Site Design Consultants

Civil Engineers • Land Planners

October 30, 2015

Ms. Rebecca Crist
Deputy Permit Administer, Division of Environmental Permits
New York State Department of Environmental Protection
21 South Putt Corners Road
New Paltz, NY 12561

Subject: Notice of Incomplete Application - Permit Application Number NAN-2015-00700-WOM
Village of Croton-on-Hudson

Dear Ms. Crist:

We are in receipt of your email dated August 17, 2015 and an email prepared by Heather Gierloff dated August 10, 2015 and offer the following responses.

1. A Docks, Mooring, & Platform Joint Application Supplemental was submitted with a proposed facility area of 6,800 square feet. That appears to be the area of the entire walkway. Please provide the following:

   a. Area of elevated boardwalk over Mean High Water.
   Based on the Mean High Water Elevation of +1.78, the area of the elevated boardwalk above the Mean High Water Elevation was calculated to be 2,546 sq. ft. Eighty three percent (83%) of the elevated section of the boardwalk will be beyond the limit of the Mean High Water Elevation.

   b. Area and cubic yardage of excavation and fill for each part of the project – the Elliot Way expansion and the storm water improvements.

   Excavation and Fill *quantities are summarized as follows:*

Excavation*	**Mean High Water Impacts**	
Project Location	**Area**	**Volume**
Elevated Boardwalk – Demolition Debris	1,800 sq. ft.	100 cu. yd.
At-Grade Sidewalk	0	0
Elliot Way Expansion – Roadway Section	0	0
Storm Water Improvements – Culvert	480 sq. ft.	60 cu. yd.
Sedimentation Basin	1,050 sq. ft.	80 cu. yd.
Note: * The quantities calculated are based on the portion of the project below the Mean High Water Elevation of +1.78.		

Fill*	**Mean High Water Impacts**
Project Location	**Volume***
Rip Rap - Shoreline Protection @ Elevated Boardwalk	100 cu. yd.
At Grade Sidewalk	0
Elliot Way Expansion – Roadway Section	0
Storm Water Improvements – Culvert Replacement	35 cu. yd.
Sedimentation Basin	0
Rip Rap - Shoreline Protection @ At-Grade Side Walk	65 cu. yd.
Note: * The quantities calculated are based on the portion of the project below the Mean High Water Elevation of +1.78.	

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60 Walnut Grove Road • Ridgefield, Connecticut 06877
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2. The Village submitted a Full EAF for this action, but it appears to be an Unlisted action. Please indicate if the Village will be coordinating for SEQR and if this action is consistent with their LWRP.

   We will forward the SEQRA determination upon receipt from the Village.

3. Sheet C-101 shows the sheet piling for the sedimentation basin but there is no cross-section showing the detail. A narrative should be included to explain the necessity of the sheet piling. In addition, I would want to know the methodology for installing the sheet piling.

   The existing sedimentation basin is part of the storm water management system for the Village of Croton-on-Hudson. The 8' metal arch pipe which runs below the Metro North tracks, discharges storm water into the Hudson River at the Croton Yacht Club (Photo #9). The sediment basin was constructed by the Village of Croton-on-Hudson to retain debris and sediment caused by storm water discharge. The existing sedimentation basin is constructed of vertical H piles with horizontal timber lagging and large precast concrete blocks (Photo #10). Under this project the existing steel H piles, horizontal timber lagging and concrete blocks would be removed and replaced with new steel sheeting (Z sections). The steel sheeting would be installed using either vibratory or press method. The press method is the preferred method as it would eliminate ground vibrations. We anticipate that that the sheet piles will be approximately 25 - 30' in total length. See typical detail.

4. Sheet C-103 has a turbidity curtain and the curtain on detail sheet C-501 shows a curtain that is only five feet long. If a turbidity curtain will be used on site it should goes from the surface of the water down to the bed of the river.

   The detail shown on Sheet C-501 was for illustration purposes. The turbidity curtain will be approximately 300 feet long and will vary in depth. The turbidity curtain will start at the water surface and extend down to the river bottom. The drawings have been corrected to reflect this.

5. Sheet C-104 shows that the new concrete walkway is encroaching into the Mean High Water area. This would cause fill below Mean High Water. The design should be assessed to see if there is an alternative design for a walkway that does not cause fill below mean high water.

   The purpose of this project is to create a safe pedestrian access link along Elliott Way. Currently, there is no defined walkway that would allow for safe pedestrian access to the north. Elliot Way is extremely unsafe. Pedestrians walk, run, and bike along this narrow single lane road. This stretch of narrow road is also at times heavily used by both passenger vehicles, and commercial traffic. There is limited visibility, lighting and no delineated walkways. The proposed 8'-6"wide walkway will create at best, an 8'-0" wide (clear) path for the public. This width will only allow for two (2) 4'-0" travel lanes. The travel lanes are confined by the railing along the water side and the guide rail on the roadway side. The 8'-0" width is consistent with the existing path to the south and north end of the project. Narrowing of the proposed walkway would limit access and create an unsafe condition. The walkway cannot be shifted to the east, as it is bound by the Metro North Railroad tracks. Alternate construction methods were examined and were deemed inadequate as they would cause more disturbance to the Hudson River.

6. Sheet C-105 - There is a detail showing that vegetation will be planted in between rocks. I want to encourage the plantings but I would prefer that a plant list was created so that I had some assurances that the plan will be implemented with success.

A planting schedule has been attached (Table II) for your review and will is included on drawings.

Please review and contact us if you have any questions. Thank you.

Sincerely,

Joseph C. Riina, P.E.

JCR/tc/cm/Enc. / sdc 11-20

TABLE II - FRESHWATER BRACKISH EMMERGENT PLANT SPECIES*

COMMON NAME	SCIENTIFIC NAME	HABITAT	PLANTING PERIOD
Arrow Arum	*Peltandra virginica*	Fresh-to-brackish Tidal Riverbank	May to July
Duck Potato	*Sagittaria latifolia*	Fresh-to-brackish Tidal Riverbank	June to August
Common Threesquare	*Schoenoplectus pungens*	Fresh-to-brackish Tidal Riverbank	May to August
Narrow-leaf Cattail	*Typha angustifolia*	Fresh-to-brackish Tidal Riverbank	May to August
Pickerelweed	*Pontederia cordata*	Fresh-to-brackish Tidal Riverbank	May to September
Swamp Rose-mallow	*Hibiscus moscheutos*	Fresh-to-brackish Tidal Riverbank	May to September
Sweetflag	*Acorus americanus*	Fresh-to-brackish Tidal Riverbank	May to August
Switch-grass	*Panicum virgatum*	Fresh-to-brackish Tidal Riverbank	June to September
Soft-stem Bullrush	*Schoenoplectus tabernaemontanii*	Fresh-to-brackish Tidal Riverbank	May to August

* All plants consist of 2 inch plugs, and can be provided in quarts.

