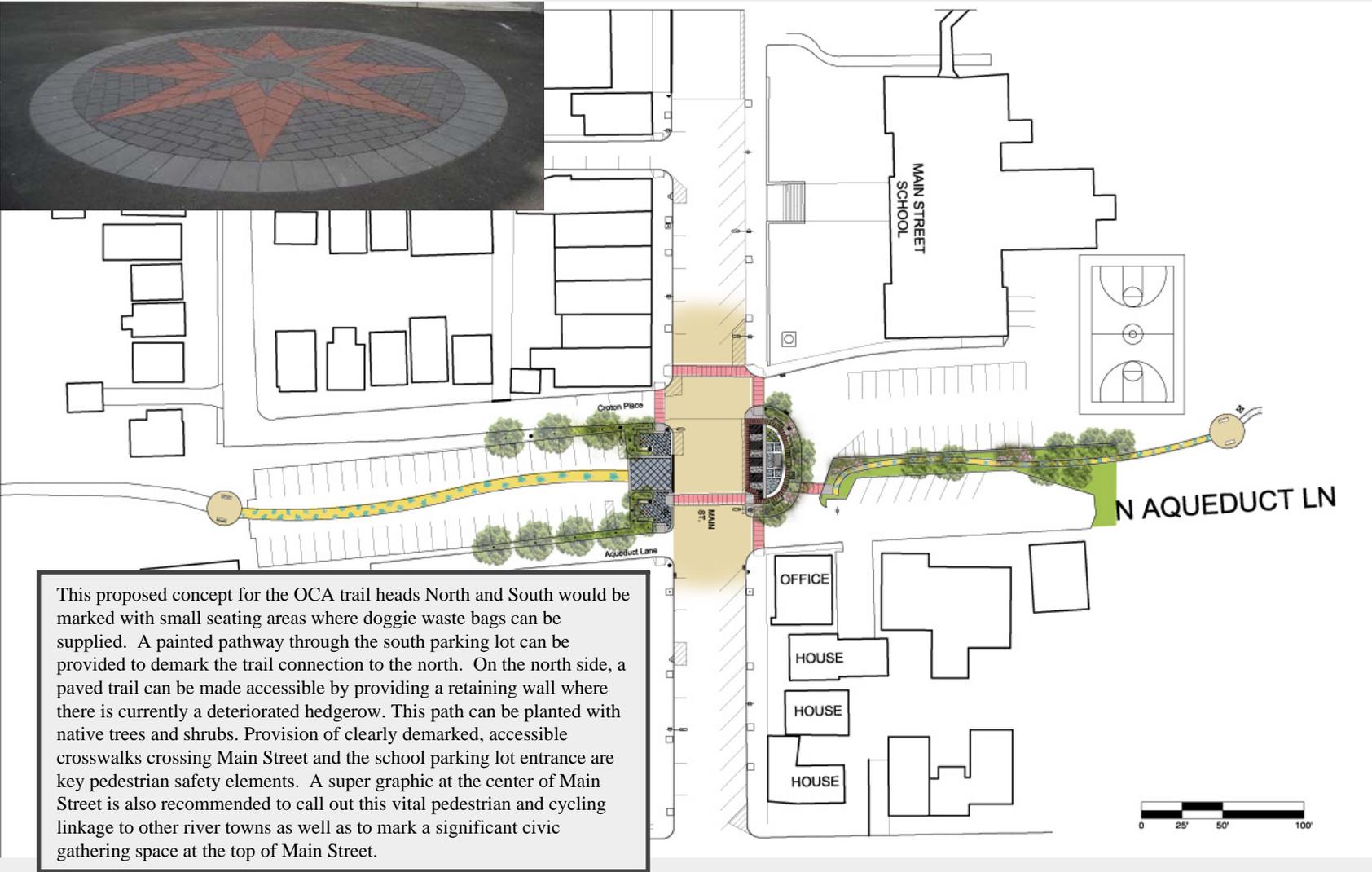
# Creation of Social Spaces At Old Croton Aqueduct Trail



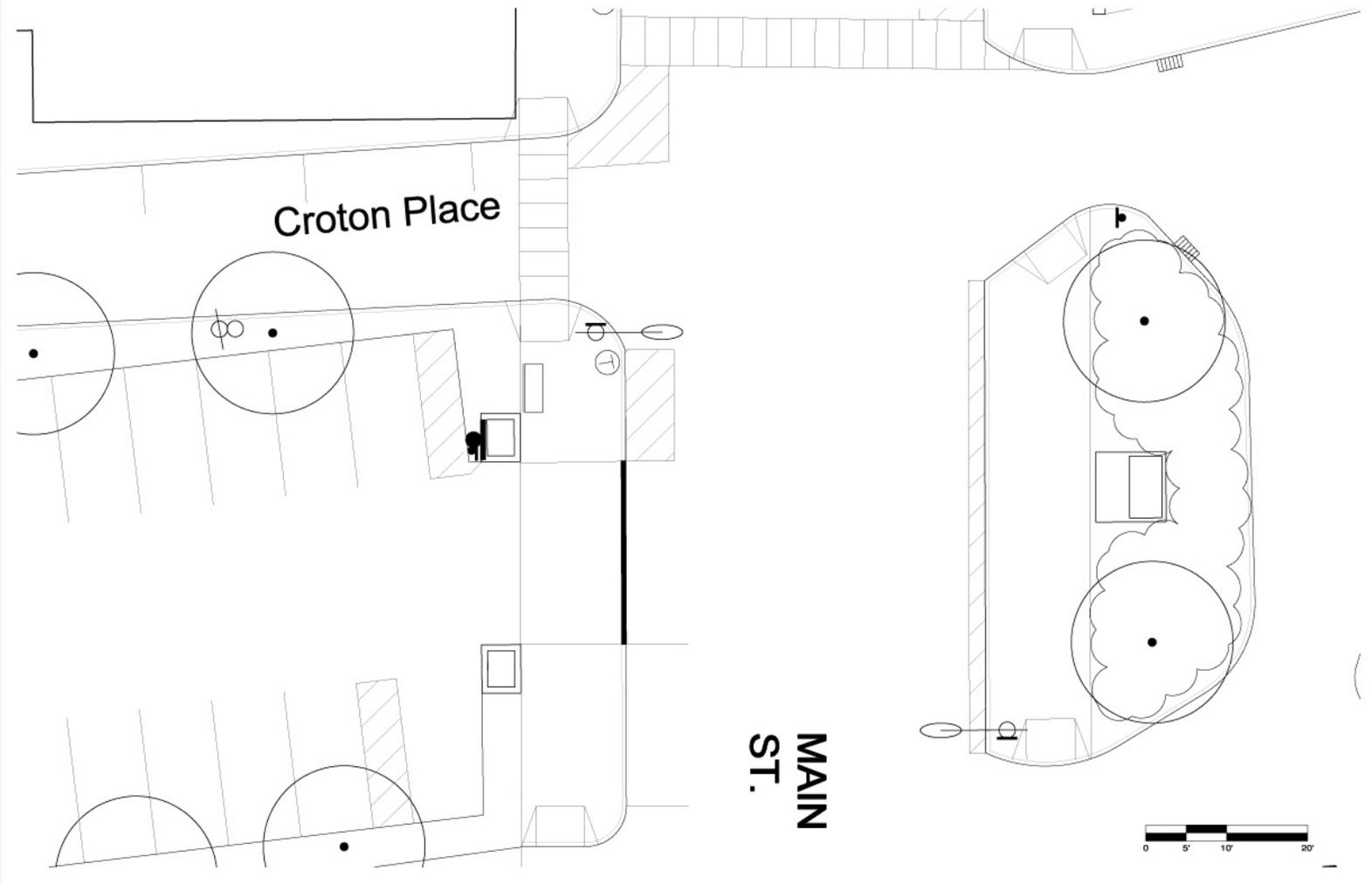
Existing condition, plan.

