

**Village of Mamaroneck • Committee for the Environment
DRAFT AGENDA**

December 19, 2022 @7:30 pm Village Courthouse

Vote to Approve Minutes of November 2022 Meeting

Meeting Schedule for 2023

Updates

- Proposed resolutions from prior meetings
 - Junior committee member
 - Leave the leaves
 - Update sanitation brochure
- Mayor's Monarch Pledge
- Taylors Lane
- Rockland Pocket Park (report attached)
- Proposed gas-powered leaf blower buyback
- Comprehensive Plan

Clean Energy Communities/Climate Smart Communities

- Update on progress since last meeting (report attached)
- Campaign for Heat Pumps
- New York Stretch Code

Food Scrap Recycling:

- DEC Food Scrap grant
- New signage indicating pickup service needed

Short Street Bridge (report attached)

- Proposed resolution

Priorities for 2023

Revitalization and Appointment of Subcommittees

Public Comment: At the end of each meeting. 10 minute limit per person, unless otherwise permitted by CFTE.

**Draft VILLAGE OF MAMARONECK COMMITTEE FOR THE ENVIRONMENT
MINUTES OF November 15, 2022 MEETING**

Members Present: Ellen Silver (Chair), Lou Young (Village Trustee), David Freeman (via zoom), Dan Kushnick (via phone), Liam Robb O'Hagan, Renee Crabtree, Christi Young, Katherine Dehais, Debbie Sullivan, Mandy Forlenza Sticos. **Members Absent:** Tim Whitney.

The meeting was held in person at The VOM Courthouse. Called to order at 7:39pm

General Discussion

The minutes of the Committee's October 2022 meeting were approved.

Environmental Bond Act Passed. Kate reports that the VOM did not vote in favor of it, although it passed by a wide margin in the state. One thought was that it got mixed up with the 3 Village proposals. The VOM sent out a survey to residents regarding the Comprehensive Plan which includes a sustainability section.

Retiring Committee Members/New Members. Ellen is retiring, and a new CftE chair will be appointed by the BOT. Ellen noted the many achievements of the committee during her tenure. The Committee unanimously approved a resolution proposed by David thanking Ellen for outstanding leadership. Lou asks for members to give input on new leadership and on new members who are applying. Mandy will send an email in support of 2 applicants for committee membership. Ellen again raised the issue of a Junior member which the committee has voted to support. NY State is advocating this. Lou will bring it to the BOT for approval.

Update on 3 Resolutions previously passed in the October meeting. The committee passed the following 3 resolutions in October: 1. Adding a Junior member to the Committee; 2. Leave the Leaves recommendations for the Village to adopt, and 3. updates to the DPW brochure on recommendations for Leave the Leave practices and Food Waste Recycling. The 3 resolutions need to be brought to the BOT in a timely manner. There was a discussion of having 2 junior members, and when their term (s) would start. Lou will follow up with the BOT.

Mayor's Monarch Pledge. Mandy has been reviewing and updating the 2022 actions towards getting badges. So far, 10 actions have been completed, 5 more are on the way to completion and there are 5 more that Jerry has agreed to.

Taylor's Lane. It is not known why the DEC has not yet given release of the site for use. Lou reports that the top DEC use recommendation is as a solar field. He will follow up with the BOT to get an update from the DEC.

NY State Birds and Bees Project. NYS Birds and Bees Protection Act
<https://www.facebook.com/groups/284561182238823/permalink/1056292021732398/> Kate introduced this project which is seeking support for the NY State Birds and Bees Protection Act. The bill prohibits the use of neonicotinoid pesticides. The committee voted unanimously to give our support of the bill.

Transfer Station odor problem. There have been recent complaints about the odor, but the issue has been going on for years. Kate reports there is a meeting Thursday, 11/17 from 7-9 pm at St. Vito's Church; Suburban Carting and VOM representatives (including Jerry Barberio) will be there to address concerns. Suburban Carting, located near the DPW, is a private business which receives and then transfers food scraps and recyclables.

Community Engagement:

Fall Clean and Green - recap. There were about 150 people at the November 5 event; 45 service letters were given out. It has been a very solid community event.

Healthy Yards

Leave the Leaves. The VOM newsletter advocated the mulching of leaves in place.

Native plantings at /Prospect Curb Extension; fall planting. Kate reports that the planting will not be this fall, but in the spring.

Rockland pocket butterfly habitat – Update on work done; proposed resolution to name park and do fundraising. Kate reports that the site has been cleaned, and planted with a guestimate of 600 donated plants and seeds. The VOM took out some trees, and will be putting in wood chips and biodegradable material to prevent erosion. **The committee unanimously passed a resolution to ask the BOT to designate the site as The Rockland Pocket Preserve, and establish it as a named park with signage.** The VOM will need to weed whack the preserve 2-3 times/year to help control invasives. The ongoing restoration will be done by the CftE, the Tree Committee and volunteers. Mandy brought up having a group or subcommittee focused on beautification of the Village.

Proposed gas powered leaf blower buyback. Ellen has been working on the proposal to use the grant money obtained from the Community Campaigns to give \$100 coupons to exchange gas powered leaf blowers for electric ones. Foleys is interested in participating, but they only stock a high end blower. Lou and Dan mentioned KRB Hardware as another option. A scrap metal dealer and a large dumpster would be needed to collect the gas blowers. The possibility of having an event in the early spring was discussed, maybe at the Rockland Pocket Preserve. The BOT needs to approve the buyback plan.

Clean Energy Communities/Climate Smart Communities.

Update from 10/19 Meeting. Ellen met with Village representatives to go over documents that can be used to apply for Bronze Status.

Greenhouse Gas Inventory. Ellen is working on this with the Village.

Community Campaign for Energy Smart Homes. Debbie has been working with Sustainable Westchester which is starting a cohort of 6 municipalities to run a Community Campaign for EnergySmart Homes. The Campaign Scoping Document needs to be approved by the Village and submitted. The Clean Heating and Cooling Campaign aims to educate residents about insulating their homes and installing air heat pumps and geothermal heat pumps. The Village can earn grant money and points in the CSC and CEC

programs if there are 5 installations, 3 of which must be heat pumps. Debbie has proposed that the program run until the end of 2023. David and Liam have volunteered to work on the campaign.

Food Scrap Recycling. There are 306 households in the pick-up program; more than 6 tons of food scraps were collected last month, the highest amount ever. Signage is still needed about the pickup service.

The meeting was adjourned at 9:38 p.m.

Respectful submitted,

Debbie Sullivan

Climate Smart Communities
Status Update 12/14/22

Applying for Bronze status by January 6th is no longer is feasible due to delays in Priority actions. Our next opportunity to apply is April 2023. We have completed and documented CSC actions totaling 89 points (see attached spreadsheet). Once we complete 3 Priority actions we will qualify for Bronze status. Those 3 actions are 1. Greenhouse Gas inventory, 2. Installation of EV charging stations (at least 7 stations) and 3. Sustainability section of the Comprehensive Plan. It is reasonable to expect these 3 actions to be completed during Q1 of 2023.

A new CSC action to note is the Environmentally Preferable Purchasing Policy which was passed by the BOT on December 5th. This requires the Village to consider the environmental impacts of new contracts and purchases.

The Village staff provided me with documentation for the action, Local Forestry Program (8 points). We can thank the Tree Committee for their great work on the tree ordinance, tree inventory, mapping and new plantings.

Ellen Silver
CSC Task Force Coordinator

Climate Smart Communities: Path to Bronze Certification

Pledge Element	Action	Mandatory or Priority	CSC Status	Points	Notes
PE1	CSC Task Force	M	Completed	20	
PE1	CSC Coordinator	M	Completed	10	
PE8	Community Choice Aggregation		Completed	18	
PE9	Social Media		Completed	3	
PE5	Residential Organic Waste Program		Completed	22	Five actions with varying points
PE8	Community Campaigns		Completed	6	Community Solar/GridRewards
PE3	Environmentally Preferable Purchasing Policy		Completed	2	
PE6	Local Forestry Program		Completed	<u>8</u>	
	COMPLETED SUBTOTAL			89	
PE6	Alternative-fuel Intrastructure	P	Planned	16	7 + charging stations = 16 pts
PE3	LED Street Lights		Planned	12	Need NYSERDA approval docs
PE2	Government Operations GHG Inventory	P	Planned	16	In Process
PE6	Comp Plan with Sustainability Elements	P	Planned	3	In Process
PE5	Community Repair		Planned	<u>4</u>	Now eligible
	PLANNED SUBTOTAL			51	
	COMPLETED + PLANNED POINTS			140	
PE3	Fleet Inventory		Unplanned	4	Needs to be completed
PE7	Hazard Mitigation Plan		Unplanned	4	VoM Hazard Mitigation Plan 2021
PE6	NY Stretch Energy Code		Unplanned	10	
	UNPLANNED TOTAL			18	
Bronze Certification Criteria**					
	Mandatory			2	
	Priority			3	