Soil Mixing & Conditioning:

Each planting area will receive a minimum of 12 inches of planting soil consisting predominantly of clay soil (65%), mixed with a loam soil (25 %) and pea-gravel (10%), suitable for the types of plants selected for planting, and based on nursery guidelines. Compost will also be introduced into the planting soil mixture to achieve a suitable soil pH necessary for ideal plant growth.

Monitoring:

Monitoring will be performed on a monthly basis during the season of planting to ensure successful growth prior to the first year's winter season. As necessary, species will be substituted to ensure plant diversity and successful recreation. Semiannual monitoring will be performed after monthly monitoring after for the first year planting season and annual thereafter for a period of 5-years.

Elliot Way

Pre-Construction Photographs

PHOTO #1 - PANORAMIC VIEW PROJECT SITE (LOOKING SOUTH)

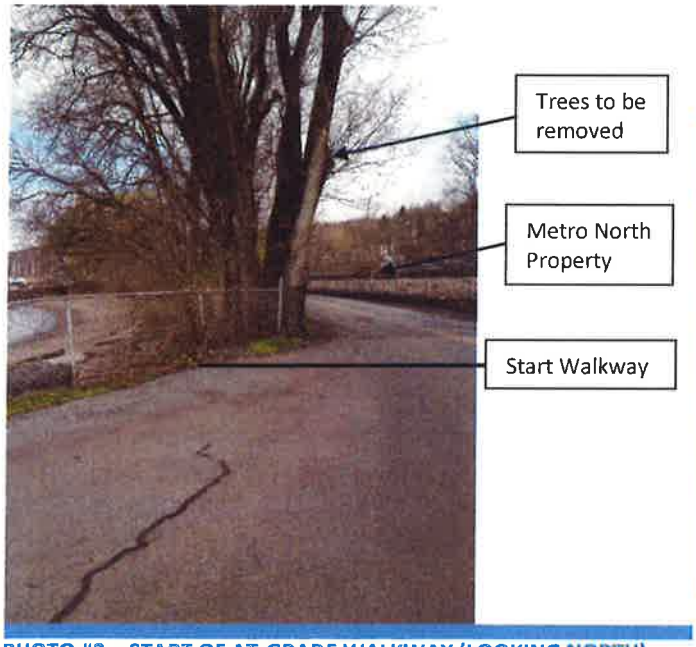


PHOTO #2 – START OF AT-GRADE WALKWAY (LOOKING NORTH)

PHOTO #3 - ELLIOT WAY (LOOKING SOUTH)

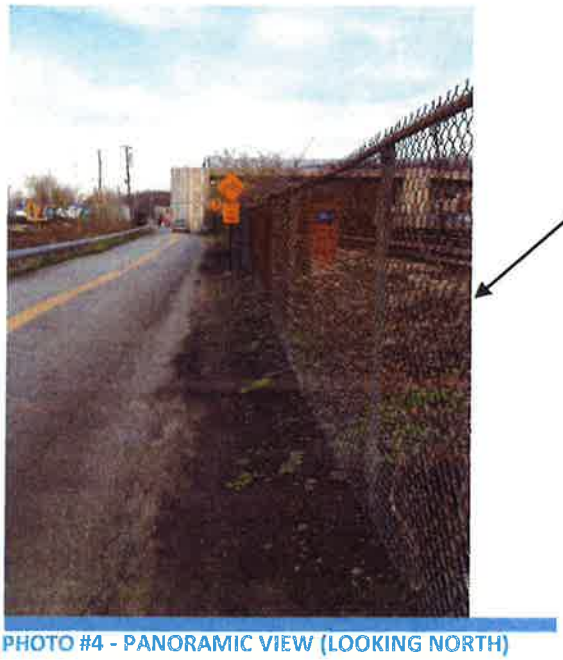


PHOTO #4 - PANORAMIC VIEW (LOOKING NORTH)

PHOTO #5 – ELLIOT WAY (LOOKING NORTH)

Elliot Way

Pre-Construction Photographs

PHOTO #6 – SHORE LINE

PHOTO #7 – SHORE LINE (LOOKING SOUTH)

Debris to be removed

Elevated Walkway

Rip Rap to be removed

PHOTO #8 – SHORE LINE (LOOKING SOUTH)

PHOTO #9 – ARCH CULVERT

Timber Sheeting

Steel Piles

PHOTO #10 – SEDIMENT BASIN

Head Wall

PHOTO #11 – HEAD WALL

Elliot Way

Pre-Construction Photographs

Yacht Club Entrance

PHOTO #12 – YACHT CLUB ENTRANCE

JOINT APPLICATION FORM

For Permits/Determinations to undertake activities affecting streams, waterways, waterbodies, wetlands, coastal areas and sources of water withdrawal.

New York State

You must separately apply for and obtain separate Permits/Determinations from each involved agency prior to proceeding with work. Please read all instructions.

US Army Corps of Engineers (USACE)

APPLICATIONS TO

1. NYS Department of Environmental Conservation

Check all permits that apply:

- ☐ Stream Disturbance
- ☑ Excavation and Fill in Navigable Waters
- ☑ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☑ 401 Water Quality Certification
- ☐ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☑ Coastal Erosion Management
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ Aquatic Vegetation Control
- ☐ Aquatic Insect Control
- ☐ Fish Control
- ☐ Incidental Take of Endangered/Threatened Species

☑ I am sending this application to this agency.

2. US Army Corps of Engineers

Check all permits that apply:

- ☑ Section 404 Clean Water Act
- ☐ Section 10 Rivers and Harbors Act
- ☑ Nationwide Permit(s) - Identify Number(s): 3, 13

Preconstruction Notification - ☑ Y / ☐ N

☑ I am sending this application to this agency.

3. NYS Office of General Services

Check all permits that apply:

- ☐ State Owned Lands Under Water
  - ☐ Utility Easement (pipelines, conduits, cables, etc.)
  - ☐ Docks, Moorings or Platforms

☐ I am sending this application to this agency.

4. NYS Department of State

Check if this applies:

- ☑ Coastal Consistency Concurrence

☐ I am sending this application to this agency.

