HONORING A LEGACY OF

Officer Courtney F. Smith

A MONTH OF RECOGNITION | FEBRUARY 2026

South Nyack's First African American Police Officer

UPCOMING EVENTS

Town Board Recognition

Tuesday, February 10, 2026
Time: 7:00 PM
Orangetown Town Hall
26 Orangeburg Road,
Orangeburg, NY

Street Naming Ceremony

Saturday, February 21, 2026
Time: 2:00 PM
South Broadway between Cornelison Avenue and Clinton Avenue

BLACK HISTORY MONTH TRIBUTE

SATURDAY, FEBRUARY 21, 2026
4:00PM - 6:30PM

NYACK CENTER
58 DEPEW AVE, NYACK NY 10960

RSVP

Join us throughout February as we honor a trailblazer whose service paved the way for generations to come.

911 Monument Fundraiser
"Never Forget"

On the 25th anniversary of 9/11, the Volunteer Fire Association of Tappan would like to honor and recognize all who perished on that tragic day, as well as those who subsequently passed. We are establishing a permanent monument to ensure their sacrifice is never forgotten. With your support, we can make this tribute a reality.

Donate By Mail

Make Check Payable to

Vol. Fire Assc. of Tappan (VFAT)
P.O Box 105
Tappan, NY 10983

SCAN TO DONATE

gofundme

www.gofundme.com

Type: 25th Anniversary of September 11th - Monument Update

ARTICLE V

Fees in Support of Electronic Record Conversion and Storage, and Geographic Information System (GIS) Displaying Certain Land Use and Other Municipal Information

~~[Adopted 5-8-2006 by L.L. No. 9-2006]~~

§ 14-13. Establishment of fees.

Whenever an individual, group of individuals, partnership, firm, association, corporation or entity is required by any other article, chapter, section or subsection of this Code or any other applicable law to pay a fee associated with any of the permits, applications, or departments listed in § 14-14 below, such individual, group of individuals, partnership, firm, association, corporation or entity shall pay an additional fee as set forth by a resolution or resolutions of the Town Board. for purposes of addressing conversion, storage, processing and maintenance of certain land use records in electronic format and for fees related to the Geographic Information (GIS) System.

§ 14-14. Matters upon which fees must se paid; when due.

A. The fee required in § 14-13 above shall be paid in each and every one of the following instances:

(1) Project of any kind before the Planning Board;

(2) Project of any kind before the Zoning Board;

(3) Application for any type of building permit from the Office of Building, Zoning, Planning Administration and Enforcement;

(4) Application of any type submitted to the Highway Department;

(5) Application of any type submitted to the Department of Environmental Management and Engineering.

B. Said fees shall be due at the same time that the fee upon which they are derived is due.

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300 Tice Boulevard Suite 101
Woodcliff Lake, New Jersey 07677
Main: 877 627 3772
www.colliersengineering.com

Colliers
Engineering & Design

VIA UPS
February 2, 2026

Audrey Lupachino
Town of Orangetown
26 Orangeburg Road
Orangeburg, NY 10962

622 Route 303 (Al Foxie)
Town of Orangetown, Rockland County, NY
Project No. 22002634B

Dear Ms. Lupachino,

Please find enclosed two (2) copies of the Preliminary Site Plan prepared by our office, last revised December 9, 2025, as well as two (2) copies of the Stream Diversion Hydraulic Report & Downstream Analysis prepared by our office, last revised January 2026, as part of our submission to the Town Board for the above-mentioned project. Digital copies of these documents will also be emailed.

The proposed project will consist of combining the two (2) existing tax parcels into one lot for the construction of a 160,120 square-foot warehouse/distribution facility. Other associated site improvements include parking spaces, loading docks, and trailer storage areas associated with the proposed building, and landscape and lighting. The lot has two proposed driveway entrances on Al Foxie Way for vehicular and truck access to the facility, as well as a proposed gated emergency access driveway to Birchwood Drive. The project proposes a total of 12.26 acres of disturbances.

Under existing conditions, a stream runs through the center of the site, greatly limiting the use of the site. The project includes a plan to divert the existing stream around the development from the entrance point at the culvert and maintain the same discharge point into the wetlands to allow for the proposed developments. The proposed diversion consists of a dual-chamber concrete structure at the outflow of the existing Al Foxie Way culvert connecting to dual 48" pipes. The 48" pipes convey runoff around the proposed building to the east and north, before turning west and discharging to the existing stream as it enters the wetlands. The pipes will discharge to a proposed plunge pool/scour hole to reduce the velocity of the piped runoff and provide erosion protection.

Should you have any questions, please do not hesitate to contact our office.

Sincerely,

Colliers Engineering & Design CT, P.C.

Justin Ferrazzano
Senior Project Manager | Associate

\\corp.collierseng.com\corp\Montvale\Projects\2022\22002634A\Correspondence\OUT\260202_JF_Lupachino_Town Board Submission.docx

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& Design

Stream Diversion Hydraulic Report & Downstream Analysis

August 2023

Last Revised January 2026

Project Al Foxie
Town of Orangetown
SBI. No. 65.14-1-11.2, 65.14-1-11.3

Prepared for:

622 Route 303 LLC
21 Phillips Parkway
Montvale, NJ 07645

Prepared by:

Jesse B. Cokeley, P.E.
NYS Professional Engineer
License No. 090987

Colliers Engineering & Design
300 Tice Boulevard Suite 101
Woodcliff Lake, New Jersey 07677
Main: 877.627.3772
Colliersengineering.com

Project No. 22002634B

555 Hudson Valley Avenue Suite 101
New Windsor New York 12553
Main: 845 564 4495

Colliers
Engineering
& Design

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I. EXECUTIVE SUMMARY

Project Name:	**Client Name and Address:**
Project Al Foxie (formerly "622 Route 303")	622 Route 303 LLC 21 Phillips Parkway Montvale, NJ 07645
Project Engineer and Firm:	**Contractor Name and Address:**
Jesse B. Cokeley, P.E. Colliers Engineering & Design 300 Tice Boulevard, Suite 101 Woodcliff Lake, NJ 07677 (877) 627-3772	Sam Nussbaum Industry Construction Service 21 Phillips Parkway Montvale, NJ 07645
Project Location:	**Permitting Contact:**
Al Foxie Way SBL: 65.14-1-11.2 & 65.14-1-11.3 Town of Orangetown (Blauvelt) Rockland County, NY	Town of Orangetown 26 W Orangeburg Rd Orangeburg, NY 10926 845-359-5100

Figure 1: Project Location (Source: Google Earth)

II. INTRODUCTION

The proposed project consists of the development of two existing adjacent tax lots and will include the construction of a distribution warehouse. The two lots to be developed have total 18.5 acres and about bound by a frontage along Birchwood Lane to the north, Al Foxie Way to the south, and NYS Route 303 to the east. The project site is a former golf ball driving range and is currently vacant with a mixture of woodlands/meadows and wetlands,

An existing tributary of the Hackensack River, which flows from south to north, is located within the subject site and will be impacted by the proposed development. The proposed site involves the construction of a new building where the existing tributary is now located. This project proposes to address this impact by constructing an extension to the existing culvert which will reroute the existing creek around the proposed building footprint. The segment of creek to be diverted and culverted will be the segment of the creek immediately downstream of the existing double 36" RCP pipe beneath Al Foxie Way and will extend to the point at which the existing stream discharges to the existing on-site wetland. The Al Foxie Way culvert will also be reconstructed to increase capacity as part of this project.

The intent of this report is to document and address only those factors associated with the piping of the existing reach of stream being disturbed to accommodate the development of the site. Documentation and a discussion of the approach used for the design of all other stormwater management facilities associated with this project are addressed as part of a separate report.

III. DESIGN GOALS

GOALS. The principal objective of this report is to document the decisions and factors used in the design of the proposed culvert extension needed to address the diversion of the existing stream around the location of the proposed building footprint. Key objectives for this design include:

- Minimization of potential impacts upstream of the proposed culvert by ensuring that no rise in headwater will occur as a result from the proposed culverting of the downstream reach.
- Minimization of impacts to the receiving wetlands located downstream of the proposed culvert by ensuring that existing discharge points are maintained and that outlet velocities are controlled.
- Providing a proposed culvert design that is both cost effective and that requires minimal maintenance effort in the future.
- Providing a culvert design that is in harmony with all the other proposed improvements associated with this project.
- Ensuring that the proposed design be fully in compliance with all Local, State, and Federal requirements. Key guidance include:

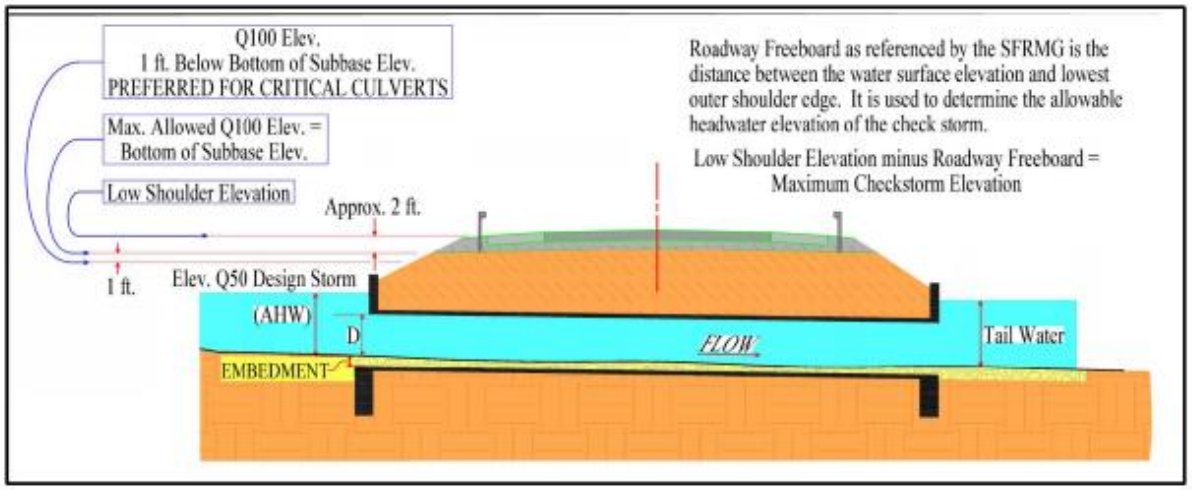
The New York State Stormwater Management Design Manual, by New York State Department of Environmental Conservation, August 2015 (NYSSMDM).

New York State Department of Transportation Highway Design Manual, by New York State Department of Transportation, June 2021

Stormwater quality or attenuation measures for the developed site are not addressed as part of this report.

IV. METHODOLOGY

The existing culvert was analyzed to determine existing capacity and overtopping flows. Based on the upstream analysis of the existing culvert (Culvert #1) within Al Foxie way it is evident that there is no factor of safety or accommodations in place to receive the 100 year storm flow (235.20 CFS) and pass it through the Culvert #1 (maximum capacity of 214 CFS), therefore the proposed design includes the upgrade of Culvert #1 to provide one (1) 36" x 60" box culvert which would raise the capacity of the csystem to the necessary 235.20 CFS. New York State requires that headwater for the 50-year flow shall be no higher than 1 foot below the low shoulder elevation of the existing road, with maximum headwater for the 100-year flow be no higher than low shoulder elevation of the existing road.



The following is the list of steps used as part of this approach.

a. Determine design flows for the existing culvert using USGS Regression equations through the use of Streamstats.

b. Analyze existing culvert using Manning's Equation to determine existing capacity.

c. Evaluate alternatives for culvert extension that will not adversely impact headwater to the existing culvert or create erosion issues downstream of the proposed culvert.

d. Analyze the downstream northern neighboring culvert (Culvert #2) to ensure tailwater does not impede upon the new extension.

V. DISCUSSION

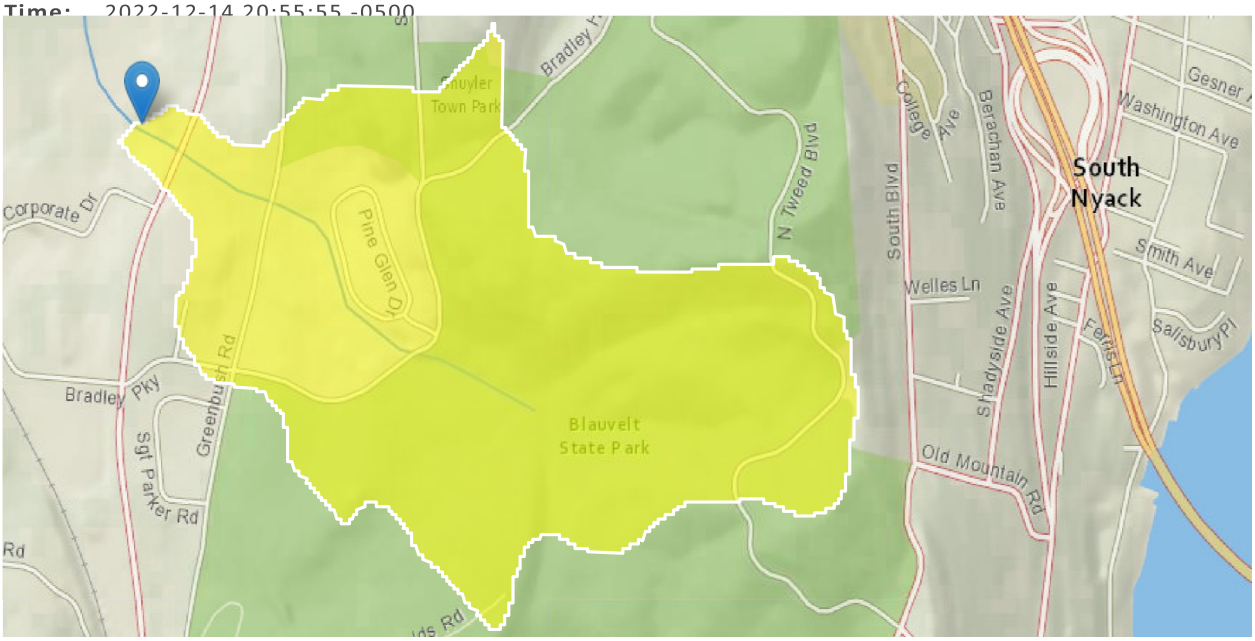
Design Points

Three design points (points of analysis) were selected for the analysis of the existing culvert and design of the proposed culvert extension. The three points were the entrance to the existing culvert located beneath Al Foxie Way (Culvert #1), the discharge point for the proposed culvert extension into the existing wetland, and the existing culvert beneath the neighbor's property to the north (Culvert #2).

HYDROLOGY

Design flows for the existing Culvert #1 and proposed culvert extension was determined using the Regression equation through the use of StreamStats. This methodology was found to be sufficient for the purposes of estimating design flows for the extension of this culvert. A copy of the StreamStats report is found in the appendices. The size of the contributing basin was determined to be 0.51 square miles (326.4 Acres):

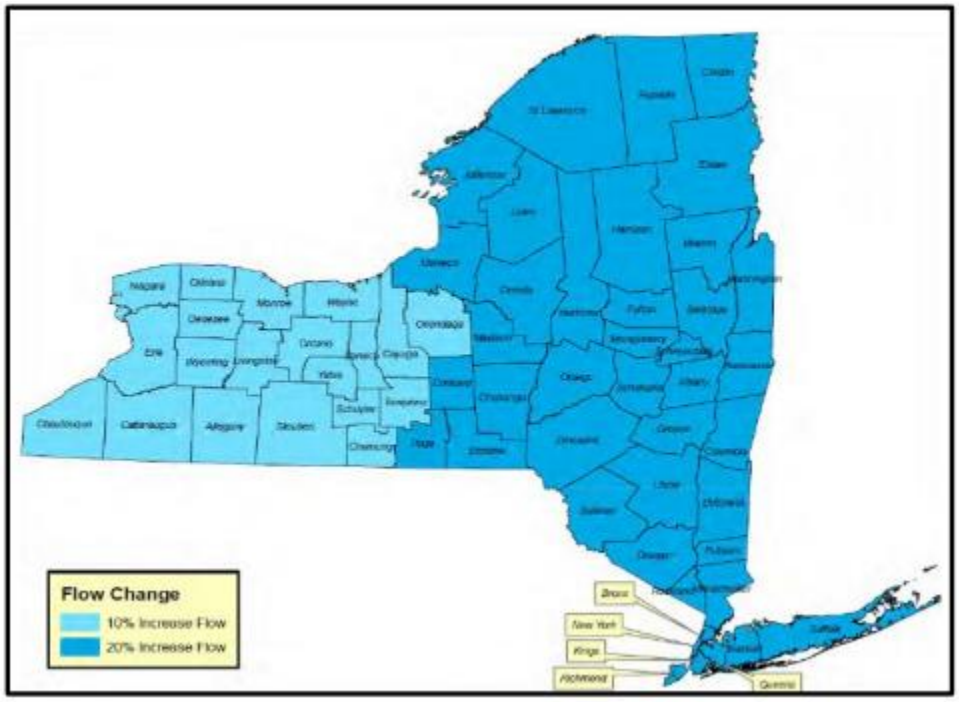
Clicked Point (Latitude, Longitude): 41.08097, -73.95033
Time: 2022-12-14 20:55:55 -0500



Critical flows were determined to be:

2% Annual Exceedance Probability Flow (50 Year)	160 CFS
1% Annual Exceedance Probability Flow (100 Year)	196 CFS

In accordance with Exhibit 8-10 of the manual:



Design flows are to be increased by 20%. After applying this multiplier design discharges for the project are to be:

2% Annual Exceedance Probability Flow (50 Year) 192 CFS

1% Annual Exceedance Probability Flow (100 Year) 235.2 CFS

These flows are approximate only and likely overestimate the flows that the existing culvert currently experience. Also, regression equations and predictions may be less reliable due to the small watershed size. This method does not account for the presence of existing upstream controls which include existing culverts and roadways located within the basin which, if considered, would restrict flow and delay timing.

SOIL TYPES

Soil data for this project was obtained from the USDA Natural Resources Conservation Service Web Soil Survey (NRCS WSS). A copy of the report generated for the site can be found in the Appendix of this report.

Several different soil designations are identified throughout the entire project. A further detailed description of the soil characteristics and properties can be found in the NRCS WSS included as an Appendix to this report.

HYDROLOGIC SOIL GROUP (HSG)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). Dual class soil groups are conservatively considered "D" soils.

The prevailing soil type for the basin have been identified through the NRCS WSS as HSG 'D' Soils.

EVALUATION

The evaluation of the existing culvert revealed that, under conservative assumptions and positively sloped pipes at 2.22% downstream, that the existing dual 36" HDPE culverts have a full-flow capacity of 214.34 CFS and therefore the existing culvert is proposed to be upgraded to a 36" by 60" RCP box culvert at 2.3% with a capacity of 539.08 cfs to receive the necessary 235.20 CFS.

A copy of the Manning's calculations for the capacity of the existing dual 36" pipes beneath Al Foxie Way, and HydraFlow print outs for the proposed 36" by 60" box culvert which include profiles with Hydraulic Grade Lines and loss calculations for the proposed system have been included in the appendices for reference.

DOWNSTREAM VELOCITY

Additional analysis was performed to ensure that the velocity of water exiting the proposed culvert will not exceed the existing velocity of runoff at that point.

An additional StreamStats analysis was performed at the approximate location of the discharge point, showing that under existing conditions, the 100 year storm has an approximate flow of 223.2 CFS (186 CFS with an increase of 20%) through the existing stream. The cross section of the existing stream at this point was modeled in HydroCad, and the resulting velocity is 5.46 fps.

Under proposed conditions, the proposed culvert will discharge to a proposed scour hole, which will discharge to the existing wetlands at 4.10 fps for the 100 year storm.

Please refer to the appendices for reference.

VI. SUMMARY OF PROPOSED IMPROVEMENTS

The evaluation revealed that a two (2) 48" HDPE pipes would provide the most cost-effective solution for the stream diversion through the site. The analysis incorporates energy loss within the system due to friction, elevation, and pipe bends. No tailwater condition exists at the outfall location as demonstrated by the analyses in the addendum of this report.

The stream diversion will begin just downstream of the proposed culvert reconstruction. A special drainage structure will be constructed to at the end of the existing culvert and will connect the proposed reconstructed culvert to the proposed extension, as detailed on the site plans. The extension will divert flow to the east of the proposed building, will run parallel to the existing building and then be diverted back to the west where it will discharge into the existing wetlands at the same point where the existing reach of stream discharges to the existing wetlands. The outlet pipe will discharge into a plunge pool to remove energy from the system, prevent scour/erosion, and minimize impacts to the existing wetlands. The proposed stream diversion will discharge to the wetlands at the same location as the existing stream, and will convey flow only from the upstream culvert. Therefore, the proposed project will have no impact on the water quality within the stream diversion, and as the velocity at the discharge point is being reduced from existing conditions there will be no negative impact on the hydrology.

The existing culvert under All Foxie Way will be upgraded a 36" by 60" box culvert, installed using traditional construction methods. The contractor will utilize standard flagmen, barrels, and cones. Although FedEx traffic is the only vehicles anticipated during construction, the flagmen would be on-site during all hours of active construction.

The northern half of Al Foxie Way will be sawcut and excavated so vehicular access is maintained to the existing Fed Ex facility, and the northern existing headwall will be demolished. The contractor will need to maneuver around existing pipe crossings but since the proposed box culvert follows the same path and elevation as the existing 36" pipes, there will be no need for concrete casements or cradles. The shoring the contractor utilizes will be dependent upon the soil composition, but we recommend a test pit prior to commencement. If the soil is soft as anticipated, trench boxes will be utilized. A temporary stream diversion will be required. The contractor will run a pump/hose from the in-flow (southern side of Al Foxie Way) of the culvert into the existing catch basin further west down Al Foxie (also southern side of roadway). They will utilize standard bypass procedures and provide 24/7 pumping. The proposed northern junction box and box culvert will be constructed, and then the northern half of the road will be backfilled in 12 inch lifts and the asphalt base courses installed using normal compaction trench rollers. The contractor will meet the specified design compaction and is open to a third party to provide testing and oversight.

The same procedure would occur on the southern side of the roadway until the pipes are fully installed. The proposed southern headwall will be constructed by installing a pre-cast headwall and wingwalls which will be joined to the box culvert with mechanical rebar connectors and a closure pour.

Once the culvert and headwall are fully installed and backfilled, with the base course compacted, the asphalt top course will be installed. The contractor will be informed that this construction should

occur during a stretch where there is no rain or storms anticipated. The contractor anticipates a construction timeframe of one-week.

A copy of the proposed design can be found in the appendices.

APPENDICES

Appendix 1
Hydrology – StreamStats Report – At Culvert #1

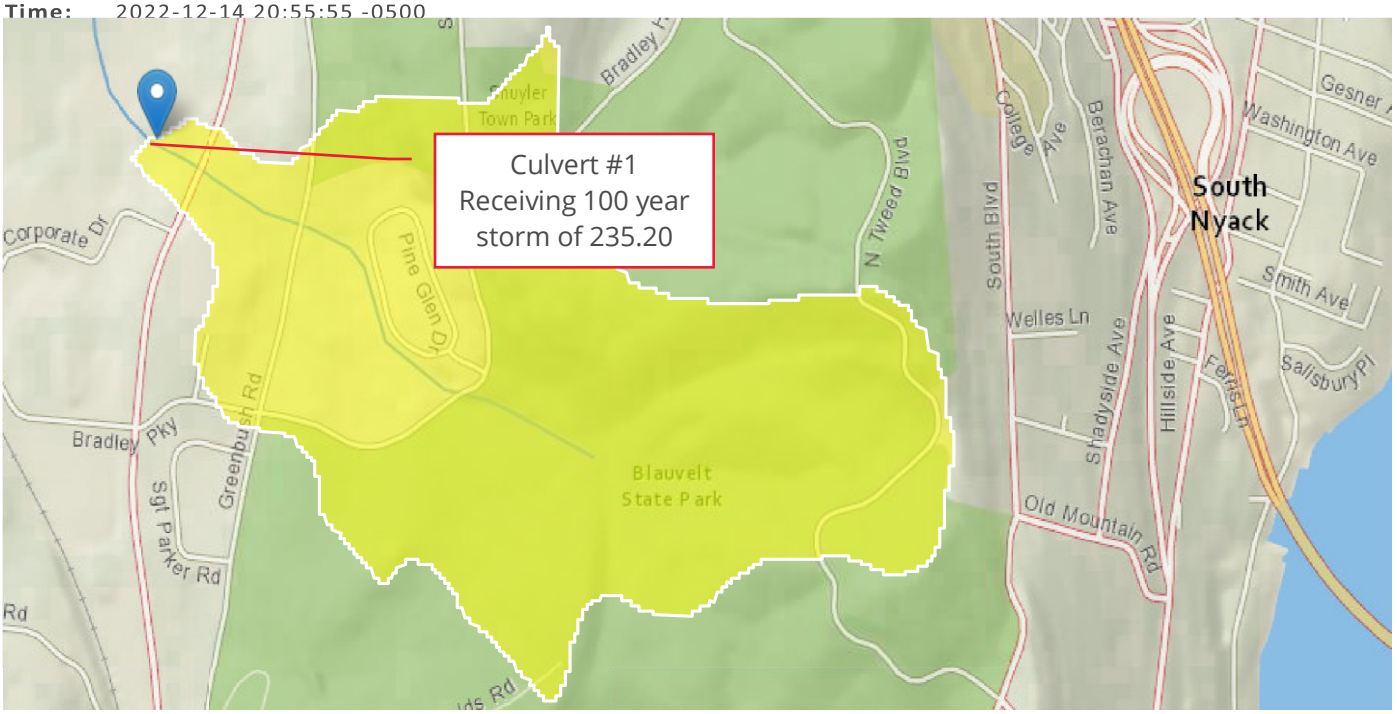
StreamStats Report

Region ID: NY

Workspace ID: NY20221215015535929000

Clicked Point (Latitude, Longitude): 41.08097, -73.95033

Time: 2022-12-14 20:55:55 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	589060.1	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4547795.5	meters
CSL1085LO	10-85slope of lower half of main channel in feet per mile.	213	feet per mi
DRNAREA	Area that drains to a point on a stream	0.51	square miles
EL1200	Percentage of basin at or above 1200 ft elevation	0	percent
JULAVPRE	Mean July Precipitation	4.23	inches
JUNAVPRE	Mean June Precipitation	4.47	inches
JUNMAXTMP	Maximum June Temperature, in degrees F	79	degrees F
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.0054	dimensionless
LENGTH	Length along the main channel from the measuring location extended to the basin divide	1.53	miles
MAR	Mean annual runoff for the period of record in inches	23.4	inches
MAYAVPRE	Mean May Precipitation	4.73	inches
PRJUNAUG00	Basin average mean precip for June to August from PRISM 1971-2000	12.9	inches

Parameter Code	Parameter Description	Value	Unit
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	0	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	0.75	percent
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0.43	percent

Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Region 3 SIR2009 5144]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	0.42	329

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	0.07722	940.1535

Bankfull Statistics Parameters [Piedmont P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	0.289575	939.99906

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [Bankfull Region 3 SIR2009 5144]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	PIu
Bankfull Area	28.4	ft^2	7.48	108
Bankfull Depth	1.44	ft	0.39	5.31
Bankfull Streamflow	53	ft^3/s	3.7	759
Bankfull Width	19.7	ft	5.29	73.3

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	11.5	ft
Bieger_D_channel_depth	0.924	ft
Bieger_D_channel_cross_sectional_area	10.7	ft^2

Bankfull Statistics Flow Report [Piedmont P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	10.4	ft
Bieger_P_channel_depth	0.93	ft
Bieger_P_channel_cross_sectional_area	9.41	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	9.77	ft
Bieger_USA_channel_depth	1.04	ft
Bieger_USA_channel_cross_sectional_area	11.9	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	PIu
Bankfull Area	28.4	ft^2	7.48	108
Bankfull Depth	1.44	ft	0.39	5.31
Bankfull Streamflow	53	ft^3/s	3.7	759
Bankfull Width	19.7	ft	5.29	73.3
Bieger_D_channel_width	11.5	ft		
Bieger_D_channel_depth	0.924	ft		
Bieger_D_channel_cross_sectional_area	10.7	ft^2		
Bieger_P_channel_width	10.4	ft		
Bieger_P_channel_depth	0.93	ft		
Bieger_P_channel_cross_sectional_area	9.41	ft^2		
Bieger_USA_channel_width	9.77	ft		
Bieger_USA_channel_depth	1.04	ft		
Bieger_USA_channel_cross_sectional_area	11.9	ft^2		

Bankfull Statistics Citations

Mulvihill, C.I., Baldigo, B.P., Miller, S.J. , and DeKoskie, Douglas,2009, Bankfull Discharge and Channel Characteristics of Streams in New York State: U.S. Geological Survey Scientific Investigations Report 2009-5144, 51 p. (http://pubs.usgs.gov/sir/2009/5144/)

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDFCoverPages)

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	1.93	996
LAGFACTOR	Lag Factor	0.0054	dimensionless	0.014	6.997
STORAGE	Percent Storage	0.43	percent	0	11.88
MAR	Mean Annual Runoff in inches	23.4	inches	16.03	33.95

Peak-Flow Statistics Disclaimers [2006 Full Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [2006 Full Region 2]

Statistic	Value	Unit
80-percent AEP flood	22.1	ft^3/s
66.7-percent AEP flood	28.2	ft^3/s
50-percent AEP flood	37.4	ft^3/s
20-percent AEP flood	66.4	ft^3/s
10-percent AEP flood	91.2	ft^3/s
4-percent AEP flood	128	ft^3/s
2-percent AEP flood	160	ft^3/s
1-percent AEP flood	196	ft^3/s
0.5-percent AEP flood	236	ft^3/s
0.2-percent AEP flood	297	ft^3/s

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide duration flows excl LongIsl 2014 5220]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.51	square miles	3.14	4780
JUNAVPRE	Mean June Precipitation	4.47	inches	3.59	5.33
CENTROIDX	CENTROIDX	589060.1	meters	166000	658000
CENTROIDY	CENTROIDY	4547795.5	meters	4560000	4920000
CSL1085LO	10-85 slope of lower half of main channel	213	feet per mi	1.56	152
LENGTH	Main Channel Length	1.53	miles	0.88	305

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
MAR	Mean Annual Runoff in inches	23.4	inches	11.6	37.4
SSURGOB	SSURGO Percent Hydrologic Soil Type B	0.75	percent	1.14	65.7
JULAVPRE	Mean July Precipitation	4.23	inches	3.2	5.26
MAYAVPRE	Mean May Precipitation	4.73	inches	3.15	5.68
PRJUNAUG00	Basin average mean precip for June to August	12.9	inches	10.5	15.5
JUNMAXTMP	Maximum June Temperature	79	degrees F	68.8	78.8
SSURGOA	SSURGO Percent Hydrologic Soil Type A	0	percent	0.62	51.2
EL1200	Percentage of Basin Above 1200 ft	0	percent	0	100

Flow-Duration Statistics Disclaimers [Statewide duration flows excl LongIsl 2014 5220]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Flow-Duration Statistics Flow Report [Statewide duration flows excl LongIsl 2014 5220]

Statistic	Value	Unit
0.01 Percent Duration	64.1	ft^3/s
1 Percent Duration	8.9	ft^3/s
5 Percent Duration	3.09	ft^3/s
10 Percent Duration	1.92	ft^3/s
15 Percent Duration	1.42	ft^3/s
20 Percent Duration	1.14	ft^3/s
25 Percent Duration	0.922	ft^3/s
35 Percent Duration	0.642	ft^3/s
50 Percent Duration	0.372	ft^3/s
65 Percent Duration	0.147	ft^3/s
75 Percent Duration	0	ft^3/s
80 Percent Duration	0	ft^3/s
85 Percent Duration	0	ft^3/s
90 Percent Duration	0	ft^3/s
95 Percent Duration	0	ft^3/s
99 Percent Duration	0	ft^3/s
99.99 Percent Duration	0	ft^3/s

Flow-Duration Statistics Citations

Gazoorian, C.L.,2015, Estimation of unaltered daily mean streamflow at ungaged streams of New York, excluding Long Island, water years 1961–2010: U.S. Geological Survey Scientific Investigations Report 2014–5220, 29 p. (https://pubs.usgs.gov/sir/2014/5220/)

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Government.

Application Version:
4.11.1

StreamStats Services
Version: 1.2.22 NSS
Services Version: 2.2.1

Appendix 2

USGS Soils Report

United States Department of Agriculture

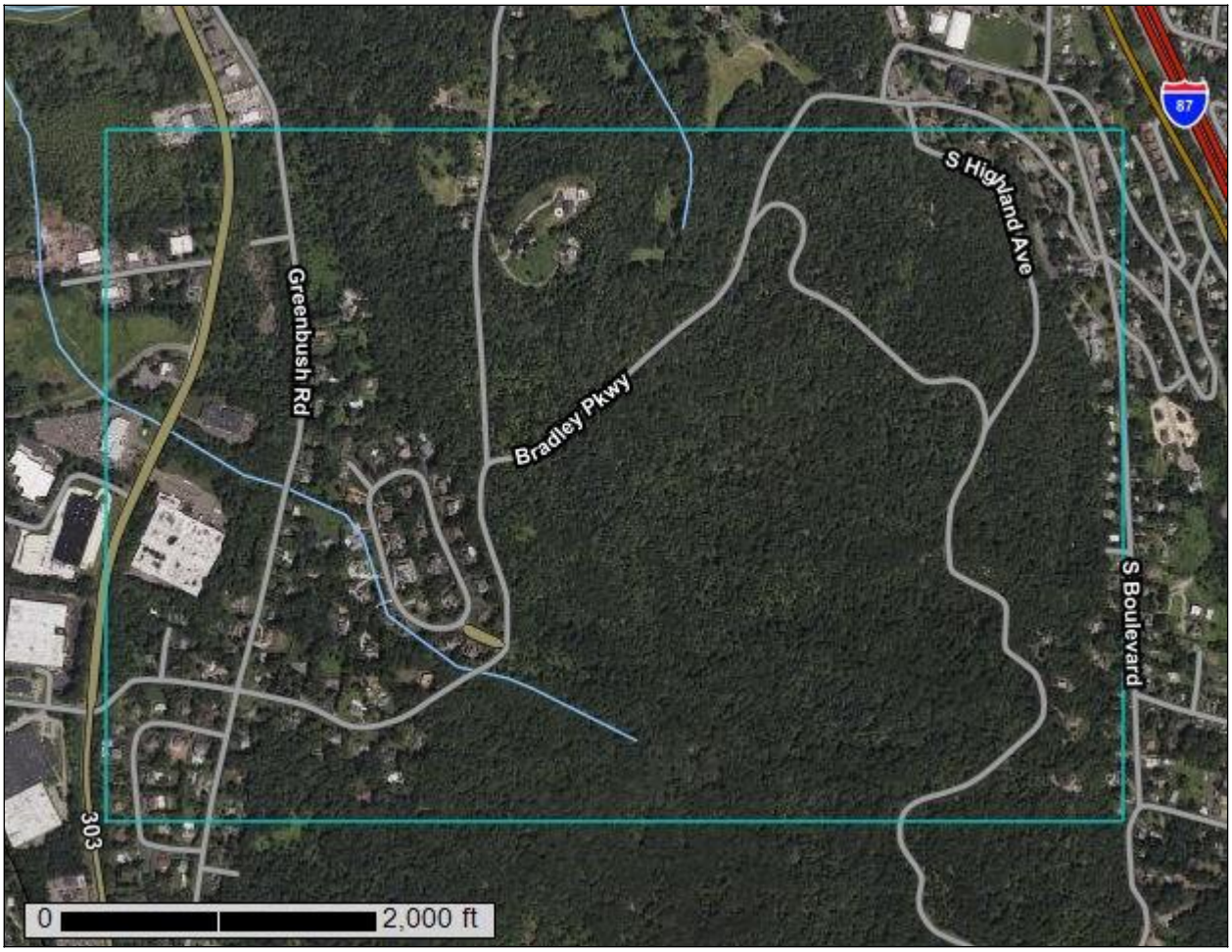
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Rockland County, New York



December 19, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil

properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/ portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil Custom Soil Resource Report, scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping,

design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and Custom Soil Resource Report identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:11,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 150 300 600 900

Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockland County, New York Survey Area Data: Version 20, Sep 10, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Date(s) aerial images were photographed: Apr 13, 2021—Sep 14, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ca	Catden muck, 0 to 2 percent slopes	8.8	1.4%
HaB	Haven loam, 3 to 8 percent slopes	15.7	2.4%
HoC	Holyoke-Rock outcrop complex, rolling	126.8	19.6%
HoD	Holyoke-Rock outcrop complex, hilly	187.1	29.0%
HoF	Holyoke-Rock outcrop complex, very steep	61.1	9.5%
Sa	Sloan silt loam	0.1	0.0%
Uw	Udorthents, wet substratum	2.0	0.3%
Ux	Urban land	10.1	1.6%
Wc	Watchaug fine sandy loam	12.2	1.9%
WeA	Wethersfield gravelly silt loam, 0 to 3 percent slopes	2.4	0.4%
WeB	Wethersfield gravelly silt loam, 3 to 8 percent slopes	140.4	21.7%
WeC	Wethersfield gravelly silt loam, 8 to 15 percent slopes	67.4	10.4%
WeD	Wethersfield gravelly silt loam, 15 to 25 percent slope s	3.2	0.5%
WuD	Wethersfield-Urban land complex, 15 to 25 percent slopes	8.7	1.4%
Totals for Area of Interest		**646.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification

of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rockland County, New York

Ca—Catden muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t2qk
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Catden and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Catden Setting

Landform: Kettles, fens, bogs, swamps, marshes, depressions, depressions, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

Typical profile

Oa1 - 0 to 2 inches: muck
Oa2 - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components Canandaigua

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Natchaug

Percent of map unit: 5 percent
Landform: Depressions, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Alden

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Timakwa

Percent of map unit: 5 percent
Landform: Swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

HaB—Haven loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v4f
Elevation: 20 to 510 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Haven and similar soils: 80 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haven Setting

Landform: Outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 28 inches: loam
H3 - 28 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Ecological site: F144AY023CT - Well Drained Outwash
Hydric soil rating: No

Minor Components Fredon

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

HoC—Holyoke-Rock outcrop complex, rolling

Map Unit Setting

National map unit symbol: 9v4p
Elevation: 0 to 850 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Holyoke and similar soils: 60 percent
Rock outcrop: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holyoke Setting

Landform: Ridges, hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: silt loam
H2 - 6 to 18 inches: silt loam
H3 - 18 to 28 inches: unweathered bedrock

Properties and qualities

Slope: 4 to 16 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F145XY011CT - Well Drained Shallow Till Uplands
Hydric soil rating: No

Description of Rock Outcrop
Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 4 to 16 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydric soil rating: Unranked

HoD—Holyoke-Rock outcrop complex, hilly

Map Unit Setting

National map unit symbol: 9v4q
Elevation: 0 to 740 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Holyoke and similar soils: 55 percent
Rock outcrop: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holyoke Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: silt loam
H2 - 6 to 18 inches: silt loam
H3 - 18 to 28 inches: unweathered bedrock

Properties and qualities

Slope: 10 to 30 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F145XY011CT - Well Drained Shallow Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 10 to 30 percent

Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s
Hydric soil rating: Unranked

HoF—Holyoke-Rock outcrop complex, very steep

Map Unit Setting

National map unit symbol: 9v4r
Elevation: 0 to 890 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Holyoke and similar soils: 45 percent
Rock outcrop: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holyoke Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: silt loam
H2 - 6 to 18 inches: silt loam
H3 - 18 to 28 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 50 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F145XY011CT - Well Drained Shallow Till Uplands
Hydric soil rating: No

Description of Rock Outcrop
Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 50 percent

Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydric soil rating: Unranked

Sa—Sloan silt loam

Map Unit Setting

National map unit symbol: 9v5b
Elevation: 920 to 970 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sloan and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sloan Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave

Across-slope shape: Concave
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 45 inches: silt loam
H3 - 45 to 60 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F144AY016MA - Very Wet Low Floodplain
Hydric soil rating: Yes

Minor Components Rippowam

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Alden

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Fluvaquents

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Medisaprists

Percent of map unit: 4 percent
Landform: Swamps, marshes

Hydric soil rating: Yes

Ipswich

Percent of map unit: 1 percent
Landform: Tidal marshes
Hydric soil rating: Yes

Uw—Udorthents, wet substratum

Map Unit Setting

National map unit symbol: 9v5f
Elevation: 50 to 2,400 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, wet substratum, and similar soils: 80 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Wet Substratum Typical profile