Climate Smart Communities: Path to Bronze Certification

Points	120
Pledge Elements	4

**Application deadline - 1/6/2023

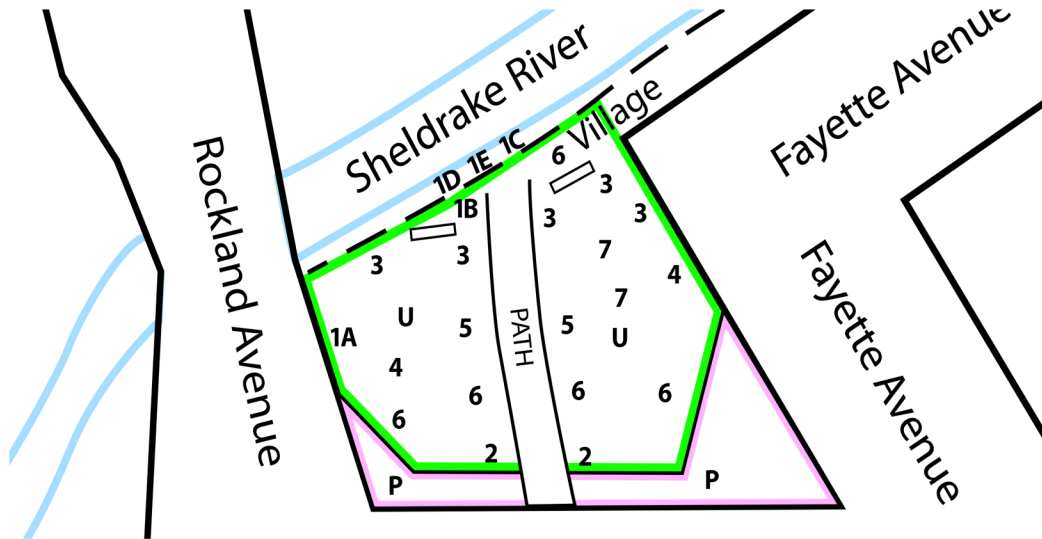
Rockland Pocket bird and butterfly refuge

Existing Trees

- 1a) Norway Maple – 1 large near road, several saplings near water X remove seedlings
- 1b) American Ash – 1 mature, 1 sapling + seedlings
- 1c) American Cherry – 1 medium near water
- 1d) American Sycamore – 1 small near water
- 1e) Bitternut Hickory – 1 sapling near water + seedlings

New Trees

- 2) 2-Oaks – native variety TBD
- 3) 4-Willow – *Salix nigra*
- 4) 2-American Cherry – *Prunus serotina*
- 5) 2-Service Berry - *Amelanchier canadensis*
- 6) 4-Spice Bush – *Lindera benzoin*
- 7) 2 – Swamp Tupelo – *Nyssa biflora*



P Pollinator sunloving plants

U Understory native plants

□ Japanese knotweed area

At the back

Swamp Milkweed *Asclepias incarnata*
 Evening Primrose *Oenothera biennis*
 Beardtongue *Penstemon digitalis*
 New England Aster *Aster novae-angliae*
 Daisy Fleabane *Erigeron strigosus* nts
 Anise Hyssop *Agastache foeniculum*
 Sweet Goldenrod *Solidago odora*
 Wild Bergamot *Monarda fistulosa*
 Cardinal Flower *Lobelia cardinalis*
 Bee Balm *Monarda didyma*
 Euthamia

Middle:

Blazing Star *Liatris spicata*
 Purple Coneflower *Echinacea purpurea*
 Wild Geraniums *Geranium maculatum*
 Wild Columbine *Aquilegia canadensis*
 Little Bluestem *Schizachyrium scoparium*
 Butterfly Weed *Asclepius tuberosa*
 Switchgrass *Panicum virgatum*
 Black Eyed Susan *Rudbeckia hirta*
 Brown Eyed Susan *Rudbeckia triloba*
 False sunflower *Heliopsis helianthoides*

Front

White upland solidago
 Hyssop leaved boneset
 Pearly everlasting
 Wild petunia
Coreopsis verticillata

Woodland edge/half shade

Mountain Mint *Pycnanthemum*
 Golden Alexander *Zizia aurea*
 Wild geranium
 Golden groundsel *Packera aurea*
 Wild bleeding heart
 Thimble weed,
 Canada anemone
 Agrimonia
 Iris cristata
 woodland and creeping phlox
 Bluestem goldenrod
 Honewort
 Figwort
 Zigzag goldenrod
 Heuchera 'Autumn bride'
 Skullcaps

Full shade

Mayapple
 Bloodroot
 Woodland anemones
 Virginia bluebells
 Lyre leaf sage
 'Woodland asters'
 'woodland ferns'
 'Woodland Sedges'

Competitive species

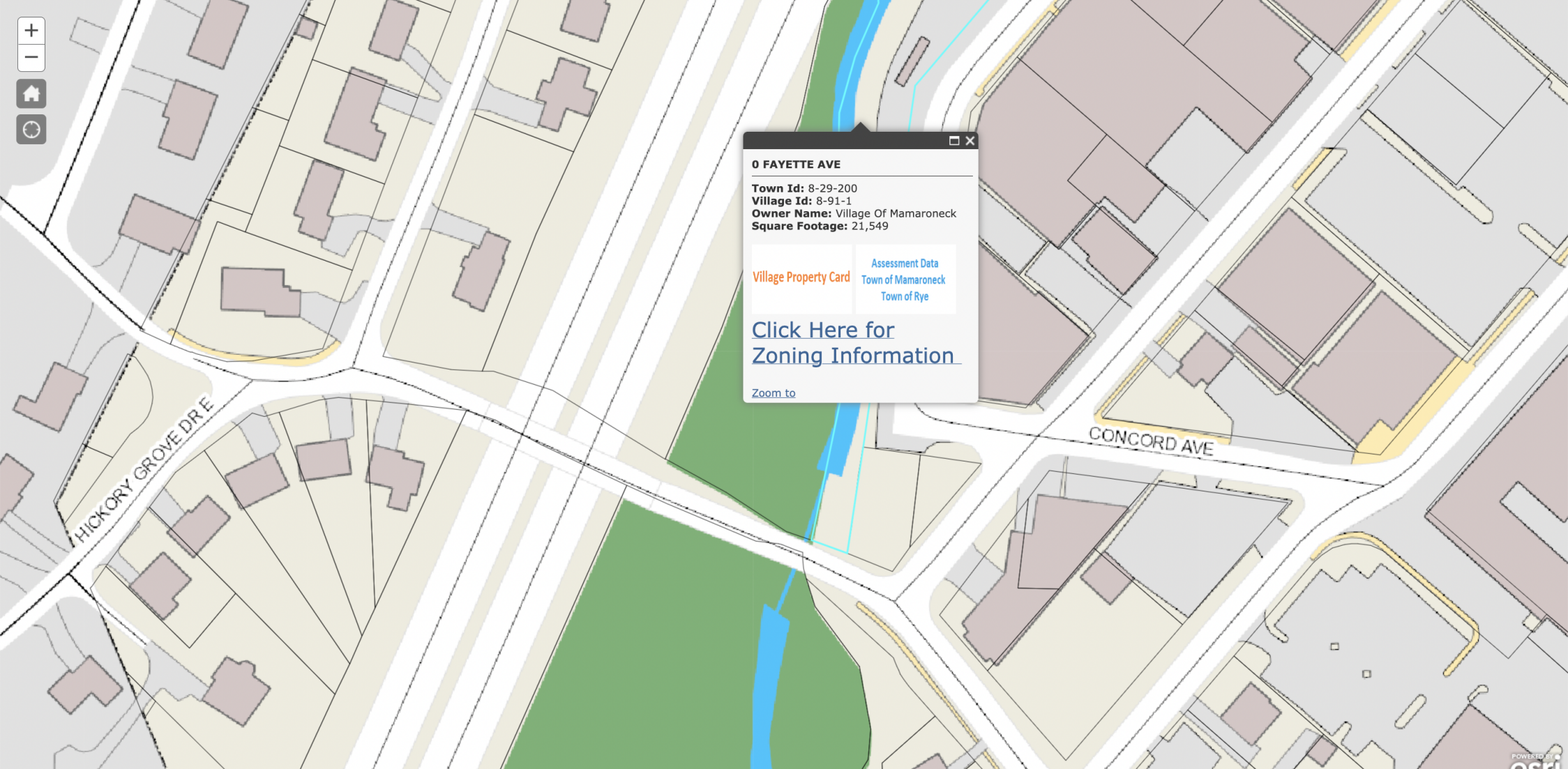
Mountain Mint *Pycnanthemum muticum*
 Rudbeckia lanciniata
 Woodland sunflower,
 Joe Pyeweed
 Swamp rose
 Virginia rose
 Choke berry
 Elderberry
 Any deer proof shrub
 you can get your hands on!

In orange: consider buying as plugs (we can order them for you for wholesale prices)

In black: Most of these species can be gathered as seeds or as baby plants from 'neighbors'

In blue: Use subsidized Saratoga Spring nursery in the winter to order

GIS - Property Finder



0 FAYETTE AVE

Town Id: 8-29-200
Village Id: 8-91-1
Owner Name: Village Of Mamaroneck
Square Footage: 21,549

[Village Property Card](#) [Assessment Data](#)
[Town of Mamaroneck](#)
[Town of Rye](#)

[Click Here for Zoning Information](#)

[Zoom to](#)

Jerry Barberio, Village Manager
Village of Mamaroneck
123 Mamaroneck Avenue
Mamaroneck, NY 10543

December 5, 2022

Mr. Barberio,

On behalf of the Committee for the Environment (CFTE), I am writing this letter in support of the Short Street Culvert Rehabilitation Project.

The CFTE is comprised of volunteers who advise the Village's Board of Trustees on ways to protect our natural resources from further damage, and to initiate, promote, and recommend viable programs and the adoption of laws to improve the health of land, water, and air in and around our unique, waterfront village. It is our recommendation that the Village completes this culvert rehabilitation project to improve the natural waterway and reduce flood risk that can damage the surrounding environment. We are also supportive of the Village's application to the NYSDOT BRIDGE NY Grant Program to receive the necessary funding to do so.