# Creation of Social Spaces At Old Croton Aqueduct Trail

Photo inset of pavement print material that can be used on Main Street and pathway between trail heads.



# Creation of Social Spaces At Old Croton Aqueduct Trail



Existing condition, plan.

## Creation of Social Spaces At Old Croton Aqueduct Trail



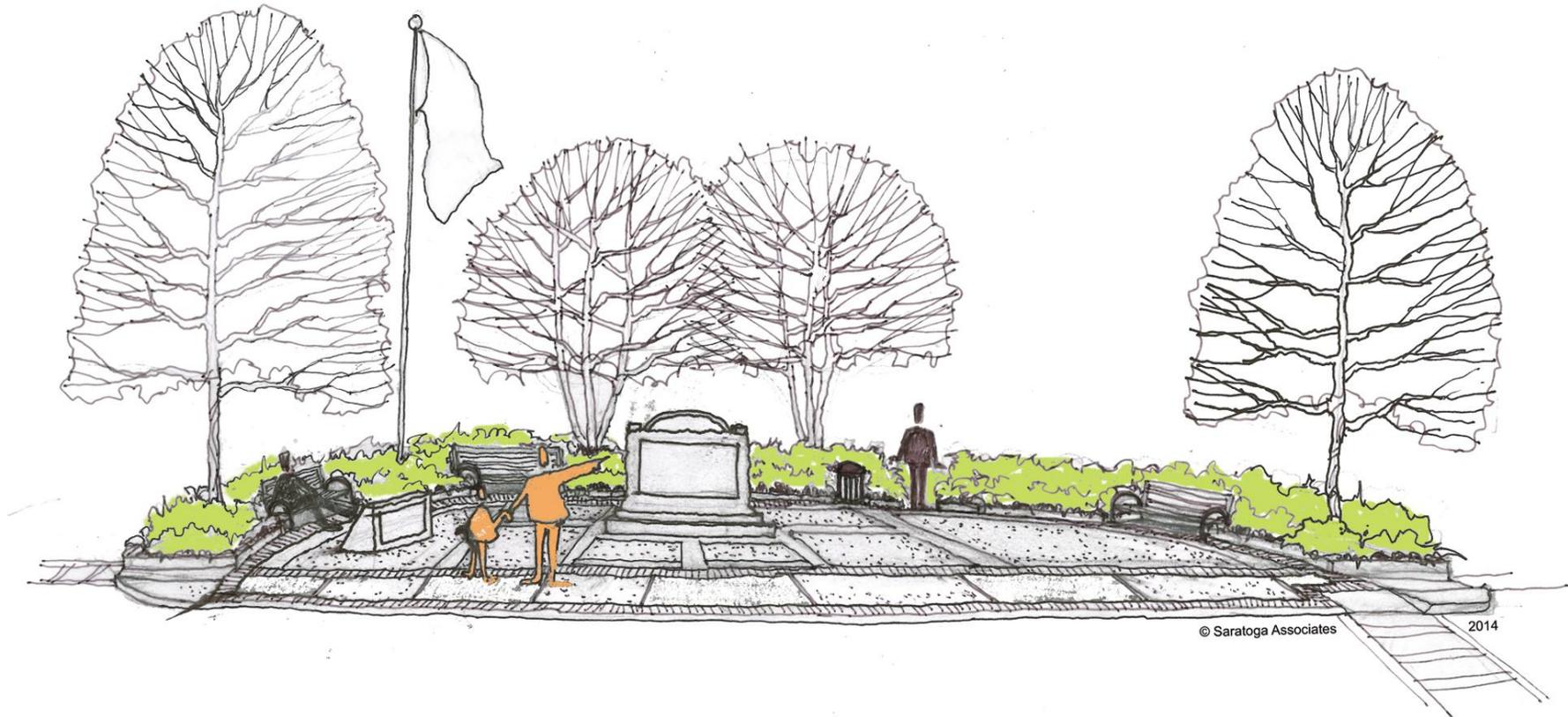
This proposed concept includes modifications on the south side of the street include taking away two parking lot spaces to provide an expanded sitting area with distinctive pavement, six benches, two trash receptacles, and an orientation sign structure. A new cross walk with pedestrian curb ramps would link the OCA trail to the north where it would again cross the parking lot entrance to a new, level pathway connecting to the north trail head. To create an accessible connection an existing hedgerow would need to be removed and a retained pathway installed. The Memorial Plaza area would be modified to resolve uneven geometries, and provide space for four benches, a flag pole, and a trash receptacle. The Vietnam Era conflict monument would be moved to the west to allow through passage of the trail. Additional flush mounted monuments would be provided for Revolutionary War, Civil War and other times of sacrifice. A quotation by Thomas Jefferson would lend solemnity to the space.

## Creation of Social Spaces At Old Croton Aqueduct Trail



View North of the existing Memorial Plaza. School parking lot, hedgerow and Old Croton Aqueduct trail head beyond.

## Creation of Social Spaces At Old Croton Aqueduct Trail



Sketch rendering showing proposed changes to the Memorial Plaza.

# Creation of Social Spaces At Broadway Bus Stop

### Existing Conditions:

The corner of Main Street and Broadway is a key entrance to Main Street and the Historic District. The NW corner includes a gas station and a bus stop. It includes a wood bench with two missing wood back slats, a trash receptacle and a whisky barrel planter.

The bus stop can be improved to provide a more welcoming and accommodating image for Irvington; one which can emphasize the walkable nature of the Village.



# Creation of Social Spaces At Broadway Bus Stop

Recommended improvements include provision of distinctive pavement where driveways cross sidewalks; distinctive pavements at the bus stop, new curbs to protect new plantings, and a bus shelter with benches and a trash receptacle. The recommended bus shelter shown at right with a standing seam roof is Model # 6x16HRsp "Southampton" as manufactured by Columbia Equipment Co.



# TRANSFORMATION

## Renew Pavements, Curbs, and Markings

- Resurface the roadway with reconstructed gutter lines
- Provide infiltration strips such as Stormcrete™ along gutter line to recharge groundwater
- Clearly define crosswalks
- Maintain granite curbs with 6" reveal to handle stormwater
- Provide permeable pavers on a continuous tree planting strip.
- Provide ADA compliant pedestrian drop curbs.
- Hanover "Slateface – blue" paver sidewalk



Existing



Proposed.