5. Name of Applicant (use full name)

Village of Croton-on-Hudson
c/o Marco Gennarelli, Acting Commissioner of PW

Mailing Address: Stanley H. Kellerhouse Municipal Building, 1 Van Wyck Street

Post Office City: Croton-on-Hudson

State: NY Zip Code: 10520

Telephone (daytime): 914-271-3775

Email: mgennarelli@crotondnhudson-ny.gov

Applicant must be:

- ☑ Owner
- ☐ Operator
- ☐ Lessee

(check all that apply)

Taxpayer ID (If applicant is NOT an individual):

6. Name of Facility or Property Owner (if different than Applicant): MTA/Metro North

Mailing Address

— PLEASE NOTE CHANGE OF CONTACT PERSON FOR VILLAGE OF C-O-H

Post Office City

State Zip Code

Telephone (daytime) Email

7. Contact/Agent Name

Joseph C. Riina, P.E.

Company Name: Site Design Consultants

Mailing Address: 251F Underhill Avenue

Post Office City: Yorktown Heights

State: NY Zip Code: 10598

Telephone (daytime): 914-962-4488

Email: Jriina@sitedesignconsultants.c

8. Project / Facility Name

Elliot Way Site Improvement Project

Property Tax Map Section / Block / Lot Number

Project Location - Provide directions and distances to roads, bridges and bodies of waters:

Croton-on-Hudson
Senasqua Park - Route 9 S, take the exit toward NY-9A N/NY-129 N.Turn right onto Half Moon Bay Dr. At Stop sign, make a right onto Elliot Way

Street Address, if applicable: 6 Elliot Way

Post Office City: Croton-on-Hudson State: NY Zip Code: 10520

Town / Village / City: Village of Croton-on-Hudson

County: Westchester

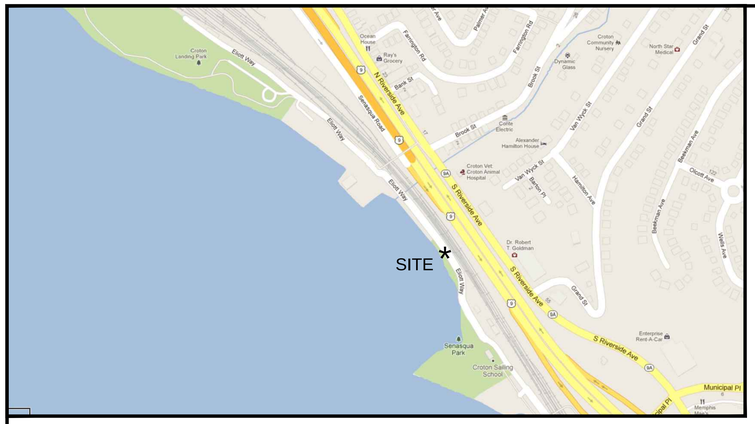
Name of USGS Quadrangle Map: Haverstraw NY (Code: O41073B8)

Stream/Water Body Name: Hudson River

Location Coordinates: Enter NYTMs in kilometers, **OR** Latitude/Longitude

NYTM-E	NYTM-N	Latitude	Longitude
		41°12'15.0"N	73°53'29.8"W

For Agency Use Only DEC Application Number: USACE Number:



LOCATION MAP

OWNER:
THE VILLAGE OF CROTON-ON-HUDSON
CROTON-ON-HUDSON TOWN HALL
1 VAN WYCK STREET
CROTON-ON-HUDSON, NY 10520

ACTING VILLAGE MANAGER:
JANINE KING

COMMISSIONER OF PUBLIC WORKS:
MARCO GENNARELLI - ACTING COMMISIONER

VILLAGE ENGINEER/BUILDING INSPECTOR:
DANIEL O'CONNOR, P.E.

CIVIL ENGINEER:
SITE DESIGN CONSULTANTS
251-F UNDERHILL AVENUE
YORKTOWN HEIGHTS, NY 10598
P: 914 962 4488
F: 914 962 7386
jriina@sitedesignconsultants.com

VILLAGE OF CROTON-ON-HUDSON
WESTCHESTER COUNTY, NEW YORK

ELLIOTT WAY IMPROVEMENTS

DATE: 11/02/15

LIST OF DRAWINGS

SHEET NUMBER	DRAWING TITLE
C-101	OVERALL LAYOUT PLAN
C-102	EXISTING CONDITIONS PLAN
C-103	EROSION & SEDIMENT CONTROL PLAN
C-104	TREE REMOVAL PLAN
C-501	SITE DETAILS

PREPARED BY:
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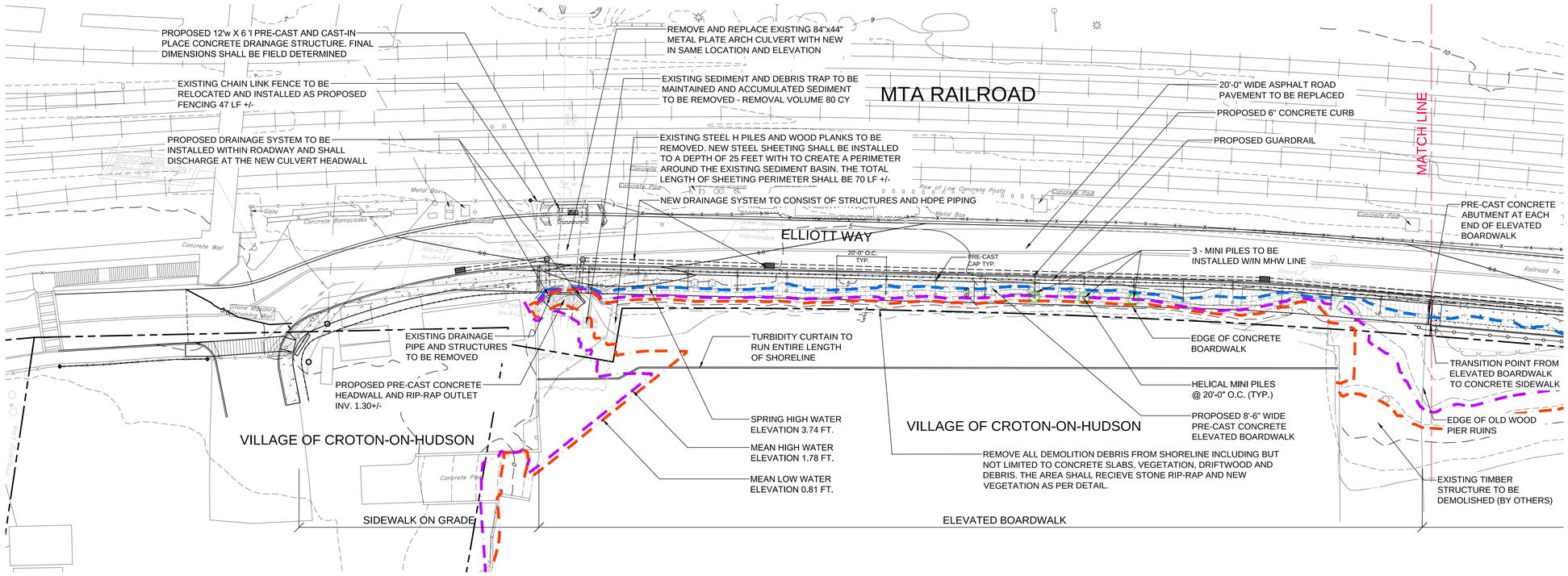