H1 - 0 to 20 inches: channery loam
H2 - 20 to 70 inches: very gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Hydric soil rating: Yes

Minor Components Rippowam

Percent of map unit: 2 percent
Landform: Flood plains
Hydric soil rating: Yes

Sloan

Percent of map unit: 2 percent
Landform: Flood plains
Hydric soil rating: Yes

Palms

Percent of map unit: 2 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Ux—Urban land

Map Unit Setting

National map unit symbol: 9v5g
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land
Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Wc—Watchaug fine sandy loam

Map Unit Setting

National map unit symbol: 9v5j
Elevation: 50 to 750 feet
Mean annual precipitation: 47 to 50 inches

Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Watchaug and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Watchaug Setting

Landform: Till plains, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
H1 - 2 to 7 inches: fine sandy loam
H2 - 7 to 23 inches: gravelly fine sandy loam
H3 - 23 to 64 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components Alden

Percent of map unit: 5 percent

Landform: Depressions
Hydric soil rating: Yes

WeA—Wethersfield gravelly silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9v5k
Elevation: 100 to 560 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wethersfield and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield Setting

Landform: Till plains, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam
H2 - 13 to 22 inches: gravelly loam
H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F145XY012CT - Well Drained Dense Till Uplands
Hydric soil rating: No

WeB—Wethersfield gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v5l
Elevation: 30 to 690 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wethersfield and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield Setting

Landform: Till plains, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam
H2 - 13 to 22 inches: gravelly loam
H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F145XY012CT - Well Drained Dense Till Uplands
Hydric soil rating: No

WeC—Wethersfield gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9v5m
Elevation: 20 to 690 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Wethersfield and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield Setting

Landform: Till plains, hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam
H2 - 13 to 22 inches: gravelly loam
H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F145XY012CT - Well Drained Dense Till Uplands
Hydric soil rating: No

WeD—Wethersfield gravelly silt loam, 15 to 25 percent slope s

Map Unit Setting

National map unit symbol: 9v5n
Elevation: 0 to 640 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Wethersfield and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield Setting

Landform: Till plains, hills

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam
H2 - 13 to 22 inches: gravelly loam
H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F145XY012CT - Well Drained Dense Till Uplands
Hydric soil rating: No

WuD—Wethersfield-Urban land complex, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9v5r
Elevation: 0 to 620 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Wethersfield and similar soils: 65 percent
Urban land: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield Setting

Landform: Till plains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam
H2 - 13 to 22 inches: gravelly loam
H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F145XY012CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

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References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/? cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

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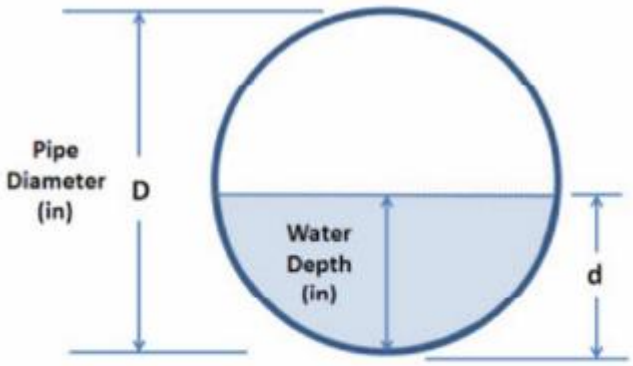
Appendix 3
Manning's Calculation for Existing Capacity at Culvert #1

Gravity Flow in a Circular Section



$$Q = \frac{1.486}{n} A r^{2/3} s^{1/2}$$

Pipe Diameter (in)	36.00
Water Depth (in)	36.00
Pipe slope (ft/ft)	0.02200
Manning's n	0.012

Help select n value

Hydraulic radius: 0.75 ft
Area: 7.07 sq ft
Capacity: 107.17 cfs
Velocity: 15.16 ft/sec
Critical depth: 35.1 in

2 x 36" pipes @ 2.2% slope
107.17 cfs capacity per pipe

Total Capacity = 214.34 cfs

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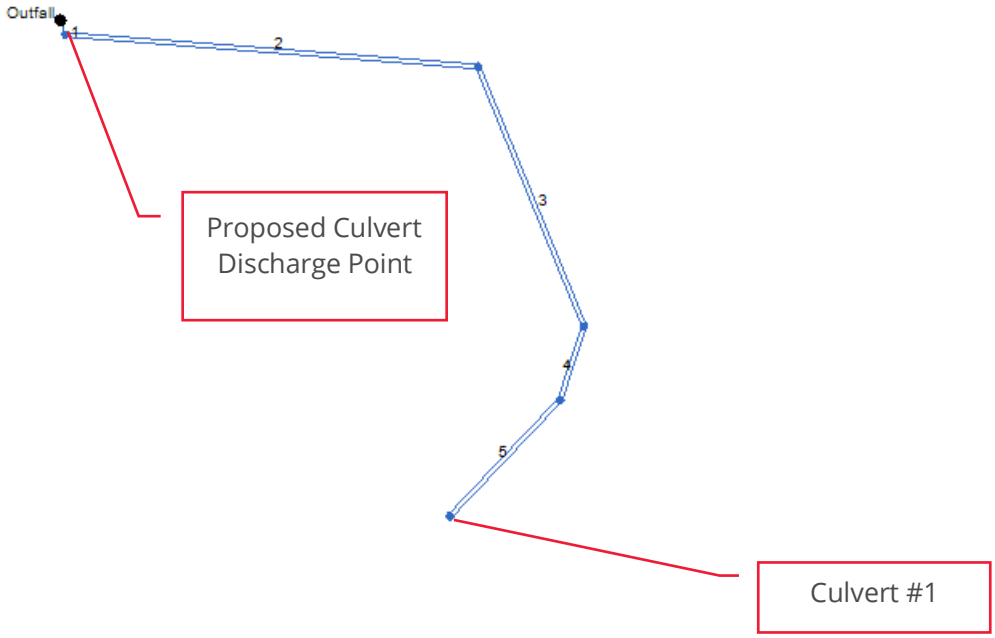
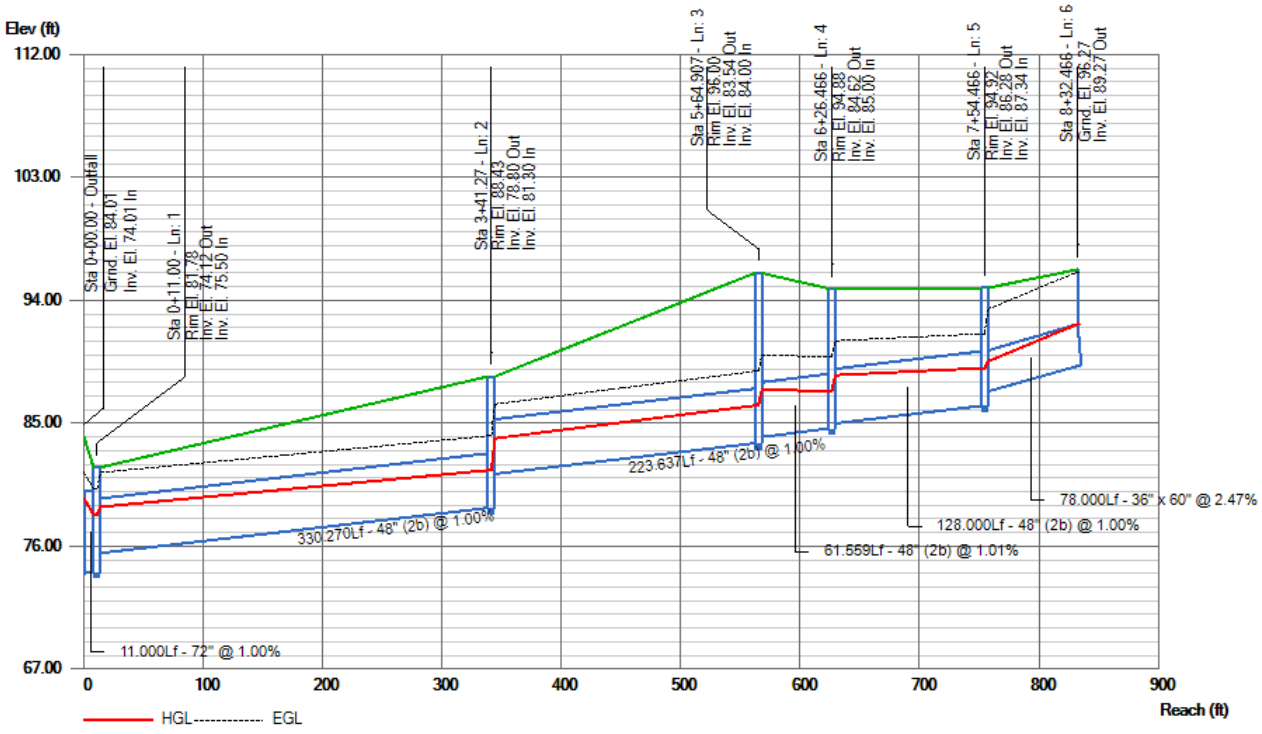
Appendix 4
HydraFlow Analysis – 100 Year Storm

Line No.	Line ID	Inlet ID	Known Q	Flow Rate	Capacity Full	Vel Ave	n-value Pipe	Line Size	Invert Up	Invert Dn	Gmd/Rim Elev Up	Gmd/Rim Elev Dn	HGL Up	HGL Dn	J-Loss Coeff	Cover Up	Cover Dn	EGL Jnct	EGL Up
			(cfs)	(cfs)	(cfs)	(ft/s)		(in)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
1	P-11	S-13 (OVERSIZED)	0.00	235.20	458.88	9.92	0.012	72	74.12	74.01	81.78	0.00	78.32	79.48	0.93 z	1.66	n/a	80.24	80.24
2	P-16	S-12 (OVERSIZED)	0.00	235.20	311.11	11.54	0.012	48(2b)	78.80	75.50	88.43	81.78	81.56	78.88	0.91 z	5.63	2.28	84.07	84.07
3	P-10 (1)	S-11 (OVERSIZED)	0.00	235.20	311.49	13.17	0.012	48(2b)	83.54	81.30	96.00	88.43	86.30	83.90	0.70 z	8.46	3.13	88.81	88.81
4	P-10	S-10 (OVERSIZED)	0.00	235.20	312.35	11.46	0.012	48(2b)	84.62	84.00	94.88	96.00	87.38	87.45	0.48 z	6.26	8.00	89.89	89.89
5	P-9	S-51	0.00	235.20	311.24	11.36	0.012	48(2b)	86.28	85.00	94.92	94.88	89.04	88.53	0.97 z	4.64	5.88	91.55	91.55




Elev (ft)
112.00
103.00
94.00
85.00
76.00
67.00
0
100
200
300
400
500
600
700
800
900
Reach (ft)
Sta 0+00.00 - Outfall
Grnd. El. 84.01
Inv. El. 74.01 In
Sta 0+11.00 - Ln: 1
Rim El. 81.78
Inv. El. 74.12 Out
Inv. El. 75.50 In
Sta 3+41.27 - Ln: 2
Rim El. 88.43
Inv. El. 78.80 Out
Inv. El. 81.30 In
Sta 5+64.907 - Ln: 3
Rim El. 96.00
Inv. El. 83.54 Out
Inv. El. 84.00 In
Sta 6+26.466 - Ln: 4
Rim El. 94.88
Inv. El. 84.62 Out
Inv. El. 85.00 In
Sta 7+54.466 - Ln: 5
Rim El. 94.92
Inv. El. 86.28 Out
Inv. El. 87.34 In
Sta 8+32.466 - Ln: 6
Grnd. El. 96.27
Inv. El. 89.27 Out
11.000Lf - 72" @ 1.00%
330.270Lf - 48" (2b) @ 1.00%
223.637Lf - 48" (2b) @ 1.00%
61.559Lf - 48" (2b) @ 1.01%
128.000Lf - 48" (2b) @ 1.00%
78.000Lf - 36" x 60" @ 2.47%
HGL
EGL

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Appendix 5
Hydrology – StreamStats Report – At Proposed Culvert Outlet

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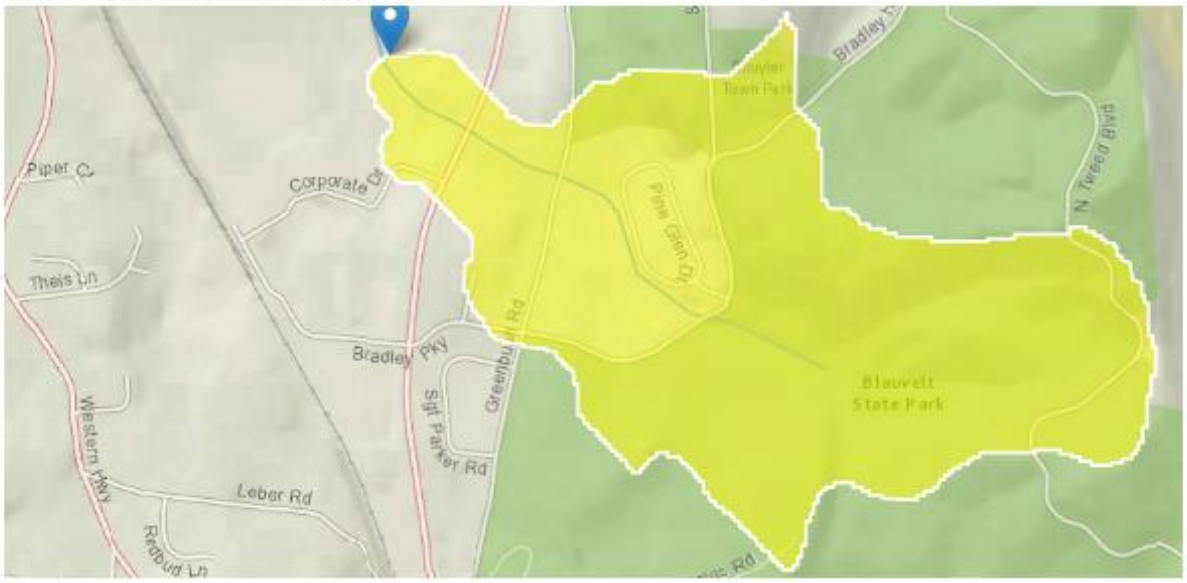
StreamStats Report

Region ID: NY
Workspace ID: NY20250108165840728000
Clicked Point (Latitude, Longitude): 41.08217, -73.95159
NHD Stream GNIS Name of Click Point: Stream name not found
Time: 2025-01-08 11:59:10 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.53	square miles
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.00624	dimensionless
MAR	Mean annual runoff for the period of record in inches	23.4	inches
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0.94	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.53	square miles	1.93	996
LAGFACTOR	Lag Factor	0.00624	dimensionless	0.014	6.997
MAR	Mean Annual Runoff in inches	23.4	inches	16.03	33.95
STORAGE	Percent Storage	0.94	percent	0	11.88

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Peak-Flow Statistics Disclaimers [2006 Full Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [2006 Full Region 2]

Statistic	Value	Unit
80-percent AEP flood	21	ft^3/s
66.7-percent AEP flood	26.8	ft^3/s
50-percent AEP flood	35.5	ft^3/s
20-percent AEP flood	63	ft^3/s
10-percent AEP flood	86.5	ft^3/s
4-percent AEP flood	121	ft^3/s
2-percent AEP flood	152	ft^3/s
1-percent AEP flood	186	ft^3/s
0.5-percent AEP flood	225	ft^3/s
0.2-percent AEP flood	284	ft^3/s

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

No NHD streams intersect the delineated basin.

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
02030101	Lower Hudson
02030103	Hackensack-Passaic

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6. (https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4. (https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4)

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Application Version: 4.25.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

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Appendix 6
HydroCad Analysis – Existing Velocity at Proposed Discharge Point

240906_TPS RT 303 - R3 *Type III 24-hr 100-yr Rainfall=8.99"*
Prepared by Colliers Engineering & Design Printed 1/10/2025
HydroCAD® 10.20-5c s/n 04431 © 2023 HydroCAD Software Solutions LLC Page 2

Summary for Pond 19P: Existing Discharge Point

Inflow	=	223.20 cfs @	0.00 hrs,	Volume=	57,893,616 cf, Incl. 223.20 cfs Base Flow
Outflow	=	223.20 cfs @	0.05 hrs,	Volume=	57,893,616 cf, Atten= 0%, Lag= 3.0 min
Primary	=	223.20 cfs @	0.05 hrs,	Volume=	57,893,616 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 76.46' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	73.99'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 0.01 1.01 2.01 Width (feet) 0.00 10.02 20.58 30.41

Primary OutFlow Max=223.20 cfs @ 0.05 hrs HW=76.46' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Orifice Controls 223.20 cfs @ 5.46 fps)

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Appendix 7
HydroCad Analysis – Proposed Velocity at Proposed Discharge Point

240906_TPS RT 303 - R3 *Type III 24-hr 100-yr Rainfall=8.99"*
Prepared by Colliers Engineering & Design Printed 1/20/2025
HydroCAD® 10.20-5c s/n 04431 © 2023 HydroCAD Software Solutions LLC Page 2

Summary for Pond 17P: Scour Hole

[92] Warning: Device #1 is above defined storage
[93] Warning: Storage range exceeded by 1.89'
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=700)
[61] Hint: Exceeded Reach 20R outlet invert by 1.89' @ 0.05 hrs

Inflow	=	236.93 cfs @	0.05 hrs,	Volume=	61,006,018 cf
Outflow	=	256.93 cfs @	0.05 hrs,	Volume=	61,002,418 cf, Atten= 0%, Lag= 0.0 min
Primary	=	256.93 cfs @	0.05 hrs,	Volume=	61,002,418 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 75.89' @ 0.05 hrs Surf.Area= 1,080 sf Storage= 1,800 cf

Plug-Flow detention time= 0.3 min calculated for 60,958,285 cf (100% of inflow)
Center-of-Mass det. time= 0.0 min (2,160.0 - 2,160.0)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	1,800 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	216	0	0
72.00	432	324	324
73.00	720	576	900
74.00	1,080	900	1,800

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**30.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=256.93 cfs @ 0.05 hrs HW=75.89' (Free Discharge)
↑—1=Broad-Crested Rectangular Weir (Weir Controls 256.93 cfs @ 4.54 fps)

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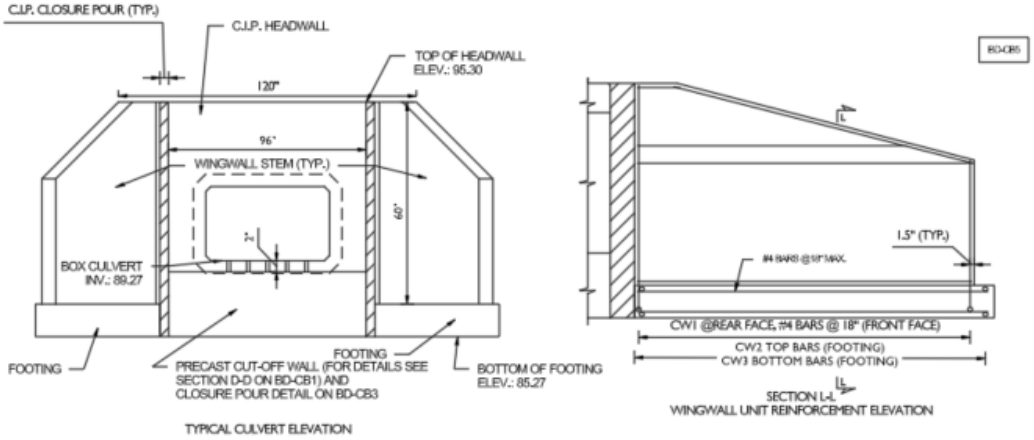
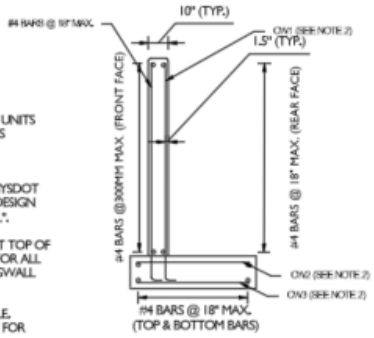
Appendix 8
Proposed Headwall Modification at Al Foxie Way





THE JOINT DETAIL BETWEEN WINGWALL UNITS SHALL BE IN ACCORDANCE WITH DETAILS PRESENTED ON BD-CB8.

ADDITIONAL CULVERT REINFORCEMENT INFORMATION MAY BE FOUND IN THE "NYSDOT REINFORCED CONCRETE BOX CULVERT DESIGN AND ANALYSIS PROGRAM USERS MANUAL".

DIMENSION "X" IS THE LEVEL DISTANCE AT TOP OF WALL TO BE DETERMINED BY DESIGNER FOR ALL CORNERS AND ENTERED INTO THE WINGWALL DATA TABLE ON BD-CB1.

WEEPHOLES NOT SHOWN AS AN EXAMPLE. DESIGNER TO DETERMINE THE NECESSITY FOR WEEPHOLES.

NOTES:

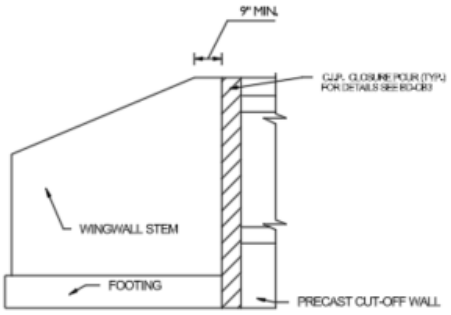
1. TALL WALLS MAY USE DOWEL BAR LAPPED TO A VERTICAL BAR.
2. BAR SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.

NOTES:

BASED ON HANDLING AND SHIPPING CONSTRAINTS, THE CONTRACTOR MAY ELECT TO USE MULTIPLE WINGWALL UNITS TO SATISFY WALL LENGTH REQUIRED ON THE PLANS.

ACTUAL REINFORCEMENT SPACINGS TO BE DETERMINED BY FABRICATOR.

DETAILS ON THE DRAWINGS LABELED "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.



TYPICAL PRECAST WINGWALL UNIT ELEVATION

PRECAST CANTILEVER WINGWALL DETAILS

NOT TO SCALE

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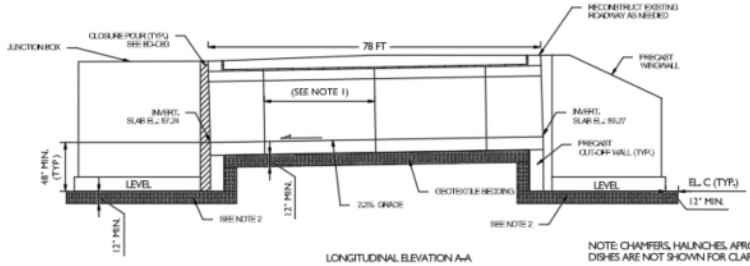
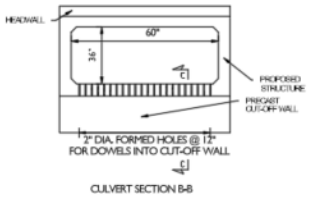


LONGITUDINAL ELEVATION A-A

NOTE: CHAMFERS, HAUNCHES, APRON AND DISHES ARE NOT SHOWN FOR CLARITY.



CULVERT SECTION B-B

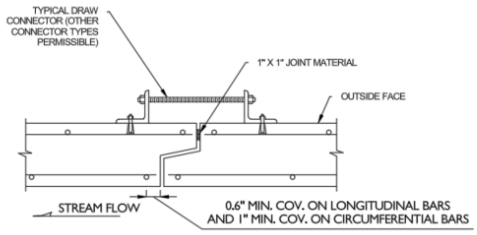
NOTES:

1. THE LENGTH OF EACH CULVERT SEGMENT SHALL BE DETERMINED BY THE CONTRACTOR. IF STAGED CONSTRUCTION IS EMPLOYED, THE PRECAST BOX CULVERT SEGMENT LENGTH MUST BE COMPATIBLE WITH STAGING REQUIREMENTS.
2. PRECAST CUT-OFF WALLS AND WINGWALLS SHALL BE PLACED ON A LEVELING BED OF CRUSHED MATERIAL MEETING THE REQUIREMENTS OF MATERIAL DESIGNATION 703-0201, 703-0202 OR 703-0204 WITH A PRIMARY SIZE DESIGNATION OF 2. AFTER PLACING AND LEVELING THE PRECAST UNITS, THE AREAS BENEATH AND BEHIND THE UNITS SHALL BE GROUTED WITH CONTROLLED LOW STRENGTH MATERIAL MEETING THE REQUIREMENTS OF SECTION 204.
3. FOR SECTUIB D-D, SEE DWG. NO. BD-CB3.

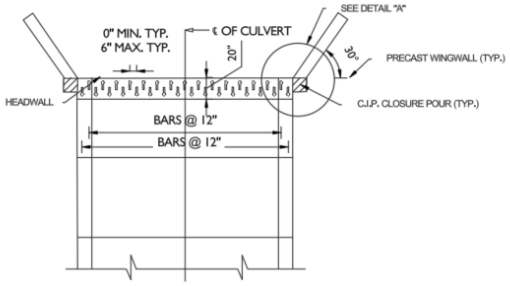
DETAILS ON THE DRAWING LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

PRECAST BOX CULVERT PLAN AND SECTIONS DETAILS

NOT TO SCALE



BOX CULVERT JOINT DETAIL



HEADWALL ON 30° SKEW CULVERT

NOTES:

ALL COVER SHALL BE 2" UNLESS OTHERWISE NOTED.

DETAILS ON THE DRAWING LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

DESIGNER NOTES:

FOR DETAILS "A", "B" AND "C", SEE BD-CB3.

FOR DETAILS OF BASE AND ANCHOR SEE BD-RS7.

WEEPHOLES SHOWN AS AN EXAMPLE. IF WATERPROOF MEMBRANE IS USED TO TOP OF FOOTING, WEEPHOLES ARE REQUIRED.

HEADWALL REINFORCEMENT SPACING MAY BE VARIED TO AVOID RAILING ANCHORAGES.

LONGITUDINAL BARS IN HEADWALLS ARE NOT SHOWN FOR CLARITY.

PRECAST BOX CULVERT MISCELLANEOUS DETAILS

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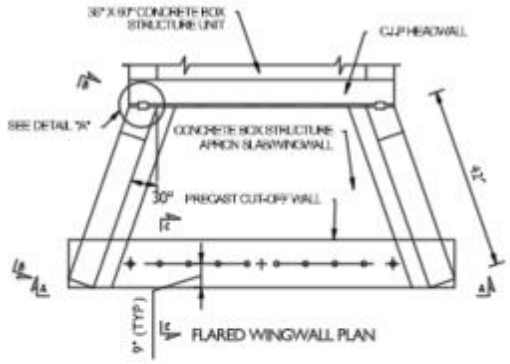
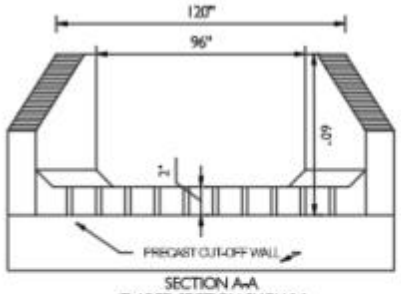
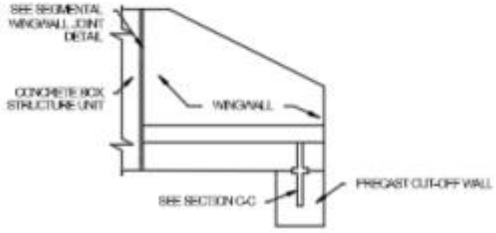
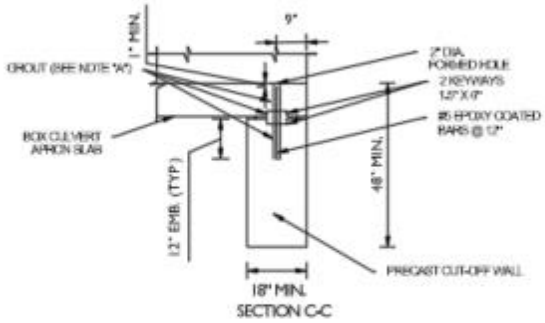




SECTION A-A
(FLARED SECTION SHOWN)



SECTION B-B
(FLARED SECTION SHOWN)



SECTION C-C

NOTE "A":

DOWEL BARS USED TO ATTACH THE PRECAST CUT-OFF WALL TO THE BOX CULVERT SHALL BE DRILLED AND GROUTED PER THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 586 EXCEPT THE GROUT SHALL MEET THE REQUIREMENTS OF SECTION 701-06. THE KEYWAY SHALL BE GROUTED WITH THE SAME MATERIAL AS THE DOWELS. WHEN THE GRADE OF THE BOX EXCEEDS 5%, THE TOP OF THE CUT-OFF WALL SHOULD BE BEVELED TO MATCH THE GRADE. PLACE A BEAD OF CAULK, CLOSED CELL FOAM OR OTHER SUITABLE MATERIAL ON BOTH SIDES OF THE KEYWAY TO CONTAIN THE GROUT.

NOTES:

DETAILS ON THE DRAWINGS LABELED "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

CONCRETE BOX STRUCTURE APRON SLAB DETAILS

NOT TO SCALE

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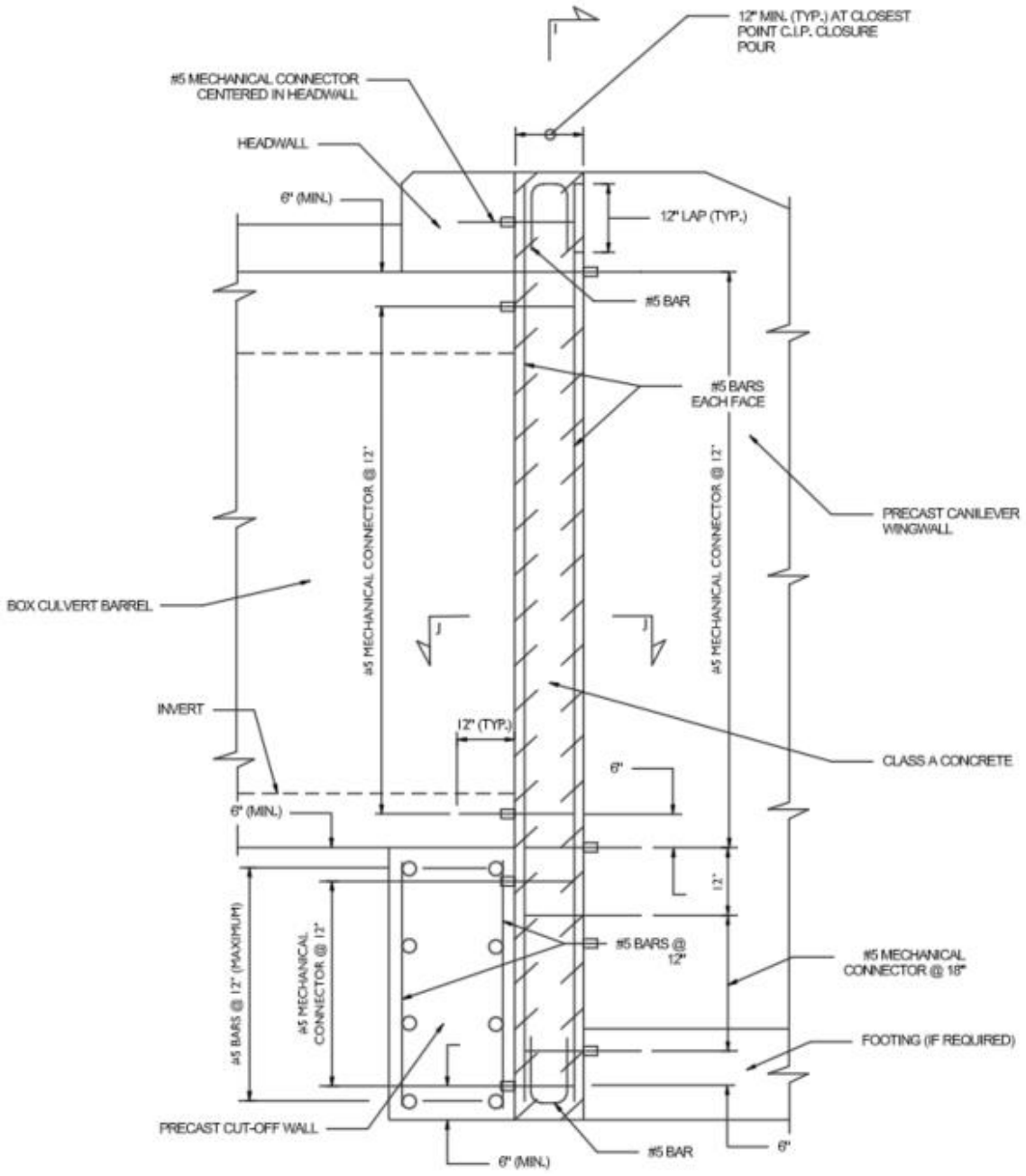

CLOSURE POUR DETAIL

NOT TO SCALE

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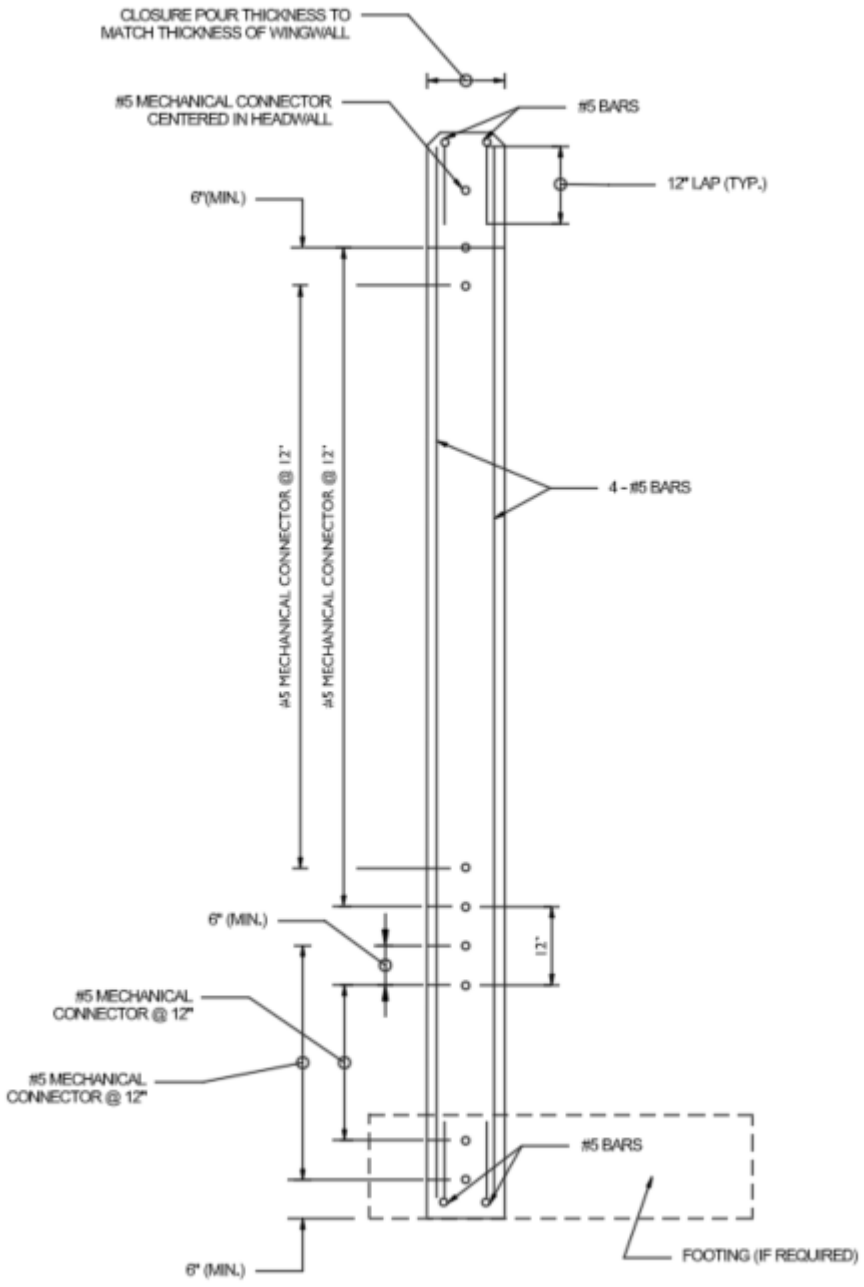
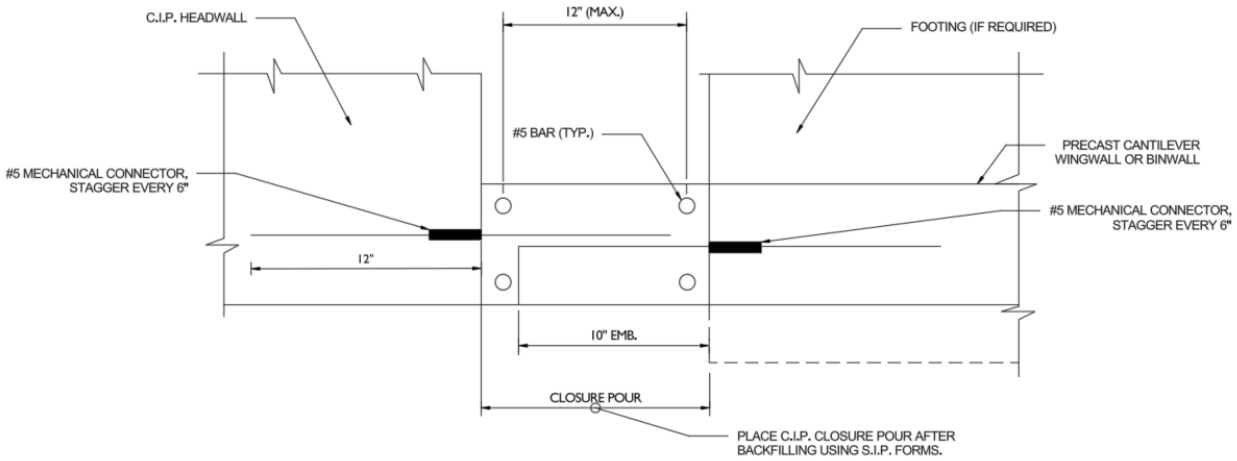


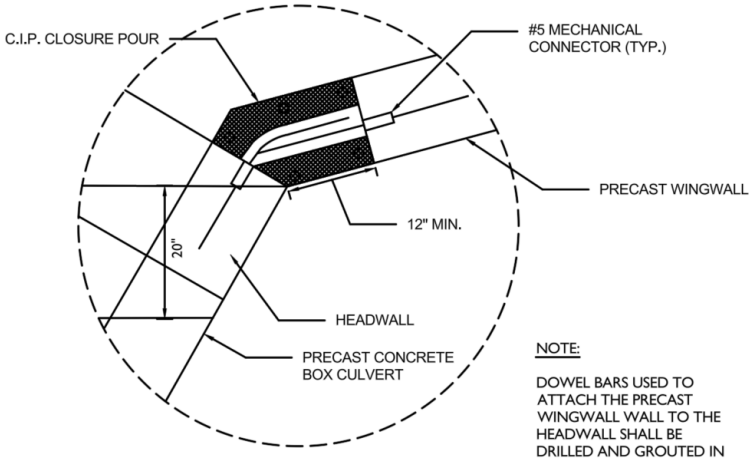
SECTION I–I CLOSURE POUR REINFORCEMENT DETAIL

NOT TO SCALE



SECTION J-J CLOSURE POUR DETAIL

NOT TO SCALE

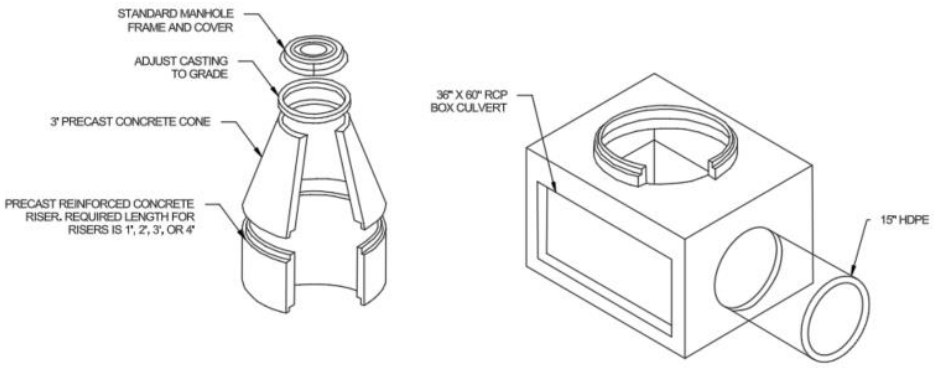


DETAIL "A"

NOT TO SCALE

NOTE:

DOWEL BARS USED TO ATTACH THE PRECAST WINGWALL WALL TO THE HEADWALL SHALL BE DRILLED AND GROUTED IN THE FIELD PER THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 586 EXCEPT THE GROUT SHALL MEET THE REQUIREMENTS OF SECTION 701-06.