# TRANSFORMATION

## Plant and Maintain Sustainable Street Trees

- Preserve existing trees with good form and remove trees which are in decline. Plant new street trees in continuous tree pits that provide good water infiltration as well as good Oxygen and CO<sub>2</sub> exchange between the soil and air and provides expanded soil area for healthy root growth. Plant a diverse selection trees from an approved list of street trees selected for their environmental hardiness and aesthetics. Trees recommended to meet these requirements as well as the needs of a trend for more extreme weather patterns and known pests is provided.
- Species selection should be mindful of blocking views of the river and of historic architecture. Offset tree locations to prevent conflict with underground connections and access to street to property water, sewer, gas, electric, and communications lines. Maintain offsets of trees from street lighting and fire hydrants. A table of customary tree offsets is provided below. Locate street trees to avoid blocking critical cone of vision for motorists at intersections.

Street Tree spacing standards* from	Horizontal Distance
Building entrances	Avoid
Bus stops	Avoid
Over watermains less than 20" diameter	Avoid
Corner of street intersection to tree trunk	40 feet minimum
Stop sign	30 feet minimum
Other traffic sign	6 feet minimum
Streetlight	25 feet minimum
Another tree	20 feet minimum
Driveway to tree trunk	7 feet minimum
Driveway to edge of planting pit	2 feet minimum
Water main	6 feet minimum
Vertical obstruction (wall, step, railing, etc)	4 to 6 feet minimum
Parking meter	5 feet minimum
Oil fill pipe to edge of planting pit	4 feet minimum
Fire hydrant to edge of planting pit	3 feet minimum
Gas or water valve to edge of planting pit	2 feet minimum
Coal chute to edge of planting pit	2 feet minimum
Face of curb	2-1/2 feet typical

\* NYCDPR Street Tree Spacing standards are widely accepted standards.

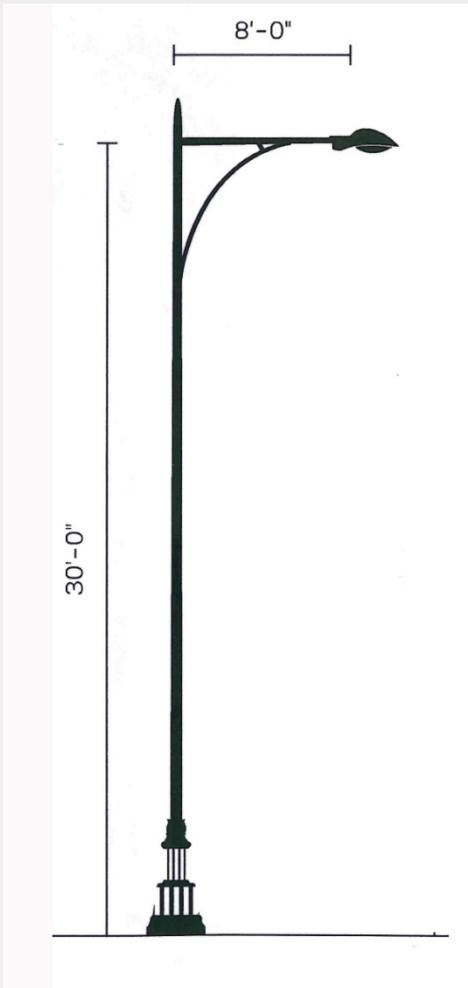


Standard trees planted in tree pits

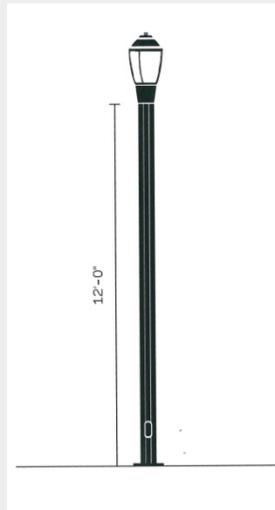


Small trees, large shrubs planted in pots

## RECOMMENDED STREET FURNISHINGS:



Flatbush style pole with Helm luminaire



World's Fair Pedestrian Pole



World's Fair Bench with back



Victor Stanley side-opening  
Trash Receptacle



Maglin MTB650  
Steel Bollard

Establish a palette of site furnishings that reinforces compliments and promotes historic Irvington's character and image.

# Recommended Street Furnishings

## Street Lighting

Recommended:

Improve Main Street lighting.

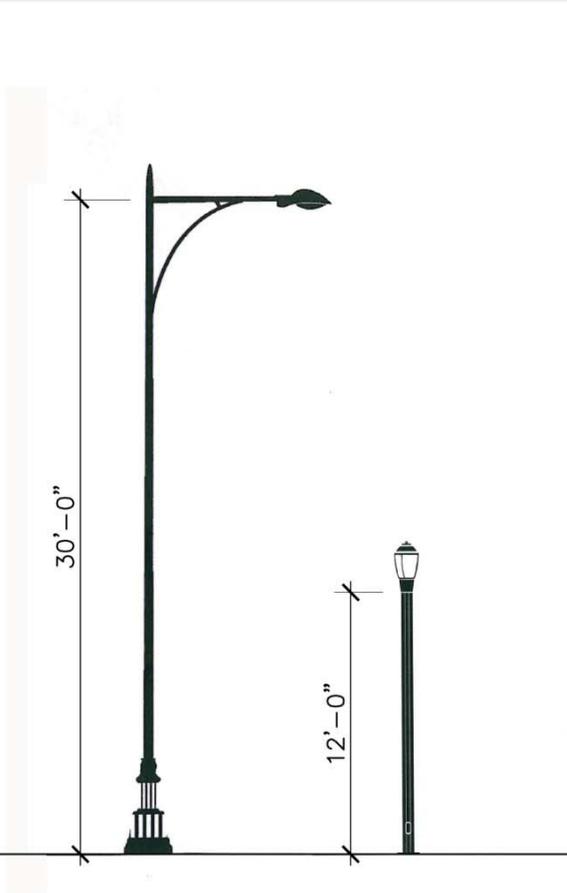
Update 30' ht street lights from Cobra head lights attached to wooden poles to a Flatbush Style metal streetlight with attachments for holiday decorations and flags.

Provide pedestrian level lighting, such as a 12' ht World's Fair pole with light fixture. Place these, especially at mid-block locations on the south side where there is inadequate illumination.

If wires are not buried, then street trees should be planted in reinforced concrete containers with a drainage hole. Planter below is Model TF4208-B2 by Wassau Tile (64"x52"x36" in French Gray). Since overhead wires will not allow for installation of Worlds Fair Pedestrian Pole, these planters may be retrofitted to include low level lighting. See image on Page 12.