We are pleased to support the Village in this endeavor and are eager to help in any way necessary. Please do not hesitate to contact me with any questions.

Sincerely,

David Freeman
Chair, CFTE
dfreeman@vomny.net

SHORT STREET CULVERT INSPECTION REPORT

TOWN OF MAMARONECK
WESTCHESTER COUNTY

09/20/2022

INSPECTED BY:

JAMES CURRA, E.I.T.

PAUL SALCHERT, P.E.

PREPARED BY:



PREPARED FOR:

VILLAGE OF MAMARONECK

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1.0 INTRODUCTION

1.1 Structure Location and Age

The Short Street culvert spans the Beaver Swamp Brook in the Village of Mamaroneck (Figure 1-1). On Friday August 12, 2022, HVEA engineers James Curra and Paul Salchert inspected the culvert and their findings and assessments are included in the contents of this report. No record plans, prior inspection reports, or structure history were available prior to the visit. The structure is presumed to have been built in 1935 based on an etching on the culvert’s parapet (Figure 1-2).

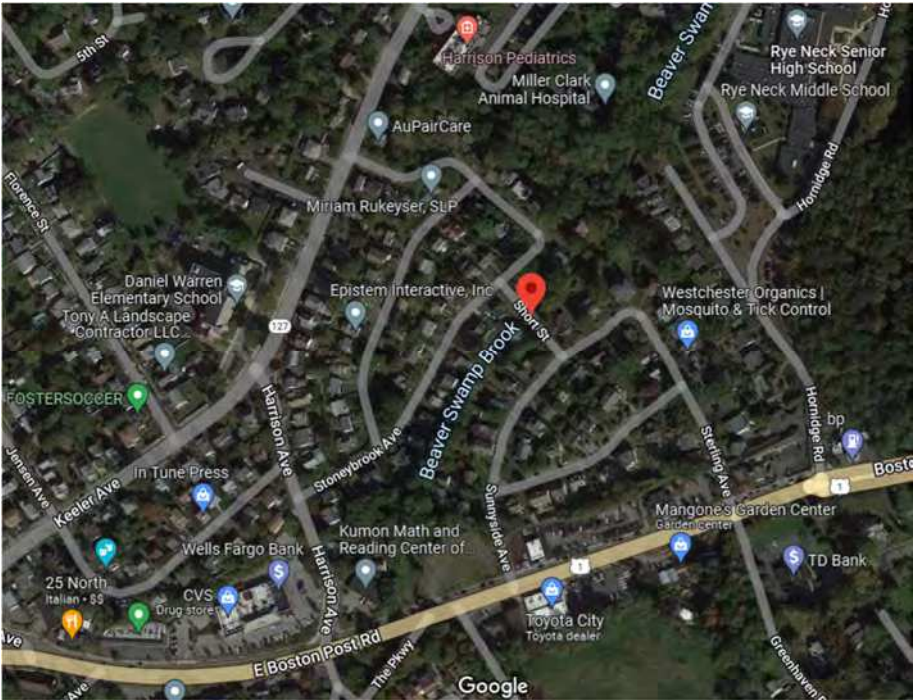


Figure 1-1: Structure location via Google Maps.



Figure 1-2: Presumed structure age based on etching on Southwest parapet.

1.2 Structure Type and Site Conditions

The culvert is an open bottom three-sided structure with a reinforced concrete top slab and stone masonry block abutment walls (Figure 1-3). Although not visible, it is believed that behind the masonry block facade there are reinforced concrete walls due to our experience with the Hillside Avenue bridge in the village of Mamaroneck. The Hillside Avenue bridge similarly had a reinforced concrete top slab with what appeared to be stone masonry block walls but it was eventually revealed that the masonry blocks were a façade for traditional reinforced concrete walls.



Figure 1-3: View of the inside of the culvert. Walls are stone masonry blocks and the top slab is reinforced concrete.

The structure has a utility passing just underneath the top slab and drainage from the roadway feeds directly through the top slab into the culvert. The inlet and outlet of the culvert have aesthetic arch end sections made of stone masonry block (Figure 1-4). This section of Beaver Swamp Brook is confined within retaining walls that delineate abutting properties (Figure 1-5). The walls are constructed from either dry laid stone or natural stone outcrops. There is no embankment above the culvert or at the edge of the brook.



Figure 1-4: Arch end section (inlet is shown, outlet similar).



Figure 1-5: In-line walls guiding Beaver Swamp Brook. Photo taken downstream looking upstream (looking at outlet).

The roadway over the culvert is an unstriped, curbed asphalt roadway (Figure 1-6). There is a sidewalk on the culvert but it ends at the approaches. A stone masonry block parapet extends slightly past the culvert on each fascia (Figure 1-7). A gas main is attached to the fascia on the downstream end. The culvert is located at the low point of a sag vertical curve, with drainage conveyed through the top slab. A summary of the structure's conditions can be found in Table 1-1.



Figure 1-6: General view of Short Street (standing at Sunnyside Avenue, SE, looking at Stoneybrook Avenue, NW).



Figure 1-7: Sidewalk and stone masonry block parapet over the culvert. Note utilities and drainage over the culvert.

Table 1-1: Short Street Culvert Summary

Walls	Stone Masonry Block
Top Slab	Reinforced Concrete
Bottom Slab	N/A
End Section	Aesthetic Arch
Parapet	Stone Masonry Block
Culvert Length	40 feet – 2 inches (exterior to exterior)
Culvert Width	11 feet – 0 inches (interior to interior)
Culvert Height	7 feet – 5 inches (middle, to underside of slab) 8 feet – 8 inches (ends, to underside of slab)
Arch Rise	7 feet – 0 inches
Wall Thickness	Unknown
Top Slab Thickness	Unknown
Parapet Height	3 feet – 1 inch
Parapet Width	1 foot – 8 inches
Parapet Length	23 feet – 1 inch

2.0 INSPECTION

2.1 Inspection Background

The inspection and rating format follows the 2020 First Edition of AASHTO's Culvert & Storm System Inspection Guide. The culvert elements are rated on a scale of 1 to 4 with 1 being the best condition and 4 being the worst. A 1 is considered "good", a 2 is "fair", a 3 is "poor", and a 4 is "severe". Each element of the culvert is broken down into subcategories that have their own rating. For example, the approach roadway is broken down into pavement, guardrail, and shoulders. The subcategory with the lowest rating controls the overall rating of that culvert element. If a culvert does not have a specific element listed in the AASHTO guide, it is rated as NR, or not rated and does not influence the rating. The AASHTO format includes materials that are not applicable to this project and thus will not be included in this report.

2.2 Approach Roadway

2.2.1 Pavement

There are transverse cracks where the approach roadway meets the existing structure with an existent but negligible height difference between the approach and structure pavement (Figure 2-1). The cracks may be caused by natural settlement of the soil behind the culvert walls or from water mobilizing fill behind the culvert's masonry block walls. Rating: FAIR.



Figure 2-1: Transverse cracks forming at the structure and approach roadway intersection.

2.2.2 Guardrail

No guardrail exists on Short Street. The culvert's parapet is not considered to be guardrail for the sake of this inspection. Guardrail was not rated.

2.2.3 Shoulders

Since Short Street is an unstriped roadway, it was considered by the inspectors to have no shoulder. Thus, shoulders were not rated.

2.2.4 Approach Roadway Rating

The pavement was the controlling factor in the rating. Rating: FAIR.

2.3 Embankment

2.3.1 Slope Stability and Embankment Erosion

The structure has no embankment due to the in-line retaining walls along Beaver Swamp Brook. There is no embankment or slope over the structure (Figure 2-2). Thus, slope stability and embankment erosion were not rated.



Figure 2-2: No culvert embankment due to retaining walls and parapet.

2.3.2 Embankment Rating

No embankment exists.

2.4 Channel Alignment and Protection

2.4.1 Channel Alignment

The channel is relatively straight immediately upstream and downstream of the culvert with no turns or meandering inbetween. The channel is aligned with the culvert. This is largely attributed to the retaining walls guiding Beaver Swamp Brook. There is no indication that the channel alignment will be threatened in the near future. Rating: GOOD.

2.4.2 Bank Erosion and Scour

There are currently no signs of bank erosion within the brook. Scour holes were found primarily at the inlet of the culvert with the deposition from the holes being noticed shortly downstream, approximately midlength of the culvert (Figure 2-3). Rating: FAIR.