SPECIFICATION NOTES:

CONCRETE: RISER TO	DESIGN STRENGTH OF 4500 PSI AT 28 DAYS, UNIT IS MONOLITHIC CONSTRUCTION AT FLOOR, FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL REQUIRED DEPTH. RATE FOR H-20 LOADING.
REINFORCEMENT:	GRADE 60 REINFORCED NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
C.I. CASTING: DIMENSIONAL	CASTINGS CONFORM TO ASTM A48 CLASS 30 FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF ASSEMBLY. USE DATA AS SHOWN

TRANSITIONAL MANHOLE STORM WATER JUNCTION BOX

NOT TO SCALE

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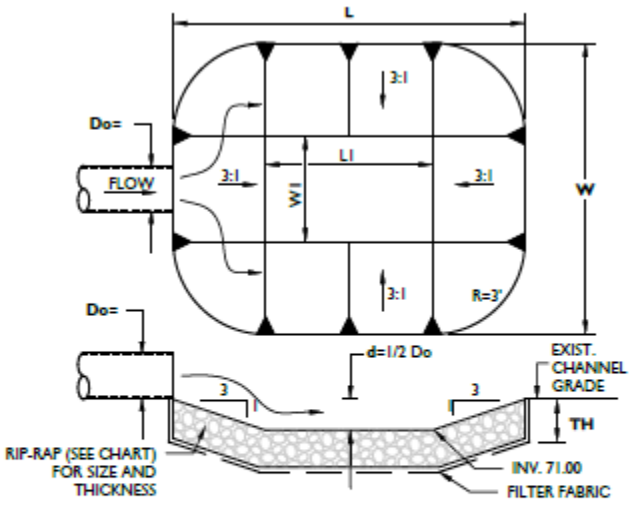
Appendix 9
Proposed Scour Hole at Proposed Culvert Outlet



d75 (Stone Size)	LI	WI	L	W	TH
5"	18'	12'	36'	30'	8"

SCOUR HOLE / PLUNGE POOL DETAIL

NOT TO SCALE

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Appendix 10
Downstream Impact Addendum – Culvert #2

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Stream Diversion Hydraulic Report: Al Foxie Culvert Extension – Downstream Impact Addendum – Culvert #2

November 12, 2024

Project Al Foxie
Town of Orangetown
SBI. No. 65.14-1-11.2, 65.14-1-11.3
Rockland County, New York

Prepared for:

RDM Group
21 Philips Parkway
Montvale, NJ 07645

Prepared by:

Cory D. Robinson, P.E.
New York Professional Engineer
License No. 103788

Colliers Engineering & Design
555 Hudson Valley Avenue
Suite 101 New Windsor New York
12553
Main: 877 627 3772
Colliersengineering.com

Project No. 22002634A

Colliers Engineering & Design

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IV. DESIGN MODIFICATIONS 6

..... *7*

Figure 5: 71 Elevation Flood – Proposed Conditions *7*

V. DISCUSSION 7

I. EXECUTIVE SUMMARY

Project Name:	**Client Name and Address:**
Project Al Foxie (formerly "622 Route 303")	RDM 21 Philips Parkway Montvale, NJ 07645
Project Engineer and Firm:	**Contractor Name and Address:**
Cory D. Robinson, P.E. Colliers Engineering & Design CT, PC 555 Hudson Valley Avenue, Suite 101 New Windsor, NY 12553 (845) 564-4495	TBD
Project Location:	**Permitting Contact:**
Al Foxie Way SBL: 65.14-1-11.2 & 65.14-1-11.3 Town of Orangetown (Blauvelt) Rockland County, NY	Town of Orangetown 26 W Orangeburg Road Orangeburg, NY 10926 845-359-5100

Figure 1: Project Location

(Source: Google Earth)

II. INTRODUCTION

The proposed project consists of the development of two existing adjacent tax lots and will include the construction of a distribution warehouse. The two lots to be developed have total 18.5 acres and about bound by a frontage along Birchwood Lane to the north, Al Foxie Way to the south, and NYS Route 303 to the east. The project site is a former golf ball driving range, is currently vacant with a mixture of woodlands/meadows and wetlands.

An existing tributary of the Hackensack River, which flows from south to north, is located within the subject site and will be impacted by the proposed development. At the downstream end of the site, the tributary is piped under a gravel driveway through a culvert consisting of a 30" CPP pipe and a 36" RCP pipe. This culvert leads to a ponding area that is located both on the subject property and the neighboring property, which discharges through a 30" CPP and a 18" CPP pipe which runs under a gravel area. This second culvert leads to a second ponding are on the neighboring property. Review of historical mapping of the area shows that these ponding areas were artificially created in sometime between June 2010 and November 2011.

This addendum has been added to provide an analysis of the downstream culvert, on the neighboring property to the North of the proposed development which is currently owned and operated by a landscaping business. Throughout the review process, the Town of Orangetown DEME has raised concerns regarding this culvert such as:

1. Does flood water or flood storage back-up into the subject property during a 100-year storm event?
2. If in fact stormwater encroaches onto the property, does the proposed development eliminate any existing flood storage areas, creating a more exacerbated flood condition on the neighbors property?
3. Does the back-up of the culvert during the 100-year storm create a tail water effect on the proposed stream diversion design?

As the project surveyor was aggressively denied access to the property to the north, several FOIL requests were submitted and we were fortunate to obtain recent and detailed survey of the neighboring parcel via a document titled "Parking Layout for Ascape Landscaping". This document was signed and sealed by a Professional Land Surveyor and performed recently in May of 2024. There was also research performed using both current and historic aerial imagery. Please refer to the figures below.

III. FINDINGS

Figure 2: Downstream Culverts

(Source: Parking Layout for Ascape Landscaping, prepared by Jay A. Greenwell, PLS, LLC, dated 05/16/2024)

The FOIL request uncovered additional information directly related to the stream diversion and culvert.

First, the two (2) pipe segments located on the Project Al Foxie property, recently identified by the DEME during a field visit, were located. It should be noted that as these pipes are twin 36" pipes that are approximately 20 feet in length, they will have no bearing positively or negatively on the existing and proposed stream flow. The 36" pipe size mimics the Al Foxie culvert and therefore will carry an equal CFS.

Next, the neighboring "Ascape" culvert has been confirmed to be 30" and 18" CPP pipes. When an updated culvert analysis was performed, running the 100 year storm event from the Al Foxie culvert all the way through the Ascape culvert, the water did in fact back up into the Project Al Foxie property to an elevation of 71.

As shown on both the project and neighboring survey, upon reaching the 71 elevation, the water would immediately overtop and begin to flow downstream towards the Ascape property.

Figure 3: Downstream Conditions, June 2010

(Source: Google Earth)

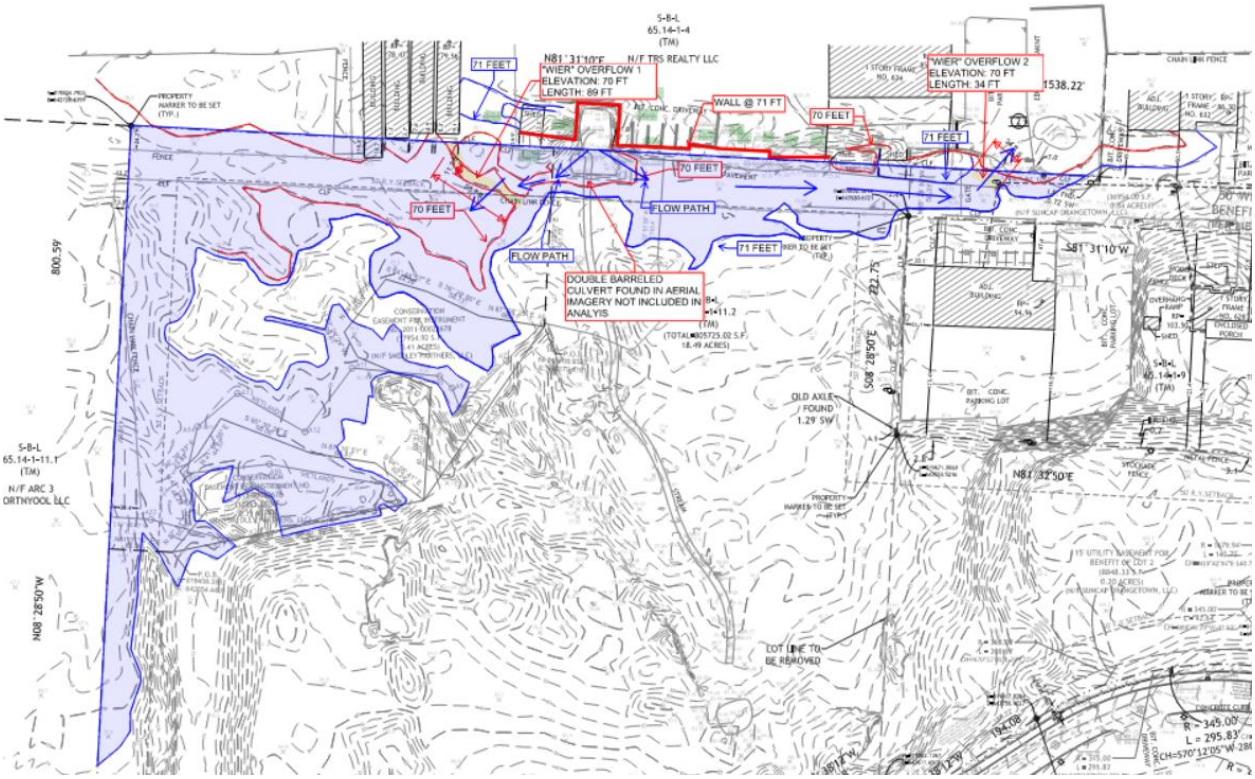


Figure 4: 71 Elevation Flood – Existing Conditions

(Source: Lot Consolidation Plan prepared for 622 New York 303, prepared by Clearpoint Surveying, DPC, dated 09/04/2024)

It is significant to note that the culvert analysis that dictated the 100 year storm, 71 elevation flood limit is based on free flowing and unimpeded culverts.

Deferring back to historical aerial imagery (that was confirmed via a separate FOIL request which produced a survey from 2010 of the subject property during the Fed Ex approval) the stream flowed across the Project Al Foxie property before entering an 18" culvert where it passed beneath the entire Ascape property ultimately daylighting and allowing the stream to continue to the north.

Since this time it has become clear that the tenants of the Ascape property have both dammed and altered the course of the stream. The former 18" culvert was given an additional 30" pipe, but it was then cut into and dammed to create two wet ponds, one of which encroaches onto the Project Al Foxie property. These appear to be utilized to irrigate the various plants being grown on the Ascape property.

So, while the analysis was performed using a "best case" approach and assuming the wet ponds were drained, the current conditions present an Ascape culvert that will never be found to be restrictive as the water level of the wet pond sits several feet higher than the culvert pipes.

Also, the stream has been diverted and redirected to the west, again in an apparent attempt to irrigate the landscaping on site. These acts have created a void in the hydraulic connection to the Hackensack River to the north.

Regardless of the current altered conditions, or a drained wet pond condition, or even if the design were to return to the original 18" single pipe culvert, the results would all remain similar- the water would rise onto the Project Al Foxie site briefly up to an elevation of 71 before finding relief and exiting the site to the north.

IV. DESIGN MODIFICATIONS

The proposed design provides for a reduced flow of the stream by use of a dissipater as well as reduces the tributary area to the stream. The proposed project already meets the burden of not creating any additional flooding to the neighbor down stream, however in the spirit of being conservative, the applicant has added a retaining wall alongside the northern most proposed stormwater basin. The intent is to install the wall at elevation 71, thus removing the potential of any impacts.

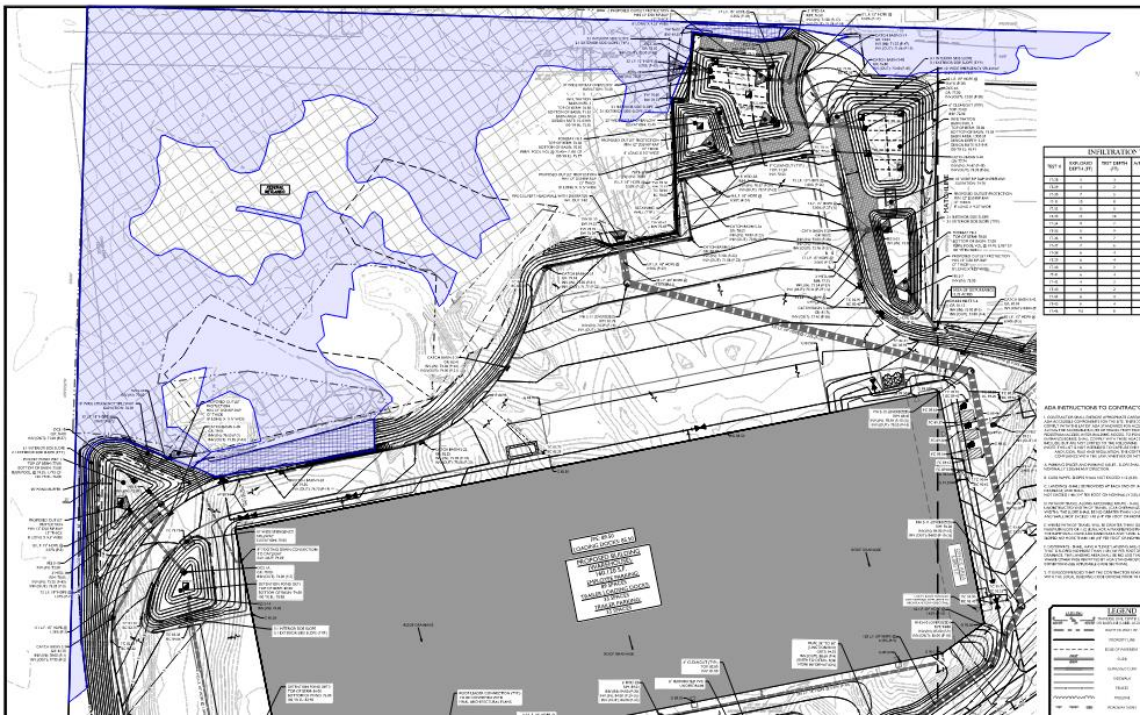


Figure 5: 71 Elevation Flood – Proposed Conditions

(Source: Preliminary Site Plan for 622 Route 303 LLC, Prepared by Colliers Engineering & Design, dated 11/12/2024)

V. DISCUSSION

Surveys of the existing culvert shows that both the existing culvert at the downstream end of the subject property and the culvert located on the neighboring property were fully submerged by the ponding areas at the time of the survey. It can be assumed that if the culverts were submerged at the time of the survey, they would also be submerged during a 100-year storm event and would therefore convey no significant flow.

Based on the analysis using HY-8, the immediately downstream culvert, with an invert of 67 FT, will be submerged by approximately 4 FT of water during the 100-year storm event. Stormwater will discharge over the existing roadway approximately 100 FT to the west of the culvert.

The above analysis resulted in an on-site flood elevation of 70.76 FT for the 100-year storm event, which has been rounded to 71 FT for the purposes of this analysis. Under existing conditions, there is a total volume of 1,081 CY of on-site flood storage below 71 FT.

Under proposed conditions, there is a total volume of 1,141 C7 of storage under 71 FT, resulting in an increase of 60 C7 of flood storage via the proposed development.

APPENDICES

Appendix 1
HY-8 Analysis

HY-8 Culvert Analysis Report

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 235.20 cfs

Design Flow: 235.20 cfs

Maximum Flow: 235.20 cfs

Table 1 - Summary of Culvert Flows at Crossing: Crossing 1

Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Culvert 2 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
70.76	235.20	44.11	11.12	179.96	10
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.76	235.20	44.11	11.12	179.96	2
70.00	56.10	45.84	10.26	0.00	Overtopping

Culvert Data: Culvert 1

Table 1 - Culvert Summary Table: Culvert 1

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04

235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04
235.20 cfs	44.11 cfs	70.76	5.92	8.963	4-FFf	2.50	2.21	2.50	3.66	8.99	1.04

Culvert Barrel Data

Culvert Barrel Type Straight Culvert

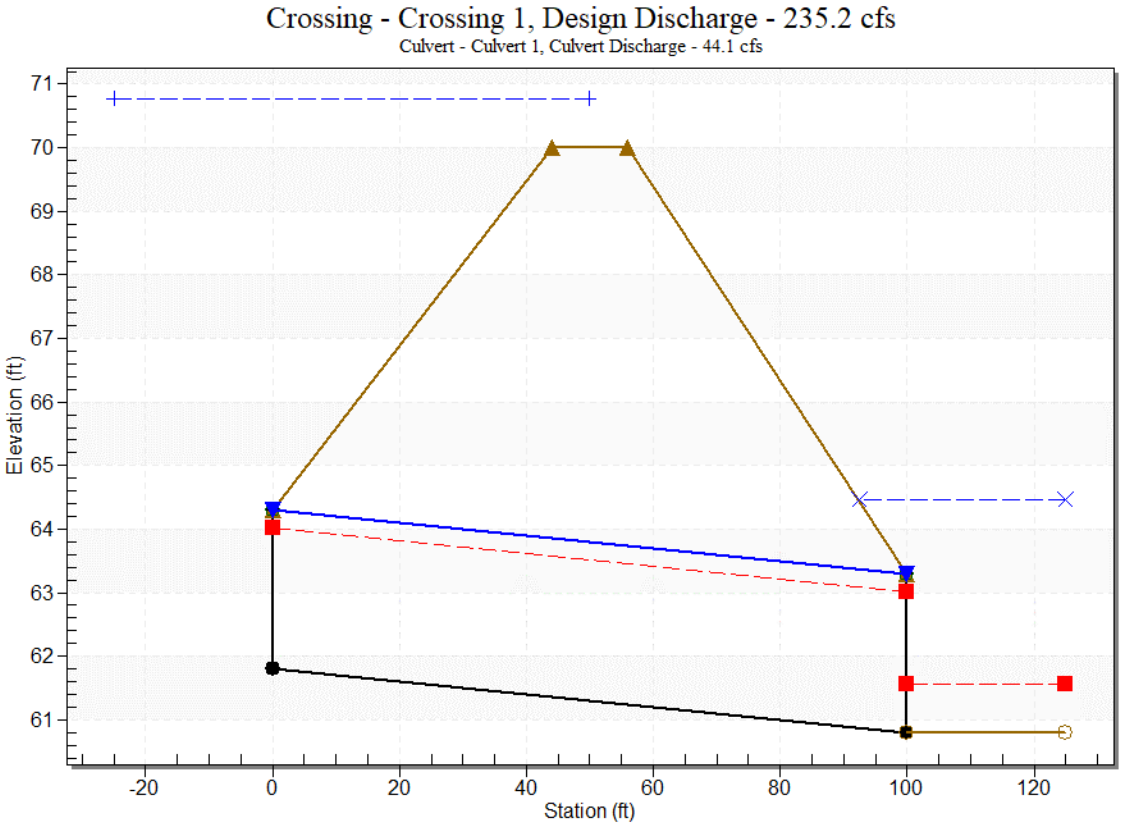
Inlet Elevation (invert): 61.80 ft,

Outlet Elevation (invert): 60.80 ft

Culvert Length: 100.00 ft,

Culvert Slope: 0.0100

Water Surface Profile Plot for Culvert: Culvert 1



Site Data - Culvert 1

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 61.80 ft

Outlet Station: 100.00 ft

Outlet Elevation: 60.80 ft

Number of Barrels: 1

Culvert Data Summary - Culvert 1

Barrel Shape: Circular

Barrel Diameter: 2.50 ft

Barrel Material: Corrugated PE

Embedment: 0.00 in

Barrel Manning's n: 0.0240

Culvert Type: Straight

Inlet Configuration: Thin Edge Projecting

Inlet Depression: None

Culvert Data: Culvert 2

Table 2 - Culvert Summary Table: Culvert 2

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04
235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04

235.20 cfs	11.12 cfs	70.76	3.07	5.364	7-M2c	1.50	1.28	1.28	3.66	6.94	1.04

Culvert Barrel Data

Culvert Barrel Type Straight Culvert

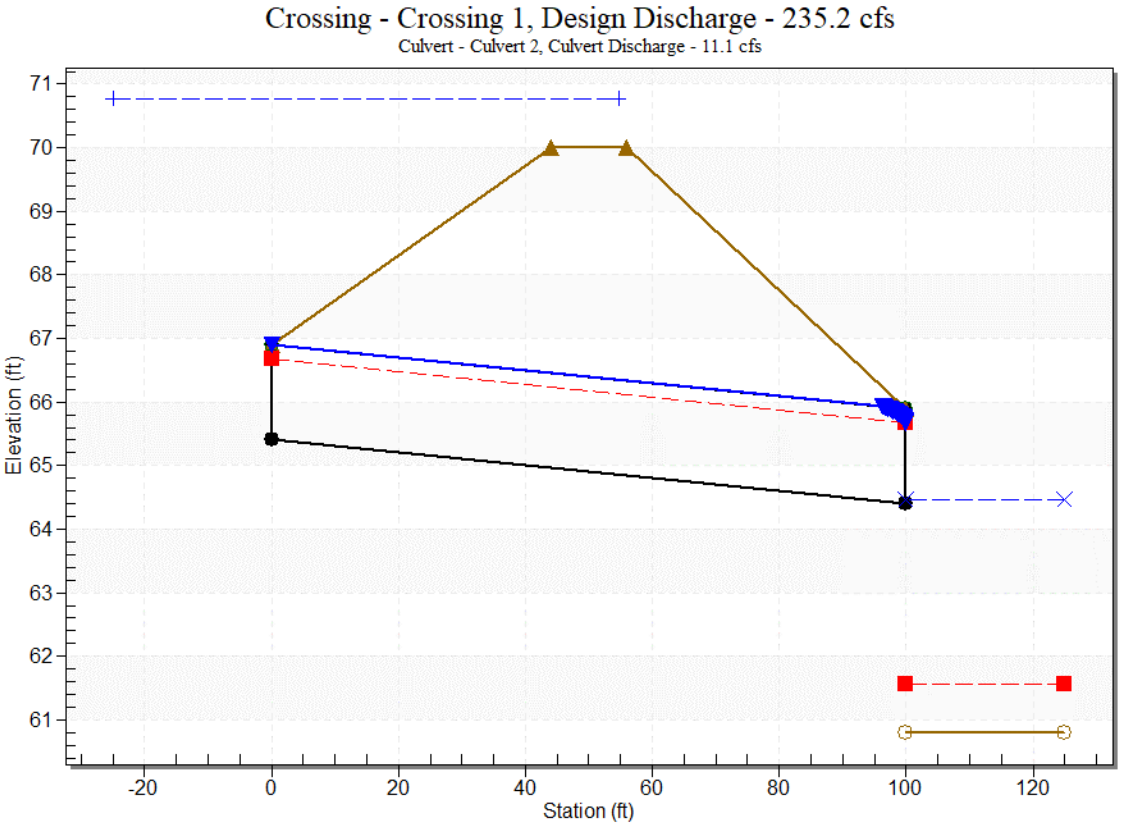
Inlet Elevation (invert): 65.40 ft,

Outlet Elevation (invert): 64.40 ft

Culvert Length: 100.00 ft,

Culvert Slope: 0.0100

Water Surface Profile Plot for Culvert: Culvert 2



Site Data - Culvert 2

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 65.40 ft

Outlet Station: 100.00 ft

Outlet Elevation: 64.40 ft

Number of Barrels: 1

Culvert Data Summary - Culvert 2

Barrel Shape: Circular

Barrel Diameter: 1.50 ft

Barrel Material: Corrugated PE

Embedment: 0.00 in

Barrel Manning's n: 0.0240

Culvert Type: Straight

Inlet Configuration: Thin Edge Projecting

Inlet Depression: None

Tailwater Data for Crossing: Crossing 1

Table 2 - Downstream Channel Rating Curve (Crossing: Crossing 1)

Flow (cfs)	Water Surface Elev (ft)	Velocity (ft/s)	Depth (ft)	Shear (psf)	Froude Number
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10
235.20	64.46	3.66	1.04	0.23	0.10

Tailwater Channel Data - Crossing 1

Tailwater Channel Option: Rectangular Channel

Bottom Width: 62.00 ft

Channel Slope: 0.0010

Channel Manning's n: 0.1000

Channel Invert Elevation: 60.80 ft

Roadway Data for Crossing: Crossing 1

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 89.00 ft

Crest Elevation: 70.00 ft

Roadway Surface: Paved

Roadway Top Width: 12.00 ft

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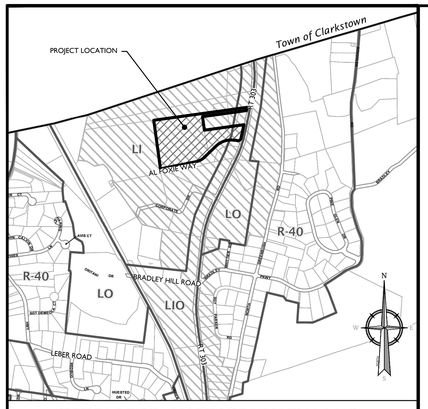


TOWN OF ORANGETOWN ZONING MAP

SCALE: 1" = 1,000'

SOURCE: TOWN OF ORANGETOWN ZONING MAPS

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

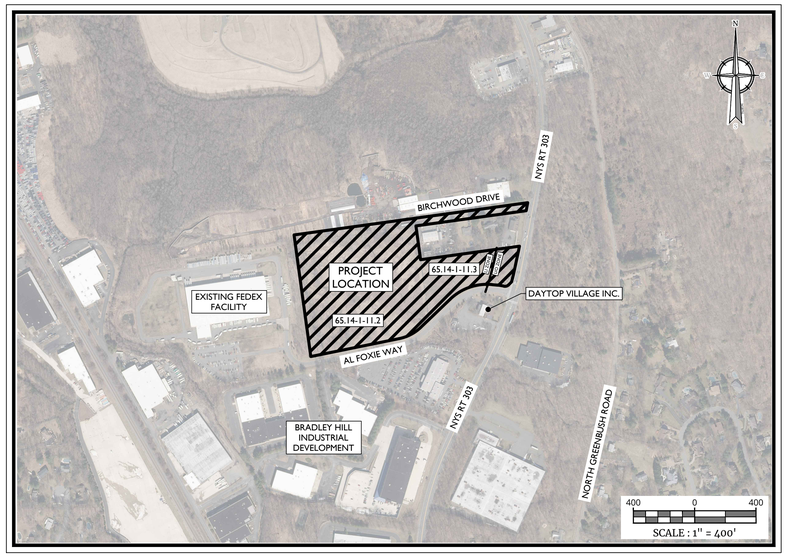
PROJECT AL FOXIE

SECTION 65.14, BLOCK 1, LOTS 11.2 & 11.3

TOWN OF ORANGETOWN

ROCKLAND COUNTY

NEW YORK STATE



PROJECT LOCATION AND AERIAL MAP

SOURCE: NYS CLEARING HOUSE

INDEX OF SHEETS

SHT. No.	DESCRIPTION	LATEST REVISION
1	COVER SHEET	11/5/2025
2	EXISTING CONDITIONS AND DEMOLITION PLAN	11/5/2025
3	OVERALL DIMENSION PLAN	11/5/2025
4	DIMENSION PLAN WEST	11/5/2025
5	DIMENSION PLAN EAST	11/5/2025
6	GRADING AND DRAINAGE PLAN WEST	11/5/2025
7	GRADING AND DRAINAGE PLAN EAST	11/5/2025
7A	GRADING AND DRAINAGE PLAN - STORM PIPE PROFILES	11/5/2025
8	UTILITIES PLAN WEST	11/5/2025
9	UTILITIES PLAN EAST	11/5/2025
10	WATERMAIN PROFILE	11/5/2025
11	SOIL EROSION AND SEDIMENT CONTROL NOTES	11/5/2025
12	SOIL EROSION AND SEDIMENT CONTROL PLAN	11/5/2025
13	SOIL EROSION AND SEDIMENT CONTROL DETAILS	11/5/2025
14	LANDSCAPE PLAN WEST	11/5/2025
15	LANDSCAPE PLAN EAST	11/5/2025
16	LIGHTING PLAN WEST	11/5/2025
17	LIGHTING PLAN EAST	11/5/2025
18-23	CONSTRUCTION DETAILS	11/5/2025
24	FIRE TRUCK TURN EXHIBIT	11/5/2025

GENERAL INFORMATION

1. THE SUBJECT PROPERTY IS KNOWN AS SECTION 65.14, BLOCK 1, LOTS 11.2 & 11.3, IN THE TOWN OF ORANGETOWN, ROCKLAND COUNTY, NEW YORK
2. THE PROPERTY IS LOCATED IN THE LI (LIGHT INDUSTRIAL) ZONING DISTRICT AND LIO (LABORATORY-OFFICE) ZONING DISTRICT, AND CONTAINS A TOTAL TRACT AREA OF 18.5 ACRES.

APPLICANT: 622 ROUTE 303 LLC
21 PHILIPS PARKWAY
MAHWAH, NJ 07430

OWNER: 622 ROUTE 303 LLC
21 PHILIPS PARKWAY
MAHWAH, NJ 07430

3. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS TAKEN FROM A PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY PREPARED FOR 622 NEW YORK 303 SECTION 65.14 BLOCK 1 LOTS 11.2 & 11.3" PREPARED BY CLEARPOINT SURVEYING, DPC.; DATED 2/27/2021 REVISED 12/14/2023, AND "LOT CONSOLIDATION PLAN PREPARED FOR 622 NEW YORK 303 SECTION 65.14 BLOCK 1 LOTS 11.2 & 11.3" PREPARED BY CLEARPOINT SURVEYING, DPC.; DATED 1/31/2024.
4. UNDERGROUND WATER UTILITY WITHIN AL FOXIE WAY SHOWN FOR REFERENCE ONLY PER DESIGN DRAWINGS BY MCLAREN ENGINEERING GROUP DATED 6/21/10 SHEETS C-301 AND C-302 (NOT REVIEWED AS-BUILT DRAWINGS). CONTRACTOR TO VERIFY LOCATION AND SIZE WITH TEST PITS PRIOR TO CONNECTING.
5. BUILDING INFORMATION SHOWN HEREON REFERENCES A SET OF PRELIMINARY ARCHITECTURAL FLOOR PLANS PREPARED BY ANDERSON DESIGN GROUP DATED 06/27/2023.
6. THE HORIZONTAL DATUM IS RELATIVE TO NAD83. THE VERTICAL DATUM IS RELATIVE TO NAD88. BENCHMARK ELEVATION OF 90.55 REFERENCED FROM SURVEY MAP CITED IN NOTE #3 ABOVE.
7. THE LIMITS OF FRESHWATER WETLANDS SHOWN HEREON WERE FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC. ON FEBRUARY 8, 2022.
8. NO 100 YEAR FLOOD PLAINS ARE KNOWN TO EXIST ON THE SITE PER THE FLOOD INSURANCE RATE MAPS 36087C179G DATED 3/03/2014 PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
9. THIS SET OF PLANS IS NOT DEPICTING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. COLLIERS ENGINEERING & DESIGN HAS PERFORMED NO EXPLORATORY OR TESTING SERVICES, INTERPRETATIONS, CONCLUSIONS OR OTHER SITE ENVIRONMENTAL SERVICES RELATED TO THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY AND THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO DETERMINE THE EXISTENCE OF SAME. SHOULD ENVIRONMENTAL CONTAMINATION OR WASTE BE DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.
10. THIS IS A SITE DEVELOPMENT PLAN AND UNLESS SPECIFICALLY NOTED ELSEWHERE HEREON, IS NOT A SURVEY.
11. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC. THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
12. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL APPROVALS REQUIRED HAVE BEEN OBTAINED, ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND THE DRAWINGS HAVE BEEN STAMPED "ISSUED FOR CONSTRUCTION". THIS SHALL INCLUDE APPROVAL OF ALL CATALOG CUTS, SHOP DRAWINGS AND/OR DESIGN CALCULATIONS AS REQUIRED BY THE PROJECT OWNER AND/OR MUNICIPAL ENGINEER.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED.
14. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL 811 TO REQUEST A UTILITY MARKOUT.
15. INFORMATION HEREON INCORPORATES THE CONTENT IN THE FOLLOWING DOCUMENTS:
- "STORMWATER POLLUTION PREVENTION PLAN (SWPPP)" PREPARED BY COLLIERS ENGINEERING & DESIGN LAST REVISED, MARCH 2024.
- GEOTECHNICAL DATA REPORT (IN-SITU INFILTRATION TESTING) PREPARED BY COLLIERS ENGINEERING & DESIGN DATED DECEMBER 21, 2022.
- TRAFFIC IMPACT STUDY PREPARED BY COLLIERS ENGINEERING & DESIGN LAST REVISED FEBRUARY 28, 2024.
- ARCHITECTURAL PLANS PREPARED BY ANDERSON DESIGN GROUP DATED AUGUST 31, 2023.

SITE NOTES

1. BUILDING FOOTPRINT DIMENSIONS SHOWN HEREON ARE APPROXIMATE. FINAL BUILDING FOOTPRINT DIMENSIONS FOR THE BUILDING SHALL BE FURNISHED ON THE INDIVIDUAL ARCHITECTURAL PLANS AT THE TIME OF APPLICATION FOR A BUILDING PERMIT. ALL STRUCTURES SHALL CONFORM TO THE APPROVED BULK ZONING REQUIREMENTS.
2. CURBS SHALL BE DEPRESSED FLUSH WITH PAVEMENT, AND HANDICAP ACCESSIBLE RAMPS INSTALLED WHERE SIDEWALKS AND CROSSWALKS INTERSECT SAME. DETECTABLE WARNINGS SHALL BE INCLUDED ON HANDICAP ACCESSIBLE RAMPS.
3. TRAFFIC SIGNAGE AND STRIPING SHALL CORRESPOND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. REFUSE AND RECYCLABLES SHALL BE STORED WITHIN OUTDOOR ROLL-OFF CONTAINERS AND PICKED UP BY PRIVATE WASTE DISPOSAL HAULER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL WASTE MATERIALS IN ACCORDANCE WITH GOVERNING REGULATIONS AND AGENCIES.
6. THERE SHALL BE NO ON-SITE BURIAL OF CONSTRUCTION MATERIALS, TREE BRANCHES, STUMPS, OR OTHER DELETERIOUS MATERIALS.
7. MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
   A. NEW YORK STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", 2018; AS SUPPLEMENTED.
   B. CURRENT PREVAILING MUNICIPAL, COUNTY, AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS, BUILDING CODES AND REQUIREMENTS.
   C. CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
   D. CURRENT MANUFACTURER SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

UTILITY NOTES

1. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTIONS, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE UNDER SIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE OR INEFFECTIVE.
2. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
3. STORM SEWERS SHALL BE CLASS III (OR HIGHER IF NOTED) REINFORCED CONCRETE PIPE (RCP) WITH "O" RING GASKETS OR INTERNALLY PRELUBRICATED GASKET (TYLOX SUPERSEAL OR EQUIVALENT, ADS N-12 HIGH DENSITY POLYETHYLENE PIPE (HDPE), AS NOTED ON THE PLAN, OR APPROVED EQUAL. PROPER PIPE COVERAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PIPE LENGTHS SHOWN HEREON ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. WATER SERVICE TO BE PROVIDED FROM THE EXISTING WATER MAIN LINE WITHIN THE 20' UTILITY EASEMENT, OWNED AND OPERATED BY VEOLIA WATER. PROPOSED WATER MAIN EXTENSIONS AND FIRE HYDRANT LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL. PIPE MATERIALS SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52, WITH ASPHALTIC EPOXY TYPE COATING. POTABLE WATER SERVICE PIPES TO BE TYPE K SEAMLESS COPPER, AS NOTED ON THE PLANS. WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM 4' OF COVER FROM THE TOP OF PIPE TO THE PROPOSED GRADE.
5. SANITARY SEWER SERVICE SHALL BE PROVIDED BY MUNICIPAL SEWER WITHIN AL FOXIE WAY, OWNED AND OPERATED BY THE TOWN OF ORANGETOWN SEWER DEPARTMENT. PROPOSED SEWER SERVICE CONNECTION IS SUBJECT TO MUNICIPAL REVIEW AND APPROVAL. PIPE MATERIALS SHALL BE PVC SDR-35, EXCEPT AS NOTED OTHERWISE ON THE PLANS. EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY, SEWER LINES, INCLUDING FORCE MAINS AND LATERALS, SHALL BE INSTALLED TO PROVIDE A MINIMUM 4 FEET OF COVER FROM THE TOP OF PIPE TO PROPOSED GRADE.
6. ALL WATER MAINS SHOULD BE SEPARATED FROM SANITARY AND STORM SEWER AND INDUSTRIAL DISCHARGE LINES BY A MINIMUM HORIZONTAL DISTANCE OF 10 FEET. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN ENCASED IN CONCRETE OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE DEPARTMENT OF HEALTH.
7. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED UNDERGROUND PER ORDINANCE OR LOCAL UTILITY COMPANIES REQUIREMENTS. CROSSINGS OF PROPOSED PAVEMENTS WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF PAVEMENT BASE COURSE.

SOIL EROSION AND SEDIMENT CONTROL NOTES

IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN SEVEN (7) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED. THE SOIL STABILIZATION MEASURES SELECTED SHALL BE IN CONFORMANCE WITH THE TECHNICAL STANDARD, NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED 2016.