EXISTING STREET LIGHT: UTILITY POLE WITH ATTACHED COBRAHEAD LIGHT FIXTURE



OPTION 'A':  
STREET LIGHT: 'FLATBUSH AVENUE'  
POLE WITH HELM LIGHT FIXTURE  
PEDESTRIAN LIGHT: 'WORLD'S FAIR'  
POLE & LIGHT FIXTURE



# POTENTIAL STREET LIGHTING IMPROVEMENTS



# Recommended Street Trees & Lighting If Wires Buried

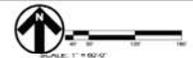


## Legend

- Existing Street Tree (Side Streets)
- New Tree in 4' x 10' Treepit (Main Street): 25 foot on center
- New Pedestrian Pole Light
- New Street Pole Light
- New Sidewalk Extensions

## Summary

- 89 - New Trees in 4' x 10' Treepits (Main Street)
- 27 - New Pedestrian Pole Lights
- 29 - New Street Pole Lights
- 13 - Total Parking Spaces Removed to Provide 14 Extensions
- 156 - Total Existing Parking Spaces on Main Street



# Recommended Street Trees & Lighting If Wires Remain



## Legend

- Existing Street Tree (Side Streets)
- New Small Tree / Large Shrub in Planter (Main Street): 20 feet on center
- New Planter Light
- Existing Electric Pole with Cobrahead Light Fixture

## Summary

- 114 - Planters (Main Street)
- 114 - New Planter Lights Integral with Planters
- 29 - Existing Electric Poles with Cobrahead Light Fixtures



# Implementation Priorities

## Establishing Implementation Priorities

The goal of the **Master Plan** for Main Street of Irvington, NY, is to establish a common vision for how Main Street and the Village of Irvington can enhance its rich historic character and legacy, and to identify a process for realizing this vision in a logical and cost effective manner. Building on the consensus achieved, by employing a transparent and iterative planning process, a series of action items were identified for the Village to consider. Placement of overhead utility wires under ground was identified as a priority improvement. This dramatic visual improvement would be a significant undertaking; one which is costly and which would have a direct impact on the sequence and phasing of other desired streetscape improvements. Desired improvements to the sidewalks, crosswalks, street lighting, street tree plantings, and placement of site furniture and new signs would be impacted by the decision to bury, or not to bury, the overhead wires.

Creation of social spaces, set away from the street and sidewalk, as indicated in the Master Plan are not directly impacted by the pending decision to bury or retain overhead wires. Some of these social spaces can be implemented immediately and at a modest cost. The Master Plan process revealed a high level of public interest in making improvements to Main Street and its newly-minted Historic District. Immediate actions to improve pedestrian safety, provide pedestrian amenities, and reinforce the beauty and charm of Main Street are high priorities for many Irvington residents. Understanding that the timing for implementing many of the Master Plan recommendations are still under discussion, Saratoga Associates proposes an implementation strategy that will enable the Village to begin to realize the benefits of the Main Street vision while moving toward a determination to bury or retain the overhead wires. It will take several months for the Village to assess conditions of utilities buried in Main Street (water, gas, sewer, storm, & fiber optics) before a decision can be finalized. Meanwhile, there are improvements that can be made in coming months.

The following is an outline prioritizing the advancement of recommended improvements identified during the Master Plan process:

### Immediate to short-term:

Immediate to short-term actions are those that can be implemented now or in the near future (three to six months) to improve public safety, provide public amenity and enhance the attractiveness of Main Street.

1. Re-stripe pedestrian crosswalks to improve visibility of the crosswalks and improve pedestrian safety.
2. Install selected benches and trash / recycling receptacles. Recognize that some furnishings may need to be moved or adjusted when sidewalks are reconstructed at a later date. A table of recommended furniture locations is appended to this report.
3. Pave open, empty tree pits to improve pedestrian safety. It may be preferable to temporarily mulch and plant empty tree pits if there is sufficient capability to maintain them.
4. Reduce visual clutter on Main Street. Coordinate with the Department of Public Works and the Police Department to review the inventory of existing signs prepared during the Master Plan study and direct the retirement / removal of signs that are no longer needed.
5. Issue a Request For Proposal (RFP) for the survey and investigation of existing conditions of existing underground and overhead utilities on Main Street including water, gas, sewer, stormwater, and fiber optics.
6. Issue a Request For Proposal (RFP) to project the future demand for utility services along the Main Street and supplied by Main Street connections such as the Bridge Street Development, side streets, and potential development parcels, etc.

# Implementation Priorities

## Mid-range goal for up to 12 months:

1. Issue a Request for Proposal (RFP) to prepare a preliminary design for upgraded utility services for Main Street including coordinated communications with Con Edison, Verizon, Cablevision, the Water Department, NYS DEC, and others. The goal of this work will be to have an actionable design plan with a refined engineers cost estimate.
2. Initiate grant applications and establish overall funding / bonding strategies for making long-range capital investments in the bed of Main Street. Look for opportunities such as Transportation Enhancement that will reimburse design costs. Establish a schedule for final design and phased construction and implementation.
3. Hire an engineering, landscape architecture, and survey team to prepare final construction documents prepared to include desired utility improvements and Main Street streetscape improvements for a reconstructed roadway including curbs, sidewalks, tree planting, lighting, signs, and street furnishings. Further refine the engineers cost estimate. Advertise the construction project and receive bids. Evaluate bids for Award. The Notice to Proceed can be stipulated for a future date when funding is in place. This will require a scheduling clause.

## Burying of the Overhead Wires

- Placement of overhead wires underground was identified as highly-desirable by a majority of individuals participating in the Master Plan Steering Committee, public meetings and on-line survey. Removing the wires from view was characterized by one of the participants as “*the most important improvement proposed by this study.*” The cost of burying the wires is significant and the benefits need to be fully understood. Not only would burying the wires greatly improve the aesthetic quality of the downtown Historic District, it would also have an immediate positive impact on the value of real estate fronting Main Street.
- Burial of the wires would make it possible to plant street trees that can be expected to attain a healthy and attractive condition. Vibrant street trees are accepted as having a positive economic impact on Main Street business areas. Wires, underground, would improve the resiliency of the Village during future storm events and reduce the frequency of power loss and costly cleanups.
- It is possible that burial of the overhead wires may be folded into future, unavoidable work in the street bed. If the cost of burying the wires is considered along with the cost of necessary in-ground infrastructure upgrades, the cost of burying may be relatively less significant.

During the course of the Master Planning process, the Master Planning team learned that underground infrastructure in the bed of Main Street is old, requires frequent emergency repair for gas leaks, water main breaks, and at 75-plus years, may be ready for a major upgrade. During 2014, Con Edison made a number of gas-line repairs and the Water Department repaired several water main breaks. Outside of regular emergency repairs, the last major update in underground infrastructure was reportedly installation of the stormwater system in the 1970's.

- The Village needs to know the condition of underground utilities in order to plan for the future. The condition of gas, water, sewer, and stormwater systems has not been evaluated in recent decades. The Village should engage a consultant to survey and evaluate water, gas, sewer, storm water and fiber optic infrastructure in the street. The decision to bury the wires, or not, can best be made with full information about the conditions in the street. A comprehensive look at the overall utility picture is needed in order to knowledgeably evaluate the cost of burying the wires.
- Consideration of an upgrade to utilities on Main Street should also consider potential future demands for these resources. Only with a clear picture of the current conditions and future needs can an informed decision about burying the wires be made. While the goal of this Master Plan is to see new pavements, street trees and street furnishings implemented as soon as possible, many of these investments should be deferred until any near-term upgrades in the bed of the street can be addressed. Once required upgrades are made, closing of the street and sidewalks should follow the recommendations made in the Master Plan. This finishing work will require a completed survey and design of the final street and curb grades. A landscape architect working closely with an engineering firm should be consulted to design and layout finalized features for the upgraded Main Street. Funding to offset some of the expense should be sought through TEP, the New York State “Transportation Enhancement Program.” Similar funding options are identified in the section on project funding.