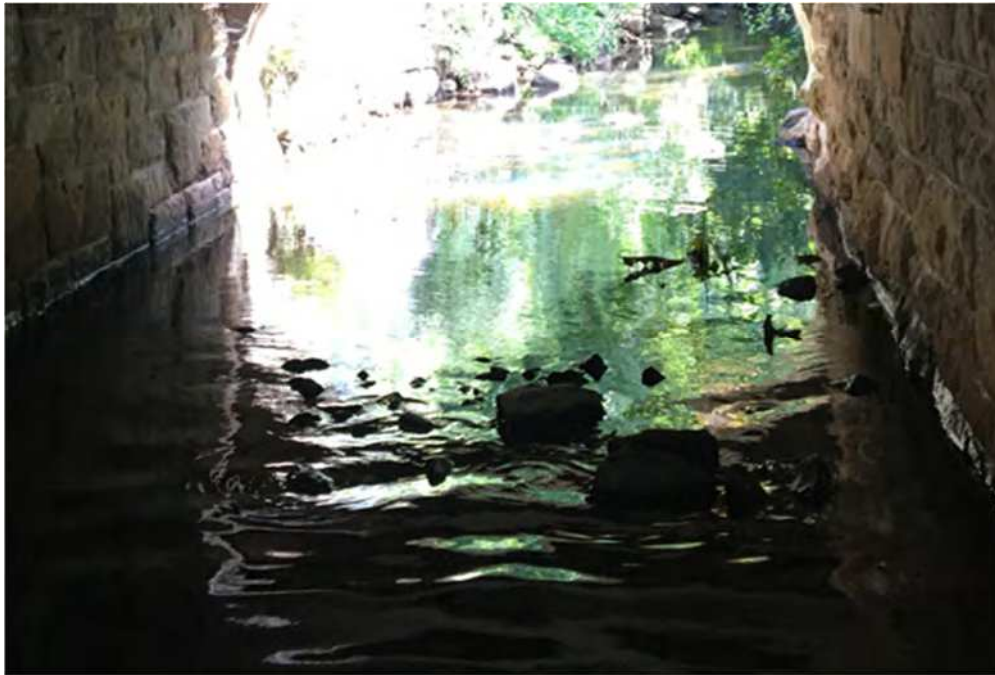


Figure 2-3: Displacement from scour holes causing a hump midlength of the culvert.

2.4.3 Protection

There are stones of various size throughout the channel, but they are limited in quantity and not enough to provide protection for the culvert (Figure 2-4). Rating: POOR.



Figure 2-4: Stones present immediately upstream of the culvert.

2.4.4 Waterway Adequacy

As previously mentioned, the deposition from the scour holes have caused crests and ridges near the inlet of the channel. This has caused sediment and debris accumulation, namely a large branch has been caught at the inlet (Figure 2-5). Other debris such as large portions of garbage were found within the brook. Although not causing significant issues now, there is potential for more debris to accumulate and clog the waterway if left unattended. Rating: FAIR.



Figure 2-5: View of sediment accumulation and portion of branch caught at inlet.

2.4.5 Channel Alignment and Protection Rating

The channel protection was the controlling factor in the rating. Rating: POOR.

2.5 End Treatment and Appurtenant Structures

2.5.1 Cracking

The stone masonry block arch end sections at the inlet and outlet do not have any visible cracks on the stone or joints (Figure 2-6). Rating: GOOD.



Figure 2-6: Close up of culvert end section (outlet).

2.5.2 Surface Damage, Spalling, Delamination

The stone appeared to be in sound condition with efflorescence being the only surface damage. The efflorescence appears to be from water seeping through the mortar or spilling from the concrete top slab and is primarily on the underside of the arch end section. No damage was observed from the efflorescence on the arch and no other spalling or delamination was observed. Rating: GOOD.

2.5.3 Deformation and Damage

Applicable only to metal structures. Not rated.

2.5.4 Corrosion

Applicable only to metal structures. Not rated.

2.5.5 Scour and Stability

A scour hole is forming in the Northwest corner of the structure and the top of the footing is visible. No vertical faces of the footing are visible. The scour hole is approximately 1 foot deep (Figure 2-7). Rating: FAIR.



Figure 2-7: Depth to top of footing at end section's scour hole.

2.5.6 Settlement/Rotation

There are no indications that the ends have rotated or any settlement has occurred. Rating: GOOD.

2.5.7 End Treatment and Appurtenant Structures Rating

The end treatment was controlled by scour and stability. Rating: FAIR.

2.6 Concrete Footing and Invert Slab

2.6.1 Differential Settlement and Movement

The footing for the culvert is assumed to be piled up large stones that the stone masonry block walls are sitting on. There is no indication that differential settlement has occurred. Rating: GOOD.

2.6.2 Scour and Stability

As mentioned in section 2.4.2, there are scour holes in the culvert whose deposited material is causing crests and ridges within the culvert. The scour holes caused by these displaced materials are uncovering previously buried structures (Figure 2-8). There is no undermining of the footing. Rating: FAIR.



Figure 2-8: Previously buried section of culvert unearthed by scour.

2.6.3 Cracking

No invert slab or concrete footing. Rating: NOT RATED.

2.6.4 Surface Damage

No invert slab or concrete footing. Rating: NOT RATED.

2.6.5 Spalling/Delamination/Patches

No invert slab or concrete footing. Rating: NOT RATED.

2.6.6 Concrete Footing and Invert Slab Rating

The scour and stability was the controlling factor in the rating. Rating: FAIR.

2.7 Barrel Alignment

2.7.1 Barrel Alignment

The barrel appears to be aligned with the channel with no noticeable heaving or bulging in the walls (Figure 2-9). Rating: GOOD.

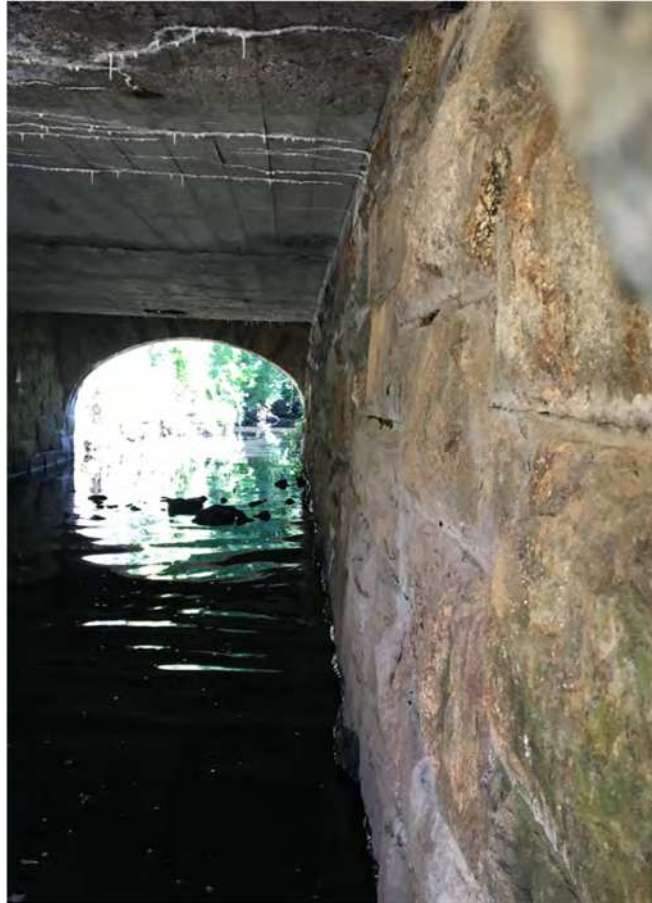


Figure 2-9: Horizontal and vertical alignment of the barrel (south wall shown, north wall similar).

2.7.2 Barrel Alignment Rating

The overall rating for the barrel alignment is a 1, or good.

2.8 Concrete Barrel

2.8.1 Cracking

The top slab of the culvert is the only section of the culvert that is concrete. The top slab is plagued with an abundance of efflorescence which is likely exacerbated by the absence of a waterproofing membrane (Figure 2-10). Underneath the efflorescence, shallow cracks are visible. Rating: POOR.



Figure 2-10: Efflorescence on the top slab of the culvert.

2.8.2 Spalling/Slabbing/Delamination/Patches

One small, shallow area of delamination was noticed at the inlet of the structure (Figure 2-11). There are a few areas of rusting and spalling. In these spalled areas, rebar is visible (Figure 2-12). However, the depth of the spalls are only fractions of an inch and yet the rebar is still visible. This indicates that the top slab was improperly constructed and cover requirements were not met. The poor construction is further indicated by segregation being noticeable which is most likely a byproduct of poor forming or consolidation when pouring the concrete. Rating: FAIR.



Figure 2-11: Delamination at the inlet of the culvert on the top slab.



Figure 2-12: Visible rebar and segregation on the top slab.

2.8.3 Deterioration

Abrasion and surface damage are visible at the roadway drainage hole near the inlet of the structure (Figure 2-13). The surrounding concrete is likely in contact with deicing salts that are draining from the roadway as well as any debris that can make its way through the grate on the roadway surface. The drainage hole near the outlet uses a PVC tube and the surrounding concrete is in better condition albeit still damaged. Rating: FAIR.



Figure 2-13: Abrasion and surface damage on the top slab at the drainage holes.

2.8.4 Concrete Barrel Rating

The cracking was the controlling factor in the rating. Rating: POOR.

2.9 Masonry Barrel

2.9.1 Masonry Units and Movement

Only the walls of the culvert are stone masonry blocks. The upper half of the block walls have sections where the masonry and mortar have separated. This separation is near exclusively on the horizontal plane (Figure 2-14). This movement is most likely caused by water infiltrating from behind the walls and into the joints and the freeze/thaw is separating the masonry from the mortar. Rating: FAIR.



Figure 2-14: Separation between the masonry blocks and mortar joints.

2.9.2 Mortar

There are few and isolated sections where the mortar is cracked or missing. It is suspected that the inner mortar is a weaker lime-sand mortar that simply serves to tie the stones together and the outer mortar is stronger to act as a waterproofing. In places where the mortar is missing, the inner mortar is crumbling and falling apart and visibly looks different than the outer mortar (Figure 2-15). The deterioration of the inner mortar appears to most likely be from water infiltrating from behind the masonry blocks and the freeze/thaw is crumbling the mortar. Rating: FAIR.