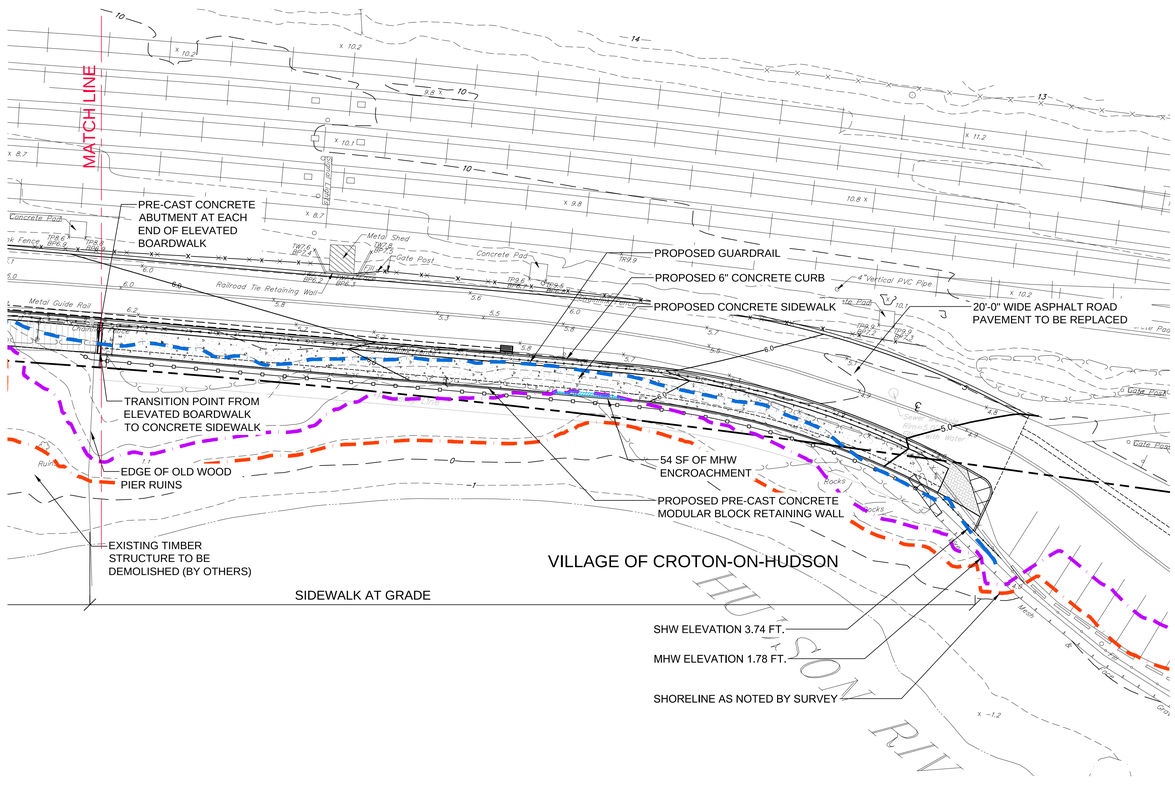

TABLES

TABLE I – Areas of Impact – Spring High Tide

Excavation*	Spring High Tide Impacts		
Project Location	Area	Volume	Comments
At-Grade Sidewalk	1,591 sq. ft.	---	Response 2.
Elevated Boardwalk – Shoreline Rehabilitation	4,680 sq. ft.	260 cu. yd.	Response 3.
Number of Piles	17 each		Response 4a.
Elevated Boardwalk Decking	1,341 sq. ft.	---	Response 4c.

Note: * The quantities calculated are based on the portion of the project below the Mean High Water Elevation of +3.74.

Excavation*	Mean High Water Impacts	
Project Location	Area	Volume
Elevated Boardwalk – Demolition Debris	1,800 sq. ft.	100 cu. yd.
At-Grade Sidewalk	0	0
Elliot Way Expansion – Roadway Section	0	0
Storm Water Improvements – Culvert	480 sq. ft.	60 cu. yd.
Sedimentation Basin	1,050 sq. ft.	80 cu. yd.

Note: * The quantities calculated are based on the portion of the project below the Mean High Water Elevation of +1.78.

Fill*	Mean High Water Impacts
Project Location	Volume*
Rip Rap - Shoreline Protection @ Elevated Boardwalk	100 cu. yd.
At Grade Sidewalk	0
Elliot Way Expansion – Roadway Section	0
Storm Water Improvements – Culvert Replacement	35 cu. yd.
Sedimentation Basin	0
Rip Rap - Shoreline Protection @ At-Grade Side Walk	65 cu. yd.

Note: * The quantities calculated are based on the portion of the project below the Mean High Water Elevation of +1.78.

NOTE:
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Engineer: Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