### Defer until decision about wires is made:

Proposed site improvements that **should be deferred** until a decision about burying the wires is made include the following:

- Re-paving and re-establishment of the roadway crown, gutter elevations, curb heights, and sidewalk elevations and grading. Gutters should include stormwater infiltration strips to recharge ground water and improve street tree health.
- Placement of colored, textured asphalt to mark pedestrian cross-walks.
- Re-construction of street corners featuring to include ADA compliant curb ramps.
- New sidewalk with distinctive paving, permeable pavers and slateface pavers.
- New street tree or tree pot locations.
- Sidewalk extensions or “bulb-outs” featuring stormwater infiltration gardens, social spaces with benches, trash & recycling receptacles and relocate fire hydrants as needed.
- Placement of new street lights, pedestrian level lighting, banners, and armatures for holiday lighting.

Note the decision to bury or retain the overhead wires will have a significant impact on several Master Plan recommendations.

#### If overhead wires are retained:

- Some existing wooden utility poles would need to be relocated to accommodate ADA compliant pedestrian ramps.
- Street trees would need to be limited to small trees or large shrubs placed in planters under wires to avoid branch conflicts at eye-level and heavy branch pruning at wire levels.
- Permeable pavers to capture stormwater to supply trees would not be relevant.
- Placement of new street lights would be not be practical.
- Placement of pedestrian level lights would not be possible.

#### If utility wires are buried underground:

- Street corners and other sidewalk areas would be unencumbered and the full corner geometry would be available to accommodate ADA compliant pedestrian ramps.
- Standard size street trees could be planted in generous 5x10 tree pits and significant levels of pruning will not be required.
- Permeable pavers over a continuous planting trench will capture stormwater to supply trees.
- Placement of new street lights will be possible.
- Placement of pedestrian level lights will be possible.

## Implementation Priorities

The street pavement itself is in need of resurfacing. The past few resurfacing projects did not include milling down of existing pavements along curbs and so, the height of the curb reveal which transports stormwater to catch basins has become increasingly shallow. There are a number of locations where stormwater comes to a parked car tire and overtops the curb, flooding the sidewalk. The Village may not want to resurface the street in the near-term until the need to excavate the street is determined. Placement of recommended new, colored, textured asphalt pavement for marking cross-walks, while not particularly costly, could wait until major work in the bed of the street is completed and the roadway has been resurfaced. In the interim, basic white lines should be reapplied at all crosswalks. Recommended new street furnishings including benches, trash receptacles and recycling bins can reasonably be placed now and be moved to adjusted locations if and when wires are buried. Placement of new street lights, banners, and signs, should be deferred to be included as part of other major street work since the lighting requires excavation to place underground electrical conduit and connections.

### Master plan recommendations independent of the overhead wire decision . . .

The Master plan recommends the creation of several social spaces that are set away from the street, curb and sidewalk and, as such, would not be impacted by the decision to retain or bury overhead wires. They include several small sitting areas or park spaces. They are listed in the order we recommend implementing/funding them.

The Old Croton Aqueduct (OCA) trail connection and **Monument Plaza** concept design can be implemented with only minor modifications required later, when wood utility poles (2) are removed when overhead wires are buried. This project, located mainly on State land, could receive funding support from the NYS Office of Parks, Recreation and Historic Preservation who own and manage the site. It would significantly improve the walking and biking linkage between Irvington and adjacent river-town communities. As an important civic gathering space, this improvement will serve as a major focal point on Main Street and continue to host street fairs and holiday events. Reconstruction of the Monument Plaza will not only greatly improve the continuity of the OCA, but also place greater significance on the Monument Plaza by providing seating for quiet reflection.

## Implementation Priorities

- The proposed **Art Park** on the hillside between Village Hall and the Main Street School also has good potential for attracting funding. Building on the Irvington legacy as a place where arts & letters has flourished, transformation of this open space into a social gathering space themed as an Art Park is most appropriate. Partial funding for this site may be sought from the National Endowment for the Arts. Naming rights could attract a significant amount of donor money. The program calls for two sitting areas, connected by an ADA accessible ramp, with easy access to Main Street and the parking area at the back of the Main Street School. The parking area is also the location of the weekly Farmers' Market. The space would be ideal as a quiet sitting and relaxing area right off of Main Street where a program of circulating artwork can be displayed. The space envisioned as one with stepped seating can provide a venue for community activities including children's music, dance, and small performances. At a recent Irvington Day, June 14, 2014; the student violin ensemble performed in an adjacent driveway next to Village Hall with limited places to stand and nowhere to sit. The Art Park can also provide ADA access to the upper area adjacent to the school where tables and chairs are envisioned as a casual sitting and dining area. This plan can move ahead in the near term (six months to one year) and will not be impacted by the decision concerning the over head wires. Village residents and visitors can begin to enjoy a downtown park adjacent to Village Hall in the near future.
- Creation of sitting areas and a tot play area next to the I.K. Benjamin **Recreation Center** at 71 Main Street is another project that can proceed without concern for the open question of overhead wires. No specific public funding source has been identified to support this facility. The proposed parklette is such a fine amenity that naming rights should attract a private donations. A high degree of amenity can be realized by removing one major evergreen tree and introducing an ADA compliant ramp, pathway, gates, two small seating areas, and a tot play area. One seating area would be adjacent to a gated toddler play area and the second would include chess-checker tables and a bench overlooking the street. It is expected to attract lunch-time visitors and an intergenerational group of residents. The accessible ramp would not only allow for wheelchair access but also provide convenience for strollers and carriages.
- The proposed **Broadway Gateway** design, at the intersection of Broadway and Main Street, will provide a more attractive and welcoming entrance to Irvington and Main Street by providing an attractive bus shelter set on new distinctive pavements and flanked by new curbs, plantings, and trash / recycling receptacles. The intention of this design is to facilitate and encourage use of public transportation. The physical design of this project is simple and straight forward. It will, however, require time, planning, and legal action because the footprint of the design encroaches on private property in use as a gas station. It will also require review with Westchester County and the BeeLine System who operates bus route. In recent years, Westchester County has been improving bus stops. The Village should inform the County of its plan / desire to upgrade the bus stop to see if any part of the purchase, installation, or maintenance of a new bus shelter can be shared by the County. An attractive and well maintained bus shelter would make a positive welcoming statement at the corner of Broadway and Main Street.
- Improvement to the Astor Street Gateway at the railroad station where Astor Street terminates Main Street is key a element of the Master Plan. The railroad station (and the dock, before it) had been the historic entrance to the Village. Main Street and its "A, B, C" cross streets were organized around this key point of arrival and departure. Planning for improvements adjacent to the railroad station should begin in the near term, with the understanding that it may take a lot of communication and coordination with the Metropolitan Transit Authority to realize the vision of the Astor Street Gateway. During this same time, the Village should be looking at future plans for the Astor Street corridor and connections to the Bridge Street development area west of the tracks. The future of these key areas will influence the outcome of the Astor Street gateway. Irvington is fortunate to have a commuter railway station, a business development area, and a large plot of public land all within easy walking distance from Main Street and the residential areas that flank it. This is an ideal Transportation Enhancement Program project area well worth pursuing to promote Irvington as a right-scale walkable community of the future.