Figure 2-15: Missing mortar between masonry blocks; note that differences between the outer and inner mortar.

2.9.3 Efflorescence or Staining

Efflorescence is primarily visible in the upper half of the walls, primarily due to the mortar issues and separation between the masonry and the mortar in those areas. The efflorescence appears to be due in part to both water making its way through the walls from the backside as well as dripping off from the top slab (Figure 2-16). Rating: FAIR.



Figure 2-16: Isolated efflorescence on the masonry.

2.9.4 Masonry Barrel Rating

The masonry units and movement, mortar, and efflorescence were the controlling factors in the rating.

Rating: FAIR.

2.10 Joints

2.10.1 Joint Separation, Offset, and Rotation

There appears to be gaps along the length of the culvert where water can pass through where concrete was poured against the top of the masonry block wall but did not adhere to the stone (Figure 2-17).

Rating: FAIR.



Figure 2-17: Joint separation where the top slab meets the masonry wall.

2.10.2 Joint Cracking

There is one joint approximately halfway through the culvert along the width of the top slab. Although there is heavy efflorescence at the joint, there does not appear to be any cracking at this location (Figure 2-18). Rating: GOOD.



Figure 2-18: Joint on top slab of culvert with heavy efflorescence but not cracking.

2.10.3 Infiltration/Exfiltration

Efflorescence is abundant on the top half of the structure. Water is passing through the mortar joints, through the top slab, and through the interface of the top slab and the walls. Rating: FAIR.

2.10.4 Joints Rating

The joint separation, offset, and rotation as well as infiltration/exfiltration were the controlling factors in the rating. Rating: FAIR.

3.0 RECOMMENDATIONS

3.1 Key Issues to Address

The culvert's reinforced concrete top slab and its susceptibility to scour are priority items that should be addressed. The structure's susceptibility to scour is due to the lack of protection within the stream and scour is already occurring. The top slab of the culvert is experiencing cracking, delamination, spalling, and efflorescence which is caused by the structures inadequate waterproofing and poor roadway drainage. Although in not as critical condition as the top slab, the masonry blocks along the culvert's walls are also experiencing deterioration due to exfiltration and remedying the waterproofing would benefit both the walls and the roof slab.

3.2 Proposed Alternatives

3.2.1 Full Replacement

Fully replacing the structure would be an effective solution to the existing structure's problems. Replacing the structure with a precast three-sided arch would remedy all structural concerns and ensure that appropriate waterproofing measures would be in place. The aesthetic of the existing structure could be reproduced by stone veneer, similar to the Village's Hillside Avenue project. The channel could also be relined with stone fill to reduce the potential for scour within the structure limits. Although this would be the most effective solution to fixing the current issues and would deter them from occurring in the future, the cost would outweigh any risk associated with the existing structure.

3.2.2 Rehabilitation

Rehabbing and repairing the compromised elements of the culvert to alleviate the culvert's deficiencies is possible. In order to prevent any future water damage to the top slab of the structure, the existing roadway would need to be excavated and a new waterproofing membrane would be applied to the top of the structure. With the top of the structure revealed it can be confirmed whether or not the stone masonry blocks are simply a façade for a concrete wall or they are in fact the walls themselves. Since it would not be feasible to excavate and reveal the entirety of the rear face of the culvert's walls, it is recommended that the top 3ft of the wall be revealed to wrap the waterproofing membrane to the top, affected portion of the wall.

The top slab should be cleaned of all efflorescence and the cracks revealed should be fixed. Based on HVEA's inspection, the cracks appear surface level but widespread. Parging of the affected areas is expected to be appropriate for the majority of the slab however if the removal of the efflorescence reveals poor quality or damaged concrete, it should be removed and patched as necessary. For the areas

where the concrete has spalled or delaminated, the unsound concrete around the damage should be removed and the concrete should be replaced. The spalled and delaminated areas are shallow and the visible rebar has not corroded so no supplemental reinforcement in these damaged areas are necessary. At the openings in the slab for the roadway drainage, it is recommended that a pipe or similar device be installed to keep the water and debris away from the concrete as this will prevent any further abrasion of the concrete. The surrounding concrete will need to be removed and replaced. Appendix B provides the locations of the damage on the concrete slab.

The masonry block joints on the top portions of the walls will need to be regouted. Any damaged or loose existing grout will need to be removed and the joints will need to be repointed. Similar to the top slab, any efflorescence should be removed but no cracks are expected to be revealed. Appendix B provides the location of the damage on the masonry blocks.

The streambed of the culvert will need to be replaced with a form of scour protection such as stone fill. The stone fill should start at the inlet of the structure and extend to the midpoint of the structure which is where the scour was observed.

3.3 Preferred Alternative

The rehabilitation of the Short Street culvert is the recommended alternative. The cause of the structure's problems, water infiltration and lack of scour protection, can be easily remedied and the existing deficiencies are repairable. Although the structure is nearly 100 years old, it is in generally good shape and has not reached the end of its service life. However, while the culvert appears to be hydraulically adequate, it is susceptible to clogging so routine observation and maintenance will be required.

APPENDIX A
INSEPCION FORM

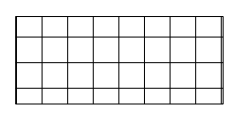
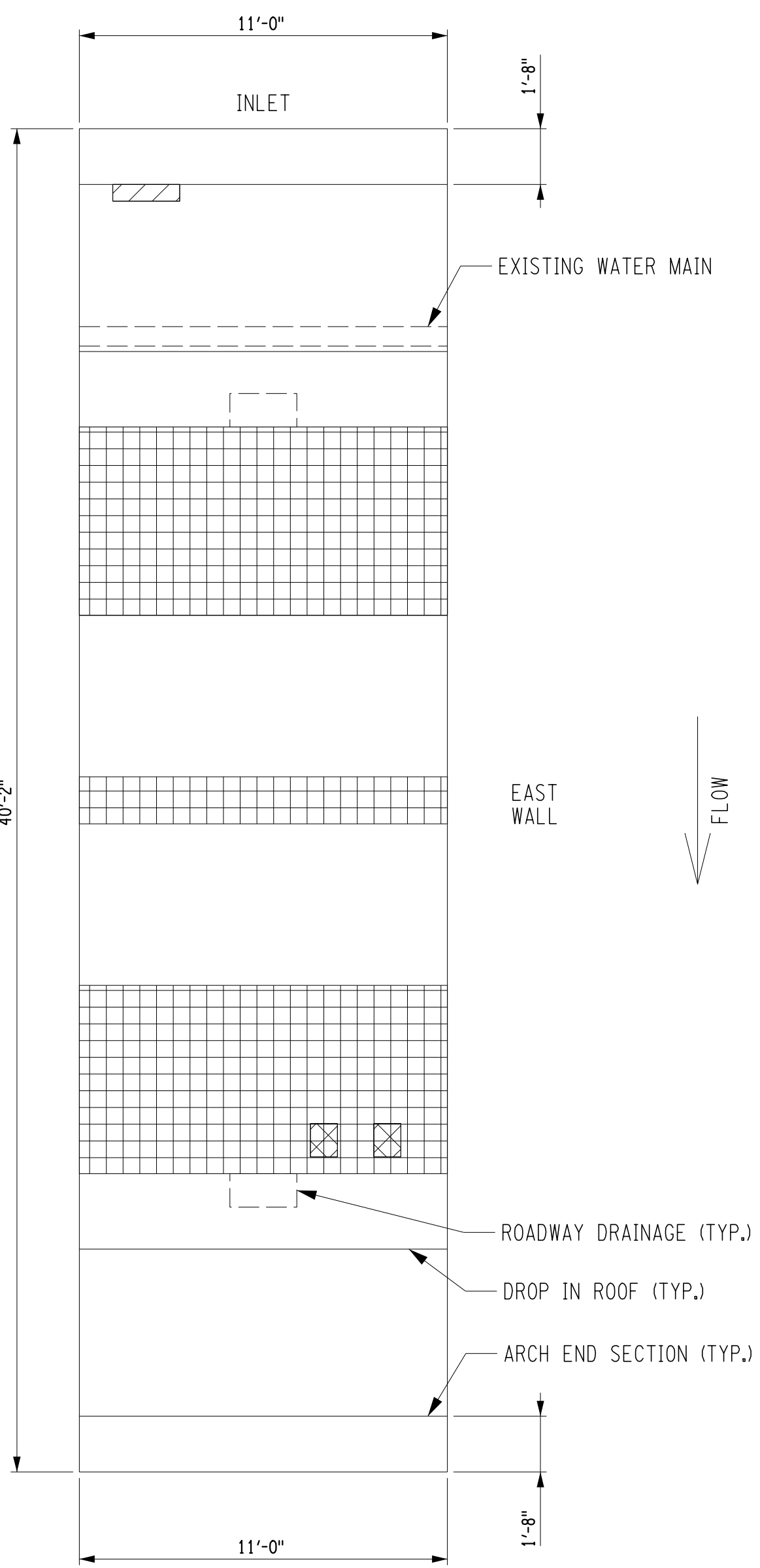
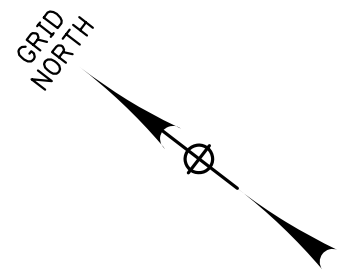
CULVERT INSPECTION FORM