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MMN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	8/29/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	4/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MMN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MMN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MMN	REVISED PER TOWN COMMENTS
8	06/20/25	MMN	REVISED PER TOWN COMMENTS
9	10/02/25	MMN	REVISED PER TOWN COMMENTS
10	11/5/25	MMN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

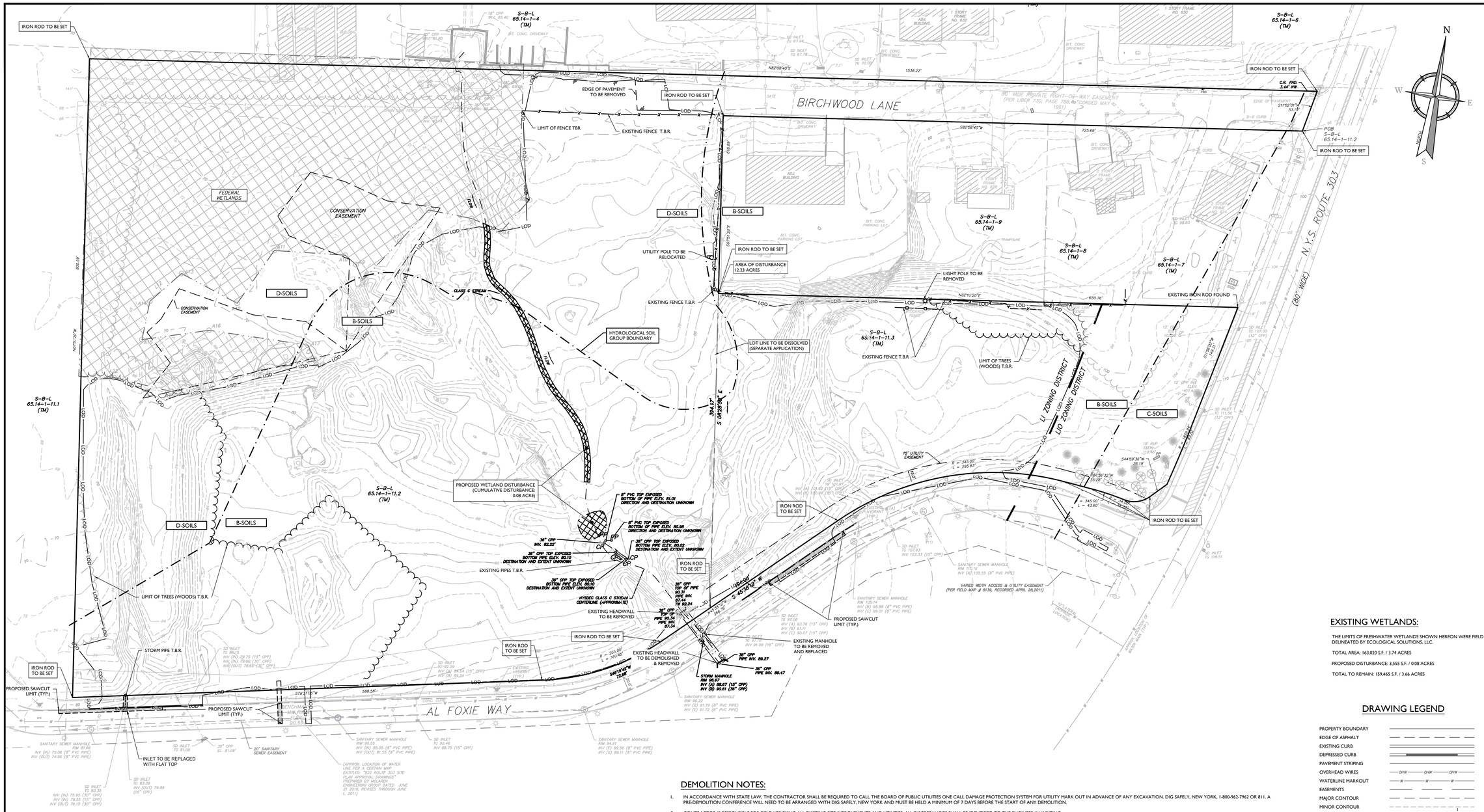
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR
PROJECT NUMBER: 22002634A	DRAWING NAME: C-COVER		

SHEET TITLE: COVER SHEET

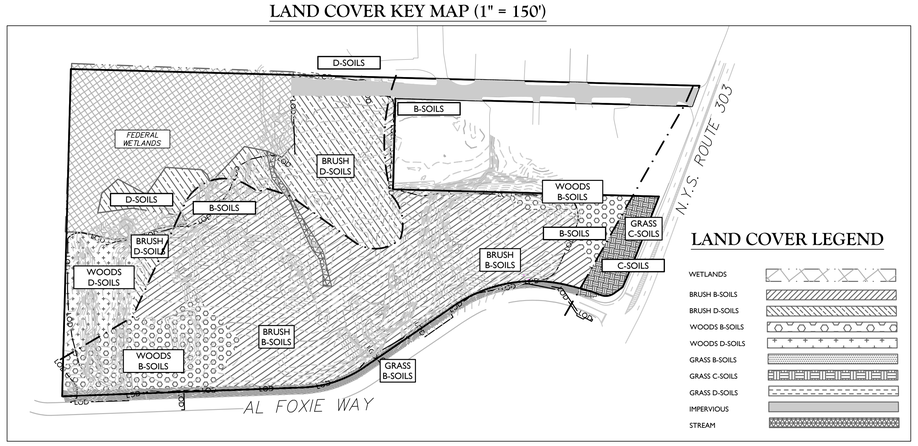
SHEET NUMBER: 01 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025/22002634A/Engineering/Site Plans/C-COVER.dwg Apr 11, 2025 - 8:29am By: MICHAEL MACDONALD



LAND COVER KEY MAP (1" = 150')



DEMOLITION NOTES:

1. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION. DIG SAFELY, NEW YORK, 1-800-962-7962 OR 811. A PRE-DEMOLITION CONFERENCE WILL NEED TO BE ARRANGED WITH DIG SAFELY, NEW YORK AND MUST BE HELD A MINIMUM OF 7 DAYS BEFORE THE START OF ANY DEMOLITION.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING SITE IMPROVEMENTS AND UTILITIES. ALL DISCREPANCIES SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING.
3. ALL DEMOLITION DEBRIS TO BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
4. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS, AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO COLLIERS ENGINEERING & DESIGN IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
5. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
6. ENSURING COPIES OF ALL PERMITS AND APPROVALS MUST BE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW (SEE "EROSION AND SEDIMENT CONTROL PLAN," THIS DRAWING SET).
7. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
8. ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
9. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
10. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
11. CLEAN THE EXISTING UTILITY STRUCTURES ON-SITE PRIOR TO CONSTRUCTION AND VERIFY THE INVERTS FOR CONNECTION.
9. COLLIERS ENGINEERING & DESIGN IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE O.S.H.A. REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
10. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
11. ROCK EXCAVATIONS (AS APPLICABLE) WILL BE PERFORMED BY MECHANICAL MEANS ONLY. IF USE OF BLASTING IS REQUIRED FOR ROCK EXCAVATION, THE CONTRACTOR SHALL SECURE ALL THE REQUIRED PERMITS AND CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS (INCLUDING TOWN CODE CHAPTER 58A - EXPLOSIVES) SHALL BE IN PLACE PRIOR TO STARTING. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES, AS APPLICABLE.
12. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL", AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS-OF-WAY.
13. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY (AS APPLICABLE).
14. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINE WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
15. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL O.S.H.A. AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
16. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.
17. DEMOLITION SHALL NOT PROCEED UNTIL THE APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE MARKED IN THE FIELD AND ALL UTILITY CONNECTIONS ARE SUITABLY SHUT OFF AND DISCONNECTED AND PROPER DEMOLITION PERMITS ARE IN PLACE WITH THE APPROPRIATE JURISDICTION.
18. CONTRACTOR IS RESPONSIBLE TO RESTORE ALL DISTURBED SITE AREAS TO ORIGINAL CONDITION AS DIRECTED BY THE OWNER.
19. PROTECT ALL EXISTING UTILITIES TO REMAIN (INCLUDING DRAINAGE STRUCTURES, HYDRANTS, VALVES, SEWER MANHOLES, ETC.) DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIMSELF OR SUB-CONTRACTORS.
20. THIS SET OF PLANS IS NOT DEPICTING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. COLLIERS ENGINEERING & DESIGN CONSULTING HAS PERFORMED NO EXPLORATORY OR TESTING SERVICE, INTERPRETATIONS, CONCLUSIONS OR OTHER SITE ENVIRONMENTAL SERVICES RELATED TO THE DETERMINATION OF POTENTIAL FOR CHEMICAL, TOXIC, OR RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY AND THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO DETERMINE THE EXISTENCE OF SAME. SHOULD ENVIRONMENTAL CONTAMINATION OR WASTE BE DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAW AND REGULATIONS.
21. PRIOR TO CONSTRUCTION COMMENCING A NYS LICENSED SURVEYOR SHALL ESTABLISH PROPERTY BOUNDARIES, SET IRON RODS AT ALL CORNERS IF NOT CURRENTLY ESTABLISHED, DELINEATE LIMITS OF DISTURBANCE, AND ESTABLISH WETLAND BOUNDARY.
22. SETTING OF IRON RODS MUST BE COORDINATED WITH SURVEYOR.
23. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN SEVEN (7) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED. THE SOIL STABILIZATION MEASURES SELECTED SHALL BE IN CONFORMANCE WITH THE TECHNICAL STANDARD, NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED 2016.

EXISTING WETLANDS:

THE LIMITS OF FRESHWATER WETLANDS SHOWN HEREON WERE FIELD DELINEATED BY ECOLOGICAL SOLUTIONS, LLC.

TOTAL AREA: 163,020 S.F. / 3.74 ACRES

PROPOSED DISTURBANCE: 3,555 S.F. / 0.08 ACRES

TOTAL TO REMAIN: 159,465 S.F. / 3.66 ACRES

DRAWING LEGEND

PROPERTY BOUNDARY
EDGE OF ASPHALT
EXISTING CURB
DEPRESSED CURB
PAVEMENT STRIPING
OVERHEAD WIRES (OHW)
WATERLINE MARKOUT (W)
EASEMENTS
MAJOR CONTOUR
MINOR CONTOUR
SANITARY PIPES
STORMWATER PIPES
TREEROW / HEDGE
TREELINE
BOUNDARY EVIDENCE
SIGN
POST / BOLLARD
UTILITY POLE
GUY WIRE
LIGHT POLE
SANITARY MANHOLE
SANITARY CLEANOUT
DRAINAGE MANHOLE
CATCH BASIN

TBR = TO BE REMOVED
UTP = UTILITY POLE
DI = DRAIN INLET
CB = CATCH BASIN
GR. = GRATE
CO = CLEANOUT

EXISTING WETLANDS
WETLAND DISTURBANCE
SAW CUT PAVEMENT

50 0 50 100
SCALE : 1" = 50'

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REV	DATE	DRAWN BY	DESCRIPTION
1	8/30/23	TPS	REVISED PER REMOVAL OF SUBDIVISION APPLICATION COMMENTS
2	03/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	3/7/2024	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	5/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	04/22/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

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PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14–1–11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

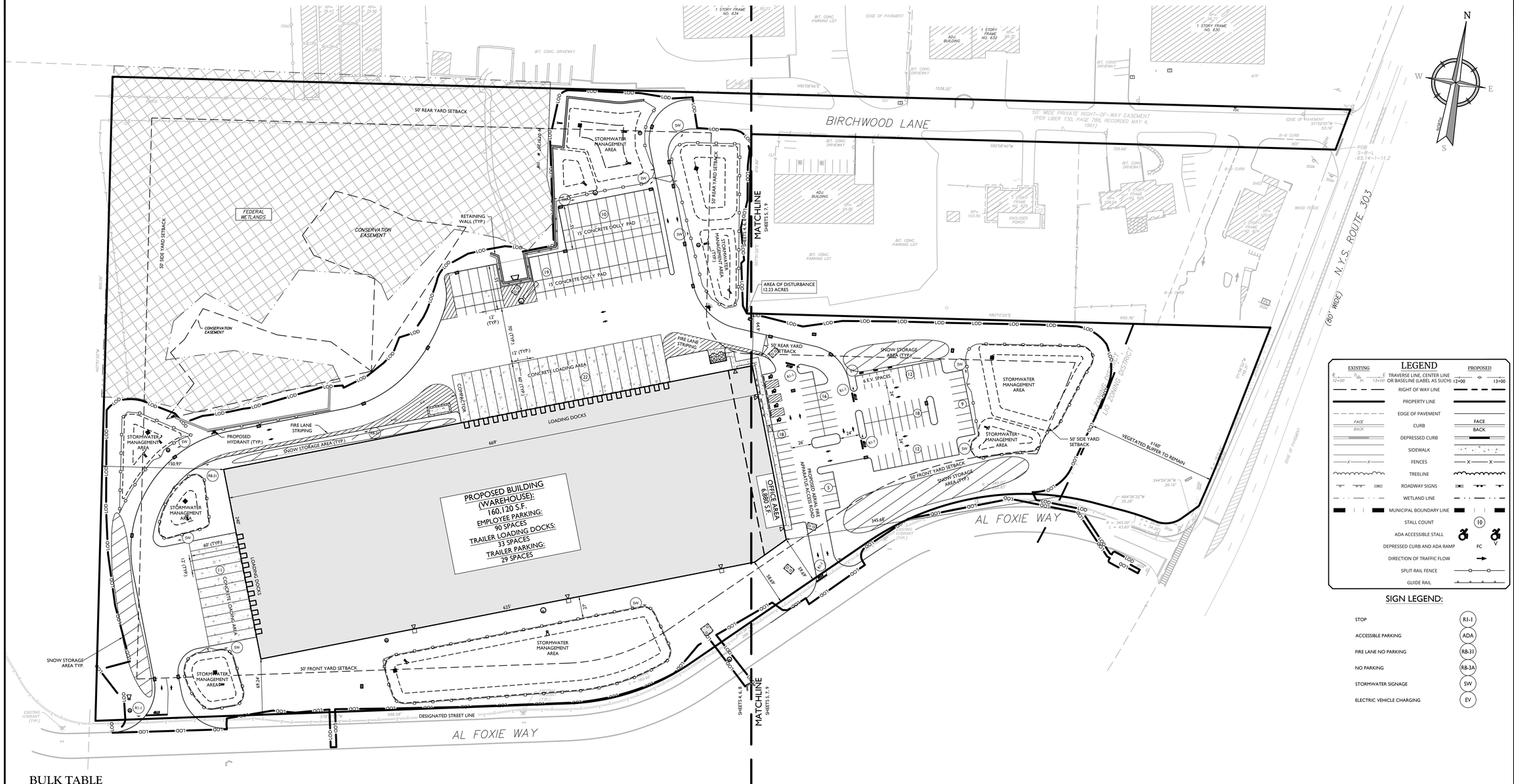
PROJECT NUMBER:	DRAWING NAME:
22002634A	C-DEMO

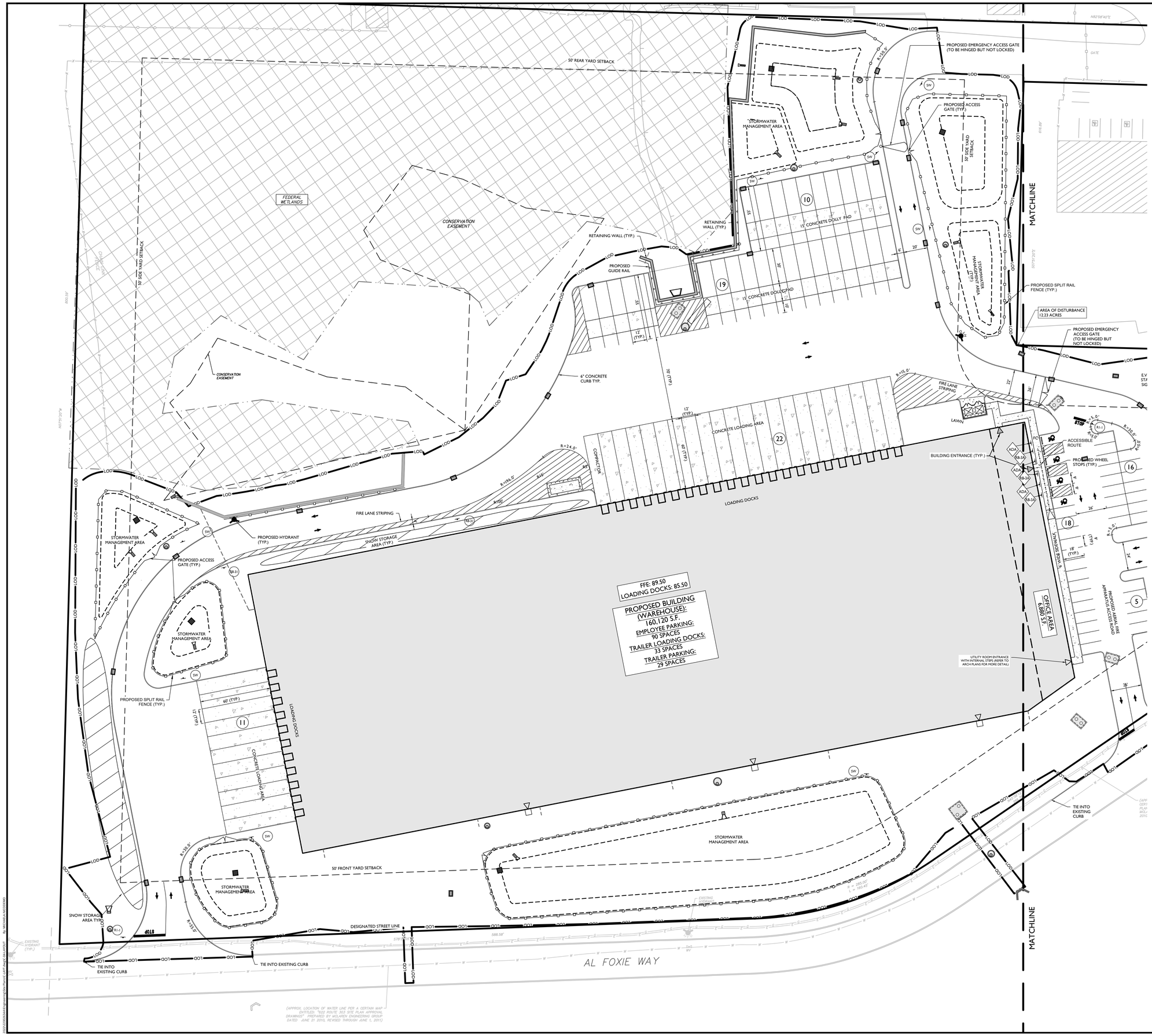
SHEET TITLE:
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NUMBER:
02 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2022\22002634A\Engineering\Site Plans\C-DEMO.dwg C-DEMOLITION By: MICHAELA MCCORMICK


BIRCHWOOD LANE
50' WIDE PRIVATE RIGHT-OF-WAY EASEMENT (PER LIBER 730, PAGE 788, RECORDED MAY 4, 1961)
N.Y.S. ROUTE 303 (80' WIDE)
AL FOXIE WAY
50' REAR YARD SETBACK
50' SIDE YARD SETBACK
50' FRONT YARD SETBACK
STORMWATER MANAGEMENT AREA
FEDERAL WETLANDS
CONSERVATION EASEMENT
RETAINING WALL (TYP.)
19' CONCRETE DOLLY PAD
15' CONCRETE DOLLY PAD
AREA OF DISTURBANCE 12.23 ACRES
PROPOSED BUILDING (WAREHOUSE): 160,120 S.F.
EMPLOYEE PARKING: 90 SPACES
TRAILER LOADING DOCKS: 33 SPACES
TRAILER PARKING: 29 SPACES
OFFICE 6,880 S.F.
LOADING DOCKS
CONCRETE LOADING AREA
FIRE LANE STRIPING
PROPOSED HYDRANT (TYP.)
SNOW STORAGE AREA (TYP.)
PROPOSED ASPHALT APPARATUS ACCESS ROAD
SNOW STORAGE AREA TYP.
DESIGNATED STREET LINE
MATCHLINE SHEETS 5, 7, 9
MATCHLINE SHEETS 4, 6, 8
SHEETS 5, 7, 9
1 E.V. SPACES
2 E.V. SPACES
VEGETATED BUFFER TO REMAIN
LIGHTING DISTRICT
LIO ZONING DISTRICT
1 STORY FRAME NO. 634
1 STORY FRAME NO. 632
1 STORY FRAME NO. 630
ADJ. BUILDING
BIT. CONC. PARKING LOT
BIT. CONC. DRIVEWAY
EDGE OF PAVEMENT
WOOD FENCE
SHED
SIGN
POB S=E=L 65.14-1-11.2
N82°08'40"E 1538.22'
S82°08'40"W 725.69'
N82°10'20"E 650.78'
S7°35'20"W 49.50'
N84°36'32"W 55.09'
S44°59'38"W 26.19'
S7°35'20"W 49.50'
N82°08'40"E 588.58'
S82°08'40"W 588.58'
N82°08'40"E 169.62'
N82°08'40"E 345.68'
R = 345.00' L = 43.60'
R = 345.00' L = 43.60'
N07°51'20"W 806.59'
S07°51'20"E 806.59'
S07°51'20"E 649.90'
N07°51'20"W 649.90'
S07°51'20"E 649.90'
N07°51'20"W 649.90'
S07°51'20"E 649.90'
N07°51'20"W 649.90



SIGN LEGEND:

STOP	R1-1
ACCESSIBLE PARKING	ADA
FIRE LANE NO PARKING	R8-3I
NO PARKING	R8-3A
STORMWATER SIGNAGE	SW
ELECTRIC VEHICLE CHARGING	EV

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE	CURB	FACE
BACK		BACK
	DEPRESSED CURB	
	SIDEWALK	
x x	FENCES	x x
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	FC
	DIRECTION OF TRAFFIC FLOW	
	SPLIT RAIL FENCE	
	GUIDE RAIL	

30 0 30 60

SCALE : 1" = 30'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION
11	12/9/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/16/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	09/06/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	11/15/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	5/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/12/25	MAN	REVISED PER TOWN COMMENTS

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SBL: 65.14-1-11.2 & 11.3

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AS SHOWN	01/03/2023	MAS	CDR
PROJECT NUMBER: 22002634A		DRAWING NAME: C-LAYT	

SHEET TITLE:
DIMENSION PLAN WEST

SHEET NUMBER:
04 of 24

2022\22002634A\Engineering\Site Plans\C-LAYT.dwg C-04 LAYOUT By: MICHAELA MCDONALD

N
W E
S

SIGN LEGEND:

STOP	R1-1
ACCESSIBLE PARKING	ADA
FIRE LANE NO PARKING	R8-3I
NO PARKING	R8-3A
STORMWATER SIGNAGE	SW
ELECTRIC VEHICLE CHARGING	EV

LEGEND

EXISTING		PROPOSED
	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 PI 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	FC
	DIRECTION OF TRAFFIC FLOW	
	SPLIT RAIL FENCE	
	GUIDE RAIL	

30 0 30 60

SCALE : 1" = 30'

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MMN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	8/21/23	TPS	REVISED PER REMOVAL OF 5 RIBS FENCE & DEPRESSION CHAMBERS
2	07/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	11/12/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MMN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MMN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MMN	REVISED PER TOWN COMMENTS
8	06/20/25	MMN	REVISED PER TOWN COMMENTS
9	10/20/25	MMN	REVISED PER TOWN COMMENTS
10	11/7/25	MMN	REVISED PER TOWN COMMENTS

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AS SHOWN	01/03/2023	MAS	CDR
PROJECT NUMBER:	DRAWING NAME:		
22002634A	C-LAYT		

SHEET TITLE:
DIMENSION PLAN EAST

SHEET NUMBER:
05 of 24

2025\22002634A\Engineering\Site Plans\C-LAYT.dwg 05-LAYOUT By: MICHAEL A MOSCHINO

INFILTRATION TESTS

TEST #	EXPLORED DEPTH (FT)	TEST DEPTH (FT)	AVERAGE RATE (IN/HR)	DEPTH TO ROCK/WATER (FT)
IT-28	5	3	19.3	N/A
IT-29	4	2	24.0	N/A
IT-30	7	5	23.8	N/A
IT-31	10	8	13.8	N/A
IT-32	11	9	24.0	N/A
IT-33	12	10	16.8	N/A
IT-34	9	7	19.8	N/A
IT-35	11	9	24.0	N/A
IT-36	9	7	15.0	N/A
IT-37	7	6	1.0	N/A
IT-38	6	4	24.0	N/A
IT-39	6	4	16.0	N/A
IT-40	6	2	22.9	N/A
IT-41	6	4	24.0	N/A
IT-42	4	2	13.4	N/A
IT-43	4	2	24.0	N/A
IT-44	6	4	12.8	N/A
IT-45	6	4	17.8	N/A
IT-46	9.5	8	24.0	N/A

ADA INSTRUCTIONS TO CONTRACTOR:

I. CONTRACTOR SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EGRESS, SHALL COMPLY WITH THESE ADA CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
(NOTE: THIS LIST IS NOT INTENDED TO CAPTURE EVERY APPLICABLE FEDERAL, STATE AND LOCAL RULE AND REGULATION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE LAW, WHETHER OR NOT STATED SPECIFICALLY HEREIN):

A. PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

B. CURB RAMPS- SLOPES SHALL NOT EXCEED 1:12 (8.3%).

C. LANDINGS -SHALL BE PROVIDED AT EACH END OF RAMPS, SHALL PROVIDE POSITIVE DRAINAGE, AND SHALL
NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

D. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - SHALL PROVIDE A 36 INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL, (CAR OVERHANGS CANNOT REDUCE THIS MINIMUM WIDTH), THE SLOPE SHALL BE NO GREATER THAN 1:20 (5.0%) IN THE DIRECTION OF TRAVEL, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE.

E. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), AN ADA RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM DISTANCE OF 30 FEET, SHALL BE PROVIDED. THE RAMP SHALL HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE.

F. DOORWAYS - SHALL HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA SHALL BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHER WISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS (SEE APPLICABLE CODE SECTIONS).

2. IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL PRIOR TO COMMENCING WORK.

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	'B' INLET	
	'E' INLET	
	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75	CONTOURS	75
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0
	FLUSH CURB ELEVATION	× FC 29.0
	INFILTRATION TEST LOCATION	TP-29

30 0 30 60
SCALE : 1" = 30'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REV	DATE	DRAWN BY	DESCRIPTION
1	8/30/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	10/30/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	4/17/25	JMG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/9/24	JMG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	05/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR
PROJECT NUMBER: 22002634A	DRAWING NAME: C-GRAD		

SHEET TITLE:
GRADING & DRAINAGE PLAN - WEST

SHEET NUMBER:
06 of 24

LEGEND

EXISTING		PROPOSED
12+00 Tan PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
x x	FENCES	x x
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	'B' INLET	
	'E' INLET	
(P)	STORM MANHOLE	(P)
(S)	SANITARY MANHOLE	(S)
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0
	FLUSH CURB ELEVATION	× FC 29.0
	INFILTRATION TEST LOCATION	TP-29

30 0 30 60

SCALE : 1" = 30'

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Dig Safely. Call Before You Dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
T1	1/24/25	MAN	REVISED PER TOWN COMMENTS
1	06/08/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS.
2	03/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	04/22/25	MAN	REVISED PER TOWN COMMENTS
9	11/20/25	MAN	REVISED PER TOWN COMMENTS
10	1/15/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER: 22002634A
DRAWING NAME: C-GRAD

SHEET TITLE:
GRADING & DRAINAGE PLAN - EAST

SHEET NUMBER:
07 of 24

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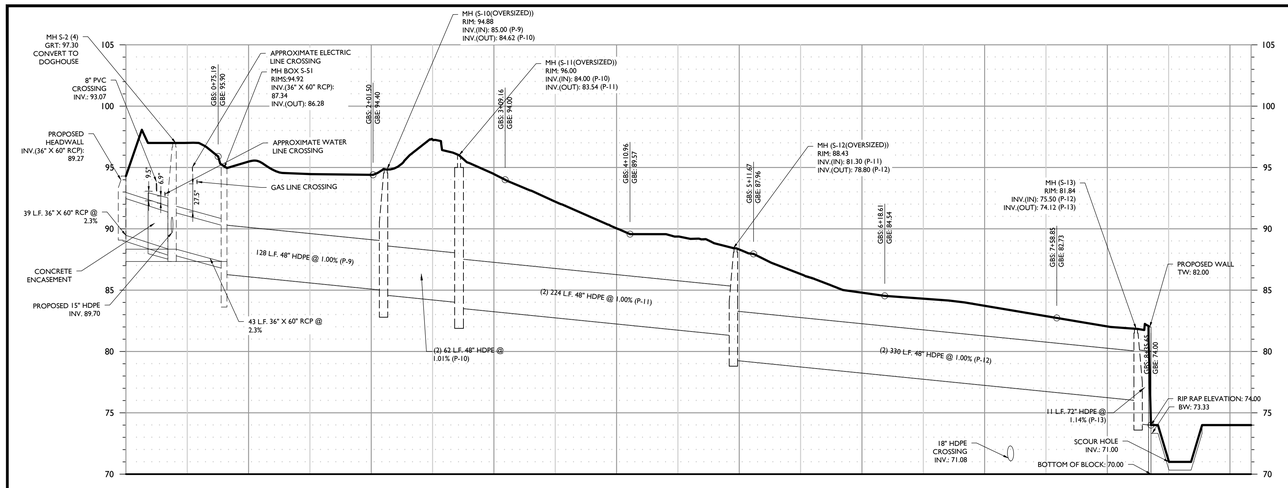

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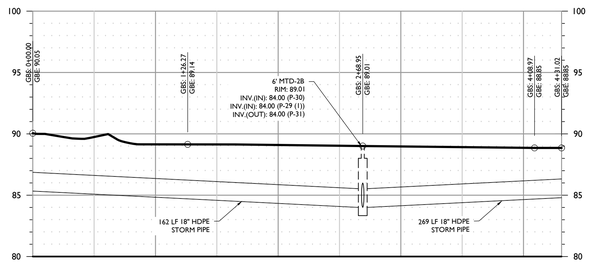

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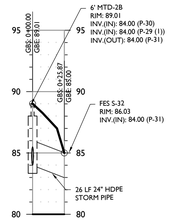

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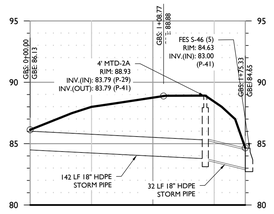

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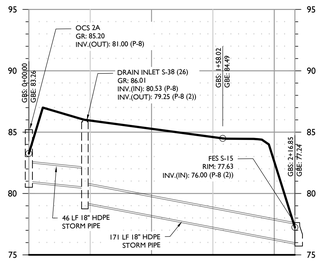

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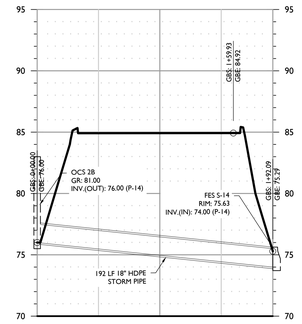

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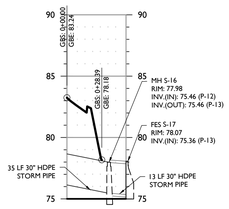

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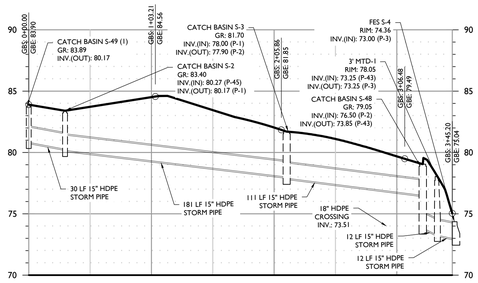

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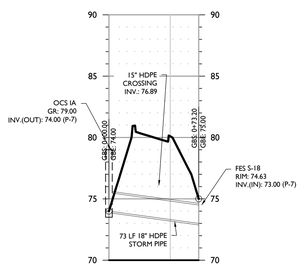

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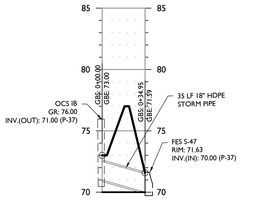

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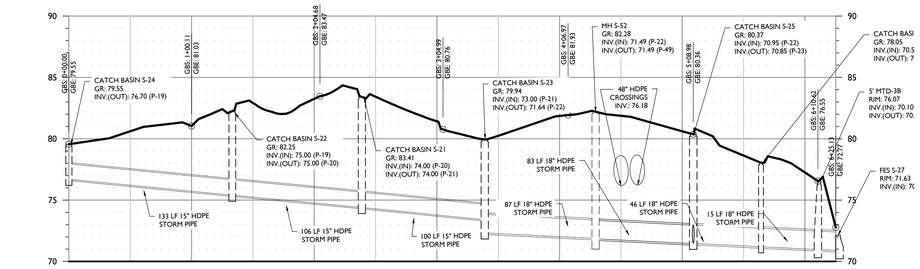

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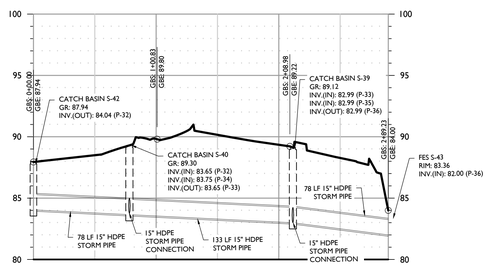

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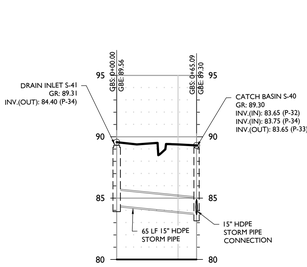

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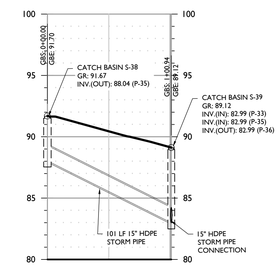

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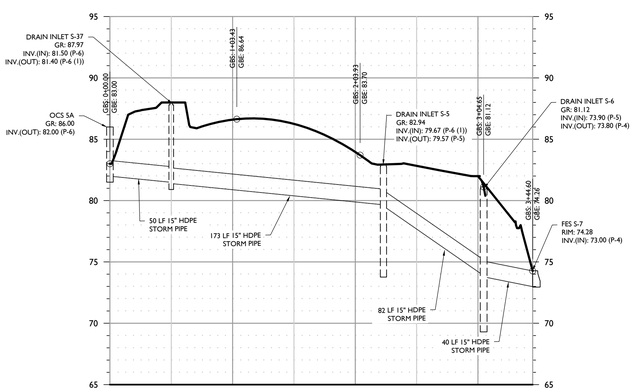

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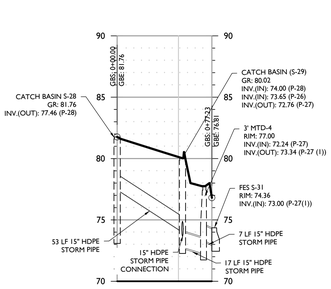

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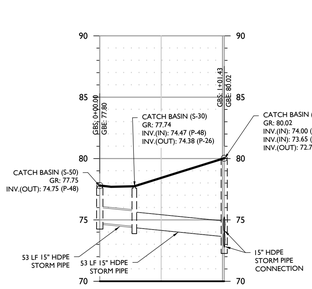

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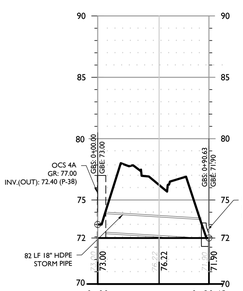

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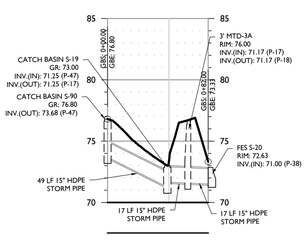

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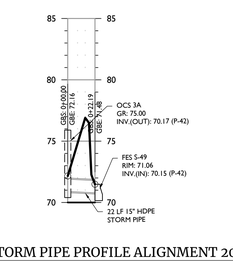

STORM PIPE PROFILE ALIGNMENT 20

SCALE : 1" = 5' VERTICAL

SCALE : 1" = 50' HORIZONTAL

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REV	DATE	DRAWN BY	DESCRIPTION
1	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/26/25	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	09/04/25	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	9/15/25	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/30/25	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER TOWN COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

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PRELIMINARY SITE PLAN

FOR

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PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

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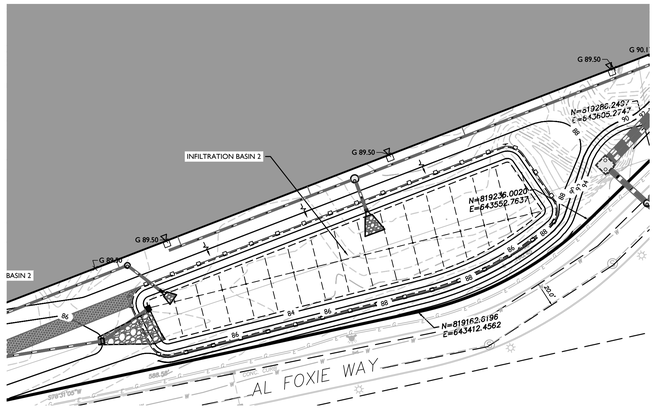
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR
PROJECT NUMBER:		DRAWING NAME:	
22002634A		C-PROF	

SHEET TITLE:
GRADING & DRAINAGE PLAN - STORM PIPE PROFILES

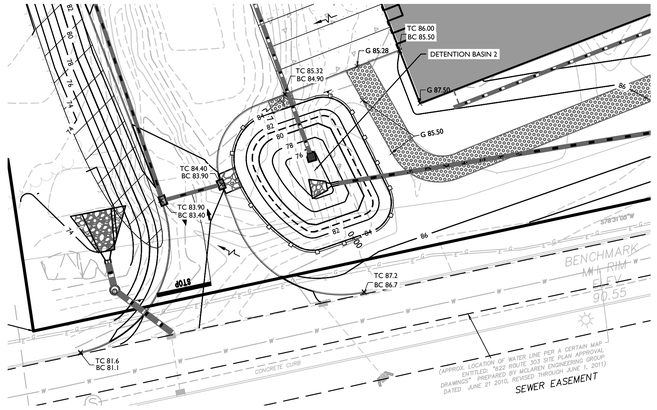
SHEET NUMBER:
7A of 24

2026\22002634A\Engineering\Site Plans\C-PROF.dwg, C-6, 2/9/2026 8:15 By: MICHAEL A. MOSCHARO



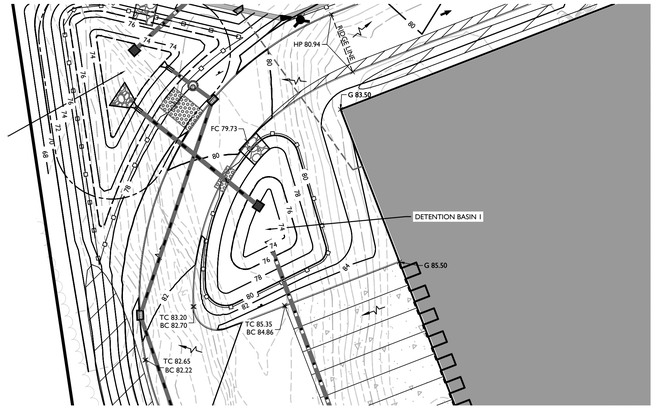
INFILTRATION BASIN 2 PLAN VIEW

SCALE : 1" = 50'



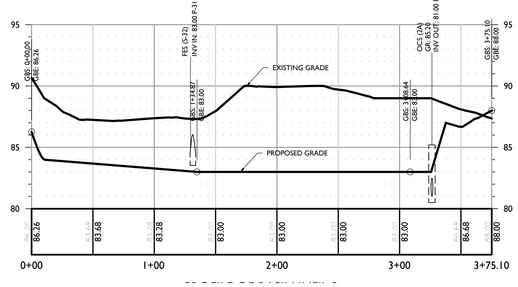
INFILTRATION BASIN 2 PLAN VIEW

SCALE : 1" = 30'



INFILTRATION BASIN 1 PLAN VIEW

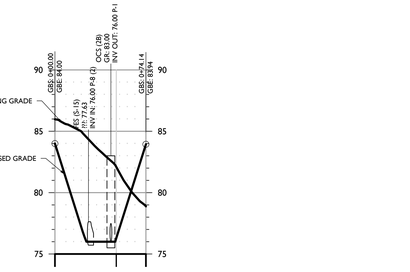
SCALE : 1" = 30'



CROSS SECTION OF INFILTRATION BASIN 2

SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL



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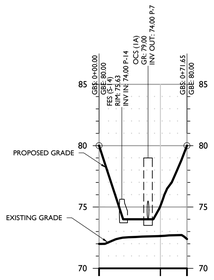
SCALE : 1" = 50' HORIZONTAL

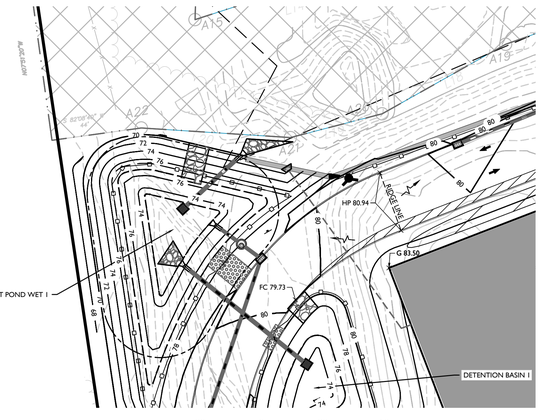
SCALE : 1" = 5' VERTICAL



CROSS SECTION OF INFILTRATION BASIN 1

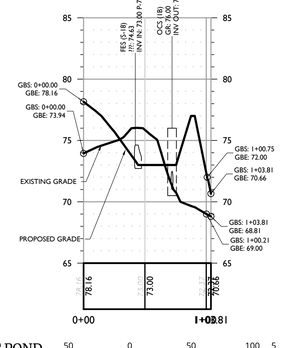
SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL



POCKET POND WET 1 PLAN VIEW

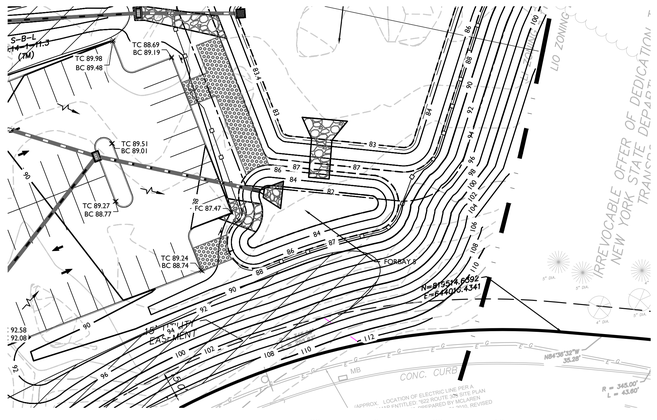
SCALE : 1" = 30'



CROSS SECTION OF POCKET POND WET 1

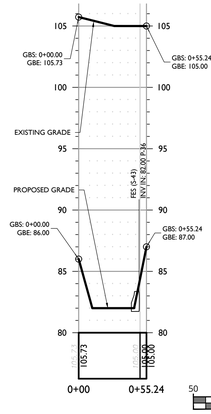
SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL



FORBAY 5 PLAN VIEW

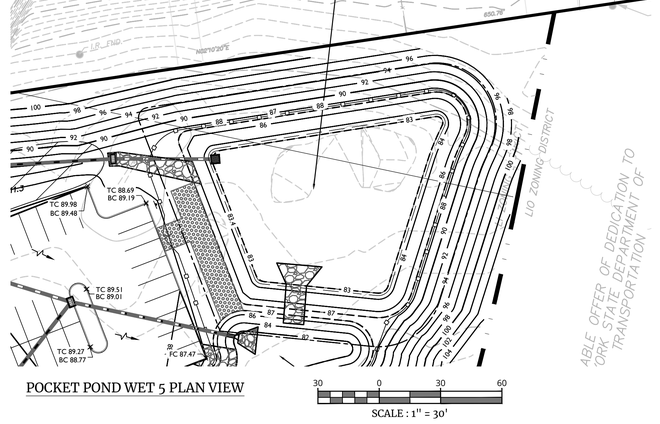
SCALE : 1" = 30'



CROSS SECTION OF FORBAY 5

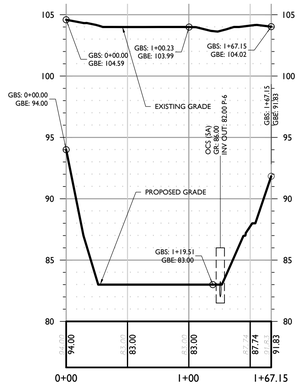
SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL



POCKET POND WET 5 PLAN VIEW

SCALE : 1" = 30'



CROSS SECTION OF POCKET POND WET 5

SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL

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-	-	-	-

REV	DATE	DRAWN BY	DESCRIPTION
1	08/16/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	10/06/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	2/17/25	JAC	REVISED PER VARIOUS AGENCY COMMENTS
4	9/9/24	JAC	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK
JESSE BARRETT COKELEY
No. 090987
LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

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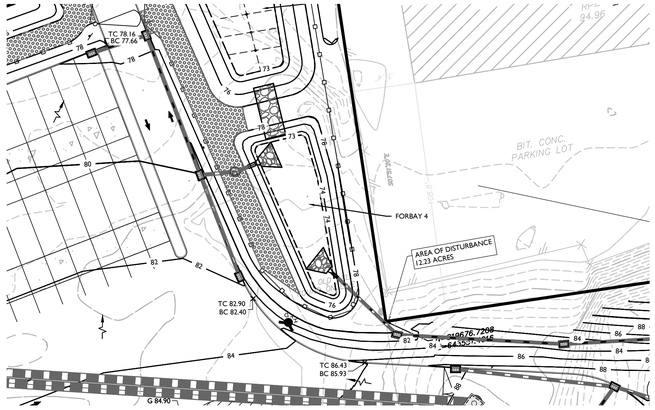
PROJECT NUMBER:	DRAWING NAME:		
22002634A	C-PROF		

SHEET TITLE:
GRADING & DRAINAGE PLAN - BASIN PROFILES 1

SHEET NUMBER:
7B of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

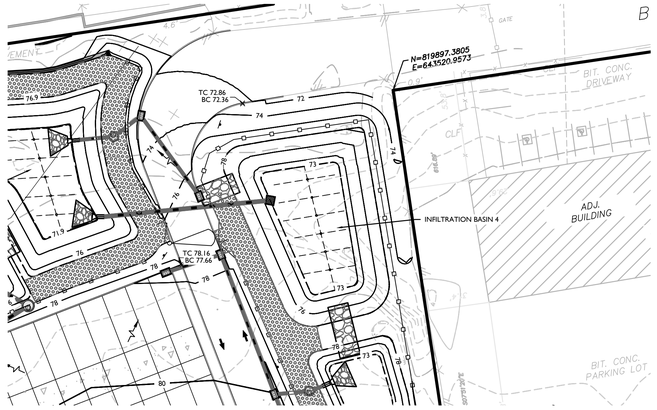
2022\2002634A\Engineering\Site Plans\C-PROF.dwg C-PROF(ES-C2) By MICHAEL A MOTOMAN



FORBAY 4 PLAN VIEW

30 0 30 60

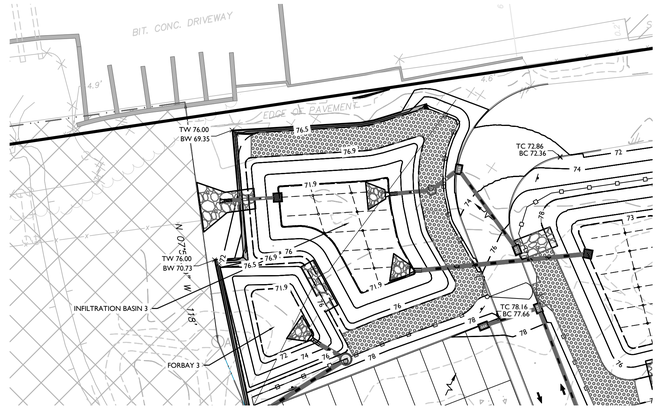
SCALE : 1" = 30'



INFILTRATION BASIN 4 PLAN VIEW

30 0 30 60

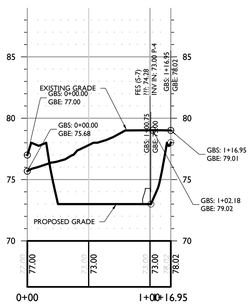
SCALE : 1" = 30'



INFILTRATION BASIN 3 PLAN VIEW

30 0 30 60

SCALE : 1" = 30'



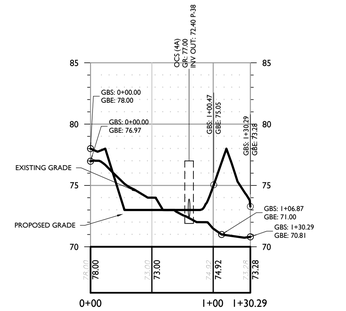
CROSS SECTION OF FORBAY 4

50 0 50 100

SCALE : 1" = 50'
HORIZONTAL

5 0 5 10

SCALE : 1" = 5'
VERTICAL



CROSS SECTION OF INFILTRATION BASIN 4

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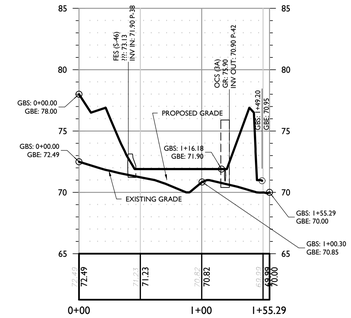
SCALE : 1" = 50'
HORIZONTAL

5 0 5 10

SCALE : 1" = 5'
VERTICAL



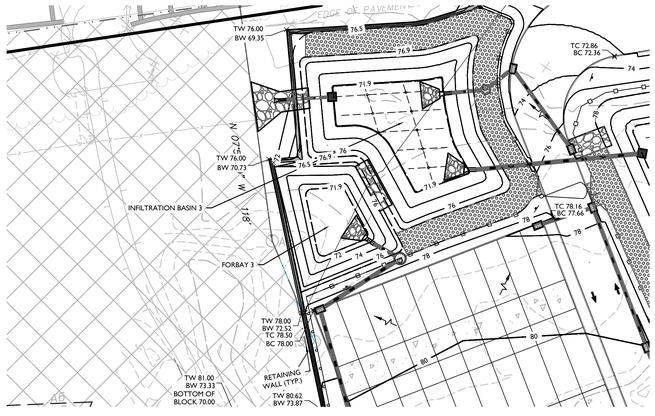
CROSS SECTION OF INFILTRATION BASIN 3

50 0 50 100

SCALE : 1" = 50'
HORIZONTAL

5 0 5 10

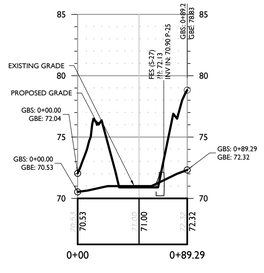
SCALE : 1" = 5'
VERTICAL



FORBAY 3 PLAN VIEW

30 0 30 60

SCALE : 1" = 30'



CROSS SECTION OF FORBAY 3

50 0 50 100

SCALE : 1" = 50'
HORIZONTAL

5 0 5 10

SCALE : 1" = 5'
VERTICAL

2022\2200634A\Engineering\Site Plans\C-PROF.dwg C-PROF By: MICHAEL.NOONAN

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-	-	-	-
-	-	-	-

REV	DATE	DRAWN BY	DESCRIPTION
1	08/2023	TPS	REVISED PER REVISAL OF SUBSURFACE INFILTRATION CHAMBERS
2	10/2024	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	01/2025	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	3/2025	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/2025	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/2025	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/2025	MAN	REVISED PER TOWN COMMENTS
8	05/2025	MAN	REVISED PER TOWN COMMENTS
9	10/2025	MAN	REVISED PER TOWN COMMENTS
10	11/2025	MAN	REVISED PER TOWN COMMENTS

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PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
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PROJECT NUMBER:	DRAWING NAME:
22002634A	C-PROF

SHEET TITLE:
GRADING & DRAINAGE PLAN - STORM PIPE PROFILES 2

SHEET NUMBER:
7C of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

UTILITY NOTES

1. LOCATION OF ALL EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. ALL CONNECTION POINTS SHALL BE VERIFIED IN FIELD BY GC AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY REGARDING ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT LOWEST INVERT AND PROGRESS UP GRADIENT. PROPOSED CROSSING OF EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICES THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE TO REMAIN DURING SITE CONSTRUCTION.
3. THE CONTRACTOR TO INSTALL ALL STORM/SANITARY SEWERS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.
4. ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC AND TELEPHONE SERVICE, SHALL BE INSTALLED UNDERGROUND. ALL TO BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY/SERVICE PROVIDER SPECIFICATIONS AND STANDARDS.
5. WATER SERVICE TO BE PROVIDED FROM THE EXISTING WATER MAIN LINE ON AL FOXIE WAY , OWNED AND OPERATED BY VEOLIA NORTH AMERICA. PROPOSED WATER MAIN EXTENSIONS AND FIRE HYDRANT LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL, ACCORDING TO THE AMERICAN WATERWORKS ASSOCIATION STANDARDS. PIPE MATERIALS SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52, WITH ASPHALTIC EPOXY TYPE COATING. ALL WATER SERVICE PIPES TO BE 1" DIAMETER TYPE K SEAMLESS COPPER. WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM 4 FEET OF COVER FROM THE TOP OF PIPE TO THE PROPOSED GRADE.
6. SANITARY SEWER SERVICE SHALL BE PROVIDED BY GRAVITY CONNECTION TO EXISTING SEWER MAIN ON AL FOXIE WAY, OWNED AND OPERATED BY ORANGETOWN SEWER DISTRICT. PROPOSED SEWER MAIN EXTENSIONS AND MANHOLE LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL. PIPE MATERIALS SHALL BE PVC SDR-35, EXCEPT AS NOTED OTHERWISE ON THE PLANS, EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY, SEWER LINES, INCLUDING FORCE MAINS AND LATERALS, SHALL BE INSTALLED TO PROVIDE A MINIMUM 4 FEET OF COVER FROM THE TOP OF PIPE TO PROPOSED GRADE.
7. ALL MATERIALS USED FOR SANITARY SEWER SYSTEMS SHALL BE MANUFACTURED IN THE UNITED STATES, WHEREVER AVAILABLE, AS GOVERNED BY P.L. 1982, c. 107, EFFECTIVE DATE OCTOBER 3, 1982.
8. SANITARY SEWERS SHALL BE SEPARATED FROM WATER MAINS BY AT LEAST 10 FEET HORIZONTALLY. IF SUCH SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SANITARY SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. ANY WATER SERVICE LOCATED IN THE SAME TRENCH AS A SEWER LINE MUST BE LOCATED ABOVE AND TO ONE SIDE OF THE SEWER LINE AT LEAST ONE FOOT AWAY FROM THE SEWER LINE. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS ARE AS FAR AWAY AS POSSIBLE FROM THE WATER LINE.
9. GAS, ELECTRIC, LIGHTING, CABLE TELEVISION, AND ELECTRICAL SERVICE PLANS, IF REQUIRED, SHALL BE PREPARED BY THE RESPECTIVE UTILITY COMPANIES THAT SERVICE THE AREA PRIOR TO SITE CONSTRUCTION AND SHALL BE INSTALLED PER ORDINANCE REQUIREMENTS.
10. TELEPHONE, ELECTRIC, AND GAS LINES WILL BE INSTALLED UNDERGROUND. CROSSINGS OF PROPOSED PAVEMENTS WILL BE INSTALLED PRIOR TO THE CONSTRUCTION OF PAVEMENT BASE COURSE.
11. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
12. STORM SEWERS SHALL BE CLASS III (OR HIGHER IF NOTED) REINFORCED CONCRETE PIPE (RCP) WITH "O" RING GASKETS OR INTERNALLY PRELUBRICATED GASKET (TYLOX SUPERSEAL OR EQUIVALENT), ADS N-12 HIGH DENSITY POLYETHYLENE PIPE (HDPE), HANCOR SURE-LOK HIGH DENSITY POLYETHYLENE PIPE (HDPE) OR APPROVED EQUAL AS NOTED. PROPER PIPE COVERAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PIPE LENGTHS SHOWN HEREON ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
13. A COPY OF THE ENGINEER'S CERTIFICATION, SANITARY SEWER TEST RESULTS AND AS-BUILTS ARE TO BE SENT TO THE ROCKLAND COUNTY HEALTH DEPARTMENT.
14. THE TOWN OF ORANGETOWN WILL NOT RELEASE CERTIFICATES OF OCCUPANCY UNTIL A CERTIFICATE OF APPROVAL HAS BEEN RELEASED BY THE ROCKLAND COUNTY HEALTH DEPARTMENT.
15. THE TOWN OF ORANGETOWN SEWER INSPECTOR SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY AND ALL CONSTRUCTION ON OR NEAR EXISTING AND PROPOSED SANITARY SEWER FACILITIES.

UTILITY DEMAND CACULATION

DESIGN FLOWS BELOW ARE BASED ON NEW YORK STATE DESIGN STANDARDS FOR INTERMEDIATE SIZED WASTEWATER SYSTEMS, DATED MARCH 2014.

PER TABLE B-3 "TYPICAL PER-UNIT HYDRAULIC LOADING RATES":

FACTORY / DISTRIBUTION WAREHOUSE = 12 GPD PER EMPLOYEESS PER SHIFT

135 EMPLOYEES X 12 = 1,620 GPD

LEGEND

EXISTING		PROPOSED
12+00 75 P1 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE	CURB	FACE
BACK		BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	'B' INLET	
	'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
CATV	CABLE TV CONDUIT	CATV
W	WATER MAIN	W
G	GAS MAIN	G
T	TELEPHONE CONDUIT	T
E	ELECTRIC CONDUIT	E
	SANITARY PIPE	S
	STORM PIPE	

SCALE : 1" = 30'

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10	11/05/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
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3	7/17/24	JAG	REVISED PER AGENCY COMMENTS.
2	03/08/24	TPS	REVISED PER AGENCY COMMENTS.
1	08/08/23	TPS	REVISED PER AGENCY COMMENTS.

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 099087 — LICENSED PROFESSIONAL ENGINEER

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NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 099087-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
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PRELIMINARY SITE PLAN

FOR

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PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

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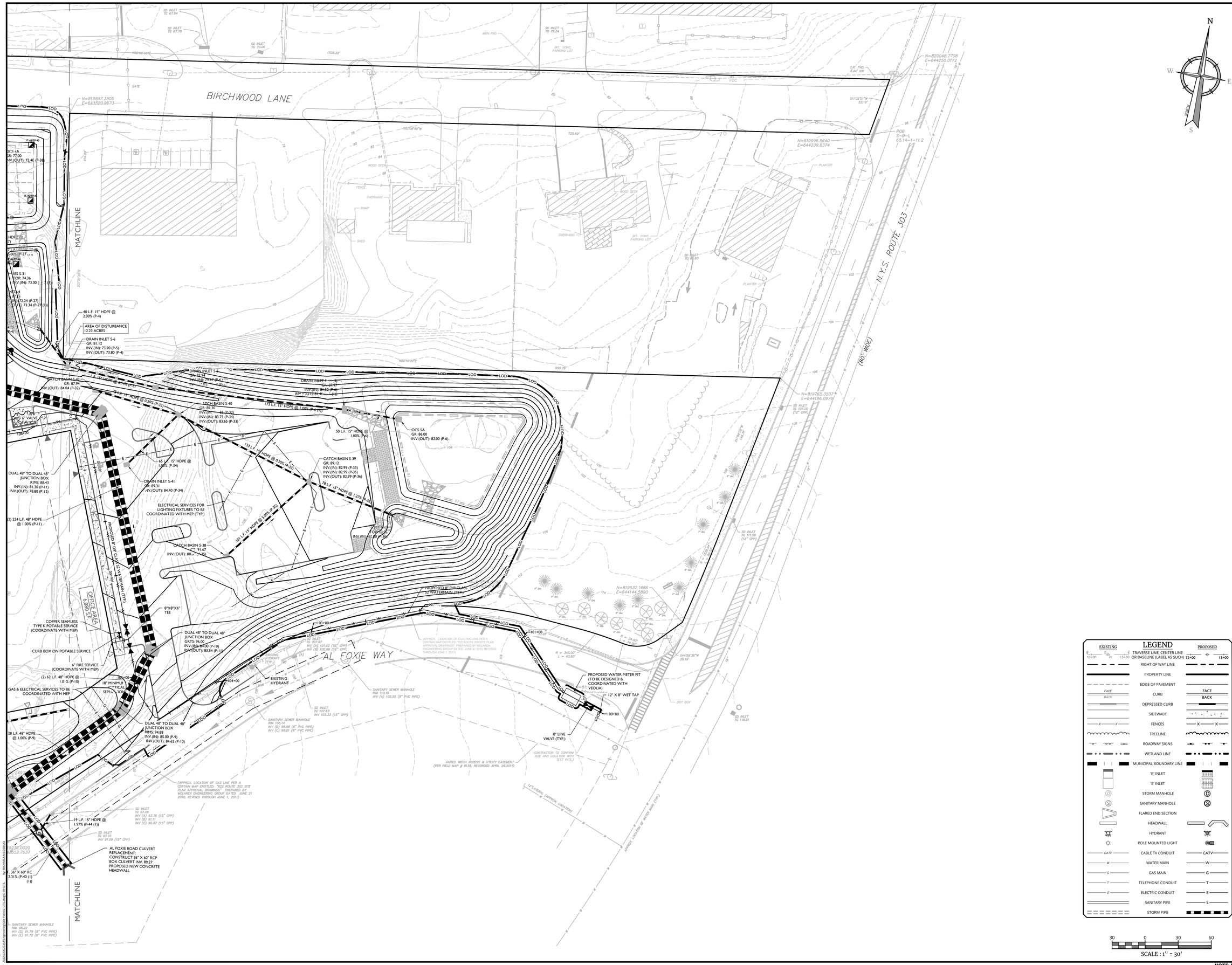
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER: 22002634A
DRAWING NAME: C-UTIL

SHEET TITLE: UTILITIES WEST PLAN

SHEET NUMBER: 08 of 24



LEGEND

EXISTING		PROPOSED
72 / 74	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 / 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	'B' INLET	
	'E' INLET	
(D)	STORM MANHOLE	(D)
(S)	SANITARY MANHOLE	(S)
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
CATV	CABLE TV CONDUIT	CATV
W	WATER MAIN	W
G	GAS MAIN	G
T	TELEPHONE CONDUIT	T
E	ELECTRIC CONDUIT	E
	SANITARY PIPE	S
	STORM PIPE	

30 0 30 60

SCALE : 1" = 30'

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11	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	06/21/23	TPS	REVISED PER RMDNR, OF DURD/FENCE EXPLORATION CHAMBERS.
2	07/05/24	TPS	REVISED PER MARDOG AGENCY COMMENTS.
3	8/12/24	JAG	REVISED PER MARDOG AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER MARDOG AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER MARDOG AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER MARDOG AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/21/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE B. BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER
Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER:	DRAWING NAME:
22002634A	C-UTIL

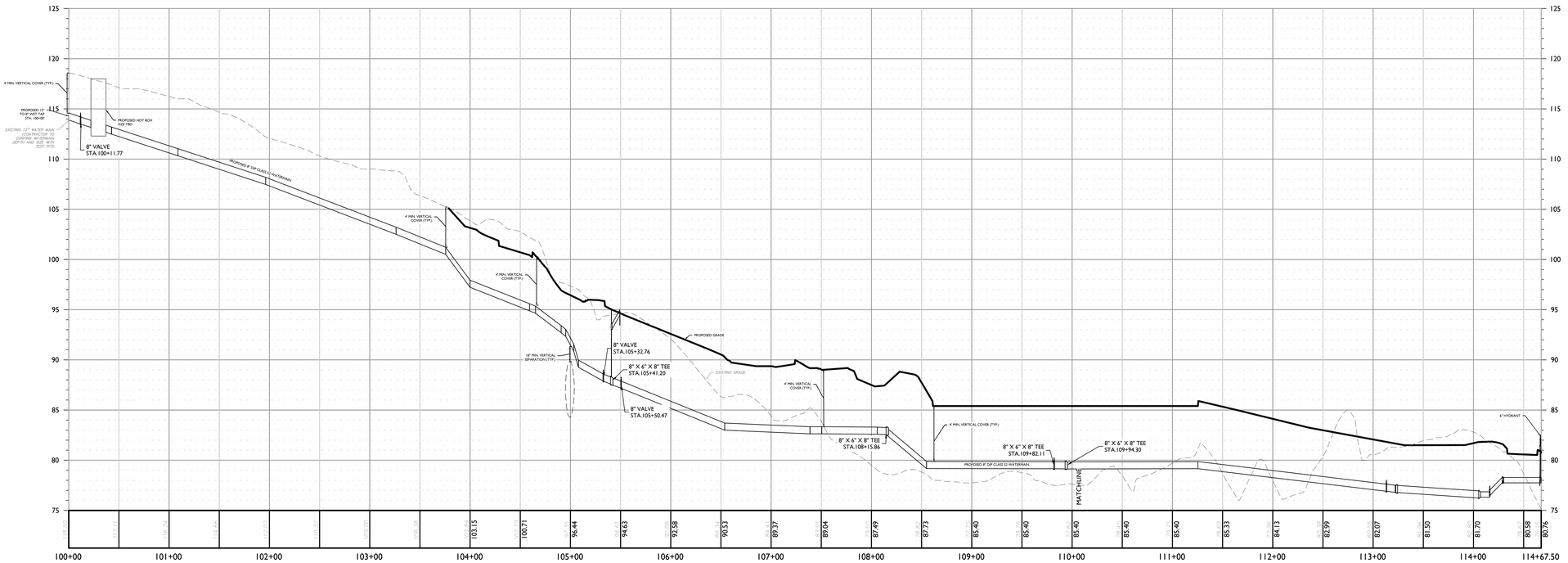
SHEET TITLE:

UTILITIES EAST PLAN

SHEET NUMBER:

09 of 24

2023\22002634A\Engineering\Civil\Plans\C-UTIL.dwg, 1/21/2025 8:47:15 AM, By: MICHAELA MOSCARIELLO



PROFILE OF WATER MAIN
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'

SCALE : 1" = 50'
HORIZONTAL

SCALE : 1" = 5'
VERTICAL

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www.colliersengineering.com

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Doing Business as MASER CONSULTING

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/08/23	TPF	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS.
2	03/08/24	TPF	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	04/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

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LICENSE NUMBER: 090987-01
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PRELIMINARY SITE PLAN

FOR

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PROJECT AL FOXIE

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
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PROJECT NUMBER:	DRAWING NAME:
22002634A	C-UTIL

SHEET TITLE:
WATER MAIN PROFILE

SHEET NUMBER:
10 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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GENERAL SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL NOTES

GENERAL SEQUENCE NOTES THAT APPLY TO ALL PHASES:

1. THE ENGINEERING INSPECTOR SHALL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK.
2. PRIOR TO THE COMMENCEMENT OF ANY SITE WORK BUT IN NO CASE NO MORE THAN 2 DAYS OR LESS IF RAIN IS PREDICTED AFTER CONSTRUCTION ACTIVITY THE APPLICANT SHALL INSTALL THE SOIL EROSION AND SEDIMENT CONTROLS AS PER THE APPROVED PLANS, WHICH INCLUDES THE SILT FENCES, AND INLET FILTERS AND SLOPE PROTECTING MEASURES. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE LATEST VERSION OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
3. STABILIZATION - THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. STABILIZATION MEANS COVERING OR MAINTAINING AN EXISTING COVER OVER SOIL. COVER CAN BE VEGETATIVE (E.G. GRASS, TREES, SEED AND MULCH, SHRUBS, OR TURF) OR NON-VEGETATIVE (E.G. GEOTEXTILES, RIP RAP, GABIONS AND/OR CAT TRACKING).
4. MAINTENANCE - SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS WHENEVER THEIR CAPACITY HAS BEEN REDUCED BY TWENTY-FIVE (25) PERCENT FROM THE DESIGN CAPACITY. A FIXED VERTICAL SEDIMENT DEPTH MARKER SHOULD BE INSTALLED TO MONITOR THE CAPACITY.
5. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED, AS MAY BE REQUIRED AND REQUESTED BY AUTHORITIES, TO PREVENT THE INCIDENTAL DISCHARGE OF SILT LADEN RUNOFF FROM ENTERING A WATER COURSE OR A DRAINAGE SYSTEM.
6. THE GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS.
7. EXISTING ON-SITE UTILITIES TO BE MARKED OUT PRIOR TO CONSTRUCTION. EXTREME CARE AND CAUTION SHALL BE USED WHEN PERFORMING ANY WORK NEAR EXISTING UTILITY LINES.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 1)

PHASE 1: SITE ACCESS, PREPARATION FOR CONSTRUCTION VEHICLES, AND PASSENGER PARKING CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 2.89 ACRES

1. STAKE OUT OR DELINEATE THE LIMITS OF WETLANDS AND CONSERVATION AREAS AS APPLICABLE AS WELL AS THE LIMITS OF PHASE 1 BY GPS OR OTHER SURVEY METHODS. THE CONTRACTOR MUST PROTECT THE WETLANDS AND CONSERVATION AREAS AS APPLICABLE.
2. INSTALL PERIMETER SILT FENCE AND SILT SOCK MEASURES AS SHOWN ON THE PROJECT PLANS.
3. INSTALL CONSTRUCTION ENTRANCES AND TRUCK WASHOUTS IN LOCATIONS INDICATED ON THIS PLAN FOR PHASE 1.
4. CLEAR STUMPS AND ANY REMAINING VEGETATION WITHIN THE LIMITS OF PHASE 1. ANY DEBRIS OR WASTE IDENTIFIED SHOULD BE DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS DEPENDING ON THE NATURE OF IT.
5. ESTABLISH AREAS FOR CONSTRUCTION STAGING AND MATERIALS STORAGE.
6. INSTALL TEMPORARY DIVERSION SWALES TO ENSURE THAT STORMWATER RUNOFF IS CONVEYED TO THE TEMPORARY SEDIMENT TRAPS.
7. EXCAVATE FOR TEMPORARY STONE OUTLET SEDIMENT TRAPS A AND B WITHIN THE LIMITS OF PHASE 1.
8. EXCAVATE SUBSURFACE CLAY, RELOCATE CUT SOIL IN AREAS OF FILL AS INDICATED ON THE GRADING PLAN, UNSUITABLE SOIL THAT WILL NOT BE USED AS FILL SHOULD BE BROUGHT OFF THE SITE.
9. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 1.
10. EXCAVATE FOR UTILITY TRENCHING, AND STORMWATER TRENCHING WITH THE LIMITS OF PHASE 1. REPEAT PREVIOUS STEP.
11. INSTALL UTILITY AND STORMWATER PIPES/STRUCTURES LOCATED WITHIN PHASE 1 (INCLUDING THE LIMITS OF THE STREAM DIVERSION PIPES AND STRUCTURES) AS INDICATED ON THE GRADING AND UTILITY PLANS.
12. INSTALL INLET PROTECTION PER PLAN AND ADDITIONAL SOIL EROSION MEASURES AS DICTATED BY CONSTRUCTION CONDITIONS.
13. ROUGH GRADE THE LIMITS WITHIN PHASE 1. STABILIZE ROADS WITH GRAVEL.
14. PREPARE PAVEMENT SUB-GRADE AND INSTALL SUB-BASE MATERIAL.
15. INSTALL PROPOSED CURBING AND PAVE (BASE AND BINDER COURSE) PROPOSED DRIVE AISLES BASED ON THE LAYOUT AND GRADING PLANS.
16. FINISH GRADING AND STABILIZE ALL DISTURBED AREA. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
17. REMOVE ALL ACCUMULATED SEDIMENT WITHIN THE TEMPORARY SEDIMENT AREAS WITH VACUUM EXCAVATION TRUCKS FOR BEST RESULTS.
18. FINISH FINAL GRADING FOR POCKET POND 5 (AREA PREVIOUSLY USED FOR SEDIMENT TRAP A) AND FOREBAY 4 (AREA PREVIOUSLY USED FOR SEDIMENT TRAP B) .
19. REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED FROM CONSTRUCTION ACTIVITIES. ONCE THE SITE IS CLEAR OF DEBRIS AND THE SURROUNDING AREA IS STABILIZED CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED.
20. PHASE 2 MAY BEGIN. THIS IS TO ENSURE THAT NO MORE THAN 5 ACRES OF LAND IS DISTURBED AT ANY ONE TIME.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 2)

PHASE 2: AL FOXIE CULVERT RECONSTRUCTION, STREAM DIVERSION INSTALLATION, NORTHERN LOADING DOCKS AND PARTIAL BUILDING FOUNDATION CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 5.00 ACRES

1. STAKE OUT OR DELINEATE THE LIMITS OF PHASE 2 BY GPS OR OTHER SURVEY METHODS. THE CONTRACTOR MUST FIRST DELINEATE AND PROTECT THE WETLANDS AND CONSERVATION AREAS AS APPLICABLE.
2. INSTALL PERIMETER SILT FENCE AND SILT SOCK MEASURES AS SHOWN ON THE PROJECT PLANS.
3. INSTALL TRUCK WASHOUTS IN LOCATIONS INDICATED ON THIS PLAN FOR PHASE 2.
4. CLEAR STUMPS AND ANY REMAINING VEGETATION WITHIN THE LIMITS OF PHASE 2. ANY DEBRIS OR WASTE IDENTIFIED SHOULD BE DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS DEPENDING ON THE NATURE OF IT.
5. ESTABLISH AREAS FOR CONSTRUCTION STAGING AND MATERIALS STORAGE.
6. INSTALL TEMPORARY DIVERSION SWALES TO ENSURE THAT STORMWATER RUNOFF IS CONVEYED TO THE TEMPORARY SEDIMENT TRAPS.
7. EXCAVATE FOR TEMPORARY STONE OUTLET SEDIMENT TRAPS C, D AND E WITHIN THE LIMITS OF PHASE 2. CONTRACTOR TO ENSURE ALL UPSTREAM DISTURBED AREAS HAVE BEEN ACHIEVED 100% FINAL STABILIZATION PRIOR TO EXCAVATION. IF FINAL STABILIZATION CANNOT BE ACHEIVED ALL FLOW TO THE TEMPORARY SEDIMENTATION TRAPS MUST BE DIVERTED TO AN ALTERNATE STORMWATER QUALITY/QUANTITY FEATURE
8. INSTALL TEMPORARY CULVERT BYPASS PUMPING.
9. SAWCUT AND EXCAVATE A TRENCH ON THE SOUTHERN HALF OF AL FOXIE WAY AND THE EXISTING SOUTHERN HEADWALL FOR THE EXISTING CULVERT RECONSTRUCTION.
10. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 2.
11. INSTALL THE PROPOSED BOX CULVERT AND HEADWALL AS INDICATED ON THE GRADING AND UTILITY PLANS.
12. PREPARE PAVEMENT SUB-GRADE AND INSTALL SUB-BASE MATERIAL IN THE TRENCH.
13. INSTALL PROPOSED CURBING AND PAVE (BASE AND BINDER COURSE) BASED ON THE EXISTING GRADES.
14. FINISH GRADING AND STABILIZE ALL DISTURBED AREA. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
15. SAWCUT AND EXCAVATE A TRENCH ON THE NORTHERN HALF OF AL FOXIE WAY AND THE EXISTING NORTHERN HEADWALL FOR THE EXISTING CULVERT RECONSTRUCTION.
16. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 2.
17. INSTALL THE PROPOSED BOX CULVERT AND JUNCTION BOX AS INDICATED ON THE GRADING AND UTILITY PLANS.
18. PREPARE PAVEMENT SUB-GRADE AND INSTALL SUB-BASE MATERIAL IN THE TRENCH.
19. INSTALL PROPOSED CURBING AND PAVE (BASE AND BINDER COURSE) BASED ON THE EXISTING GRADES.
20. FINISH GRADING AND STABILIZE ALL DISTURBED AREA. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
21. EXCAVATE FOR REMAINING STREAM DIVERSION PIPES AND STRUCTURES WITHIN THE LIMITS OF PHASE 2 WHILE PROTECTING THE EXISTING STREAM.
22. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 2.
23. INSTALL REMAINING STREAM DIVERSION PIPES/STRUCTURES LOCATED WITHIN PHASE 2 AS INDICATED ON THE GRADING AND UTILITY PLANS.
24. EXCAVATE SUBSURFACE CLAY, RELOCATE CUT SOIL IN AREAS OF FILL AS INDICATED ON THE GRADING PLAN, UNSUITABLE SOIL THAT WILL NOT BE USED AS FILL SHOULD BE BROUGHT OFF THE SITE.
25. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 2.
26. EXCAVATE FOR REMAINING UTILITY,AND STORMWATER TRENCHING WITHIN THE LIMITS OF PHASE 2 REPEAT PREVIOUS STEP.
27. INSTALL REMAINING UTILITY AND STORMWATER PIPES/STRUCTURES LOCATED WITHIN PHASE 2 AS INDICATED ON THE GRADING AND UTILITY PLANS.
28. INSTALL INLET PROTECTION PER PLAN AND ADDITIONAL SOIL EROSION MEASURES AS DICTATED BY CONSTRUCTION CONDITIONS.
29. ROUGH GRADE THE LIMITS WITHIN PHASE 2. STABLIZE ROADS WITH GRAVEL.
30. CONSTRUCT BUILDING FOUNDATION WITHIN THE LIMITS OF PHASE 2.
31. PREPARE PAVEMENT SUB-GRADE AND INSTALL SUB-BASE MATERIAL.
32. INSTALL PROPOSED CURBING AND PAVE (BASE AND BINDER COURSE) PROPOSED LOADING DOCKS AND DRIVE AISLES BASED ON THE LAYOUT AND GRADING PLANS.
33. FINISH GRADING AND STABILIZE ALL DISTURBED AREA. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
34. REMOVE ALL ACCUMULATED SEDIMENT WITHIN THE TEMPORARY SEDIMENT AREAS WITH VACUUM EXCAVATION TRUCKS AND/OR USING LIGHT UNPACKING EQUIPMENT (TO AVOID COMPACTION OF THE BASIN FLOOR) FOR BEST RESULTS.
35. NEXT, THE BASINS SHALL BE EXCAVATED TO THE FINAL DESIGN ELEVATION FOR INFILTRATION BASIN 2 (AREA PREVIOUSLY USED FOR SEDIMENT TRAP C), INFILTRATION BASIN AND FOREBAY 3 (AREA PREVIOUSLY USED FOR SEDIMENT TRAP E) AND INFILTRATION BASIN 4 (AREA PREVIOUSLY USED FOR SEDIMENT TRAP E) AND DESIGN GROUND COVER INSTALLED. ONCE THE INFILTRATION BASIN, BASIN BOTTOM, BASIN SLOPES, ETC. HAVE ACHIEVED I 00% STABILIZATION, STORMWATER FLOW CAN BE REDIRECTED TO THE INFILTRATION BASINS AND ALL TEMPORARY STORMWATER QUALITY/ QUANTITY FEATURES BE REMOVED.
36. REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED FROM CONSTRUCTION ACTIVITIES. ONCE THE SITE IS CLEAR OF DEBRIS AND THE SURROUNDING AREA IS STABILIZED CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED.
37. PHASE 3 MAY BEGIN. THIS IS TO ENSURE THAT NO MORE THAN 5 ACRES OF LAND IS DISTURBED AT ANY ONE TIME.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 3)

PHASE 3: WESTERN LOADING DOCKS AND REMAINING BUILDING FOUNDATION CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 4.37 ACRES

1. STAKE OUT OR DELINEATE THE LIMITS OF PHASE 3 BY GPS OR OTHER SURVEY METHODS. THE CONTRACTOR MUST FIRST DELINEATE AND PROTECT THE WETLANDS AND CONSERVATION AREAS AS APPLICABLE.
2. INSTALL PERIMETER SILT FENCE AND SILT SOCK MEASURES AS SHOWN ON THE PROJECT PLANS.
3. INSTALL TRUCK WASHOUTS IN LOCATIONS INDICATED ON THIS PLAN FOR PHASE 3.
4. CLEAR STUMPS AND ANY REMAINING VEGETATION WITHIN THE LIMITS OF PHASE 3. ANY DEBRIS OR WASTE IDENTIFIED SHOULD BE DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS DEPENDING ON THE NATURE OF IT.
5. ESTABLISH AREAS FOR CONSTRUCTION STAGING AND MATERIALS STORAGE.
6. INSTALL TEMPORARY DIVERSION SWALES TO ENSURE THAT STORMWATER RUNOFF IS CONVEYED TO THE TEMPORARY SEDIMENT TRAPS.
7. EXCAVATE FOR TEMPORARY STONE OUTLET SEDIMENT TRAPS F, G AND H WITHIN THE LIMITS OF PHASE 3.
8. EXCAVATE SUBSURFACE CLAY, RELOCATE CUT SOIL IN AREAS OF FILL AS INDICATED ON THE GRADING PLAN, UNSUITABLE SOIL THAT WILL NOT BE USED AS FILL SHOULD BE BROUGHT OFF THE SITE.
9. PLACE ANY EXCESS EXCAVATED MATERIAL IN POTENTIAL SOIL STOCKPILE LOCATIONS AS SPECIFIED ON THE PROJECT PLANS FOR PHASE 3.
10. EXCAVATE FOR REMAINING UTILITY,AND STORMWATER TRENCHING WITHIN THE LIMITS OF PHASE 3. REPEAT PREVIOUS STEP.
11. INSTALL REMAINING UTILITY AND STORMWATER PIPES/STRUCTURES LOCATED WITHIN PHASE 3 AS INDICATED ON THE GRADING AND UTILITY PLANS.
12. INSTALL INLET PROTECTION PER PLAN AND ADDITIONAL SOIL EROSION MEASURES AS DICTATED BY CONSTRUCTION CONDITIONS.
13. ROUGH GRADE THE LIMITS WITHIN PHASE 23 STABILIZE ROADS WITH GRAVEL.
14. CONSTRUCT BUILDING FOUNDATION WITHIN THE LIMITS OF PHASE 3.
15. PREPARE PAVEMENT SUB-GRADE AND INSTALL SUB-BASE MATERIAL.
16. INSTALL PROPOSED CURBING AND PAVE (BASE AND BINDER COURSE) PROPOSED LOADING DOCKS AND DRIVE AISLES BASED ON THE LAYOUT AND GRADING PLANS.
17. FINISH GRADING AND STABILIZE ALL DISTURBED AREA. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
18. REMOVE ALL ACCUMULATED SEDIMENT WITHIN THE TEMPORARY SEDIMENT AREAS WITH VACUUM EXCAVATION TRUCKS FOR BEST RESULTS.
19. FINISH FINAL GRADING FOR WET POND 1, DETENTION BASIN 1 AND DETENTION BASIN 2.
20. ONCE CONSTRUCTION OF THE PROPOSED BUILDING FOUNDATION AND TRUCK LOADING AREA FOR PHASE 3 AS WELL AS THE ABOVE REFERENCES BASINS ARE COMPLETED THE PROPOSED BUILDING MAY BE CONSTRUCTED.
21. REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED FROM CONSTRUCTION ACTIVITIES. ONCE THE SITE IS CLEAR OF DEBRIS AND THE SURROUNDING AREA IS STABILIZED CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED.
22. AFTER COMPLETION OF CONSTRUCTION, APPLY SEED OR SOD ON ALL LAWN AREAS. AFTER STABILIZATION HAS BEEN ESTABLISHED CLEAR DRAINAGE PIPES AND STRUCTURES OF ANY SEDIMENT WHICH MAY HAVE ACCUMULATED. REMOVE ALL EROSION CONTROL DEVICES. MAINTAIN ALL LAWN AND LANDSCAPED AREAS TO ENSURE A VIABLE STABILIZED VEGETATIVE COVER.