# Implementation Priorities

## Knowledge is power, communications are critical

To implement the vision of the Main Street Streetscape Master Plan it is important that the Village deepen its knowledge of its existing infrastructure, explore options for city properties, and make long-term plans to safeguard, enhance, and enjoy the Main Street. This plan will require a commitment to not only borrow and expend money over the long term but also to leverage improvements by negotiating strategic development rights. Maintaining communication with the residents and businesses through this process will be critical. Residents and businesses will look forward to improved amenities, expect them to be maintained, and only be willing to pay for them if they feel that they have helped initiate them. This will require an on-going dialogue and skilled leadership. The following are our recommendations to strengthen the knowledge base and to maintain clear communications to foster realization of the Master Plan.

Maintain the Main Street streetscape steering committee as an ongoing committee to follow up on research, design review, and funding opportunities related to enhancing Main Street.

Communicate early with internal departments which will share in the responsibility for maintenance and operation of new amenities or facilities.

Communicate early and in an ongoing forum with outside agencies from whom the Village hopes to gain project support including: the NYS Office of Parks, Recreation and Historic Preservation, the Irvington Union Free School District, the MTA, the NYS DOT, Westchester County, Con Edison, the Water Department, Verizon, Cablevision and others.

Present the Master Plan to State, County, and agency leaders and ask for their support and recommendations in procuring the funding needed to advance the Master Plan.

Present the Master Plan to private funding sources and suggest projects that have funding / naming opportunities.

Pursue identified grants and other funding opportunities.

Utilize political and legal communication as needed with Con Ed, Verizon, Cable Vision and other agencies, to clarify what overhead wires are active, who is responsible for utility poles, who is responsible for removing damaged utility poles, and what role they would play in potentially burying wires.

Inform the MTA of the Village's interest in improvements to the rail road drop-off and pick up area on Astor Street. Establish a dialogue regarding the desired improvements at Astor Street, especially those which include proposed modifications on MTA property.

Study circulation in Irvington beyond Main Street including Astor Street and Bridge Street including a potential alternative pedestrian connections to the west side of the railroad tracks.

Identify one of the proposed site improvements concepts, outside the potential zone of impact related to burying the overhead wires, to advance through design and construction to keep the interest and momentum going for Main Street projects.

Initiate plans for advancing a general obligation bond or a (TIP) Tax Increment Financing instrument.

# Implementation Strategies

## Funding Preliminary Investigations and Design

Funding of preliminary investigations and design would most likely be the responsibility of the Village. While outside sources of funding are not likely to be available for preliminary survey, research and design related to Main Street improvements, there is potential under some funding sources to recover these upfront costs at a later date. The NYS DOT's [TEP] Transportation Enhancement Program, for example, is a reimbursement program which provides up to an 80% reimbursement for design, construction and inspection of projects improving pedestrian safety and intermodal transportation. It is, therefore, advisable to conduct investigatory and design work in accordance with rules that will allow for reimbursement. TEP requires that the project sponsor, or the Village, would develop projects in accordance with Title 23, United States Code and the NYSDOT Project Development Manual. The NYSDOT Procedures for Locally Administered Federal-Aid Projects is the source document for project process and procedural requirements.

A key element of preliminary investigation is to discover the actual location and condition of underground utilities: water, sewer, stormwater, gas, etc. The timing and scale of any related underground utility work needs to be understood before proceeding with a decision to bury or retain overhead wires as well as any decision to fund and replace sections of roadway and sidewalk. The work required is expensive and it is in the interest of the Village to conduct the work once and avoid digging up newly completed improvements.

The possibility of required road excavation and determining the actual location of the utilities has the potential to impact adjoining sidewalks etc. thus influencing when any new improvements to the sidewalks should be undertaken.

As a result of the investigation, if the utilities are in need of replacement, the Village should retain a consultant to prepare 50% contract drawings identifying the required utility upgrades and the desired proposed streetscape improvements. TEP and other sources of funding require a detailed cost estimate which includes contingencies and accounts for inflation.

Such a plan would typically be based on a set of documents such as a 50% set of construction documents. This would enable the Village to identify the required capital expenditure, and to seek grants and funding, based on having a shovel ready project. Developing the Contract Documents and related specifications, does not obligate the Village to construct anything.

Burial of the wires, should be included as part of any utility upgrade contract documents. Again, it would not obligate the Village to undertake burying the overhead wires, but would aid in seeking funding and identifying the cost associated with burying the wires.

Key reasons for burying the wires include resiliency, maintenance, aesthetics, and increased visibility of the historic structures and character.

If burying the wires is not to be pursued, the Village can proceed with improvements to be implemented in a logical and cost effective manner.

The potential improvements identified in the Master Plan include but are not limited to the crosswalks, sidewalks, ramps, curb extensions, site furniture elements, street trees, new public spaces, the OCA entrances and Memorial Plaza, lighting, and signage.

The implementation of new proposed public spaces associated with the proposed Art Park and Recreation Center play area would not be impacted by any decision associated with whether the overhead wires are buried or not.

Equally, the proposed improvements at the bottom of Main Street at the train station on Astor Street and the OCA trail crossing and Memorial Plaza, could also proceed with relatively little concern about the timing of burying the wires. If the wires were buried at a later date there would be minimal disturbance to the newly implemented improvements.

# Implementation Strategies

## Funding Sources

To assist in implementing the Master Plan's proposed improvements, the Village can explore the following potential sources of funding and grants identified as part of the Consolidated Funding Program including the following:

New York State Department of Transportation's [TEP] Transportation Enhancement Program (has a number of categories that would apply, including burying the wires) 80 % reimbursement for programs including pedestrian safety, intermodal transportation, etc. All proposed projects must have a minimum total cost of \$200,000 and the maximum reimbursement is \$2.5 million. To be eligible, the proposed project must fit into one or more of five eligible TEP categories including:

Provision of Facilities for Pedestrian and Bicycles, which includes construction of sidewalks, high visibility crosswalks for improving pedestrian safety.

Scenic or Historic Highway programs which may have applicability because of the recent Historic District designation. Landscaping and Other Scenic Beautification (Including streetscape improvements.)

New York State Office of Parks, Recreation, and Historic Preservation funding under its EPF Municipal Grant Program is available for park acquisition development and planning that would be applicable to the proposed improvements to the OCA. These funds can be used towards design fees as well as construction costs for the desired improvements identified in the Master Plan recommendations.