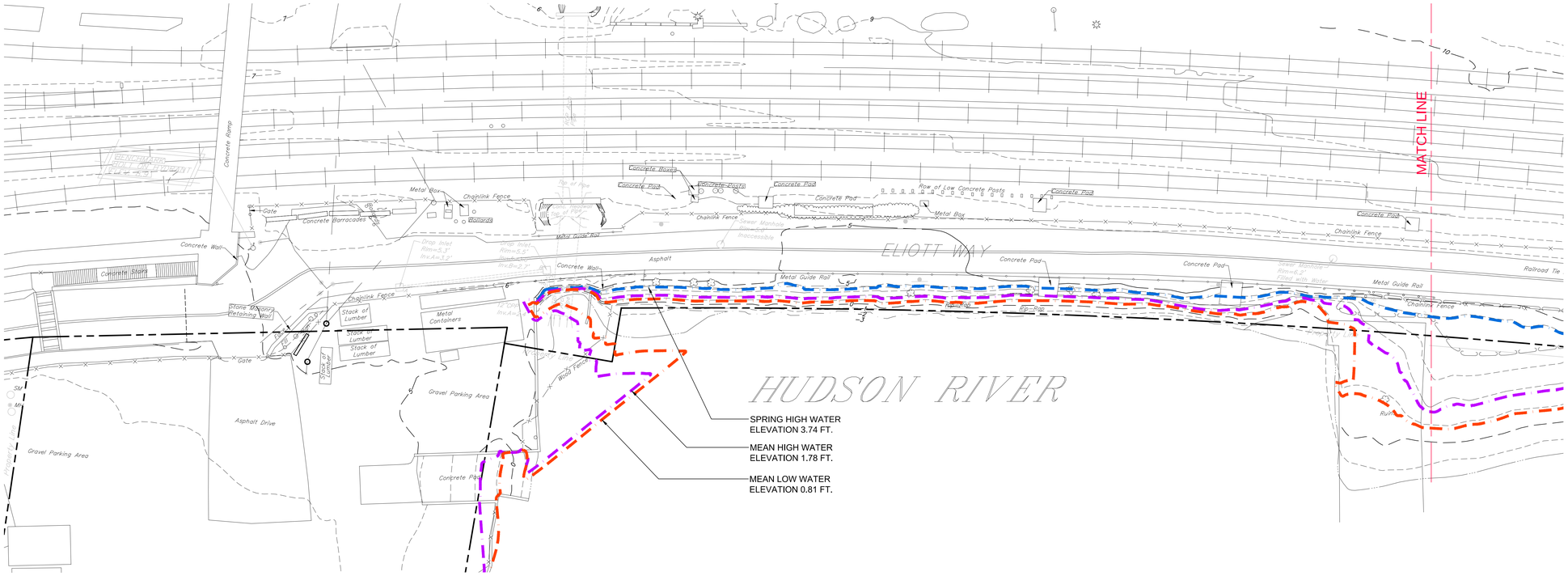
No.	Date	Comments
1.	6/11/15	DEC Submission
2.	11/2/15	DEC & ACOE Revisions

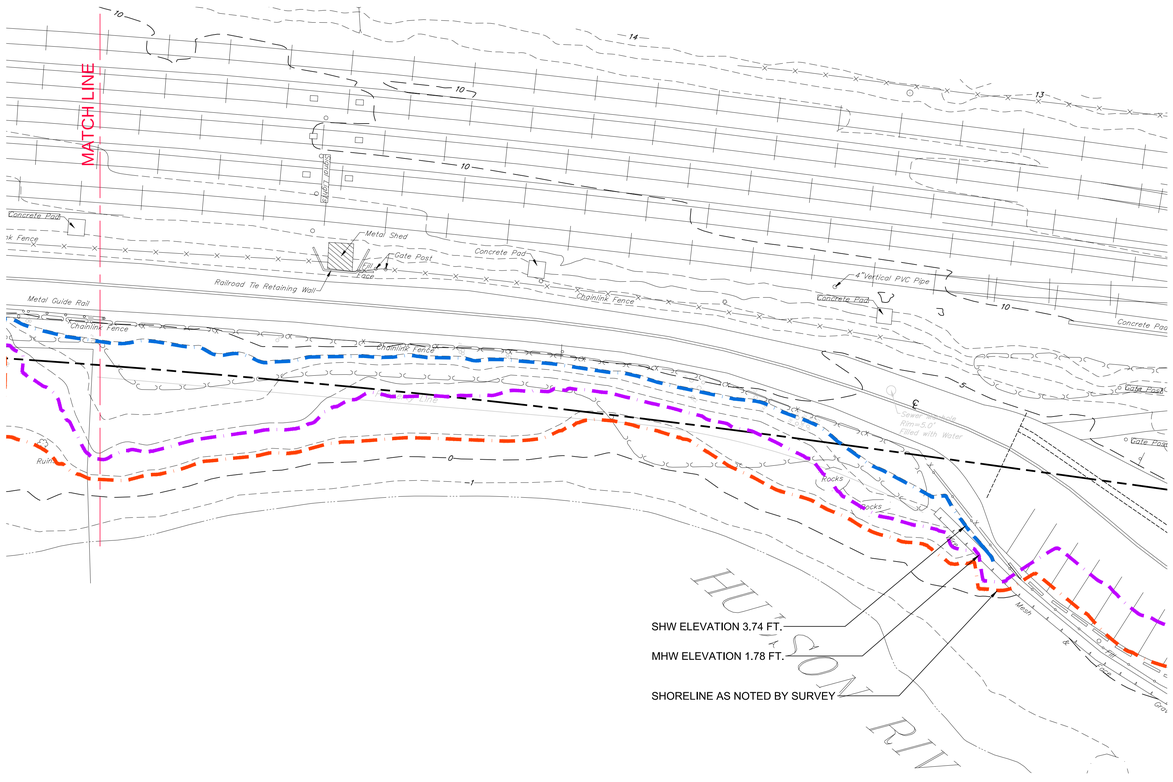
SCALE: 1" = 20'
DRAWN BY: MEM
DATE: 02/23/15

OVERALL LAYOUT PLAN

LAYOUT PLAN PREPARED FOR
VILLAGE OF CROTON-ON-HUDSON
ELLIOTT WAY IMPROVEMENTS
Village of Croton-On-Hudson
Westchester Co., New York

C - 101





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Engineer:
STATE OF NEW YORK · JOSEPH C. RIINA · LICENSED PROFESSIONAL ENGINEER
Joseph C. Riina, P.E.
NYS Lic. No. 64431