GENERAL SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS FOR DISTURBANCES LESS THAN FIVE (5) ACRES AND SEVEN (7) DAYS FOR DISTURBANCES GREATER THAN FIVE (5) ACRES, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
3. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE 2016 NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL OR AS AMENDED.
5. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUBBASE SHALL BE INSTALLED WITHIN FIVE (5) DAYS OF THE PRELIMINARY GRADING.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES 3:1 OR GREATER AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES (I.E. SLOPES GREATER THAN 3:1).
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
9. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
10. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
11. CONDUIT OUTLET PROTECTION MUST BE REVIEWED & SUPPLEMENTED AT ALL OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL
12. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.
13. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
14. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.
15. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION AND SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
16. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMITS OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN.
17. CONCRETE WASHOUT, DUMPSTER, & STAGING AREA LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED AT THE PRE-CONSTRUCTION MEETING. THEY SHALL BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE AND STAGING AREAS AND SHALL BE USED PRIOR TO EXITING THE PROJECT SITE. THE LOCATION SHALL BE IN A PRACTICAL, CLEARLY DELINEATED, AREA AND BE MAINTAINED THROUGHOUT CONSTRUCTION.
18. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
19. ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, AND SHALL BECOME THEIR RESPONSIBILITY.
20. PAVEMENT AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.
21. DURING CONSTRUCTION, ANY ADDITIONAL CONTROL MEASURES AS DEEMED NECESSARY TO PREVENT EROSION OR CONTROL SEDIMENT BEYOND THOSE MEASURES SHOWN ON THE APPROVED PLAN SHALL BE INSTALLED OR EMPLOYED AT THE DIRECTION OF THE MUNICIPAL ENGINEER.
22. ALL TEMPORARY, STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED, WHEN ALL CONSTRUCTION ACTIVITY IDENTIFIED IN THE SWPPP HAS BEEN COMPLETED, ALL AREAS OF DISTURBANCE HAVE ACHIEVED FINAL STABILIZATION** AND ALL POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE SWPPP AND ARE OPERATIONAL.
23. BOTTOM AND BERM ELEVATIONS OF TEMPORARY SEDIMENT TRAPS TO BE REVIEWED WITH THE CONTRACTOR BASED ON THEIR PROPOSED CONSTRUCTION SEQUENCE FOR THE PROJECT.
24. WASHOUTS, STOCKPILES, AND STAGING AREAS SHOWN FOR SCHEMATIC REFERENCE ONLY. CONTRACTOR TO LOCATE AS NECESSARY TO FACILITATE WORK.

**FINAL STABILIZATION - MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.

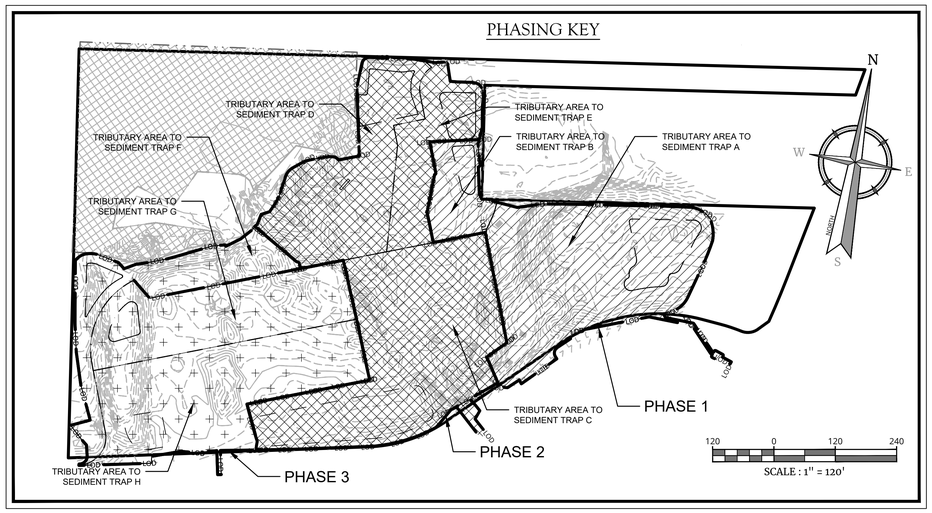
MAINTENANCE PLAN DURING CONSTRUCTION:

INSPECTION AND MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH GP-0-20-001 OR AS AMENDED. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED AND INSTALLED FOR THE PROJECT. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 25% OF ITS' CAPACITY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES APPROXIMATELY 6" DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE LANDSCAPE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

MAINTENANCE AGREEMENT NOTE:

THE OWNER/APPLICANT SHALL ENTER INTO AN ENFORCEABLE MAINTENANCE AGREEMENT WITH THE MUNICIPALITY (IF AN HOA COMMUNITY) RELATED TO MAINTENANCE OF STORMWATER FACILITIES. THE OWNER/APPLICANT IS RESPONSIBLE TO PERFORM ALL REQUIRED MAINTENANCE BOTH DURING CONSTRUCTION AND LONG-TERM. THE NATURE OF THE AGREEMENT IS TO ALLOW THE MUNICIPALITY TO PERFORM MAINTENANCE AT THEIR OPTION SHOULD THE OWNER/APPLICANT FAIL TO ADEQUATELY MAINTAIN THE SYSTEM AS DETERMINED BY THE MUNICIPAL ENGINEER. MAINTENANCE OF THE STORMWATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SWPPP AND DETAIL SHEETS.

PHASING KEY



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REV	DATE	DRAWN BY	DESCRIPTION
1	11/9/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	06/21/23	TPS	REVISED PER RESPONSE OF SUBSURFACE EXPLORATION COMMENTS.
2	10/05/23	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/12/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/7/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
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Suite 101
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Phone: 845.352.0411
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AS SHOWN	01/03/2023	MAS	CDR

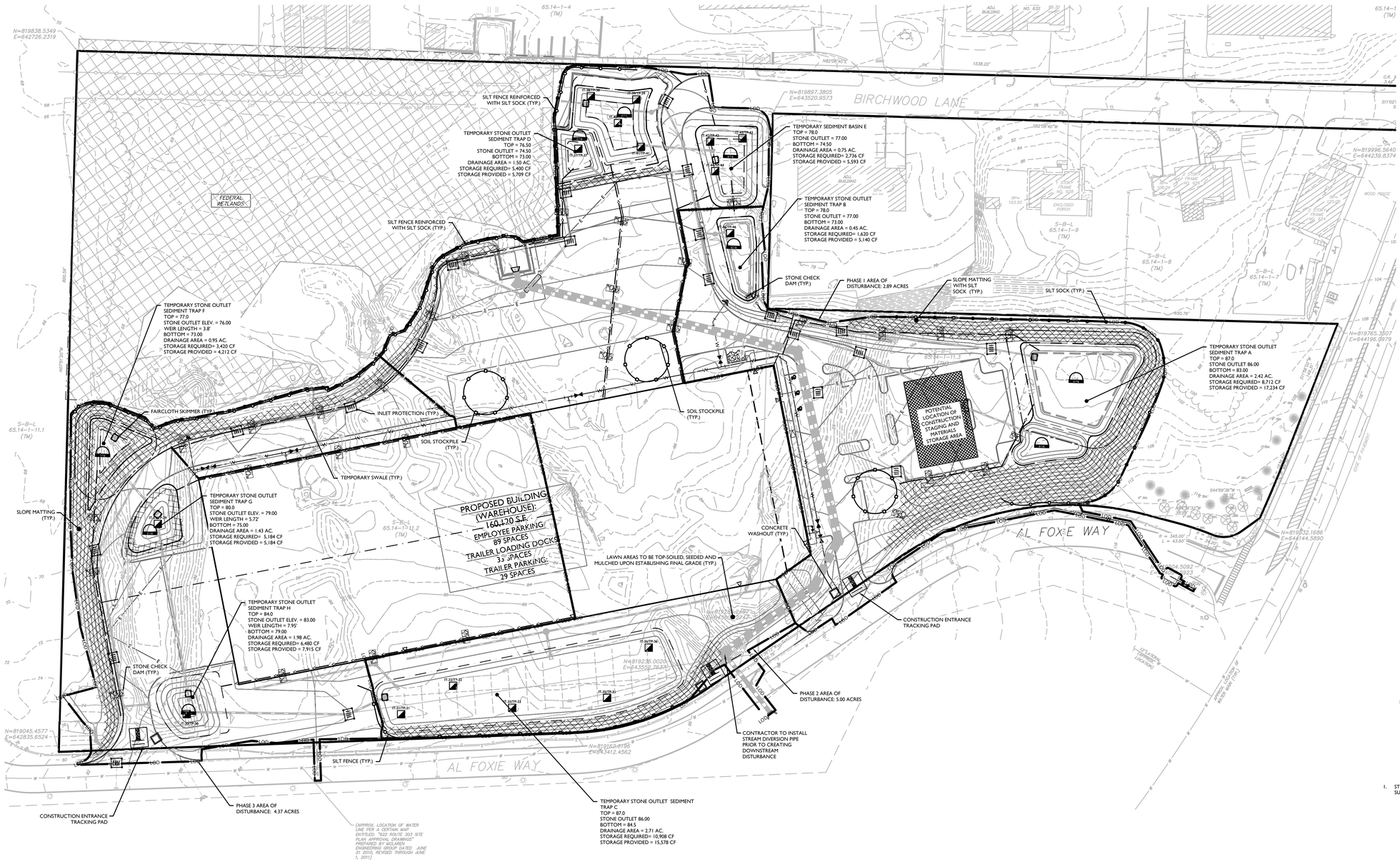
PROJECT NUMBER:	DRAWING NAME:
22002634A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL NOTES

SHEET NUMBER:
11 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\22002634A\Engineering\Plan Prep\C-SESC.dwg,C-11 GNL SESC06 By:MICHAEL.SACCOMO



WETLAND BUFFER NOTE:

1. WETLAND AREAS MUST BE STAKED OUT BY A LICENSED SURVEYOR AND DELINEATED WITH ORANGE CONSTRUCTION FENCE PRIOR TO THE START OF CONSTRUCTION.

INFILTRATION AREA PROTECTION DURING CONSTRUCTION

1. STORMWATER INFILTRATION AREAS MUST BE PROTECTED FROM SEDIMENTATION AND SURCHARGE LOADING FROM EQUIPMENT AT ALL TIMES DURING CONSTRUCTION.

LEGEND FOR EROSION CONTROL DURING CONSTRUCTION

- PROPERTY LINE
- CONSTRUCTION LIMIT LINE
- SILT FENCE
- SILT SOCK
- ORANGE CONSTRUCTION FENCE
- STORM INLET SEDIMENT TRAP
- STABILIZED CONSTRUCTION ENTRANCE
- SEDIMENT TRAP OUTLET
- TEMPORARY SWALE
- TEMPORARY SEDIMENT BASIN
- MATERIAL STOCKPILE
- CHECK DAM
- SLOPE MATTING
- FAIRCLOTH SKIMMER

50 0 50 100

SCALE : 1" = 50'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/26/22	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	03/06/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER:	DRAWING NAME:
22002634A	C-SESC

SHEET TITLE:

SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER:

12 of 24

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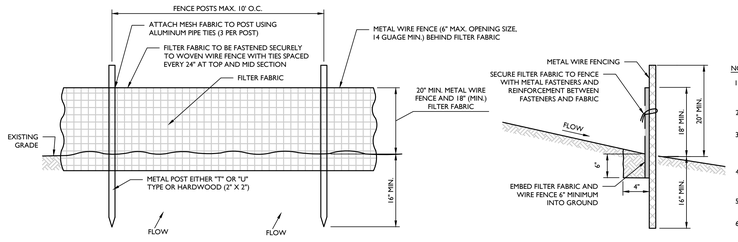
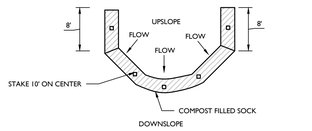


NOTES:

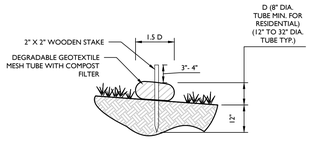
1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 3 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR AS REQUIRED. MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. WHEN TWO SECTIONS OF FILTER FABRIC ARE JOINED, THEY SHALL BE OVER-WRAPPED BY SIX INCHES AND FOLDED.
5. FILTER FABRIC TO BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
6. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
7. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.

REINFORCED SILT FENCE (WITH WIRE FENCE) DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-1101 | 07/01/19



PLAN VIEW



SECTION

DIA. (in.)	SLOPE%						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	-	-
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
*Length in feet							

NOTES:

1. ALL MATERIAL TO MEET **FILTREXX SILTSOX** SPECIFICATIONS OR APPROVED EQUAL.
2. COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

COMPOST FILTER SOCK DETAIL

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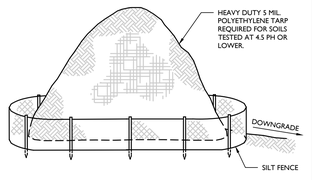
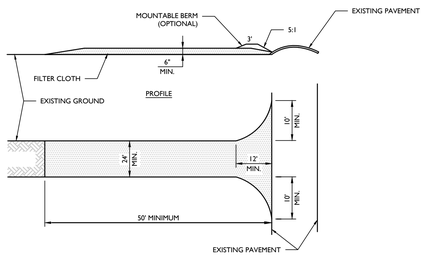


NOTES:

1. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.

TOPSOIL STOCKPILE DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2500 | 07/01/19



PLAN VIEW

NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. LENGTH: NOT LESS THAN 50 FEET. THICKNESS: NOT LESS THAN (6) INCHES.
2. WIDTH - 24'
3. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTING BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

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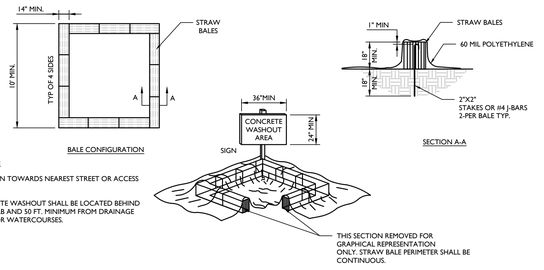

DETAIL NOTES:

1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.

NOTES:

1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.
2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.
3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 FEET AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.
4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.
5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.
6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.
7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.
8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.
9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.
10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.
11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.
12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:
    A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.
    B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS WITH 10 MIL PLASTIC LINING.

CONCRETE WASHOUT DETAIL

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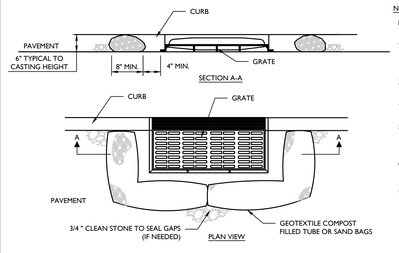

NOTES:

1. GEOTEXTILE TO BE WOVEN POLYPROPYLENE PRODUCT, OR APPROVED EQUAL.
2. FILLER CORE MAY BE SAND, COMPOST, OR PEA GRAVEL COMPLETELY CONTAINED WITHIN GEOTEXTILE. SEAMS, CLOSED BY SUITABLE MECHANICAL MEANS TO PREVENT LEAKAGE OF FILLER.
3. WHERE NO CURB IS PRESENT, BARRIER SHALL COMPLETELY ENCIRCLE THE DRAIN INLET.
4. INLET GRATE OPENING IS TO BE KEPT CLEAR OF OBSTRUCTIONS AT ALL TIMES.
5. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR/ 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.
6. OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE PROJECT ENGINEER.
7. INSPECTIONS SHALL BE FREQUENT, MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARDS THE INLET HAS REACHED FINAL STABILIZATION.

INLET PROTECTION (FILTER BARRIER) DETAIL

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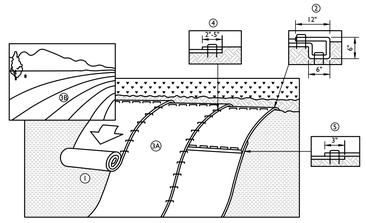
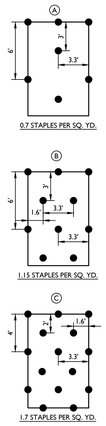


STAPLES PATTERN GUIDE
6.67' WIDE ROLLS

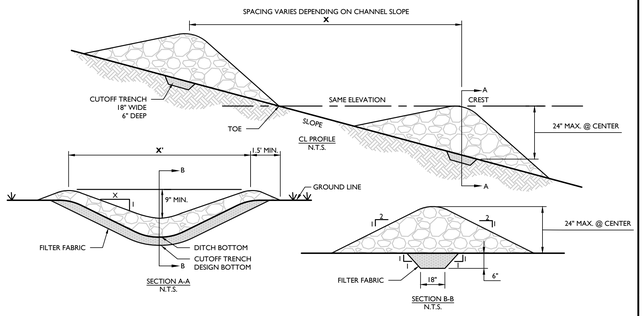


NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
   * WHEN USING MATTING WITH SEED, DO NOT SEED THE AREA. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECPS (A.) DOWN OR (B.) HORIZONTALLY STEP BY STEP ACROSS THE SLOPE TAMPERING IT DOWN ALONG THE WAY. RECP'S SHALL UNROLL WITH APPROPRIATE SIDE TIGHTLY AGAINST THE SOIL SURFACE. RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKESSHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAKED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION MATTING (CURLEX ENFORCER I) DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2200 | 07/01/19



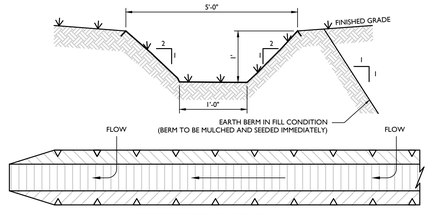
CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN ON THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA: 2 ACRES

STONE CHECK DAM DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2301 | 07/01/19



PLAN

TO BE INSTALLED ABOVE DISTURBED AREAS, TO DIVERT RUNOFF OFF-SITE WITHOUT INCREASING EROSION; INTERMITTENTLY ACROSS DISTURBED AREAS, TO SHORTEN OVERLAND FLOW DISTANCES; BELOW DISTURBED AREAS, TO DIVERT SEDIMENT-LADEN WATER TO A SEDIMENT TRAPPING DEVICE; AND TO SAFELY TRANSPORT RUNOFF ALONG ROADWAYS.

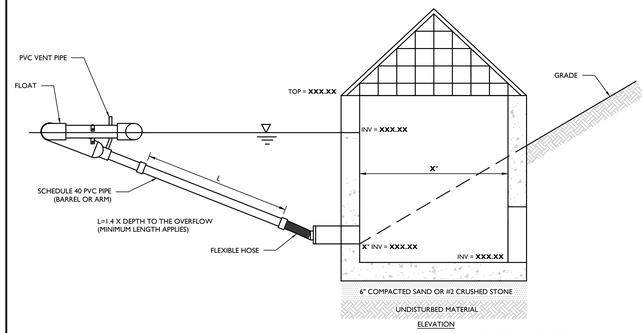
* WHERE SWALE TRAVERSES CONSTRUCTION VEHICLE PATH, DEPTH TO BE 6". SEE PLAN FOR LOCATION

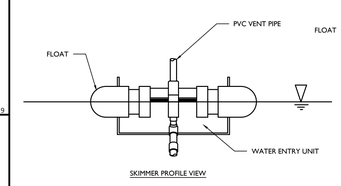
INSTALLATION NOTES:

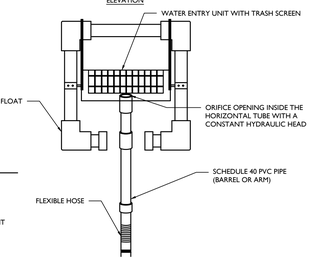
1. ALL SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. INSPECTION AND MAINTENANCE MUST BE PROVIDED BY THE CONTRACTOR AS REQUIRED
9. STABILIZATION SHALL BE SEED AND STRAW MULCH.

TEMPORARY SWALE & EARTH BERM DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2302 | 07/01/19





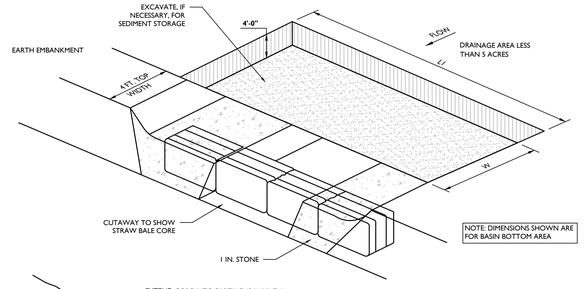


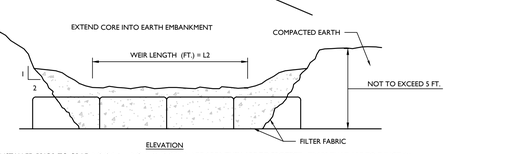
GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS PROVIDED BY MANUFACTURER FOR EACH SIZE.

FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE DETAIL

NOT TO SCALE | MCNY-SOIL-EROS-2700 | 07/01/19





TO BE INSTALLED PRIOR TO GRADING OR FILLING IN THE DRAINAGE AREA THEY ARE TO PROTECT. TRAPS THAT ARE TO FUNCTION DURING BUILDING CONSTRUCTION MUST NOT BE LOCATED WITHIN 20 FEET OF A PROPOSED BUILDING FOUNDATION. WHILE TRAPS SHOULD BE SITED TO MAXIMIZE STORAGE BENEFIT, THEY SHOULD NOT BE LOCATED IN WETLANDS OR WETLAND BUFFER AREAS, OR IN EXISTING WATERCOURSES.

SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.

INSTALLATION NOTES:

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS WELL.
   THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER SIZED STONES, ROCKS, ORGANIC MATERIAL AND OTHER QUESTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
2. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
3. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
4. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
5. ALL CUT AND FILL SLOPES SHALL BE 1 : 2 OR FLATTER.
6. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.

SIZING CALCULATIONS

NOTE:

1. 3,600 CUBIC FEET OF STORAGE REQUIRED PER ACRE OF DISTURBANCE.

*THIS IS THE MINIMUM AMOUNT OF SEDIMENT TRAPS, ADDITIONAL MAY BE REQUIRED BASED UPON OTHER ON-SITE CONDITIONS AND CONTRACTOR SCHEDULE AND PHASING ACTIVITIES.

STONE OUTLET SEDIMENT TRAP TABLE

SEDIMENT TRAP	DRAINAGE AREA	AREA (FT²)	DEPTH (FT.)	VOLUME REQ'D (C.F.)	VOLUME PROVIDED (C.F.)	WEIR LENGTH (L2)
A	2.42 AC.	14,326	3.0 FT.	8,712 C.F.	17,234 C.F.	9.68 FT.
B	0.45 AC.	3,213	4.0 FT.	1,620 C.F.	5,140 C.F.	1.80 FT.
C	2.71 AC.	25,964	1.5 FT.	9,756 C.F.	15,578 C.F.	10.84 FT.
D	1.50 AC.	9,315	1.5 FT.	5,400 C.F.	5,709 C.F.	6.0 FT.
E	0.75 AC.	5,593	2.5 FT.	2,700 C.F.	5,593 C.F.	3.0 FT.
F	0.95 AC.	3,510	3.0 FT.	3,420 C.F.	4,312 C.F.	3.80 FT.
G	1.43 AC.	3,276	4.0 FT.	5,184 C.F.	5,184 C.F.	5.72 FT.
H	1.98 AC.	4,947	4.0 FT.	7,128 C.F.	9,915 C.F.	7.92 FT.

STONE OUTLET SEDIMENT TRAP DETAIL

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1	1/29/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	04/05/23	TPS	REVISED PER BASIN & OF SUBSURFACE INFILTRATION CHAMBERS
2	07/07/23	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	06/09/25	MAN	REVISED PER TOWN COMMENTS
9	10/29/25	MAN	REVISED PER TOWN COMMENTS
10	11/1/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
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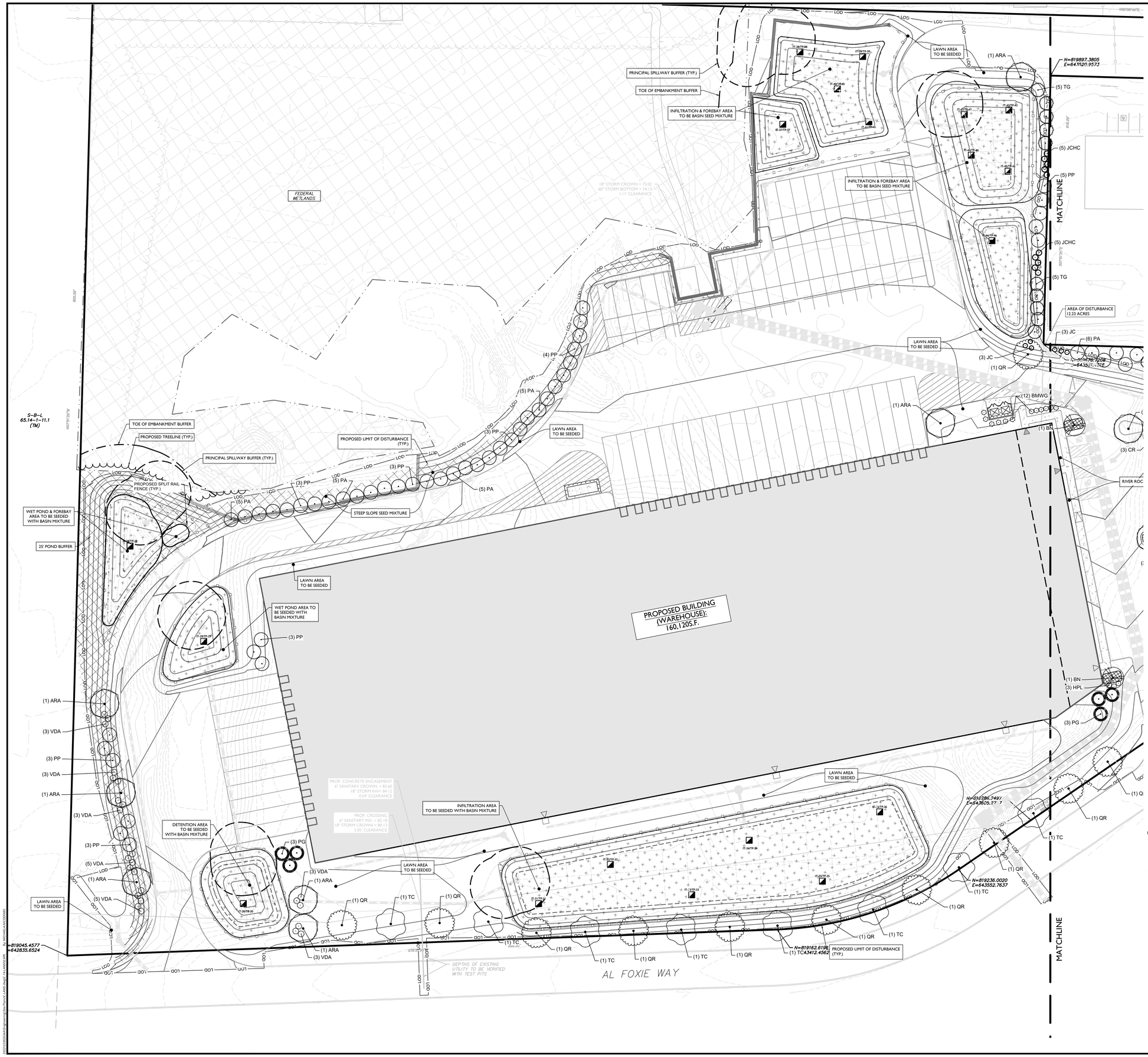
PROJECT NUMBER: 220026.54A
DRAWING NAME: C-ESC

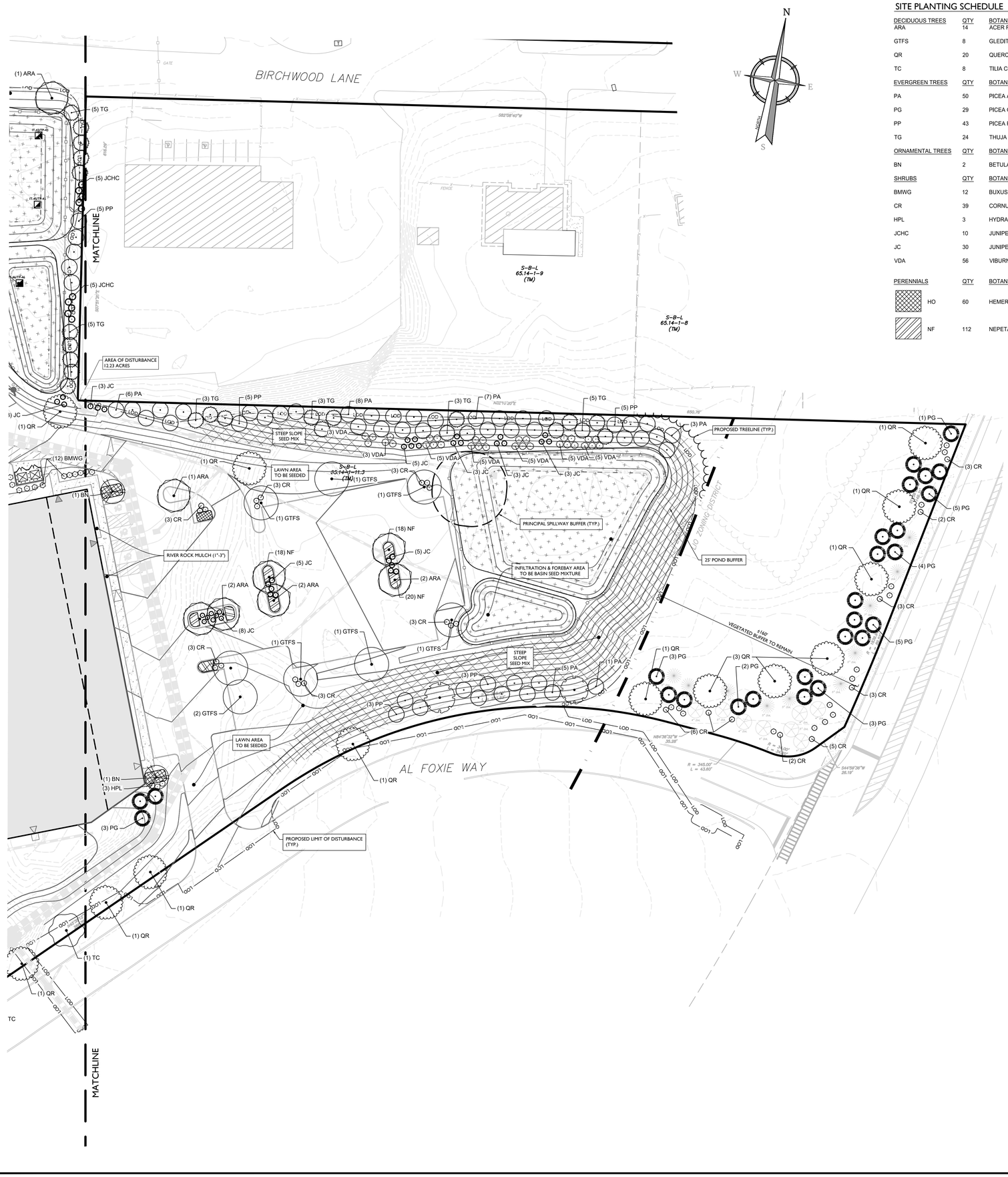
SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
13 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

J:\2022\220026.54A\Engineering\Civil\Dwg\C-ESC.dwg, 1/3/2025 8:00:00 AM, EROSION_DETAIL, By: MICHAEL A. MCGOVERN


PRINCIPAL SPILLWAY BUFFER (TYP.)
TOE OF EMBANKMENT BUFFER
INFILTRATION & FOREBAY AREA TO BE BASIN SEED MIXTURE
LAWN AREA TO BE SEEDED
(1) ARA
(5) TG
(5) JCHC
(5) PP
MATCHLINE
INFILTRATION & FOREBAY AREA TO BE BASIN SEED MIXTURE
FEDERAL WETLANDS
18" STORM CROWN = 73.02
60" STORM BOTTOM = 74.13
1.11' CLEARANCE
(5) JCHC
(5) TG
AREA OF DISTURBANCE 12.23 ACRES
LAWN AREA TO BE SEEDED
(3) JC
(6) PA
(3) JC
(1) QR
(12) BMWG
(1) ARA
(1) BN
(3) CR
RIVER ROC
S--B--L 65.14--1--11.1 (TM)
TOE OF EMBANKMENT BUFFER
PROPOSED TREELINE (TYP.)
PRINCIPAL SPILLWAY BUFFER (TYP.)
PROPOSED LIMIT OF DISTURBANCE (TYP.)
LAWN AREA TO BE SEEDED
(4) PP
(5) PA
(3) PP
PROPOSED SPLIT RAIL FENCE (TYP.)
STEEP SLOPE SEED MIXTURE
WET POND & FOREBAY AREA TO BE SEEDED WITH BASIN MIXTURE
25' POND BUFFER
LAWN AREA TO BE SEEDED
WET POND AREA TO BE SEEDED WITH BASIN MIXTURE
PROPOSED BUILDING (WAREHOUSE): 160,1205.F.
(1) ARA
(3) VDA
(3) PP
(3) VDA
(1) ARA
(3) VDA
(3) PP
(5) VDA
(1) ARA
(5) VDA
LAWN AREA TO BE SEEDED
DETENTION AREA TO BE SEEDED WITH BASIN MIXTURE
(3) PG
(3) VDA
(1) ARA
(1) QR
(1) TC
(1) QR
(1) ARA
(3) VDA
PROP. CONCRETE ENGASEMENT
6" SANITARY CROWN = 83.60
18" STORM INV= 84.12
0.54' CLEARANCE
PROP. CROSSING
6" SANITARY INV. = 82.18
18" STORM CROWN = 80.13
2.05' CLEARANCE
INFILTRATION AREA TO BE SEEDED WITH BASIN MIXTURE
LAWN AREA TO BE SEEDED
(1) TC
(1) QR
(1) TC
(1) QR
(1) TC
(1) QR



SITE PLANTING SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	ROOT	CAL	SIZE	REMARKS
ARA	14	ACER RUBRUM 'AUTUMN FLAME' / AUTUMN FLAME RED MAPLE	B & B	2-2 1/2"		STRAIGHT LEADER/SYM. BRANCHING
GTFS	8	GLEDITSIA TRIACANTHOS 'SKYLINE' / SKYLINE HONEY LOCUST	B & B	2-2 1/2"		STRAIGHT LEADER/SYM. BRANCHING
QR	20	QUERCUS RUBRA / RED OAK	B & B	2-2 1/2"		STRAIGHT LEADER/SYM. BRANCHING
TC	8	TILIA CORDATA / LITTLELEAF LINDEN	B & B	2-2 1/2"		STRAIGHT LEADER/SYM. BRANCHING
EVERGREEN TREES	**QTY**	**BOTANICAL / COMMON NAME**	**ROOT**	**CAL**	**SIZE**	**REMARKS**
PA	50	PICEA ABIES/ NORWAY SPRUCE	B & B	6-8' HT.		DENSE/TYP. SPECIES HABIT
PG	29	PICEA GLAUCA / WHITE SPRUCE	B & B	6-8' HT.		DENSE / TYP. SPECIES HABIT
PP	43	PICEA PUNGENS / COLORADO BLUE SPRUCE	B & B	6-8' HT.		DENSE / TYP. SPECIES HABIT
TG	24	THUJA OCCIDENTALIS 'GREEN GIANT' / GREEN GIANT ARBORVITAE	B & B	6-8' HT.		DENSE / TYP. SPECIES HABIT
ORNAMENTAL TREES	**QTY**	**BOTANICAL / COMMON NAME**	**ROOT**	**CAL**	**SIZE**	**REMARKS**
BN	2	BETULA NIGRA / RIVER BIRCH	B & B	6' - 7'		MULTISTEM / TYP. SPECIES HABIT
SHRUBS	**QTY**	**BOTANICAL / COMMON NAME**	**ROOT**	**HEIGHT**	**SIZE**	**REMARKS**
BMWG	12	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM' / WINTER GEM JAPANESE BOXWOOD	CONT	24"-30"		TYPICAL SPECIES HABIT
CR	39	CORNUS SERICEA / RED TWIG DOGWOOD	CONT	24"-30"		TYPICAL SPECIES HABIT
HPL	3	HYDRANGEA PANICULATA 'LIMELIGHT' / LIMELIGHT PANICLE HYDRANGEA	CONT		24"-30"	TYPICAL SPECIES HABIT
JCHC	10	JUNIPERUS CHINENSIS 'HETZII COLUMNARIS' / HETZI COLUMN JUNIPER	CONT		6'-7'	TYPICAL SPECIES HABIT
JC	30	JUNIPERUS COMMUNIS DEPRESSA / COMMON JUNIPER	CONT		24"-30"	TYPICAL SPECIES HABIT
VDA	56	VIBURNUM DENTATUM 'ARROWWOOD' / ARROWWOOD VIBURNUM	CONT	30-36"		TYPICAL SPECIES HABIT
PERENNIALS	**QTY**	**BOTANICAL / COMMON NAME**	**CONT.**			**REMARKS**
HO	60	HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY	1 GAL			CLUMPS, 18" O.C.
NF	112	NEPETA X FAASSENII / CATMINT	1 GAL			CLUMPS, 24" O.C.

LANDSCAPE LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL TREE
- SHRUB
- ORNAMENTAL GRASS
- MULCH BED LINE
- PERENNIAL PLANTING
- BASIN SEED MIXTURE
- STEEP SLOPE SEED MIXTURE
- LAWN AREA SEED MIXTURE
- 15' TOE OF EMBANKMENT BUFFER
- 25' PRINCIPAL SPILLWAY BUFFER

PLAN NOTE

1. THIS PLAN IS TO BE USED FOR LANDSCAPE PURPOSES ONLY. REFER TO DETAIL SHEETS FOR GENERAL NOTES AND LANDSCAPE DETAILS.

LANDSCAPE NOTES

1. LOCATIONS OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES IS APPROXIMATE AND MAY VARY DUE TO THE LOCATIONS OF SITE IMPROVEMENTS AND/OR BUILDING.
2. FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE PROJECT LANDSCAPE ARCHITECT AND A TOWN REPRESENTATIVE.
3. ALL AREAS WITHIN THE PLANTING BED LIMITS SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH.
4. PROPOSED LAWN AREAS AROUND BUILDINGS SHALL BE STABILIZED WITH SEED. SEE SHEET 16 (LAWN AREAS MIXTURE).
5. ANY PROPOSED IRRIGATION DESIGN AND/OR SYSTEM WILL BE DETERMINED IN THE FIELD BY THE IRRIGATION CONTRACTOR.
6. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK.
7. NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE MADE WITHOUT WRITTEN CONSENT FROM THE TOWN OF ORANGETOWN LANDSCAPE CONSULTANT.
8. ALL VEGETATION SHOWN ON THIS PLAN WILL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF THE PROPOSED USE.
9. ONLY NATURAL HERBICIDES AND PESTICIDES WILL BE USED IF NECESSARY IN THE MANAGEMENT OF THE SITE LANDSCAPING.