The Office of Storm Recovery-Resilience Fund Low -Cost Financing. This program is in the Governor's Office of Storm Recovery to develop a Resilience Fund for low cost financing, to bridge the gap between the demands for funds that were expended as part of the NY Rising Community

Reconstruction allocation. The goal is to make communities more resilient. The Village would appear to be eligible to apply under the Infrastructure Category. This Category covers new investments in infrastructure that would improve services to the community and improve resilience and reduce vulnerability to future storms. This would appear to have great applicability to both burying the wires and upgrading the existing underground utilities, for which concerns have been raised, as part of the Master Plan study, about both their condition and continued longevity. There is a 30% match requirement associated with this program, and the match can be from funds leverage from other programs and/or grants.

Empire State Development Grants- This may also have applicability to improving the infrastructure and used towards burying the overhead wires, and/or for the associated feasibility studies

New York State Council on the Arts- Arts, Culture and Heritage Projects program- as a designated historic district, the Village may be able to take advantage of this program. Projects that are eligible for support include Arts, Cultural and Heritage projects. Artistic Program Capital for purchases that directly drive public participation, tourism and regional vitality, Funding is available up to \$5 million

New York Department of State-Local Waterfront Revitalization Program, working in Partnership with neighboring municipalities, can apply for a 50:50 matching grant. For project specific planning, feasibility, design and/or marketing needed to advance eligible activities, the municipality must be preparing, or have an approved LWRP. Funding is available up to \$11.75 million.

Environmental Facilities Corporation-Green Innovation Grant Program. (can apply towards storm water management). \$12.6 Million in funding was available for this program in 2014.

# Implementation Strategies

New York State Energy Research and Development Authority-Cleaner, Greener, Communities Program- Phase II Implementation Grants. There are a number of categories under this program that would appear to be applicable to Irvington including the following:

- Category 2- Planning Initiatives to support comprehensive planning or other innovative planning related initiatives for projects to create a more sustainable and resilient community. Up to \$5 million with \$25K to \$250K available per project with a 25% match is available to support these types of effort.
- Category 3- Community-Scale sustainability projects that will be available for community wide projects that promote community wide sustainable development and are transformative in their contributions to advancing sustainable development. Up to \$25 million with \$500K to \$5 Million available per project with a 25% match is available to support these types of projects .

The National Endowment for the Arts (NEA) is a separate Federal program that would appear to have applicability for Irvington, and for funding a number of the proposed improvements or recommendations in the Master Plan. Under the NEA category of Our Town. The NEA encourages art and design to make communities more livable with increased creative activity, and a distinct sense of place. This is accomplished through the process of “Creative Placemaking”. For Irvington the creative placemaking can draw upon several options to pursue this funding including the proposed the Art Park and its adjacency to the historic theater; the proposed children’s’ play area by the recreation building; and the proposed incorporation of “art” into the sidewalks in the form of historic plaques or custom signage and environmental graphics. Additional sculptural features/items can also be incorporated within the streetscape context, associated with the proposed Village wide streetscape improvements as well as cultural and artistic programs in the proposed Art Park. The potential funding for these ranges from \$25,000 to \$200,000.

While the NYS Clean water Clean Air Bond Act of 1996 funds have been exhausted, there was an attempt to refund it through the NYS Bonds for Environmental Infrastructure in 2014. While this bond was not successfully put forward, it is likely to be a significant source of funding in coming years.

## Leveraging Opportunities

Although not part of the Master Plan project area, the DPW site needs to be evaluated by the Village, as this could be a lynch pin to leverage monies to assist in many of the Villages longer term goals, such infra-structure improvements, parking, affordable housing, increased retail, and strengthening the whole Astor Street corridor as a Gateway into the Village. Additionally, future plans for this large potential development site should be factored into any projection of future utility demands.

The Fire House on Main Street may be relocated at a future date to allow for modernization of that facility. A plan for how that site and / or structure can be repurposed should be considered well in advance of that move. Upgrades in utilities serving the site should be considered and the impact on parking should also be considered. A facility that would include parking on that site should be considered because of its central location.

The EMS station would likely move with the Fire Station. The potential reuse for this significant corner lot should also be planned for well in advance.

The municipal parking lot at the NE corner of Main Street and N. Astor Street has potential for a double level parking lot (no ramp); with access from Main Street on the upper level and from N. Astor Street for the lower level. While a small site, it could readily double the parking capacity.

## Recommended future Utility Survey Plans

Weidlinger Associates has identified the tasks needed to create a complete utility survey plan. This task would seek to inventory, map and qualify all the existing utilities in the street. Municipalities that maintain accurate mapping and condition inventories of their street infrastructure can plan aggregate improvements to include work by private utilities in a cost effective manner that mitigates costly emergency repairs due to mechanical failure or natural disasters. The following comprise the necessary steps required to prepare complete Utility Survey Plans.

**Survey:** If a recent topographical survey of the area streets is available it will need to be checked by a licensed surveyor to include any new features in the right of way. Should no recent survey exist, a new topographical survey would be performed to locate all the surface features and elevations of manholes, castings, basins, curbs, back of sidewalks, building entrances, etc. as well as obtain all linear dimensions. As best as possible all manholes in the survey would be identified as to their owner and to what system they relate. An accurate topographical survey is the critical foundation of any utility plan so that the relationship of underground facilities to surface features can be precisely depicted in scale drawings and for use in reconstruction activities.

**Sewers:** Record plans of existing storm and sanitary sewers would be obtained from the authority that maintains the drainage system, as available. These systems would be added to the topographical survey. In order to ascertain the condition of sewers, or to confirm how the various pipes and manholes interconnect and the size of the structures, a video inspection of the storm and sanitary sewers would be initiated. The resultant video would be reviewed, and the information on size and orientation of these structures would be used to refine the information from record plans so that the utility plan depicts the system accurately. The video would also be used to ascertain the condition of pipes and manholes. This condition inventory could be used in the planning of infrastructure improvements long-term and in conjunction with other excavations in the area. For example, if it is known that a certain section of sewer is dilapidated and in need of repair, the work to fix it may be dovetailed with other necessary work.

**Water Main Design:** As with sewers, record plans of existing water mains would be obtained from the authority that maintains the water distribution system, as available. These systems would be added to the topographical survey. In order to ascertain the condition of water systems, water main manholes would be opened and the valves opened to determine their functionality. Very old water main valves

are often inoperable due to rust, and during a water main break it can be critical to know which function in order to limit the damage from flooding. Also, knowing which valves are inoperable, combined with record plan dates of pipe installation, can help a municipality prioritize which parts of the system need to be replaced as a coordinated effort to head off water main breaks. Water main replacement can also be combined with sewer replacement, and form part of a phased and cost-effective long-term plan of infrastructure improvement.

**Electrical Systems:** These systems are usually comprised of a variety of components: manholes, duct banks, cables, risers, utility poles, overhead wires, service connections, primary service, secondary service and transformers. Con Edison maintains these systems in this municipality and their record plans would be used to include these systems on the survey for the composite utility plan. Consultations with the operating authority would determine what if any improvements to the system are planned that could be performed in conjunction with municipal work.