Structure ID					Date of Inspection	August 8, 2022			
Route & Mile Post	Short Street, Mamaroneck NY				Entry Type	Person Entry			
Shape / Span	Box Culvert w/ Arch End Sections 11'-0" wide by 40'-2" long				Inspector	James Curra Paul Salchert			
AOP Plan?	YES ?		NO ?	X					
APPROACH ROADWAY	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	2	
Pavement		X				Transverse cracks where approach meets structure. Negligible height difference between approach and structure pavement			
Guardrail					X	No rail system on Short Street			
Shoulders					X	Short Street is an unstripped roadway with no shoulder			
EMBANKMENT	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	NR	
Slope Stability and Embankment Erosion					X	Structure has in-line wingwalls and headwalls with a parapet, thus no embankment			
CHANNEL ALIGNMENT AND PROTECTION	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	3	
Channel Alignment	X					The channel does not show any signs of misalignment or probability in the future. The channel is aligned with the culvert			
Bank Erosion and Scour		X				No signs of bank erosion. Scour holes were found primarily at the inlet of the culvert. Deposition was noticed shortly after the holes about midlength of the culvert			
Protection			X			There is no significant protection against scour in the channel; although there are stones of various sizes throughout the channel, they're limited in quantity and are not preventing scour.			
Waterway Adequacy		X				Sediment and debris accumulation was noticed in the channel. These include large branches and garbage which have the potential to bundle up and clog the waterway if left unattended.			
END TREATMENT AND APPURTENANT STRUCTURES	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	2	
Cracking (Concrete)	X					Masonry arch inlet and outlet sections do not have any visible cracks on the stone or joints			
Surface Damage Spalling or Delamination (Concrete)	X					Masonry arch inlet and outlet sections do not have any spalling or delamination			
Deformation and Damage (Metal)					X				
Corrosion (Metal)					X				
Scour and Stability		X				On the Northwest side of the structure (inlet), the top of the stone footing is visible due to scour. No vertical face of the footing is visible			
Settlement/Rotation	X					There are no indications that the inlet or outlets have settled			
CONCRETE FOOTING AND INVERT SLAB	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	2	
Differential Settlement and Movement	X					No indication of differential settlement			
Scour and Stability		X				Scour holes forming on the inlet side of the culvert			
Cracking					X	No exposed footings and no invert slab			
Surface Damage					X	No exposed footings and no invert slab			
Spalling / Delamination / Patches					X	No exposed footings and no invert slab			

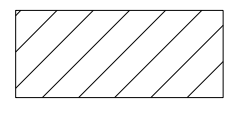
BARREL ALIGNMENT	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	1
Barrel Alignment	X					Barrel appears to aligned with the channel with no heaving or bulging in the walls		
PLASTIC BARREL	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	NR
Shape					X	Barrel is not plastic		
Surface Damage					X	Barrel is not plastic		
Local Buckling, Splits, and Cracking					X	Barrel is not plastic		
					X	Barrel is not plastic		
CONCRETE BARREL	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	3
Cracking			X			Top slab of the culvert is concrete. Heavy efflorescence at the inlet and outlet of the structure, not prevalent in the middle. Shallow cracks are noticed when scraping off the efflorescence		
Spalling / Slabbing / Delamination / Patches		X				Top slab of the culvert is concrete. One area of delamination was noticed at the inlet of the structure. Rusting is noticed in select locations. Rebar is visible in few locations but rebar was not installed with appropriate cover thus any minor spall will make the rebar visible.		
Deterioration		X				Top slab of the culvert is concrete. Abrasion is noticed at the drainage holes from the roadway		
CORRUGATED METAL BARREL	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	NR
Surface Damage					X			
Corrosion					X			
Abrasion					X			
Shape (Closed Shape)					X			
Shape (Open Bottom)					X			
MASONRY BARREL	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	2
Masonry Units And Movement		X				Only the walls are masonry. The upper half of the stone masonry has sections where the masonry and mortar have separated. This is exclusively on the horizontal plane		
Mortar		X				Only the walls are masonry. The upper half of the masonry has missing mortar. The disturbed mortar is primarily horizontal		
Efflorescence or Staining		X				Efflorescence is visible in numerous areas of the walls, primarily in the upper half. This could be due to it spilling onto the blocks from the roof slab or from water infiltrating the mortar joints		
TIMBER BARREL	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	NR
Connections or Missing Members					X			
Decay					X			
Checks / Shakes					X			
Structural Cracks					X			
Delaminations					X			
Abrasion / Impact Damage					X			
Distortion					X			

JOINTS	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	2
Joint Separation, Offset, and Rotation		X				There appears to be gaps along the length of the culvert where the masonry walls meet the concrete roof slab. Water is most likely entering here		
Joint Cracking (Concrete)	X					Top concrete roof slab has a joint approximately midlength of the culvert. No joint cracking is observed		
Infiltration / Exfiltration		X				Infiltration seems to be occurring due to the significant efflorescence on the joints.		
SEAMS (CORRUGATED METAL PLATE)	Good (1)	Fair (2)	Poor (3)	Severe (4)	NR	Comments:	RATING:	NR
Infiltration/ Exfiltration					X			
Seam Alignment					X			
Seam Bolts / Fasteners					X			
Seam Bolt Holes					X			
COMMENTS:								
REVIEWED BY:					DATE:			

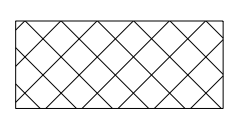
APPENDIX B
STRUCTURE DAMAGE
LOCATION



EFFLORESCENCE

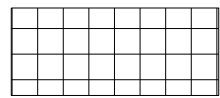
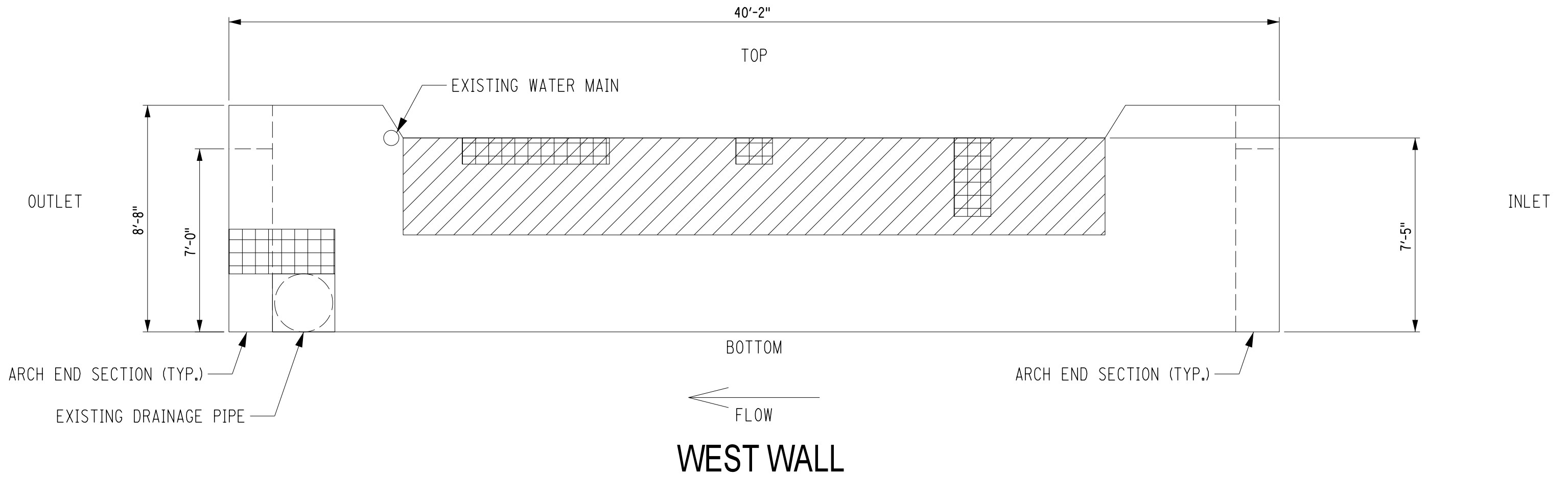


DELAMINATION

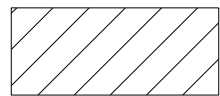


SPALL

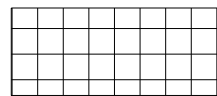
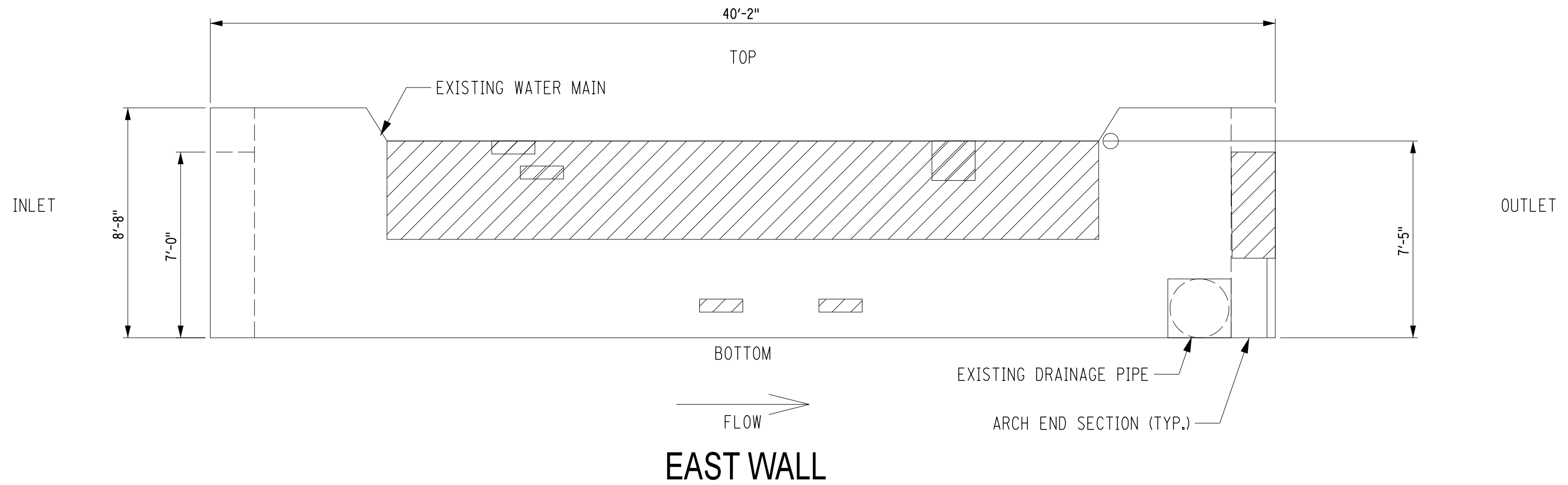
ROOF