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1.	6/11/15	DEC Submission
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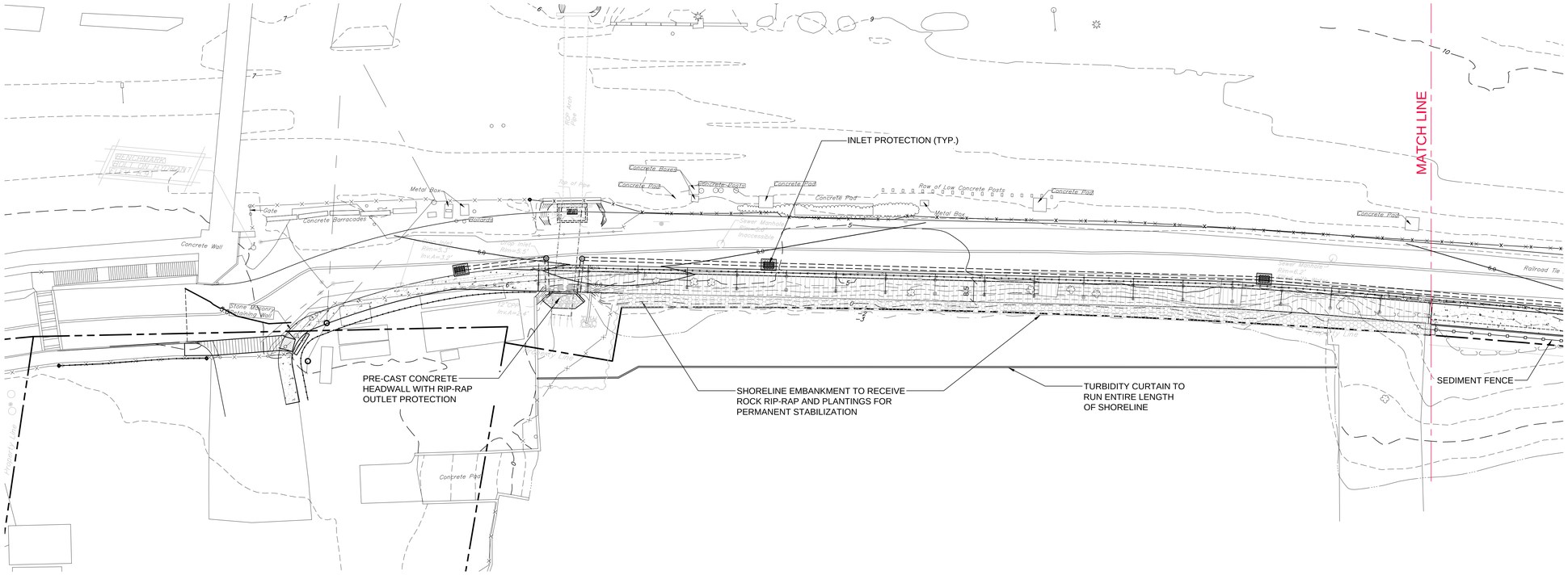
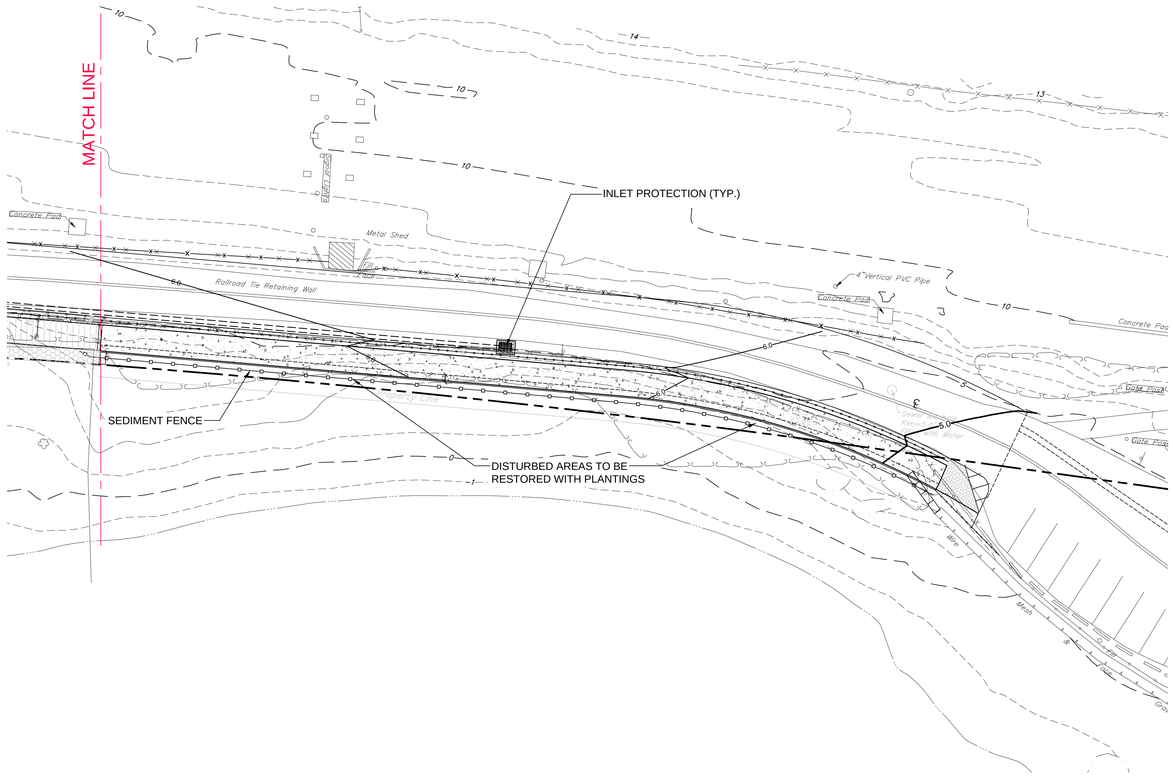
EXISTING CONDITIONS PLAN

LAYOUT PLAN
PREPARED FOR
VILLAGE OF CROTON-ON-HUDSON
ELLIOT WAY IMPROVEMENTS
Village of Croton-On-Hudson
Westchester Co., New York

C - 102

C:\DOCUMENTS\VILLAGE OF CROTON ON HUDSON - ELLIOTT WAY\DOUBLEFRONT\CAD\C-102 VILLAGE OF CROTON ON HUDSON - ELLIOTT WAY\DWG\11-05 SITE LAYOUT FOR AN DEC - ACOE PERMIT DRAWINGS.DWG





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EROSION & SEDIMENT CONTROL PLAN

LAYOUT PLAN PREPARED FOR
VILLAGE OF CROTON-ON-HUDSON
ELLIOT WAY IMPROVEMENTS
Village of Croton-On-Hudson — Westchester Co., New York