**Communications:** These systems are usually comprised of a variety of components: manholes, duct banks, cables, risers, utility poles, overhead wires, service connections, fiber optics, amplifiers and connection pedestals or cabinets. Verizon maintains some of these systems in this municipality and their record plans would be used to include these systems on the survey for the utility plan. Other entities like AT&T or Time Warner Cable may also maintain systems in the area that would need to be identified and mapped into the survey. Consultations with the operating authorities would determine what if any improvements to the system are planned that could be performed in conjunction with municipal work.

**Gas Mains:** These systems are comprised of a variety of components, to include: manholes, valves, low-pressure pipe, high pressure pipe, transmission pipe, vent stacks and regulators. Con Edison maintains these systems in this municipality and their record plans combined with manhole and valve identification would be used to include these systems on the survey for the utility plan. Consultations with the operating authority would determine what if any improvements to the system are planned that could be performed in conjunction with municipal work. If municipal work is planned, older mains that otherwise might not be replaced likely would be to head off gas leaks.

# Cost considerations and Impacts

8/29/2014  
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## Preliminary Construction Estimate Burying of Overhead Utilities

Village of Irvington

ITEM	ITEM DESCRIPTION	QUANTITY [C]	UNIT [D]	UNIT PRICE [E]	COST [CxE]	COMMENTS
1	ASPHAL TIC CONCRETE WEARING COURSE, 3" THICK	12,250	S.Y.	\$ 28.00	\$ 343,000.00	assumed resurface entire roadway (2205' x 50' wide)
2	ASPHAL TIC CONCRETE MIXTURE	1,870	TONS	\$ 125.00	\$ 233,750.00	estimated quantity per block is 170 Tons
3	CONCRETE BASE FOR PAVEMENT, 12" THICK (HIGH-EARLY STRENGTH)	980	C.Y.	\$ 260.00	\$ 254,800.00	4 trenches with a width of 3', 4', 2', and 3' with a length of 2205' each
4	CONCRETE CURB	4,410	L.F.	\$ 35.00	\$ 154,350.00	based on L.F of roadway (2205')
5	PRIMARY ELECTRIC CONDUIT INSTALLATION (SOUTH SIDE OF STREET)	1	L.S.	\$ 474,075.00	\$ 474,075.00	assumes 8 conduits, 3' wide trench, excavation, conduit, cable pulling, and splicing
6	TELEPHONE CONDUIT INSTALLATION (SOUTH SIDE OF STREET)	1	L.S.	\$ 441,000.00	\$ 441,000.00	assumes 12 conduits, 4' wide trench, excavation, conduit, cable pulling, and splicing
7	CABLE TV CONDUIT INSTALLATION (SOUTH SIDE OF STREET)	1	L.S.	\$ 176,400.00	\$ 176,400.00	assumes 4 conduits, 2' wide trench, excavation, conduit, cable pulling, and splicing
8	SECONDARY ELECTRIC CONDUIT INSTALLATION (SOUTH SIDE OF STREET)	1	L.S.	\$ 474,075.00	\$ 474,075.00	assumes 8 conduits, 3' wide trench, excavation, conduit, cable pulling, and splicing
9	FURNISH, DELIVER, & INSTALL MANHOLES, COMPLETE WITH HARDWARE AND CONNECTIONS	33	EACH	\$ 20,000.00	\$ 660,000.00	assumed 2 electric and 1 telephone manhole per intersection (11 intersections)
10	FURNISH, DELIVER, & INSTALL CATV SPLICE BOXES, COMPLETE WITH HARDWARE AND CONNECTIONS	11	EACH	\$ 10,000.00	\$ 110,000.00	assumed 1 cable TV manhole per intersection (11 intersections)
11	FILL, PLACE MEASUREMENT	3,430	C.Y.	\$ 35.00	\$ 120,050.00	Excavation quantity minus the concrete and asphalt roadway
12	4" CONCRETE SIDEWALK (UNPIGMENTED)	44,100	S.F.	\$ 7.25	\$ 319,725.00	based on L.F of roadway and an assumed width of 10'
13	UNCLASSIFIED EXCAVATION	4,900	C.Y.	\$ 60.00	\$ 294,000.00	depth of 5', length 2205', and 4 trenches with a width of 3, 4, 2, and 3'
14	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.	\$ 300,000.00	\$ 300,000.00	Based on comparison against other projects
15	MOBILIZATION	1	L.S.	\$ 281,886.00	\$ 281,886.00	4% of contract
16	ENGINEER'S FIELD OFFICE	18	MONTH	\$ 6,500.00	\$ 117,000.00	assumed 12 month construction duration (add 6 more months for field office)
17	SAWCUTTING EXISTING PAVEMENT	17,640	L.F.	\$ 4.00	\$ 70,560.00	approx. length of Main Street is 2,205 L.F (separate trench for each utility - assumed 4 trenches)
18	STRIPPING PAVEMENT SURFACE (ASPHAL TIC CONCRETE)	12,250	S.Y.	\$ 10.00	\$ 122,500.00	assumed strip entire roadway (2205' x 50' wide)
19	MAINTENANCE OF SITE	12	MONTH	\$ 17,618.00	\$ 211,416.00	APPROXIMATELY 3% of contract / MONTHS
20	TEST PITS	75	C.Y.	\$ 300.00	\$ 22,500.00	Assumed 10 test pits with volume = 8'x5'x5' each
21	CONDUIT PREP AND CABLE PULLING	70,560	L.F.	\$ 6.00	\$ 423,360.00	includes all set up, cable blocks, sheaves, and all 32 conduits
22	CABLE SPLICING, MANHOLES	33	EACH	\$ 30,000.00	\$ 990,000.00	assumed one week for a 6K per day crew
23	CABLE SPLICING, SPLICE BOXES	11	EACH	\$ 6,000.00	\$ 66,000.00	assumed two days for a 3K per day crew
24	REMOVAL OF POLES AND OVERHEAD FACILITIES	11	BLOCK	\$ 80,000.00	\$ 880,000.00	assumed two weeks per block, 8K per day crew
<b>SUBTOTAL</b>					<b>\$ 7,540,447.00</b>	
<b>CONTINGENCY (20%)</b>					<b>\$ 1,508,089.40</b>	
<b>TOTAL</b>					<b>\$ 9,048,536.40</b>	

length = 2,205 feet  
total intersections = 11



Note: This estimate is for burial of the overhead wires only, it does not include installation of street trees, lighting, street furnishings, decorative pavements and other proposed aesthetic improvements as outlined in the Master Plan.

# Appendices

- List of site furnishing sources . . . . . A - 2
- Recommended street furniture location table . . . . . A - 6
- Phasing Plan . . . . . A - 8
- Circulation Plan . . . . . A 10
- Topographic Plan. . . . . A 11
- Historic resources . . . . . A-12
- Street Tree Inventory. . . . . A-13
- Sign Inventory . . . . . A-50
- Turning Analysis. . . . . A-59



Village logo.



Standard trees planted in tree pits



Small trees, large shrubs planted in pots