30 0 30 60

SCALE : 1" = 30'

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11	12/9/25	MMN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	8/20/20	TPS	REVISED PER REMOVAL OF P-BIO/PRACE IMPLEMENTATION CHANGES
2	01/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	4/11/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	6/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MMN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MMN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MMN	REVISED PER TOWN COMMENTS
8	06/20/25	MMN	REVISED PER TOWN COMMENTS
9	10/20/25	MMN	REVISED PER TOWN COMMENTS
10	11/7/25	MMN	REVISED PER TOWN COMMENTS

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Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

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PROJECT NUMBER:	DRAWING NAME:
22002634A	C-LAND

SHEET TITLE:
LANDSCAPE PLAN
EAST

SHEET NUMBER:
15 of 24

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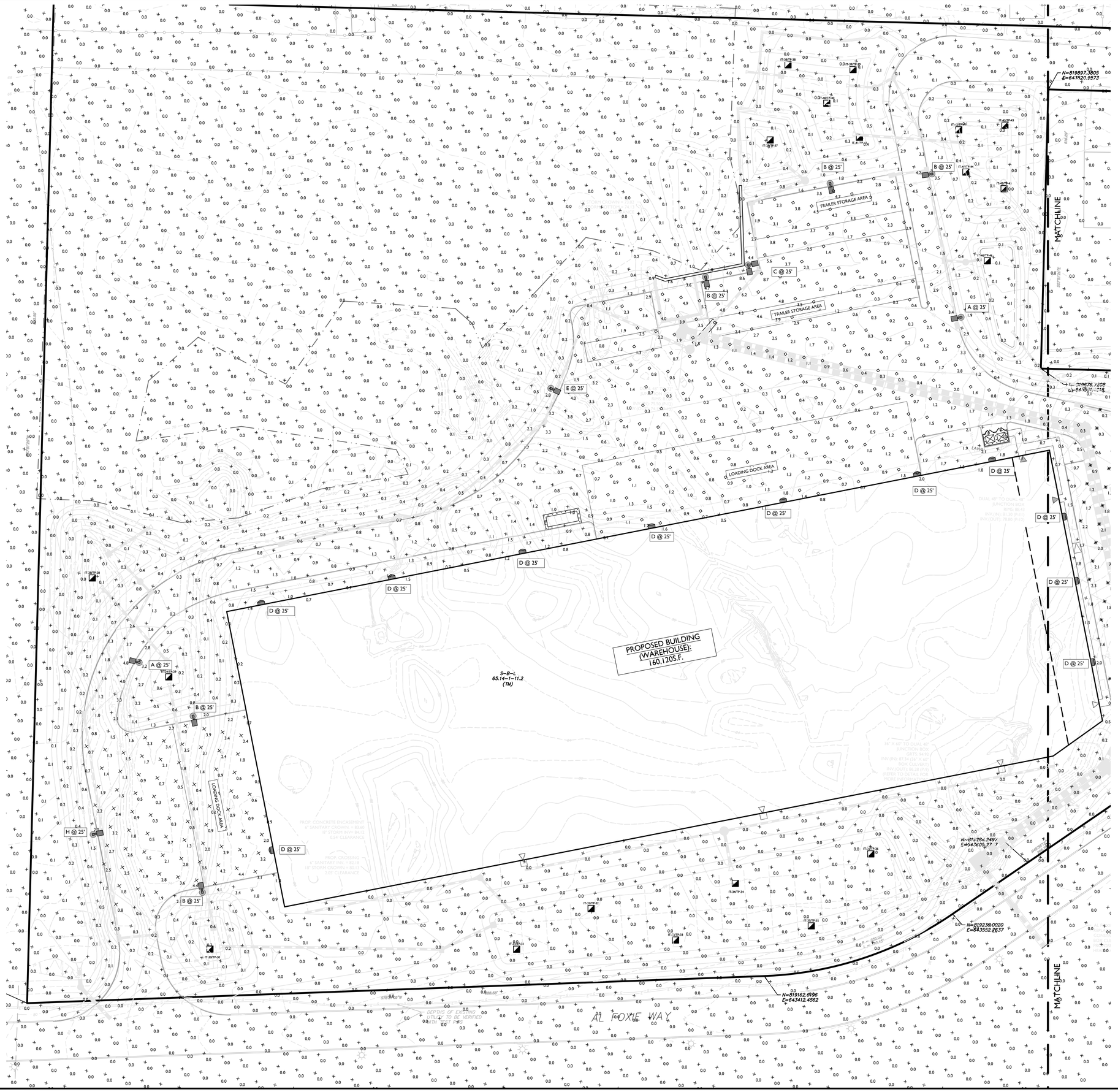
2022\22002634A\Engineering\Site Plans\C-LAND.dwg(C-LAND Layout) CA, MICHAEL.NICOSIA



LIGHTING LEGEND:

- SINGLE FIXTURE POLE LIGHT
- DOUBLE FIXTURE POLE LIGHT
- WALLPACK
- 0.0 LIGHT LEVEL AT GRADE (IN FOOTCANDLES)

LIGHTING NOTES:

1. THIS PLAN IS TO BE USED FOR LIGHTING PURPOSES ONLY.
2. POLES AND FIXTURES AS SUPPLIED BY:
   POLES & WALL FIXTURES - HOLOPHANE
   POLE FIXTURES - AMERICAN ELECTRIC LIGHTING
3. LAMPS ARE TO BE LEDs. A LIGHT LOSS FACTOR (LLF) WAS USED AS SHOWN IN THE LUMINARIES SCHEDULE.
4. FIXTURES AND POLES ARE TO BE BLACK.
5. POLE MOUNTED FIXTURES SHALL BE PLACED A MINIMUM OF TWO (2) FEET BEHIND CURBS, EDGE OF PAVEMENT OR RETAINING WALLS IN CAR PARKING AREAS.
6. PROPOSED LIGHT FIXTURE LOCATIONS ARE CRITICAL TO PROVIDE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. THE LIGHTING CONTRACTOR SHALL FIELD VERIFY FIXTURE LOCATIONS PRIOR TO INSTALLATION. IF ADJUSTMENT TO ANY LIGHT FIXTURE LOCATION IS REQUIRED DUE TO FINAL CONSTRUCTION OF UTILITIES AND SITE IMPROVEMENTS, THE LIGHTING CONTRACTOR SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
7. LIGHTING SHOWN ON PLAN DEPICTS AVERAGE MAINTAINED FOOTCANDLE LEVELS AT GRADE.
8. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF LIGHT FIXTURES FOR REVIEW AND APPROVAL BY THE OWNER OR PROJECT LANDSCAPE ARCHITECT.
9. ELECTRICAL PLANS FOR WIRING LAYOUT BY OTHERS.
10. POLE BASE INSTALLATION SHALL INCLUDE A SUPPLEMENTARY GROUND ROD AND WIRE LEAD TO BASE FOR POWER CONNECTION. DETAILS PER PROJECT ELECTRICAL ENGINEER.
11. ALL LIGHTING FIXTURES WILL BE DARK SKY COMPLIANT.

30 0 30 60
SCALE : 1" = 30'

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	8/24/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	2/08/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	05/20/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER:	DRAWING NAME:
22002634A	C-LGHT

SHEET TITLE:
LIGHTING PLAN
WEST

SHEET NUMBER:
16 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2022\22002634A\Engineering\Site Plans\C-LGHT.dwg, C-LIGHTING, By: MICHAELA.MCCORMICK

BIRCHWOOD DRIVE
AL FOXIE WAY
MATCHLINE
MATCHLINE
N=819897.3805
E=643520.9573
N=820041.2208
E=643537.4218
N=820041.2208
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E=64425
N=819996.5640
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E=644144.0890
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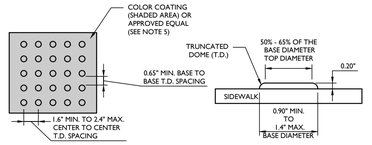
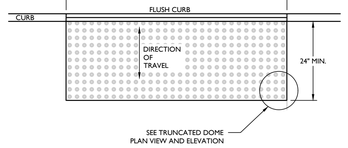
E=644010.4341
S-B-L
65.14-1-9
(TM)
S-B-L
65.14-1-8
(TM)
S-B-L
65.14-1-8.2
(TM)
S-B-L
65.14-1-11.3
(TM)
S-B-L
65.14-1-11.2
(TM)
A @ 25'
D @ 25'
F @ 25'
CAR PARKING AREA
LOADING DOCK / TRAILER STORAGE AREA
ST. CONG. PARKING LOT
CONC. CURB
CONC. WALK
FOG
S81°55'07"W
53.19'
S81°55'07"W
725.65'
S81°55'07"W
650.78'
S81°55'07"W
35.28'
S44°56'39"W
28.19'
R = 345.00'
L = 43.60'
N81°38'28"W
35.28'
N81°38'28"W
650.78'
C.B. FND. 3.44' NW
C.B. FND. 3.44' NW
C.B. FND. 3.44' NW



TRUNCATED DOME PLAN VIEW ENLARGEMENT

TRUNCATED DOME ELEVATION



PLAN VIEW

NOTES:

1. THE DETECTABLE WARNING SURFACE SHALL BE MANUFACTURED MATS THAT ARE EMBEDDED AND CAST-IN-PLACE IN THE CONCRETE.
2. IN LIEU OF A CAST IN PLACE DETECTABLE WARNING SURFACE, THE CONTRACTOR MAY UTILIZE A SURFACE APPLIED DETECTABLE WARNING SURFACE WITH PRIOR APPROVAL OF THE UNDERSIGNED ENGINEER AND PRIOR TO POURING OF THE CONCRETE RAMP.
3. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SHOP DRAWING OF THE DETECTABLE WARNING SURFACE PRIOR TO CONSTRUCTION FOR APPROVAL.
4. THE CONTRACTOR SHALL PROVIDE A MANUFACTURER CERTIFICATION THAT THE DETECTABLE WARNING SURFACE MEETS WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE DEPARTMENT OF JUSTICE AND THE ADA STANDARDS AS SUPPORTED BY THE UNITED STATES ACCESS BOARD, AND THE STATE AND/OR LOCAL ADA STANDARDS.
5. **SAFETY RED** SHALL BE APPROVED BY THE LOCAL JURISDICTION PRIOR TO INSTALLATION. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. ALTERNATIVE COLOR MAY BE USED PROVIDED SUCH COLOR COMPLIES WITH CURRENT ADA STANDARDS.
6. DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES.
7. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 0.9 INCH (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM, A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2 INCH (5.1 mm).
8. TRUNCATED DOMES IN DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41 mm) MINIMUM AND 2.4 INCHES (61 mm) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH (17 mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
9. SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. WHERE REQUIRED BY THE MANUFACTURER, THE CONCRETE BORDER SHALL NOT EXCEED 2 INCHES (51 mm).
10. DETECTABLE WARNING SURFACES SHOULD NOT BE PLACED ON PAVING OR EXPANSION JOINTS AT CURB RAMPS. THE ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET SO PEDESTRIANS WHO USE WHEELCHAIRS CAN "TRACK" BETWEEN THE DOMES.
11. ON PERPENDICULAR CURB RAMPS, DETECTABLE WARNING SURFACES SHALL BE PLACED AS FOLLOWS:
    a. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB.
    b. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5.0 FT OR LESS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE RAMP RUN WITHIN ONE DOME SPACING OF THE BOTTOM GRADE BREAK.
    c. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS MORE THAN 5.0 FT, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB.
12. ON PARALLEL CURB RAMPS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALKS.
13. ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB.

DETECTABLE WARNING SURFACE DETAIL

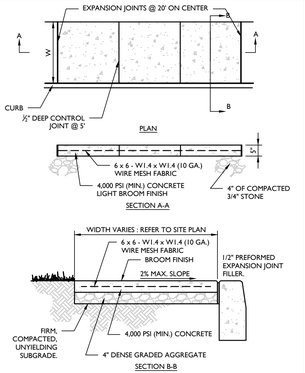
NOT TO SCALE | MCNY-SITE-HADA-2100 | 07/01/19

NOTES:

1. CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
2. LANDING AREA, APPROACH SIDEWALK TRANSITIONS AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
3. CURB AT RAMP OPENING (FLUSH CURB) TO BE FLUSH WITH ROADWAY PAVEMENT.
4. CROSSWALKS AND PAVEMENT MARKINGS TO BE INSTALLED AS DENOTED ON SITE PLAN.
5. MAXIMUM RAMP SLOPE MAY BE 12H:1V UPON APPROVAL OF ENGINEER. RAMP SLOPES SHOWN ARE THE PREFERRED SLOPE. SIDE FLARE SLOPES MAY BE 10H:1V UPON APPROVAL OF THE ENGINEER.
6. MINIMUM RAMP CROSS-SLOPE SHALL BE 0.50%. THE MAXIMUM RAMP CROSS-SLOPE MAY BE 2.00% UPON APPROVAL OF THE ENGINEER. CROSS-SLOPES SHOWN IN THE DETAILS ARE THE PREFERRED SLOPES TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE.
7. ACCESSIBLE RAMPS SHALL BE INSTALLED PURSUANT WITH THE CURRENT UNITED STATES ACCESS BOARD ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES AND THE ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND OTHER APPLICABLE LOCAL AND STATE STANDARDS IN EFFECT AT THE DATE OF CONSTRUCTION.
8. DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
9. THE RAMP SURFACE SHALL HAVE A NON-SLIP, HAND BROOMED FINISH.
10. CONCRETE EXPANSION JOINTS SHALL HAVE A FIRM SURFACE WITH 1/4" BEVELED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN 1/4" BELOW THE ADJOINING CONCRETE SURFACE.
11. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
12. THE CLEAR SPACE SHALL BE INCREASED TO 5 FEET WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
13. THE MAXIMUM SEPARATION BETWEEN THE BACK OF CURB AND DETECTABLE WARNING SURFACE SHALL NOT EXCEED 5 FEET. THE MAXIMUM SEPARATION AREA MAY BE WITHIN THE 4' X 4' CLEAR SPACE.
14. SEE SEPARATE DETAILS FOR "DETECTABLE WARNING SURFACE" AND "CURB RAMP SECTIONS".
15. WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB.
16. ALL CURB RAMP FLUSH CURB SHALL BE MADE WITH CONCRETE CURB CRADLE REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT THE SITE.

CURB RAMP NOTES

MCNY-SITE-HADA-2500 | 07/01/19

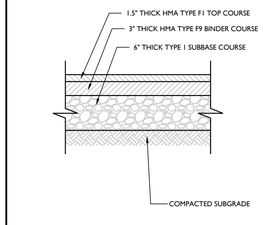


NOTES:

1. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 4" WIDE AND EXTENDING THE FULL WIDTH OF THE SIDEWALK (UNBROKEN) SHALL BE INSTALLED.
2. ½" DEEP CONTROL JOINTS INSTALLED AT AN INTERVAL OF EVERY 5'.
3. JOINT FILLER SHALL CONFORM TO AASHTO M-33. SURFACE OF CONCRETE SHALL BE BROOM FINISH. ROUND EDGES USING AN EDGING TOOL WITH A 1/4" RADIUS.
4. CONCRETE SIDEWALK SHALL BE CONSTRUCTED PER THE LATEST ADA REQUIREMENTS.

REINFORCED CONCRETE SIDEWALK (NEXT TO CURB) DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1800 | 07/01/19

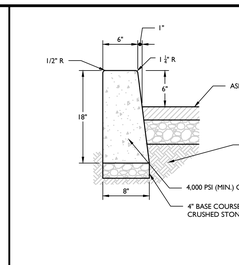


NOTES:

1. PAVEMENT TYPES TO BE IN ACCORDANCE WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

STANDARD ASPHALT PAVEMENT DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1000 | 07/01/19

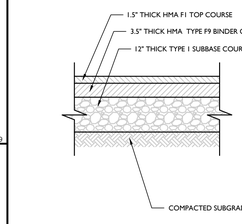


NOTES:

1. PREFORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THICK AT 20' MAX. INTERVALS ALONG THE CURB. PROVIDE CONTROL JOINTS @ 10 FEET MAX. BETWEEN EXPANSION JOINTS.

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1000 | 07/01/19

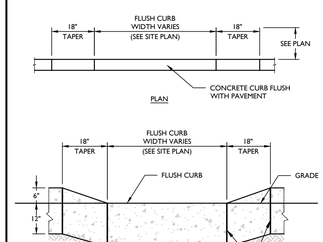


NOTES:

1. PAVEMENT TYPES TO BE IN ACCORDANCE WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

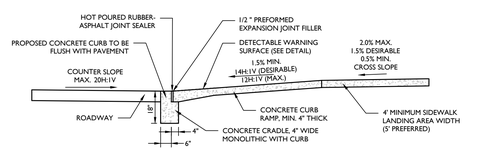
HEAVY-DUTY ASPHALT PAVEMENT DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1100 | 07/01/19

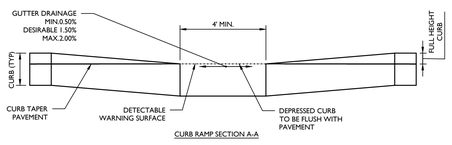


CONCRETE FLUSH CURB DETAIL

NOT TO SCALE | MCNY-SITE-CURB-1300 | 07/01/19



CURB RAMP SECTION B-B



CURB RAMP SECTION A-A

NOTES:

1. DEPRESSED CURB AT DETECTABLE WARNING SHALL BE A SMOOTH LEVEL SURFACE THAT IS FLUSH WITH THE ADJOINING PAVEMENT. NO BUMPS OR ROUGH SURFACE ARE ALLOWED. SUCH UNEVENNESS SHALL BE MILLED OR GRINDED SMOOTH.
2. POSITIVE DRAINAGE SHALL BE MAINTAINED AT RAMP. RAMP SHALL SLOPE TOWARDS PAVEMENT NO PONDING OF WATER IS PERMITTED AT CURB RAMP. PAVEMENT GRADES TO BE ADJUSTED AS NECESSARY TO PROVIDE POSITIVE GUTTER DRAINAGE.
3. CURB (DROPPED CURB) GUTTER-LINE TO BE FLUSH WITH ROADWAY PAVEMENT.
4. MAXIMUM GUTTER DRAINAGE GRADE MAY BE INCREASED TO 2.00% UPON THE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL.
5. DEVIATION FROM THIS DETAIL REQUIRES THE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL.

CURB RAMP SECTIONS DETAIL

NOT TO SCALE | MCNY-SITE-HADA-2000 | 07/01/19

"STOP & ONLY" PAVEMENT MARKING DETAIL

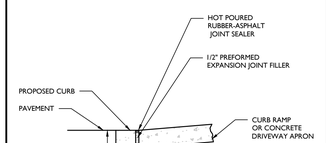
NOT TO SCALE | MCNY-SITE-MRKG-1300 | 07/01/19

24" x 30"

COLORS:
LEGEND = RED (RETROREFLECTIVE)
BACKGROUND = WHITE (RETROREFLECTIVE)

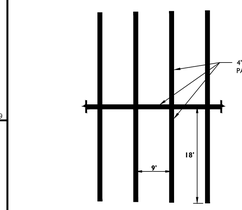
R8-3a SIGN DETAIL

MCCM-SIGN-REGU-R8-3A | 12/01/20



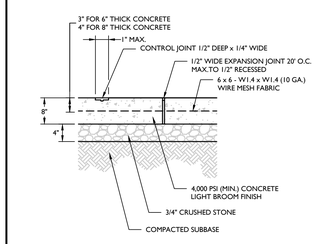
FLUSH CURB AND CRADLE DETAIL

NOT TO SCALE | MCNY-SITE-HADA-2300 | 07/01/19



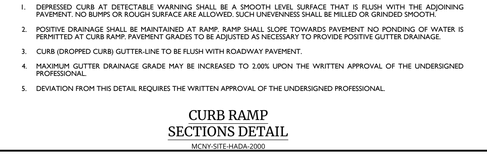
TYPICAL PARKING STALL STRIPING DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1000 | 07/01/19



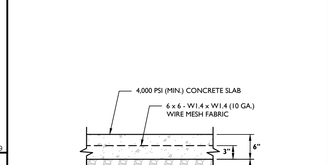
CONCRETE PAVEMENT DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1500 | 07/01/19



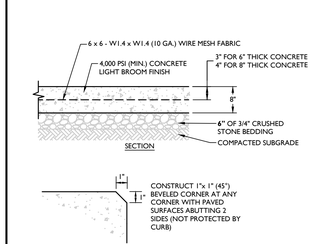
TYPICAL STOP BAR DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1100 | 07/01/19



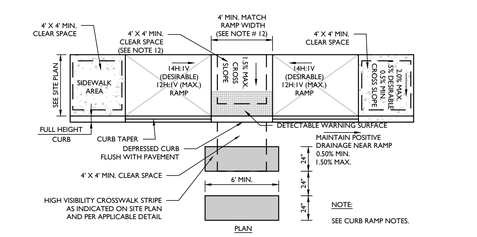
TRASH ENCLOSURE CONCRETE PAD DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-2100 | 07/01/19



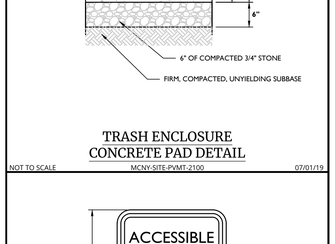
CONCRETE LOADING PAD DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1600 | 07/01/19



ACCESSIBLE PARKING LINE STRIPE STALL DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-1801 | 07/01/19

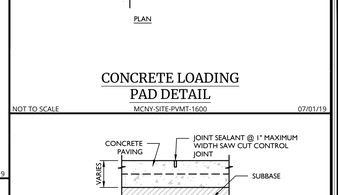


NOTES:

1. SIGN COLORS TO BE IN ACCORDANCE WITH CURRENT ADA STANDARDS.
2. ONE VAN ACCESSIBLE SIGN TO BE INCLUDED AT EACH ADA PARKING AREA.

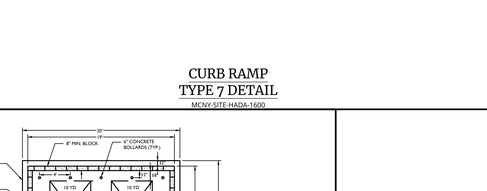
SIGN FOR ACCESSIBLE PARKING SPACE DETAIL

NOT TO SCALE | MCNY-SITE-HADA-2400 | 07/01/19



CONCRETE PAVING JOINTS DETAIL

NOT TO SCALE | MCNY-SITE-PVMT-1700 | 07/01/19



CURB RAMP TYPE 7 DETAIL

NOT TO SCALE | MCNY-SITE-HADA-1600 | 07/01/19

STROKE WIDTH: MINIMUM/STANDARD = 3"

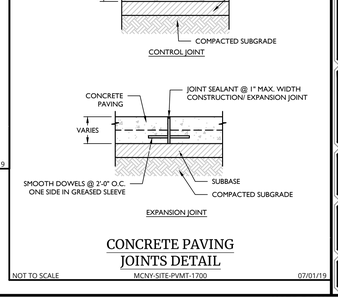
ACCESSIBLE SYMBOL DETAIL

NOT TO SCALE | MCNY-SITE-MRKG-2000 | 07/01/19

NOTES:
1. VERIFY THE DUMPSTER SIZE WITH TENANTS. ADJUST THE FINAL FENCE ENCLOSURE SIZE ACCORDINGLY.
2. ROLL OUT DUMPSTER OPENINGS ARE PROPOSED TO ACCOMMODATE ACCESS TO ALL DUMPSTERS.
3. GATE TO REMAIN CLOSED WHEN NOT IN USE. HINGES TO INCLUDE SELF-CLOSING MECHANISM.

REFUSE/RECYCLING ENCLOSURE (WITH DOUBLE GATE) DETAIL

NOT TO SCALE | MCCM-SITE-FENCE-2200 | 07/01/19

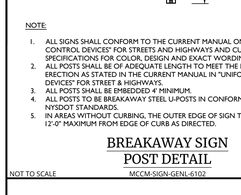


NOTE:

1. ALL SIGNS SHALL CONFORM TO THE CURRENT MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS AND CURRENT MUNICIPAL SPECIFICATIONS FOR COLOR, DESIGN AND EXACT WORDING.
2. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT MANUAL IN "UNIFORM TRAFFIC CENTRAL DEVICES" FOR STREET & HIGHWAYS.
3. ALL POSTS SHALL BE EMBEDDED 4' MINIMUM.
4. ALL POSTS TO BE BREAKAWAY STEEL U-POSTS IN CONFORMANCE WITH CURRENT NYSDOT STANDARDS.
5. IN AREAS WITHOUT CURBING, THE OUTER EDGE OF SIGN TO BE 2'-0" MINIMUM TO 12'-0" MAXIMUM FROM EDGE OF CURB AS DIRECTED.

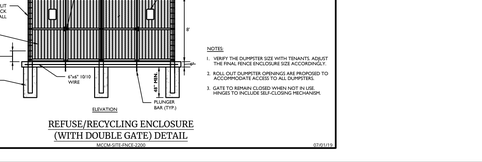
BREAKAWAY SIGN POST DETAIL

NOT TO SCALE | MCCM-SIGN-GENL-6102 | 07/01/19



R8-31 SIGN DETAIL

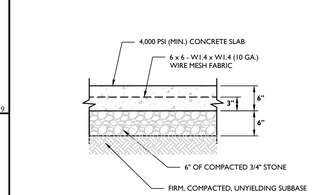
NOT TO SCALE | MCCM-SIGN-GENL-1700 | 07/01/19



24" x 30"

COLORS:
LEGEND = GREEN (RETROREFLECTIVE)
BACKGROUND = WHITE (RETROREFLECTIVE)

R8-3a SIGN DETAIL



TRASH ENCLOSURE/GENERATOR PAD CONCRETE PAD DETAIL

NOT TO SCALE

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REV	DATE	DRAWN BY	DESCRIPTION
1	11/09/05	MMH	REVISED PER TOWN COMMENTS
2	03/09/06	TPS	REVISED PER RESPONSE OF SUFFICIENCE IMPLEMENTATION CHAMBERS
3	7/7/06	JMG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/6/06	JMG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/13/06	MMH	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MMH	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MMH	REVISED PER TOWN COMMENTS
8	06/20/25	MMH	REVISED PER TOWN COMMENTS
9	10/20/25	MMH	REVISED PER TOWN COMMENTS
10	11/07/25	MMH	REVISED PER TOWN COMMENTS

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

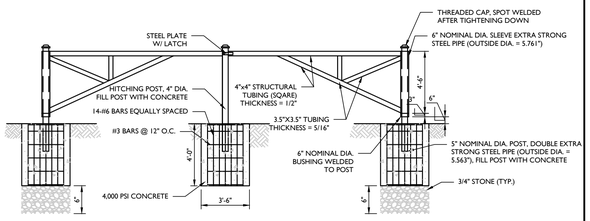
PROJECT NUMBER: 220026.34A | DRAWING NAME: C-DTLS

SHEET TITLE: SITE DETAILS

SHEET NUMBER: 18 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

3/22/2220026.34A\Engineering\Civil\Plans\C-DTLS.dwg,C-DTLS-1&-1(1ST DETAIL), By: MICHAEL A. MOORE

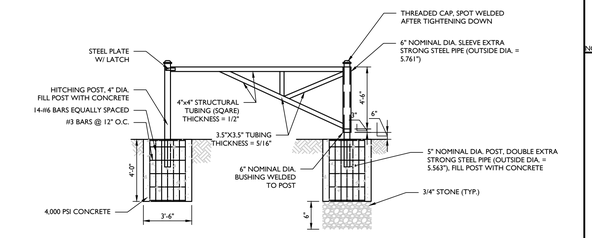


NOTES:

1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
2. GATE SHALL BE USE FOR EMERGENCY ACCESS ONLY.
3. GATE TO BE HINGED ONLY. NO LOCKS ARE TO BE USED AT ANYTIME.

EMERGENCY ACCESS DOUBLE GATE DETAIL

NOT TO SCALE — MCCM-SITE-FNCE-3100 — MOD: 01/19/24 07/01/19



NOTES:

1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
2. GATE SHALL BE USE FOR EMERGENCY ACCESS ONLY.
3. GATE TO BE HINGED. NO LOCKS ARE TO BE USED AT ANYTIME.

EMERGENCY ACCESS GATE DETAIL

NOT TO SCALE — MCCM-SITE-FNCE-3100 — 07/01/19

SPLIT RAIL FENCE (3 - RAIL) DETAIL

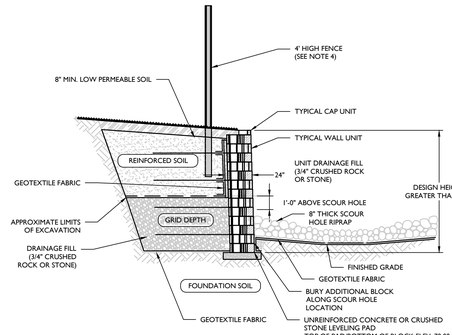
NOT TO SCALE — MCCM-SITE-FNCE-1900 — MOD: 07/03/24 07/01/19

NOTE:

1. FOOTING TO BE 2 X POST WIDTH, MINIMUM **36"** DEEP AND **3,000 PSI** CONCRETE.

WOOD GATE (3 - RAIL) DETAIL

NOT TO SCALE — MCCM-SITE-FNCE-2000 — 02/01/19

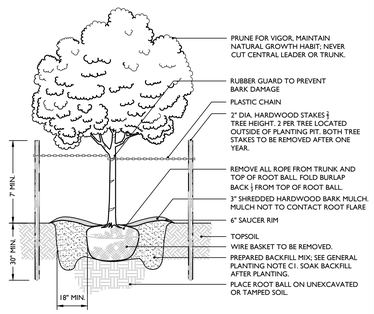


NOTES:

1. THIS DETAIL IS A SCHEMATIC REPRESENTATION FOR MUNICIPAL AND/OR AGENCY APPROVALS AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION.
2. CONTRACTOR TO PROVIDE SITE-SPECIFIC SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS FOR EACH RETAINING WALL PREPARED BY A STATE LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. A SAFETY BARRIER (FENCING) IS REQUIRED ON ALL WALLS WHERE THE WALL HEIGHT EXCEEDS 30". PLACEMENT AND INSTALLATION METHOD OF THE PROPOSED FENCING TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL REINFORCED WATER WALL SECTION AT SCOUR HOLE DETAIL

DTL_SCALE — DTL_NUMBER — MODIFIED DTL_DATE

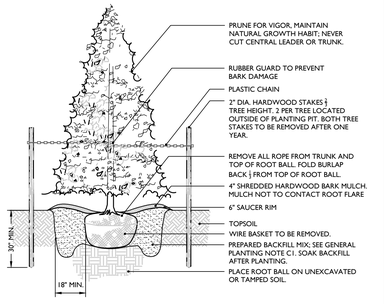


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

TREE PLANTING DETAIL

NOT TO SCALE — 07/01/19



NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

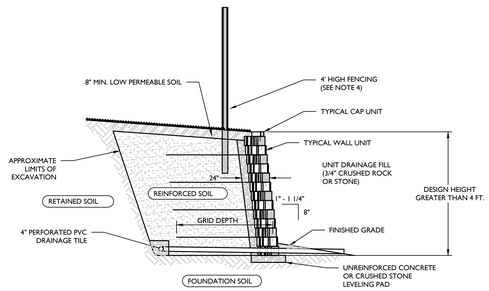
EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE — 07/01/19

GENERAL PLANTING NOTES

1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND VERIFY LOCATION OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION.
3. ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
4. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSION OF THE LANDSCAPE CONSULTANT. WRITTEN PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE DOCUMENTED.
5. THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
6. ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30" ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT HAVE BRANCHES BELOW 10'-0".
7. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
8. ALL PLANT MATERIAL SHALL BE PROPERLY INSTALLED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. CUT AND REMOVE JUTE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL. WIRE BASKETS AND NOT JUTE BURLAP SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING THE PLANT PIT.
9. BRANCHES OF DECIDUOUS TREES SHALL BE PRUNED BACK BY NO MORE THAN ONE QUARTER (1/4) TO BALANCE THE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR CHARACTER AND SHAPE. THE CENTRAL LEADER OF TREE SHALL NOT BE PRUNED.
10. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH CRUSHED STONE OR UNTIL FREE DRAINING.
11. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT NURSERY.
12. OPTIMUM PLANTING TIME:
    DECIDUOUS - APRIL 1 TO JUNE 1 & OCTOBER 15 TO NOVEMBER 30.
    CONIFEROUS - APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1.

    PLANTING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITH OUT PRIOR APPROVAL FROM THE LANDSCAPE CONSULTANT.
13. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS. WATERING AMOUNTS SHOULD BE ADJUSTED AS RAIN EVENTS OCCUR. WATERING AFTER THE INITIAL 4 WEEKS SHALL BE ADJUSTED BASED ON SEASONAL CONDITIONS. WATERING SHALL NOT TAKE PLACE DURING THE HOTTEST POINT OF THE DAY.
14. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWO YEARS AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A TREE OF SIMILAR SIZE AND SPECIES AT NO EXPENSE TO THE OWNER.
15. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 12" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED. SOIL PH SHOULD BE 5.5-6.5.
16. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH THE GENERAL SEEDING NOTES ON THIS SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED, FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
17. ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH.
18. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
19. ALL PLANTING DEBRIS (WIRE, TWINE, RUBBER HOSE, BACKFILL ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.



NOTES:

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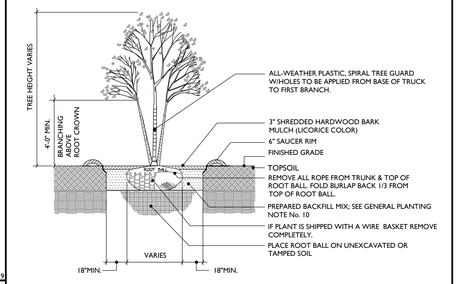
3. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. A SAFETY BARRIER (FENCING) IS REQUIRED ON ALL WALLS WHERE THE WALL HEIGHT EXCEEDS 30". PLACEMENT AND INSTALLATION METHOD OF THE PROPOSED FENCING TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL REINFORCED WALL SECTION (1" TO 1-1/4" SETBACK) DETAIL

DTL_SCALE — DTL_NUMBER — MODIFIED DTL_DATE



MULTI-STEM TREE PLANTING DETAIL

NOT TO SCALE — 07/01/19

GENERAL SEEDING NOTES

1. TEMPORARY SEEDING SHALL CONSIST OF PERENNIAL RYEGRASS IN LAWN AREAS AND ANNUAL RYEGRASS IN AREAS TO BE SEEDED WITH A MEADOW MIX APPLIED AT A RATE OF 1.0 LBS. PER 1000 SF OR SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1000 SF. TEMPORARY SEEDING SHALL BE MULCHED AND MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING.
2. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE OR APPROVED EQUAL - OPTIMUM SEEDING DATES ARE BETWEEN APRIL 1 AND MAY 31: AND AUGUST 16 AND OCTOBER 15.

   1) LAWN AREAS MIXTURE -

HARD FESCUE	120 LBS/ACRE
PERENNIAL RYE GRASS	30 LBS/ACRE
KENTUCKY BLUE GRASS (BLEND)	40 LBS/ACRE

   2) BASIN MIX - (2-3 LBS/1,000 S.F. MINIMUM)
   CREEPING RED FESCUE (30%)
   TALL FESCUE (30%)
   PERENNIAL RYE GRASS (10%)
   BIRDSFOOT TREFOIL (30%)

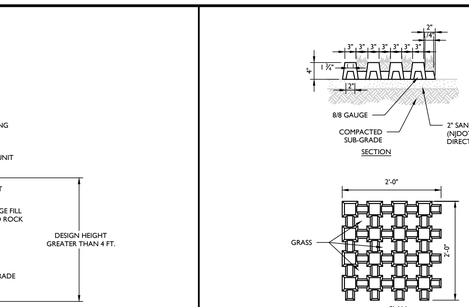
   3) NATIVE STEEP SLOPE MIX WITH GRAIN OATS
   (ERNMX# ERNMX-181-1 BY ERNST SEEDS OR APPROVED EQUAL)

   SEEDING RATE: 75 LBS PER ACRE.

   SPECIES LIST:
   - 40.0% OATS, (AVENA SATIVA)
   - 20.8% INDIANGRASS, PA ECOTYPE (SORGHASTRUM NUTANS, PA ECOTYPE)
   - 11.2% BIG BLUESTEM, 'NIAGARA' (ANDROPOGON GERARDII, 'NIAGRA')
   - 8.0% CANADA WILDRYE (ELYMUS CANADENSIS)
   - 5.6% VIRGINIA WILDRYE, MADISON-NAY ECOTYPE (ELYMUS VIRGINICUS)
   - 3.2% AUTUMN BENTGRASS (AGROSTIS PERENNANS)
   - 3.1% SWITCHGRASS (PANICUM VIRGATUM)
   - 2.4% DEERTONGUE (CANNICUM CLANDESTINUM)
   - 1.2% PURPLE CONEFLOWER (ECHINACEA PURPUREA)
   - 1.1% PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)
   - 0.9% OXEYE SUNFLOWER (HELIOPSIS HELIANTHOIDES)
   - 0.8% LANCELEAF COREOPSIS (COREOPSIS)
   - 0.8% BLACKEYED SUSAN (RUDBECKIA HIRTA)
   - 0.3% WILD BERGAMOT (MONARDA FISTULOSA)
   - 0.2% COMMON MILKWEED (ASCLEPIAS SYRIACA)
   - 0.2% WRINKLELEAF GOLDENROD (SOLIDAGO RUGOSA)
   - 0.1% CALICA ASTER (ASTER LATERIFLORUS)
   - 0.1% HEATH ASTER (ASTER PILLOSUS)

   100%

3. PERMANENT SEEDING TO BE APPLIED BY RAKING OR DRILLING INTO THE SOILS AT A RATE OF 150# PER ACRE. SLOPED AREA TO BE COVERED WITH MULCH AS INDICATED IN NOTE 5.
4. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE IN COMPLIANCE WITH THE LATEST NYSDEC REGULATIONS. A SOIL TEST PRIOR TO FERTILIZER APPLICATION IS RECOMMENDED.
5. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.
6. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL. MULCH WILL BE SPREAD AT RATES OF 90 TO 115 LBS. PER 1000 SF AND ANCHORED WITH A MULCH ANCHORING TOOL OR LIQUID MULCH BINDER, AND SHALL BE PROVIDED ON ALL SEEDINGS. HYDROMULCH SHALL ONLY BE USED DURING OPTIMUM GROWING SEASONS.
7. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
8. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
9. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.



SECTION

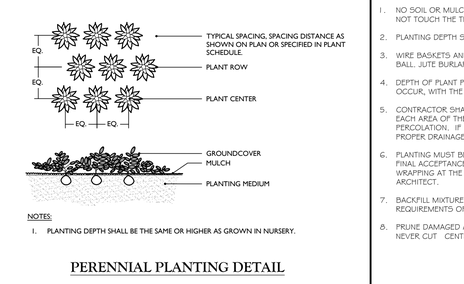
PLAN

NOTES:

1. PAVERS SHALL BE MANUFACTURED BY **HASTINGS PAVEMENT CO.** INC., FABRICATED WITH 6"x6" X 8/8 GAUGE STEEL MESH, AND 5,000 PSI CONCRETE OR APPROVED EQUAL.
2. SETTING BED FOR PAVERS SHALL BE EITHER UNDISTURBED EARTH OR FILL COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D-1557-64 + (PLUS 4% OR MINUS 2% OPTIMUM MOISTURE). REMOVE FROM THE SETTING BED, ROCK OR OTHER MATERIALS WHICH WOULD CREATE UNEVEN BEARING. PLACE TOPSOIL, SAND, OR STONE DUST IN A 2" COMPACTED LAYER TO PRESENT A TRUE AND EVEN GRADE OVER ENTIRE AREA TO RECEIVE PAVER. SET PAVERS AND LINE UP TO ABUT.
3. THOROUGHLY MIX LIME, FERTILIZER AND OTHER ADDITIVES PER LOCAL SOIL CONSERVATION REQUIREMENTS WITH THE TOPSOIL AND SPREAD LOOSELY TO FILL VOIDS IN PAVERS. WATER WITH A MIST SPRAY TO SETTLE. ADD ADDITIONAL TOPSOIL MIX TO BRING THE TOPSOIL FLUSH WITH TOP OF THE PAVER.
4. ADD SEED MIX AS PER LOCAL SOIL CONSERVATION DISTRICT AND PROJECT LANDSCAPING REQUIREMENTS AND APPLY SEED AT SLIGHTLY LESS THAN NORMAL RATE, AND MULCH. WHEN GRASS IS 2 1/2" HIGH, CUT TO 1 3/4".