C - 103

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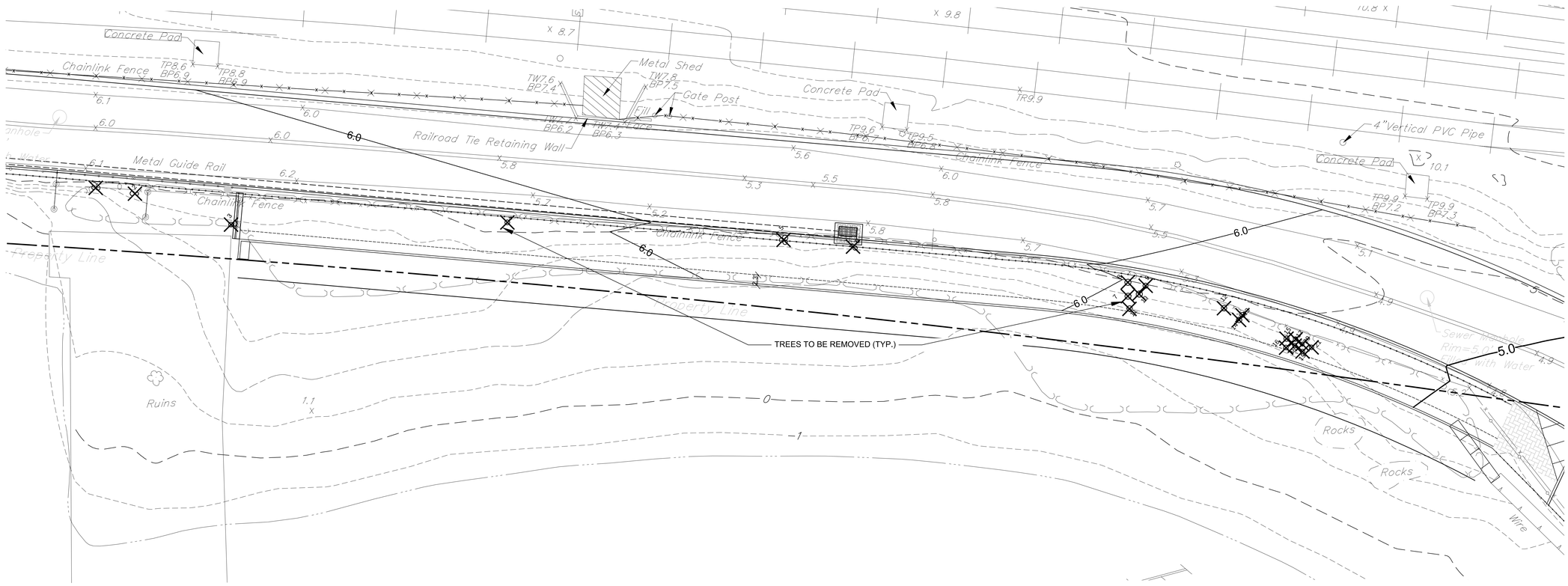

SCHEDULE OF TREES TO BE REMOVED

NO.	SIZE	TYPE
1.	11"	Twin Mulberry
2.	11"	Twin Mulberry
3.	11"	Twin Mulberry
4.	11"	Norway Maple
5.	11"	Triple Elm
6.	11"	Twin Cottonwood
7.	10"	Elm
8.	11"	Willow
9.	12"	Willow
10.	11"	Willow
11.	11"	Willow
12.	10"	Elm
13.	11"	Elm
14.	8"	Cottonwood
15.	10"	Elm
16.	9"	Elm
17.	11"	Elm
18.	9"	Elm
19.	10"	Elm
20.	10"	Elm
21.	9"	Elm

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TREE REMOVAL PLAN

LAYOUT PLAN
PREPARED FOR
VILLAGE OF
CROTON-ON-HUDSON
ELLIOT WAY IMPROVEMENTS
Village of Croton-On-Hudson
Westchester Co., New York

C - 104

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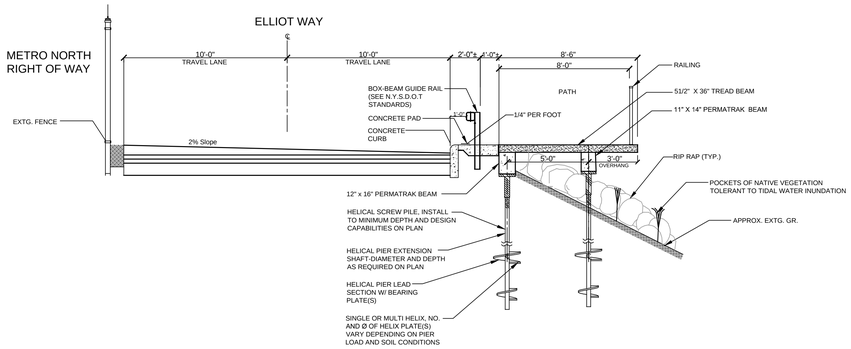
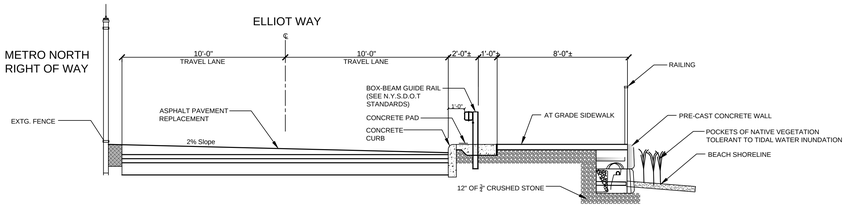
F:\2011\11-20 VILLAGE OF CROTON ON HUDSON - ELLIOTT WAY\ENGINEERING\CAD\C3D-11-20 VILLAGE OF CROTON ON HUDSON - ELLIOTT WAY\DWG\11-20 SITE LAYOUT PLAN DEC - ACOE PERMIT DRAWINGS.DWG

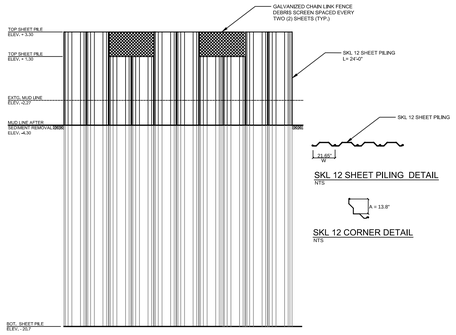


TYPICAL SECTION - ELEVATED CONCRETE BOARDWALK
STA 1+ 46 TO 3+99



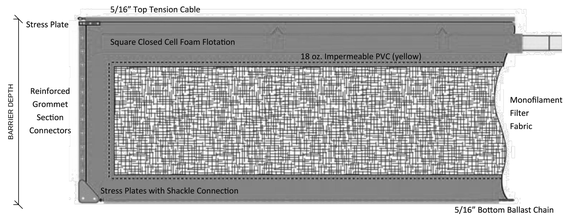
TYPICAL SECTION AT GRADE SIDEWALK
STA 6+00 - 8+00

S-1 TYPICAL ROADWAY CROSS SECTIONS
NOT TO SCALE



TYPICAL SHEET PILE DETAIL
NTS

S-3 TYPICAL SEDIMENT BASIN SHEETING DETAIL
NOT TO SCALE



GRANITE environmental
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Toll Free: 888-703-9889
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Type 3 DOT Turbidity Curtain