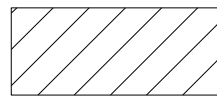
EFFLORESCENCE



MISSING/DAMAGED MORTAR



EFFLORESCENCE



MISSING/DAMAGED MORTAR



Application Information

The application is to apply for one bridge project or one culvert project under the BridgeNY Program funding.

To use the Adobe Livecycle form, save a copy of the form to your computer. From your computer, open the saved form to start entering the requested information.

Web browsers such as Apple Safari, Google Chrome, and Mozilla may have their own non-Adobe PDF readers set as the default reader. If using one of these browsers, ensure that the default PDF viewer is changed to Adobe Reader. Applicants can use the latest version of the free Adobe Acrobat Reader to complete the form. The latest versions Adobe Acrobat Standard, Pro or DC can be used to maximize the functionality in the form.

Unless otherwise indicated, use the "Tab" function to navigate through the form to ensure questions are answered in the correct order. Applicants should complete all fields as they appear in the application.

General Instructions for Completing the Application

PART A: Project Sponsor Information

Enter the Project Sponsor Information in the designated boxes.

PART B: Application Type

Choose whether this application is going to be for a bridge project or a culvert project. The appropriate fields will remain visible in the application depending on the type chosen. Example: For a bridge project, the bridge only fields remain visible and the culvert only fields become invisible.

PART C: Project Estimate

Enter the estimated costs for each of the following project costs: construction, construction inspection, right of way acquisition, and design. Enter the amount of any other funds you have already secured for this project.

PART D: Existing Structure Information

For a bridge application, enter the fields that are visible under Existing Bridge Information. Download the Existing Bridge Information Worksheet (ExistingBridgeInfo2021Data.xlsx) from <https://www.dot.ny.gov/bridgeny> to obtain information on the bridge you are applying for. A copy of this information should be attached in PART G of the application. This information will be used by reviewers during the project evaluation process.

For a culvert application, enter the fields that are visible under Existing Culvert Information.

PART E: Project Needs

Enter the appropriate information regarding the project needs, scope and special features. Note that the space is limited to the visible area for text fields.

PART F: Project Delivery

Enter the information pertaining to the delivery of the project, including design status and any right of way needs.

PART G: Project Attachments

Attach appropriate documents to the application. All attachments listed allow the applicant to better describe the need for the project.

Applications for bridge projects that have had a NYS PE review along with a letter certifying the review of the application will receive additional weight during the scoring process. To show that the application has been reviewed by a NYS PE, a letter stating such needs to be attached to the application for the final submission. This letter needs to contain the signature of the NYS PE.

Project attachments are not limited to those listed in the application. The applicant may attach other files to the email being submitted with the application itself.

PART H: Application Submission

A digital signature or a wet signature is required to complete the application. If you do not have a digital ID already created, follow the directions that show up when you click on signature. If you cannot create a digital signature, include a scan of the final page of the application with a wet signature with your submission.

Once the form is signed the application may be submitted to the Regional Program and Planning Manager in your NYSDOT Region.

Save Form



PART A: SPONSOR INFORMATION

Applicants must complete all required fields as they appear in the application. Required fields are designated by a preceding asterisk (*).

*Project Sponsor:

Village of Mamaroneck

SPONSOR RESPONSIBLE POINT OF CONTACT INFORMATION:

Salutation: Mr. *First Name: Daniel *Last Name: Sarnoff

*Title: Assistant Village Manager

*Address: 1 Village of Mamaroneck

Address 2: 123 Mamaroneck Avenue

*City: Mamaroneck *State: NY *Zip Code: 10543

*Phone #: (914) 777-7703 *E-mail: dsarnoff@vomny.org

[X] Check here if Business address and Contact address are the same. If not, please provide the Business address below:

PART B: APPLICATION TYPE

*Application Type: Culvert *Region: 8 Choose bridge or culvert for application type. Select the NYSDOT Region the project is in.

A bridge application is required if the span length is greater than or equal to 20 ft. A culvert application is required if the span length is less than 20 ft. Use the span length of the existing structure, not the span length of the proposed structure.

Save Form



PART C: PROJECT ESTIMATE

Input values for the following project costs. A detailed project estimate should be attached in PART G of the application.

Description	Costs
Construction	\$410,000
Field Change Payment, 5% and Mobilization, 4%	\$36,900
Construction Inspection	\$45,000
Right of Way *	\$20,000
Design (Preliminary & Final) **	\$180,000
Total Project Cost	\$691,900

*Right of Way costs include the cost for hiring a firm to process the ROW and the cost of the acquisition itself. The cost of hiring a firm may be as much as \$30,000.

**Design Costs shall include but are not limited to preliminary and final design, survey, geotechnical exploration/borings, mussel or other endangered species coordination and field work, wetland delineation, and utility coordination

***For Culvert projects a minimum Design (Preliminary & Final) cost is recommended as \$150,000 - upstate, \$180,000 downstate.

Other Funds Already Secured <small>(This is not the Local Match. Local Match is calculated below)</small>	
Description of Other Funds:	

Culvert Projects

Total BridgeNY Funds Requested (100%)	\$691,900
Total Local Match (0%)	\$0

Suggested values for Design, Right of Way, and Construction Inspection costs are provided as a percentage of the total construction cost. These values are provided for reference only. The Sponsor is responsible for all costs input into the application.

	Low Range (% of Const. Cost)	High Range (% of Const. Cost)	Calculated Low Value (from user input)	User Input Value (repeated from above)	Calculated High Value (from user input)
Construction Inspection	12%	15%	\$53,628	\$45,000	\$67,035
Right of Way	0%	5%	\$0	\$20,000	\$22,345
Design (Preliminary & Final) ***	20%	30%	\$89,380	\$180,000	\$134,070

Save Form



PART D: EXISTING STRUCTURE INFORMATION

Input the following information. If a bridge application was chosen in Part B, only the bridge fields will be visible. If a culvert application was chosen in Part B, then only culvert fields will be visible.

Existing Culvert Information

*Culvert Identification Number/Identifier

(Input culvert number or identifier. The identifier is assigned by the owner. If no identifier exists, use Culvert1, Culvert2,... to differentiate between different culverts being applied for by the same sponsor.)

Project Identification Number (PIN)

(Input PIN number if applicable)

Check the box if the culvert is owned by the sponsor applying for funds.

***Project County:** Select the project county.

Ulster
Warren
Washington
Wayne
Westchester
...



BridgeNY Program Application

Existing Culvert Information - Continued

*Feature Carried: Vehicular Traffic

AADT: 673

*Feature Crossed: Beaver Swamp Brook

% Trucks:

Year Built: 1935

Detour (mi): 0.45

*Width of Opening (ft): 11

Load Posting: Not Posted

*Length of Barrel (ft): 40

Material Type: Concrete

*Latitude: 40.95626

Format: ##.##### (NYS Range: 40.50 thru 45.25)

The width of the culvert opening is measured perpendicular to the water flow. If the existing structure has multiple openings, input the distance from extreme ends of the openings. The length of the barrel is measured parallel to the water flow.

*Longitude: -73.71801

Format: -##.##### (NYS Range: -71.75 thru -79.75)

To determine the latitude and longitude for your culvert, go to <http://www.latlong.net/>. Type in the name of the town so the map zooms in to the correct location, then click to the project location.

PART E: PROJECT NEEDS

*This project is needed to address the following (check all that apply)

- Structural Condition
- Inadequate Structural Capacity/Load Rating
- Hydraulic Inadequacies
- Inadequate Vertical Clearance (under or over)
- Other

If other, provide explanation. Space limited to visible field.

1. Excavation of existing roadway.
2. Application of a waterproofing membrane to top of the structure.
3. Cleaning of efflorescence from top slab.
4. Fixing of all visible cracks, removal and replacement of damaged concrete.
5. Drainage to channel water away from concrete.
6. Regrouting of masonry blocks.
7. Replacement of streambed with a form of scour protection.

*Project Scope Other: Rehabilitation

Sponsors are directed to take one of the two options below to mitigate this risk for culvert projects.

1. Provide a preliminary hydraulic analysis performed and stamped by a NYS professional engineer.
2. Base the culvert size and project scope on a minimum culvert span length equal to 1.5 times the existing waterway opening.

Failure to adhere to this requirement for culvert applications could result in a project being downgraded if justification is not provided.