Scale:	Drawing:	Revision:	Date:	By:
Not to Scale	G9320-1	2		

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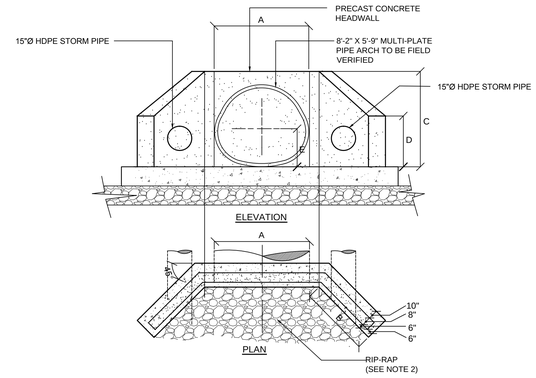
S-4 TURBIDITY BARRIER DETAIL
NOT TO SCALE

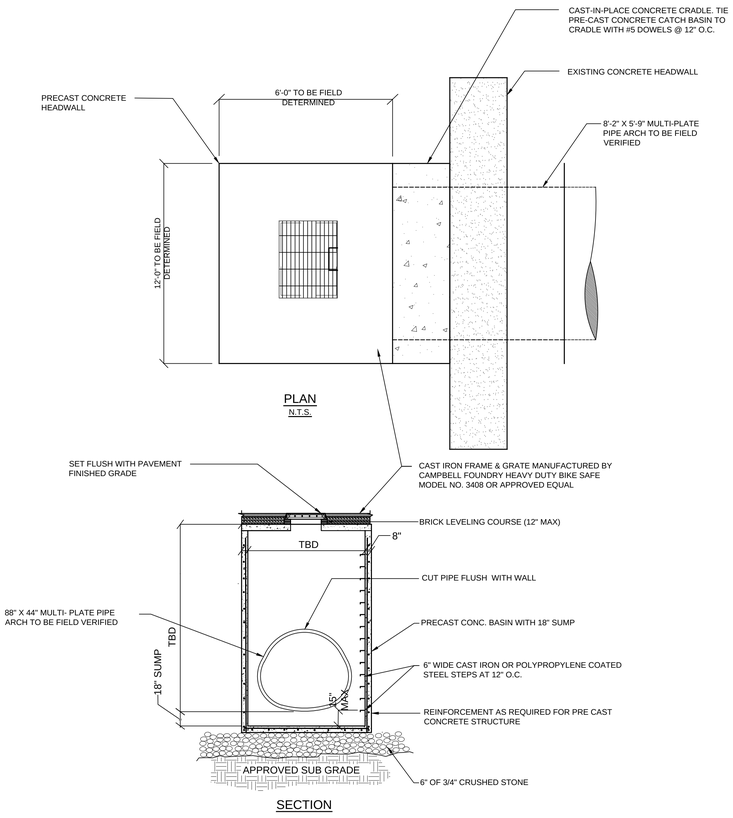


DIMENSIONS IN INCHES						
	A	B	C	D	E	APPROX. WT. / LBS
	TBD	TBD	TBD	TBD	TBD	TBD

SPECIAL SIZES NOT LISTED, CAN BE MANUFACTURED UPON REQUEST

NOTES:
1. All exposed edges to have 1" beveled corners apron by contractor in field reinforcing w/ #4 bars @ 12" O.C.E.W.

S-5 HEADWALL DETAIL
NOT TO SCALE



NOTES:
1. Where depth of catch basin exceeds 10 ft, inside dimensions shall be 48" x 48".
2. Top of basin shall be built with precast concrete structural slab designed for H-20 loading.

S-6 HEADWALL AND DRAINAGE STRUCTURE DETAIL
NOT TO SCALE

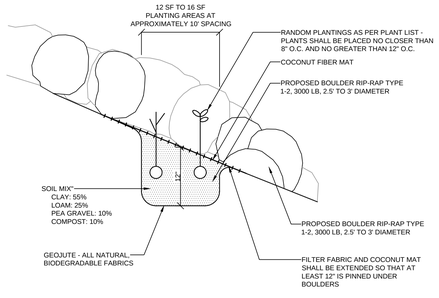


TABLE II - FRESHWATER BRACKISH EMMERGENT PLANT SPECIES*

COMMON NAME	SCIENTIFIC NAME	HABITAT	PLANTING PERIOD
Arrow Arum	*Peltandra virginica*	Fresh-to-brackish Tidal Riverbank	May to July
Duck Potato	*Sagittaria latifolia*	Fresh-to-brackish Tidal Riverbank	June to August
Common Threesquare	*Schoenoplectus pungens*	Fresh-to-brackish Tidal Riverbank	May to August
Narrow-leaf Cattail	*Typha angustifolia*	Fresh-to-brackish Tidal Riverbank	May to August
Pickerelweed	*Pontederia cordata*	Fresh-to-brackish Tidal Riverbank	May to September
Swamp Rose-mallow	*Hibiscus moscheutos*	Fresh-to-brackish Tidal Riverbank	May to September
Sweetflag	*Acorus americanus*	Fresh-to-brackish Tidal Riverbank	May to August
Switch-grass	*Panicum virgatum*	Fresh-to-brackish Tidal Riverbank	June to September
Soft-stem Bulrush	*Schoenoplectus tabernaemontanii*	Fresh-to-brackish Tidal Riverbank	May to August

* All plants consist of 2 inch plugs, and can be provided in quarts.

Soil Mixing & Conditioning:

Each planting area will receive a minimum of 12 inches of planting soil consisting predominantly of clay soil (55%), mixed with a loam soil (25 %) and pea-gravel (10%), suitable for the types of plants selected for planting, and based on nursery guidelines. Compost (10%) will also be introduced into the planting soil mixture to achieve a suitable soil pH necessary for ideal plant growth.

Monitoring:

Monitoring will be performed on a monthly basis during the season of planting to ensure successful growth prior to the first year's winter season. As necessary, species will be substituted to ensure plant diversity and successful recreation. Semiannual monitoring will be performed after monthly monitoring after for the first year planting season and annual thereafter for a period of 5-years.

S-2 SHORELINE PROTECTION DETAIL
NOT TO SCALE

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Engineer: Joseph C. Riina, P.E. NYS Lic. No. 64411

Revisions:

Rev.	Date	Comments
1.	6/11/15	DEC Submission
2.	11/2/15	DEC & ACOE Revisions

SCALE: NTS
DRAWN BY: MEM
DATE: 02/23/15

SITE DETAILS

LAYOUT PLAN PREPARED FOR
VILLAGE OF CROTON-ON-HUDSON
ELLIOTT WAY IMPROVEMENTS
Westchester Co., New York
Village of Croton-On-Hudson

C - 501

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.