Save Form



Describe the project/infrastructure need. Space is limited to the visible area.

*Project Needs Description:

Describe the project Scope. Space is limited to the visible area.

*Project Scope Description:

Describe the project's special features. Space is limited to the visible area.

Project Special Features Description:

PART F: PROJECT DELIVERY

* Indicate the current project status:

*Estimated Month and Year of Letting:

Project Priority:

(Input project priority with respect to other BridgeNY applications by the same sponsor, if applicable)

Save Form



Department of Transportation

BridgeNY Program Application

*Number of anticipated ROW acquisitions: [] Additional ROW information can be included as an attachment if the provided space is inadequate. See Notice of Funding Availability for ROW requirements.

Identify the property right(s) to be acquired and proof of right of way ownership: Ownership can be shown through surveys and clearance certificates, highway boundary line on a stamped plan, or record plans. Tax maps are not sufficient documentation.

[Empty box for property right information]

*Will the project have an effect on any district, site, building, structure or object that is listed, or may be eligible for listing on the National Register of Historic Places? [Yes]

*STATUS OF ENVIRONMENTAL REVIEWS:

State Environmental Quality Review Act (SEQR): [Not Started]

Explain: [It is anticipated that the project would be considered a Type II Action as it is maintenance of an existing facility]

National Environmental Policy Act (NEPA): [Not Started]

Explain: [It is anticipated that the project would be considered for a Categorical Exclusion as it is maintenance of an existing facility]

*In the Chart below, select the status that best represents the project deliverable:

Table with 3 columns: Project Deliverables, Status, Anticipated Completion Date. Rows include Design Report, Advanced Detail Plans (ADPs), Plans, Specifications, and Estimates (PS&Es), and Bid Proposal Documents.

Additional Information regarding Project Delivery (if applicable) [Empty box]

Save Form



PART G: ATTACHMENTS

Attach the following documents to the application:

NOTE - if you are using the free version of Adobe Reader you will not be able to attach documents to the application. If using the free version of Adobe Reader attach the following documents to the e-mail when submitting the application. If you are using a paid version of Adobe software save a copy of the form to your computer then open the saved form to be able to attach documents.

Total number of attachments: (check applicable boxes below)

- Detailed Project Estimate
- Project Schedule
- Project Location Map
- SEQR/NEPA Information
- Inspection Report / Documentation
- Plans, Drawings, Survey, or Other
- Letter certifying that a Quality Assurance review by a NYS Professional Engineer has been completed, including signature. (See Instructions on page 2 under Part G Project attachments)
- Property rights to be acquired along with Sponsor's certification to undertake the property.
- Preliminary Hydraulic Analysis
- Any other relevant documentation.
- Any other relevant documentation.
- Any other relevant documentation.
- Any other relevant documentation.
- Any other relevant documentation.



Project attachments are not limited to those listed in the application. The applicant may attach other files to the email being submitted with the application itself.

Save Form



PART H: APPLICATION SUBMISSION

*CERTIFICATION:

I acknowledge that I have read the appropriate guidance for the program to which I am applying (BridgeNY) and understand the application instructions, the program requirements and the terms and conditions associated with the reimbursement program.

Check this box if you have either attached a preliminary hydraulic analysis or based the cost and scope on a minimum culvert span length equal to 1.5 times the existing waterway opening. (Culvert projects only)

*ATTESTATION:

By entering my name in the digital signature space below, I certify that I am authorized on behalf of the Sponsor and its governing body to submit this application. I further certify that all of the information contained in this application and in all statements, data and supporting documents which have been made or furnished for the purpose of receiving assistance for the project described in this application are true, correct and complete to the best of my knowledge and belief. I acknowledge that offering a written instrument knowing that the written instrument contains a false statement or false information, with the intent to defraud the State or any political subdivision, public authority, or public benefit corporation of the State, with the knowledge or belief that it will be filed with or recorded by the State or any political subdivision, public authority or public benefit corporation of the State, constitutes a crime under New York State Law.

DIGITAL SIGNATURE INFORMATION:

Entering your digital signature in the box below locks the fields above the signature. To remove your digital signature, click the right button on your mouse and select "Clear Signature" to release the fields. You can then correct any errors or add additional information. The document will need to be re-signed before it can be submitted.

If you cannot create a digital signature, include a scan of the final page of the application with a wet signature with your submission.

Signature:

Prior to submitting applications please rename the file as follows:

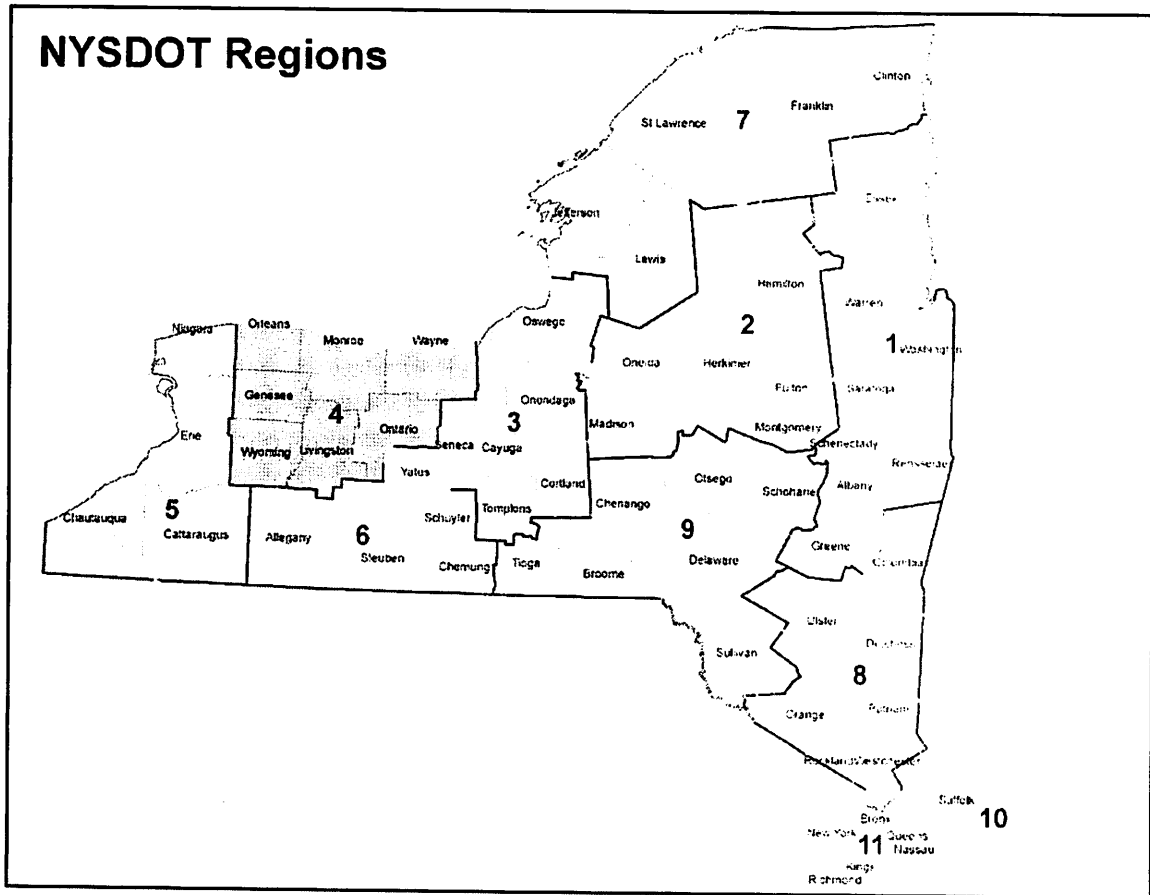
File Name for Culvert Application:

Submit completed BridgeNY Application and all attachments to the e-mail of the NYSDOT Region that the project is located in from the list below

-See Region-County map and list on page 10

REGION EMAIL LIST:

- Region 1 - R01.BNY@dot.ny.gov
- Region 2 - R02.BNY@dot.ny.gov
- Region 3 - R03.BNY@dot.ny.gov
- Region 4 - R04.BNY@dot.ny.gov
- Region 5 - R05.BNY@dot.ny.gov
- Region 6 - R06.BNY@dot.ny.gov
- Region 7 - R07.BNY@dot.ny.gov
- Region 8 - R08.BNY@dot.ny.gov
- Region 9 - R09.BNY@dot.ny.gov
- Region 10 - R10.BNY@dot.ny.gov
- Region 11 - R11.BNY@dot.ny.gov



NYSDOT Region-County List

Region 1	Region 3	Region 6	Region 9
Albany	Cayuga	Allegany	Broome
Essex	Cortland	Chemung	Chenango
Greene	Onondaga	Schuyler	Delaware
Rensselaer	Oswego	Steuben	Otsego
Saratoga	Seneca	Yates	Schoharie
Schenectady	Tompkins	Region 7	Sullivan
Warren	Region 4	Clinton	Tioga
Washington	Genesee	Franklin	Region 10
Region 2	Livingston	Jefferson	Nassau
Fulton	Monroe	Lewis	Suffolk
Hamilton	Ontario	St. Lawrence	Region 11
Herkimer	Orleans	Region 8	Bronx
Madison	Wyoming	Columbia	Kings
Montgomery	Wayne	Dutchess	New York
Oneida	Region 5	Orange	Queens
	Cattaraugus	Putnam	Richmond
	Chautauqua	Rockland	
	Erie	Ulster	
	Niagara	Westchester	