GRASS PAVERS (FOR EMERGENCY/MAINTENANCE ACCESS DRIVE) DETAIL

DTL_SCALE — DTL_NUMBER — MODIFIED DTL_DATE



NOTES:

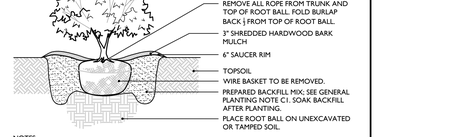
1. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

PERENNIAL PLANTING DETAIL

NOT TO SCALE

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT. MULCH SHALL NOT TOUCH THE TREE TRUNK.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
3. WIRE BASKETS AND NON-JUTE BURLAP MUST BE ENTIRELY REMOVED FROM THE ROOT BALL. JUTE BURLAP MUST BE REMOVED FROM THE TOP 1/3 OF THE ROOT BALL.
4. DEPTH OF PLANT PIT SHALL BE INCREASED BY 12" WHEREVER POOR SOIL CONDITIONS OCCUR, WITH THE ADDITION OF LOOSE AGGREGATE.
5. CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
6. PLANTING MUST BE GUARANTEED FOR TWO FULL GROWING SEASONS FROM THE TIME OF FINAL ACCEPTANCE BY THE LANDSCAPE CONSULTANT. CONTRACTOR SHALL REMOVE ALL WRAPPING AT THE END OF GUARANTEE PERIOD OR SOONER PER PROJECT LANDSCAPE ARCHITECT.
7. BACKFILL MIXTURE TO BE SPECIFIED BASED UPON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT.
8. PRUNE DAMAGED AND CONFLICTING BRANCHES MAINTAINING NORMAL TREE SHAPE, NEVER CUT CENTRAL TRUNK OR LEADER.

PLANT DETAIL NOTES

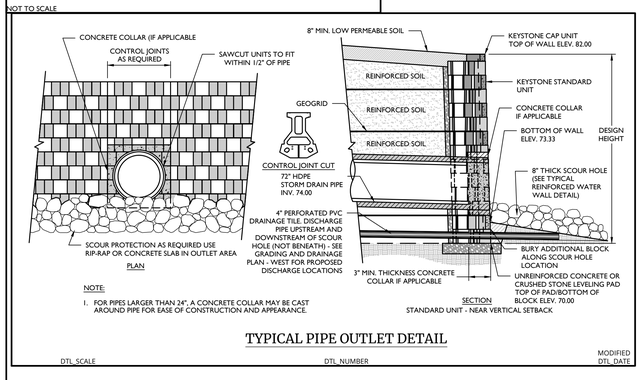


NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

SHRUB PLANTING DETAIL

NOT TO SCALE



NOTE:

1. FOR PIPES LARGER THAN 24", A CONCRETE COLLAR MAY BE CAST AROUND PIPE FOR EASE OF CONSTRUCTION AND APPEARANCE.

TYPICAL PIPE OUTLET DETAIL

DTL_SCALE — DTL_NUMBER — MODIFIED DTL_DATE

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Doing Business as MASER CONSULTING

811 Know what's below. Call before you dig.

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REV	DATE	DRAWN BY	DESCRIPTION
11	1/24/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/08/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	03/06/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/17/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	04/09/25	MAN	REVISED PER TOWN COMMENTS
9	10/20/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER:	DRAWING NAME:
22002634A	C-DTLS

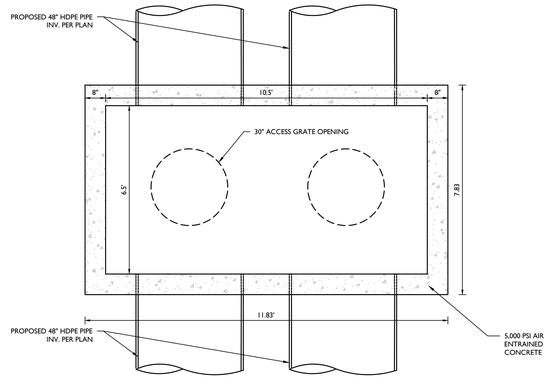
SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

19 of 24

2022002634A\Engineering\Site Plans\ C01 Cadd\ C-DTLS1 DETAILS By: MICHAELA MOSTOWSKI

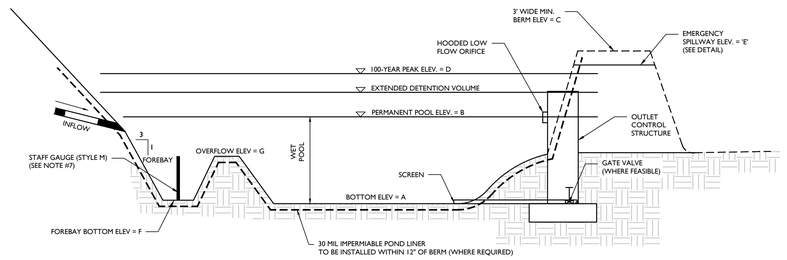


NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CUSTOM STRUCTURE.
2. CONTRACTOR TO CONFIRM EXISTING INVERTS IN THE FIELD PRIOR TO SHOP DRAWINGS PRODUCTION.

DIVERSION STREAM JUNCTION BOX (TYP)

MOD: 08/08/23



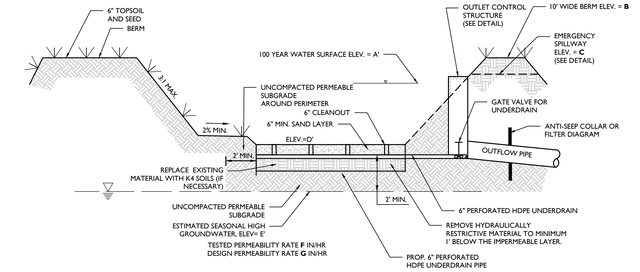
BASIN ID	POND EL [A]	PERM. POOL EL [B]	POND BERM EL [C]	POND 100-YR EL [D]	EMGCY SPILLWAY EL [E]	FOREBAY EL [F]	OVERFLOW EL [G]	LINER REQUIRED
WET 1	73.00	74.35	77.00	75.98	76.00	N/A	N/A	YES
WET 5	83.00	83.40	87.00	85.94	86.50	82.00	85.10	NO
DET 1	74.00	N/A	80.00	78.98	79.00	N/A	N/A	NO
DET 2	76.00	N/A	82.00	82.98	83.00	N/A	N/A	NO

BASIN NOTES:

1. ALL EARTHWORK OPERATIONS, INCLUDING EXCAVATION, PROOFROLLING, GRADING AND BACKFILL OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF A NEW YORK LICENSED PROFESSIONAL ENGINEER.
2. FILL MATERIAL AND LINER INSTALLATION SHALL BE INSPECTED, APPROVED BY, AND INSTALLED UNDER THE SUPERVISION OF A NEW YORK LICENSED PROFESSIONAL ENGINEER.
3. THE FILL MATERIAL TO BE UTILIZED FOR THE BERM/EMBANKMENT AT THE WET POND SHALL BE AS FOLLOWS: THE BERMS SHALL BE CONSTRUCTED WITH SOIL FILL THAT HAS AN IN-SITU PERMEABILITY NO GREATER THAN 0.4 IN/HR. THE BERM/EMBANKMENT FILL SHALL BE PLACED IN 12 INCH LAYERS AND COMPACTED TO 95% MAXIMUM MODIFIED PROCTOR DENSITY (ASTM D-1557). EACH LIFT SHALL BE INSPECTED, TESTED, AND APPROVED BY A NEW YORK LICENSED PROFESSIONAL ENGINEER PRIOR TO THE PLACEMENT OF SUBSEQUENT LIFTS.
4. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF SOIL CONDITIONS ENCOUNTERED IN THE FIELD DIFFER FROM WHAT IS SHOWN HEREON. SUCH CONDITIONS COULD RENDER THE DESIGN HEREON INAPPROPRIATE OR INEFFECTIVE.
5. ALL SUBMERGED PIPES INTO OR OUT OF A WET POND SHALL BE CONSTRUCTED USING WATERTIGHT JOINTS. REINFORCED CONCRETE PIPE JOINTS SHALL MEET ASTM C361 OR C443, PLASTIC PIPE JOINTS SHALL MEET ASTM D3212 AND DUCTILE IRON PIPE JOINTS SHALL CONFORM TO ANSI/AWWA C111/A21.11, ALL LATEST EDITIONS. HDPE PIPE SHALL NOT BE UTILIZED IN SUBMERGED CONDITIONS.
6. GROUNDWATER SHALL BE CONTROLLED BY THE CONTRACTOR AT ALL TIMES.
7. STAFF GAUGE SHALL BE 2.5" WIDE, DIVIDED INTO INCHES WITH EACH FOOT NUMBERED. GAUGES FOR ANY ELEVATION MAY BE ASSEMBLED BY USING SEPARATE FIGURE PLATES.

WET POND AND DETENTION POND NYSDEC ID #P-5 SECTION DETAIL

NOT TO SCALE — MCNY-UTIL-STMW-1200 — MOD: 12/16/22 07/01/19



BASIN ELEVATIONS							
BASIN	A	B	C	D	E	F	G
INFIL 2	85.83	87.00	86.00	83.00	80.00	19.00	9.45
INFIL 3	75.89	76.90	75.90	71.90	66.00	20.80	10.40
INFIL 4	76.91	78.00	77.00	73.00	68.00	17.00	8.50

ABOVE GROUND INFILTRATION BASIN CONSTRUCTION NOTES:

A. PRE-CONSTRUCTION:

1. CONTRACTOR SHALL PROCURE THE SERVICES OF A NEW YORK LICENSED PROFESSIONAL ENGINEER TO PERFORM REGULAR OVERSIGHT OF THE CONSTRUCTION OF THE INFILTRATION BASIN TO ENSURE ITS EFFECTIVENESS. THE FOLLOWING REQUIRED OVERSIGHT ACTIVITIES INCLUDING, BUT NOT LIMITED TO:
   a. PARTICIPATION BY THE ENGINEER AND CONTRACTOR AT A PRE-CONSTRUCTION MEETING TO REVIEW THE CONTRACTOR'S FAMILIARITY WITH CONSTRUCTION OF THE BASIN.
   b. THE CONTRACTOR SHALL IDENTIFY THE CONSTRUCTION EQUIPMENT TO BE USED FOR THE BASIN CONSTRUCTION AND THE CONSTRUCTION TECHNIQUES THAT WILL BE USED TO MINIMIZE COMPACTION OF THE INFILTRATION AREA.
   c. ENSURING THAT EARTHWORK DOES NOT OCCUR WITHIN THE LIMITS OF THE BASIN WHEN THE SOIL MOISTURE CONTENT IS ABOVE THE LOWER PLASTIC LIMIT AND THAT THE SPECIFICATIONS OF THE REPLACEMENT SOIL ARE MET.
   d. TEST EACH SOIL LAYER WHERE THE PERMEABILITY RATE IS CRITICAL PRIOR TO THE PLACEMENT OF A NEW LAYER TO ENSURE THAT THE PERMEABILITY RATE HAS BEEN RETAINED.
   e. THE CONTRACTOR SHALL ENSURE THAT PROPER PRECAUTIONS ARE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE INFILTRATION AREA DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF SOIL CONDITIONS ENCOUNTERED IN THE FIELD DIFFER FROM WHAT IS SHOWN HEREON. SUCH CONDITIONS COULD RENDER THE DESIGN HEREON INAPPROPRIATE OR INEFFECTIVE.

B. DURING CONSTRUCTION:

1. DURING CLEARING AND GRADING OF THE SITE, MEASURES MUST BE TAKEN TO ELIMINATE SOIL COMPACTION AT THE LOCATION OF THE PROPOSED INFILTRATION BASIN.
2. THE LOCATION OF THE PROPOSED INFILTRATION BASIN MUST BE CORDONED OFF DURING CONSTRUCTION TO PREVENT COMPACTION OF THE SUBSOIL BY CONSTRUCTION EQUIPMENT OR STOCKPILES. EXCAVATION AND CONSTRUCTION OF THE INFILTRATION BASIN MUST BE PERFORMED USING EQUIPMENT PLACED OUTSIDE THE LIMITS OF THE BASIN. IF THE SIZE THE BASIN PRECLUDES THIS APPROACH, EXCAVATION SHALL BE PERFORMED FROM THE INSIDE OUT SUCH THAT ALL EQUIPMENT UTILIZED WITHIN THE BASIN IS AT LEAST 2 FEET ABOVE THE FINAL EXCAVATION DEPTH.
3. EXCAVATION FOR THE INFILTRATION BASIN MUST BE AT LEAST 6 INCHES ABOVE THE FINAL EXCAVATION DEPTH IF IMPORTED SAND IS TO BE UTILIZED FOR THE ENGINEERED SAND LAYER. EXCAVATION MAY BE TO THE DESIGN ELEVATION OF THE INFILTRATION BASIN BOTTOM IF IN-SITU SAND MEETS THE SPECIFICATIONS AND IS TO BE UTILIZED FOR THE ENGINEERED SAND LAYER. THE USE OF THE LOCATION PROPOSED FOR AN INFILTRATION BASIN AS A SEDIMENT BASIN DURING CONSTRUCTION IS PROHIBITED.
4. THE BASIN BOTTOM SHALL BE CLEARED OF SEDIMENT AND UNSUITABLE MATERIALS SHALL BE REMOVED PERIODICALLY AS NECESSARY AND PRIOR TO FINAL EXCAVATION. THE EXCAVATION TO FINAL SUBSOIL DEPTH AND INSTALLATION OF THE ENGINEERED SAND LAYER OR IF APPLICABLE TO THE FINAL DESIGN ELEVATION OF THE INFILTRATION BASIN BOTTOM MAY ONLY OCCUR AFTER ALL SITE CONSTRUCTION WITHIN ITS DRAINAGE AREA IS COMPLETED AND THE DRAINAGE AREA, INCLUDING THE BASIN SIDE SLOPES, IS COMPLETELY STABILIZED.
5. IF CONSTRUCTION OF THE INFILTRATION BASIN CANNOT BE DELAYED BY INSTALLING TEMPORARY STORMWATER MANAGEMENT MEASURES, SEDIMENT BARRIERS MUST BE PLACED AROUND THE ENTIRE PERIMETER OF THE BASIN BOTTOM DURING ALL PHASES OF CONSTRUCTION TO DIVERT ALL FLOWS AWAY FROM THE BASIN. INLET FOREBAYS (CONSTRUCTED USING SEDIMENT BARRIERS) MUST BE PLACED AROUND ALL BASIN INLET PIPES CONDUIT OUTLET PROTECTION. THE SEDIMENT BARRIERS REQUIRED HEREIN MAY NOT BE REMOVED UNTIL ALL SITE CONSTRUCTION WITHIN THE BASIN DRAINAGE AREA IS COMPLETED, AND THE DRAINAGE AREA, INCLUDING THE BASIN SIDE SLOPES, IS COMPLETELY STABILIZED.
6. ALL EARTHWORK OPERATIONS, INCLUDING EXCAVATION, GRADING AND BACKFILL OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF A NEW YORK LICENSED PROFESSIONAL ENGINEER AND CERTIFIED TO INSTALLATION OF SUCH PROVIDED. IF APPLICABLE, EXCAVATIONS TO REMOVE HYDRAULICALLY RESTRICTIVE MATERIAL SHALL EXTEND A MINIMUM OF 1' BELOW THE IMPERMEABLE LAYER AND REMOVAL OF THE MATERIAL SHALL BE WITNESSED AND CERTIFIED BY A PROFESSIONAL ENGINEER.
7. THE REPLACEMENT MATERIAL MUST MEET ALL SPECIFICATIONS FOR CLEAN, COARSE SAND IN ACCORDANCE WITH AASHTO M-6 OR ASTM C-33 MEETING AGGREGRATE SIZE GRADATION SIZE NO. 10 (AASHTO M-43), AND THE MINIMUM TESTED PERMEABILITY RATE IS 8 INCHES PER HOUR, AS CERTIFIED BY A NY LICENSED PROFESSIONAL ENGINEER. CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A SUBMITTAL CONFIRMING THE REQUIREMENTS ARE MET.
8. PRIOR TO INSTALLATION OF THE ENGINEERED SAND LAYER THE PERMEABILITY RATE OF THE IN-SITU UNDERLYING OR REPLACEMENT SOILS SHALL BE CONFIRMED BY A NEW YORK LICENSED PROFESSIONAL ENGINEER TO MEET THE MINIMUM DESIGN PERMEABILITY RATE. THE BASIN INFILTRATION RATE SHALL BE CERTIFIED BY A NEW YORK LICENSED PROFESSIONAL ENGINEER, THAT IT MEETS THE MINIMUM DESIGN PERMEABILITY RATE. RESULTS OF THE PERMEABILITY TESTS SHALL BE PROVIDED TO THE DESIGN ENGINEER IN WRITING PRIOR TO THE PLACEMENT OF THE SAND LAYER. SEE PERMEABILITY TESTING REQUIREMENTS BELOW.
9. ONCE THE FINAL GRADING PHASE OF A SURFACE INFILTRATION BASIN IS REACHED, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAG OR EQUIVALENT GRADING EQUIPMENT. THESE PROCEDURES SHOULD PREFERABLY BE PERFORMED WITH EQUIPMENT LOCATED OUTSIDE THE BASIN BOTTOM. IF THIS IS NOT POSSIBLE, IT SHOULD BE PERFORMED WITH LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT. TILLING OPERATIONS SHALL BE WITNESSED AND CERTIFIED BY A NEW YORK LICENSED PROFESSIONAL ENGINEER.
10. THE BOTTOM ENGINEERED SAND LAYER MUST MEET ALL SPECIFICATIONS FOR CLEAN, COARSE SAND IN ACCORDANCE WITH AASHTO M-6 OR ASTM C-33 MEETING AGGREGRATE SIZE GRADATION SIZE NO. 9 (AASHTO M-43). THE MAXIMUM PERCENTAGE OF FINES IS 15% FINES AND THE MINIMUM TESTED PERMEABILITY RATE IS 20 INCHES PER HOUR. THE ABOVE MATERIAL MUST BE CERTIFIED BY A NJ LICENSED PROFESSIONAL ENGINEER. CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A SUBMITTAL CONFIRMING THE REQUIREMENTS ARE MET.
11. INCORPORATE MULCH INTO INFILTRATION BASIN SOIL TO MITIGATE PROBLEMS WITH SOIL FERTILITY AS A COLD CLIMATE DESIGN CONSIDERATION
12. THE GATE VALVE WITHIN THE OUTLET STRUCTURE SHALL REMAIN CLOSED AT ALL TIMES, EXCEPT FOR PERIODS OF MAINTENANCE.

C. PERMEABILITY TESTING REQUIREMENTS:

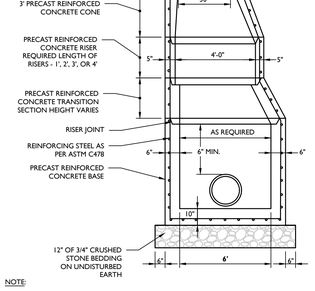
1. PERMEABILITY TESTING MUST BE PERFORMED ON THE AS-BUILT INFILTRATION BASIN IN ACCORDANCE WITH THE CONSTRUCTION AND POST-CONSTRUCTION OVERSIGHT AND SOIL PERMEABILITY TESTING SECTION IN THE "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL APPENDIX D: INFILTRATION TESTING REQUIREMENTS".
2. AS REQUIRED BY "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL APPENDIX D: INFILTRATION TESTING REQUIREMENTS", A MINIMUM OF XX PERMEABILITY TESTS SHALL BE PERFORMED WITHIN THE BASIN BOTTOM. THE MINIMUM PERMEABILITY RATE OF EACH TEST PIT SHALL BE 20 INCHES PER HOUR.
3. IF THE FIELD-TESTED PERMEABILITY RATES CONFIRM THE BASIN'S ABILITY TO TOTALLY DRAIN WITHIN 72 HOURS AFTER THE CESSATION OF THE DESIGN STORM, THE DESIGN ENGINEER, IN CONSULTATION WITH THE OWNER AND ANY AGENCY HAVING JURISDICTION, MAY ACCEPT THE BASIN DESIGN. THE CONTRACTOR HAS THE OPTION TO DEMONSTRATE THAT THE INFILTRATION BMP, WHEN FLOODED WITH WATER, EITHER ARTIFICIALLY OR NATURALLY BY RAIN EVENT, PERFORMS AS DESIGNED FOR INFILTRATION.
4. IF NEITHER THE TESTING NOR FLOODING OF THE BASIN WORKS, WHERE THE PERMEABILITY RATES DO NOT MEET THE REQUIRED DESIGN RATE NOTED ABOVE BY SHOWING A LONGER DRAIN TIME THAN DESIGNED, REMEDIAL/CORRECTIVE ACTION MUST BE TAKEN BY THE CONTRACTOR. THE SOILS BELOW THE INFILTRATION BMP MUST BE REMEDIATED OR REPLACED AND THEN RE-TESTED UNTIL THE REQUIRED DRAIN TIME IS ACHIEVED. ALL POST-CONSTRUCTION SOIL PERMEABILITY TEST RESULTS SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.

D. POST-CONSTRUCTION:

1. UPON COMPLETION OF THE BASIN, THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A TOPOGRAPHIC SURVEY OF THE BASIN PREPARED BY A NEW YORK LICENSED PROFESSIONAL SURVEYOR. THE SURVEY SHALL INCLUDE 1 FOOT CONTOURS OF THE ENTIRE BASIN, TOP OF BERM ELEVATIONS, BOTTOM OF BASIN ELEVATIONS AND ALL INFORMATION PERTAINING TO THE OUTLET CONTROL STRUCTURE INCLUDING ORIFICE AND WEIR SIZES AND ELEVATIONS. THE OUTLET PIPE AND NEXT DOWNSTREAM DRAINAGE STRUCTURE SHALL BE SURVEYED.
2. THE PROFESSIONAL ENGINEER THAT WITNESSES THE BASIN CONSTRUCTION AND PERFORMED THE SOIL PERMEABILITY TESTS SHALL PROVIDE A SIGNED AND SEALED LETTER TO THE DESIGN ENGINEER WITH THE RESULTS OF THE PERMEABILITY TESTS AND CONSTRUCTION CONFORMANCE WITH THE APPROVED SWPPP AND THIS DETAIL.

INFILTRATION NYSDEC ID #I-2 CROSS-SECTION DETAIL

NOT TO SCALE — A5C6ED61543 — MOD: 07/15/24 07/01/19

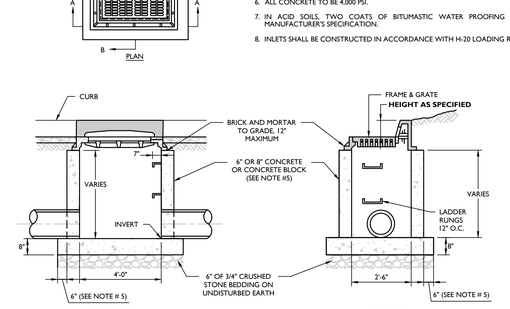


NOTE:

1. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
2. ALL CONCRETE TO BE 4,000 PSI.

PRECAST CONCRETE STORM MANHOLE (OVERSIZED) DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1601 — 07/01/19

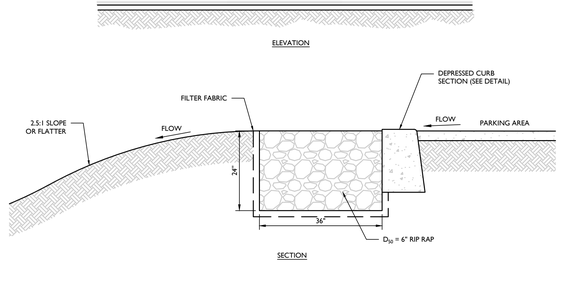


NOTES:

1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. MINIMUM DIFFERENCE IN INVERTS TO BE 0.1 FEET.
2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE OR SOLID CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALL JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT BY M.A. INDUSTRIES, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, 12" O.C. OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY **# 2617**, OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THAN 12' THE WALLS SHOULD BE 8" THICK CONCRETE OR SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE 4,000 PSI.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.

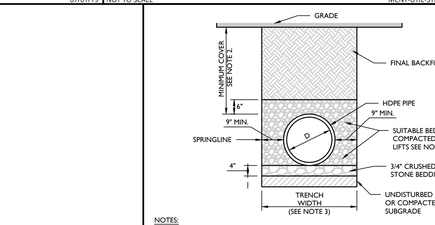
SINGLE CATCH BASIN DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-1100 — 07/01/19



DEPRESSED CURB FOR DRAINAGE (W/PEA GRAVEL DIAPHRAGM) DETAIL

NOT TO SCALE — MCNY-UTIL-STRM-2402 — 07/01/19

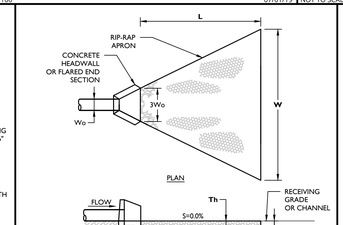


NOTES:

1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. MINIMUM COVER FOR HDPE PIPES IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR UP TO 60" DIAMETER PIPE. PIPE COVER IS MEASURED FROM TOP OF PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT, OR TO THE TOP OF RIGID PAVEMENT, OR TO THE GROUND SURFACE.
3. MINIMUM TRENCH WIDTH PER MANUFACTURER'S RECOMMENDATIONS.
4. SUITABLE BEDDING MATERIAL SHALL BE SAND, WELL GRADED GRAVEL < 2", OR 3/4" CRUSHED STONE.
5. SUITABLE FINAL BACKFILL MATERIAL SHALL BE SITE SOILS, CLEAN FILL, OR ITEM 4 STONE COMPACTED IN MAX. 9" LIFTS.
6. STONES LARGER THAN 2" FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 4" BELOW THE PIPE.
7. FOR INSTALLATION IN PAVEMENT, REFER TO THE APPLICABLE PAVEMENT DETAIL TO ESTABLISH FINAL GRADE. BACKFILL REQUIREMENTS BEYOND THE DEPTH OF THE PAVEMENT DETAIL SHALL BE IN ACCORDANCE WITH THIS DETAIL.

HDPE STORM PIPE BEDDING DETAIL

NOT TO SCALE — HDPE — 07/01/19

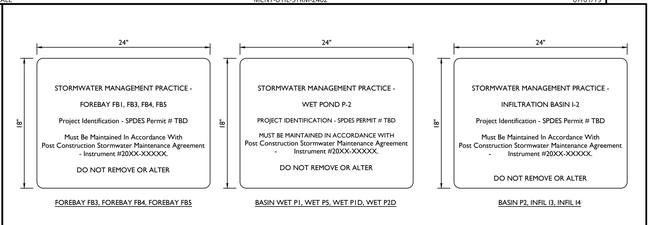


NOTES:

1. SEE PLAN FOR APRON DIMENSIONS.
2. SIDE SLOPE SHALL BE 2:1 OR FLATTER. THE BOTTOM GRADE SHALL BE LEVEL (0% SLOPE). THERE SHALL BE NO FALL AT THE END OF APRON TO THE RECEIVING SURFACE.

CONDUIT OUTLET PROTECTION DETAIL

NOT TO SCALE — MCNY-SOIL-EROS-1600 — 07/01/19



FOREBAY FB3, FOREBAY FB4, FOREBAY FB5 — BASIN WET P1, WET P5, WET P1D, WET P2D — BASIN P2, INFIL I3, INFIL I4

NOTE: IN ACCORDANCE WITH SECTION 3.5 OF THE NYSSMDM, A CONSPICUOUS AND LEGIBLE SIGN SHALL BE ERECTED OR POSTED IN THE IMMEDIATE VICINITY OF EACH STORMWATER MANAGEMENT PRACTICE (AS SHOWN ON THE LAYOUT PLAN)

STORMWATER MANAGEMENT PRACTICE IDENTIFICATION SIGNS

N.T.S.

NOT TO SCALE — MOD: 12/16/22 07/01/19

Colliers Engineering & Design
www.colliersengineering.com

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Doing Business as MASER CONSULTING

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LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

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300 TICE BOULEVARD
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COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

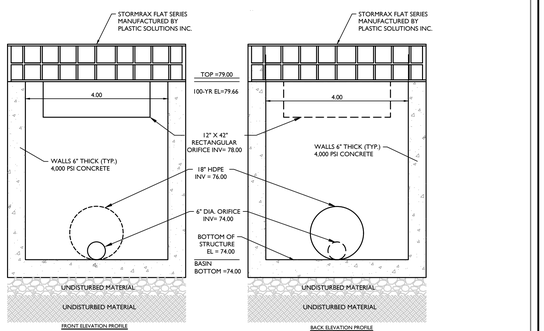
PROJECT NUMBER: 22002634A
DRAWING NAME: C-DTL5

SHEET TITLE: STORMWATER DETAILS

SHEET NUMBER: 20 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

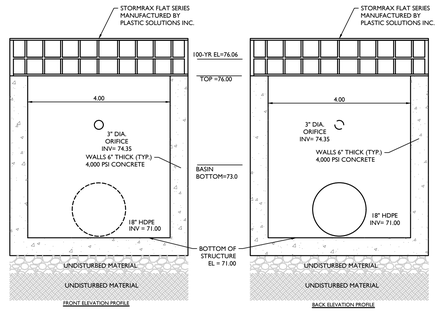
2022\22002634A\Engineering\Site Plans\C-DTL5.dwg C-DTL5 STORMWATER DETAILS By MICHAELA.MCCORMICK



DETENTION POND-DET 1 OUTLET CONTROL STRUCTURE (OCS 1A) DETAIL

NOT TO SCALE

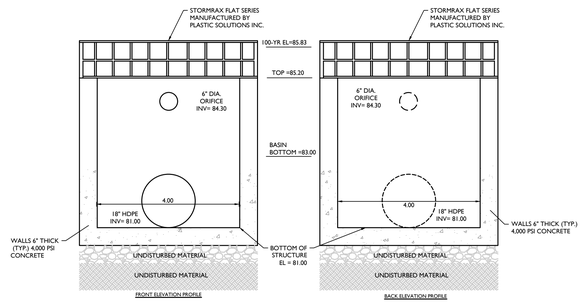
MOD: 03/06/24
07/01/19



WET POND-WET 1 OUTLET CONTROL STRUCTURE (OCS 1B) DETAIL

NOT TO SCALE

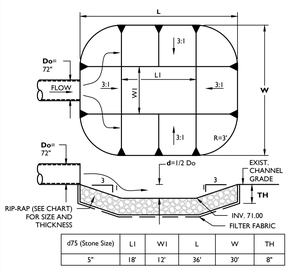
MOD: 03/06/24
07/01/19



INFILTRATION BASIN-INFIL 2 OUTLET CONTROL STRUCTURE (OCS 2A) DETAIL

NOT TO SCALE

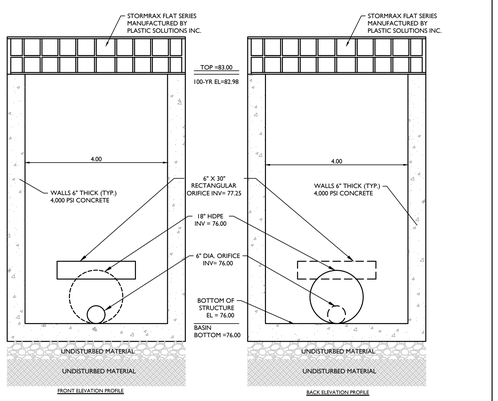
MOD: 03/06/24
07/01/19



d75 (Stone Size)	LI	WI	L	W	TH
5"	18'	12'	36'	30'	8"

SCOUR HOLE / PLUNGE POOL DETAIL

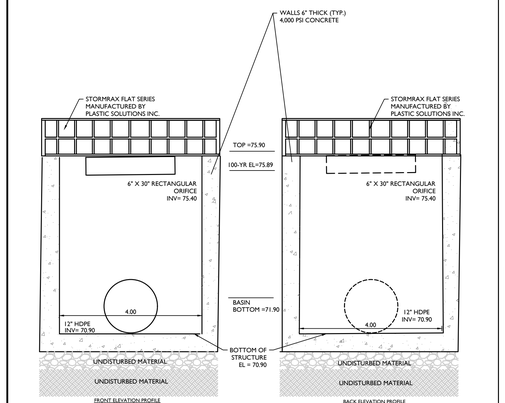
NOT TO SCALE



DETENTION POND-DET 2 OUTLET CONTROL STRUCTURE (OCS-2B) DETAIL

NOT TO SCALE

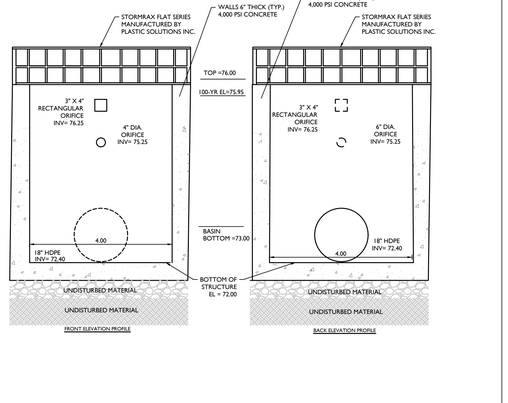
MOD: 03/06/24
07/01/19



INFILTRATION BASIN-INFIL 3 OUTLET CONTROL STRUCTURE (OCS-3A) DETAIL

NOT TO SCALE

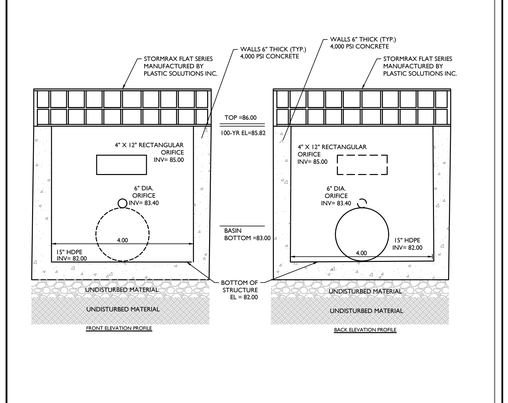
MOD: 03/06/24
07/01/19



INFILTRATION BASIN-INFIL 4 OUTLET CONTROL STRUCTURE (OCS-4A) DETAIL

NOT TO SCALE

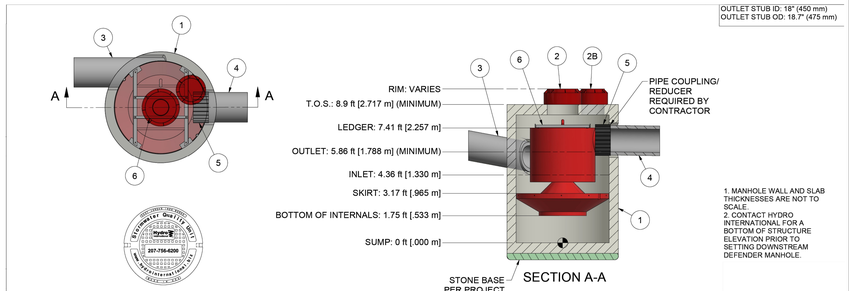
MOD: 03/06/24
07/01/19



WET POND-WET 5 OUTLET CONTROL STRUCTURE (OCS-5A) DETAIL

NOT TO SCALE

MOD: 03/06/24
07/01/19



HYDRO FRAME AND COVER (INLCUDED)
GRADE RINGS BY OTHERS AS REQUIRED

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

NOTE: NOT FOR CONSTRUCTION. CONTACT HYDRO FOR SITE SPECIFIC DETAIL

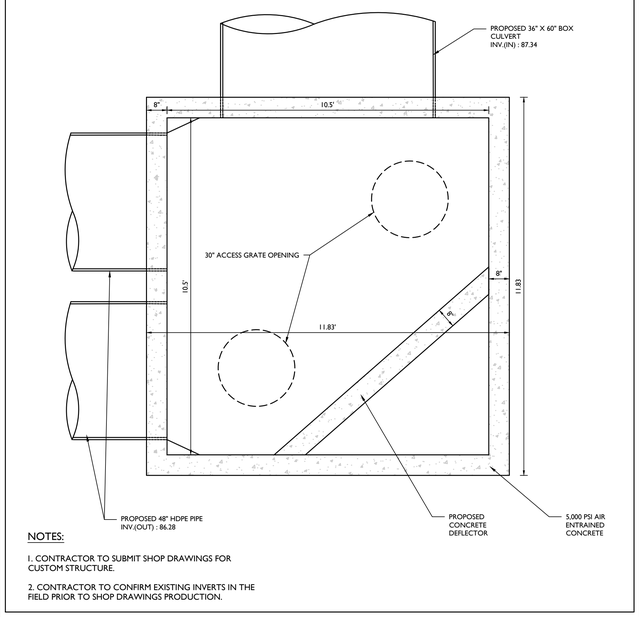
EQUIPMENT PERFORMANCE
The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

1. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
2. Peak Hydraulic Capacity: 8.0 cfs (227 l/s)
3. Sediment Storage Capacity: 2.10 cu. yd. (1.59 cu. m)
4. Continuous Oil Storage Capacity: 216 gal. (818 liters)
5. Sediment shall be stored in a zone that is isolated from the main flow path and protected from reintrainment by a benching skirt.
6. For more product information including regulatory acceptances, please visit https://hydro-int.com/en/products/downstream-defender

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	72	1800	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)
2	3	24	600	FRAME AND COVER
2B	1	18	450	FRAME AND COVER
3	1	18 (MAX)	450 (MAX)	MAX INLET PIPE (BY OTHERS)
4	1	18 (MAX)	450 (MAX)	MAX OUTLET PIPE (BY OTHERS)
5	1			PIPE COUPLING (BY OTHERS)
6	1			INTERNAL COMPONENTS (PRE-INTALLED)

HYDRO INTERNATIONAL FIRST DEFENSE UNIT DETAIL

NOT TO SCALE



NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CUSTOM STRUCTURE.

2. CONTRACTOR TO CONFIRM EXISTING INVERTS IN THE FIELD PRIOR TO SHOP DRAWINGS PRODUCTION.

DIVERSION STREAM JUNCTION BOX (90° TURN)

MOD: 08/08/23

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
11	12/9/25	MAN	REVISED PER TOWN COMMENTS

REV	DATE	DRAWN BY	DESCRIPTION
1	08/30/23	TPS	REVISED PER REMOVAL OF SUBSURFACE INFILTRATION CHAMBERS
2	09/06/24	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	2/7/2025	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	3/6/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
8	04/25/25	MAN	REVISED PER TOWN COMMENTS
9	07/25/25	MAN	REVISED PER TOWN COMMENTS
10	11/5/25	MAN	REVISED PER TOWN COMMENTS

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Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

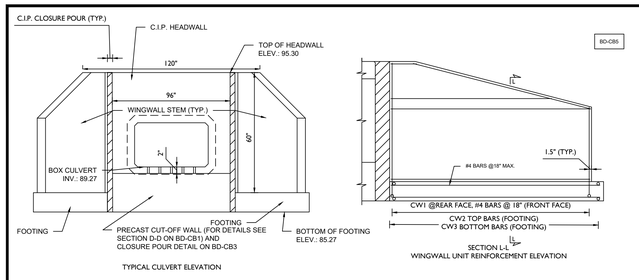
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

PROJECT NUMBER:	DRAWING NAME:
22002634A	C-DTLS

SHEET TITLE:
STORMWATER DETAILS

SHEET NUMBER:
21 of 24

2022\22002634A\Engineering\Site Plans\C-DTLS.dwg C-DTLS By: MICHAELA.MOSCHELLO



TYPICAL CULVERT ELEVATION

SECTION L-L
WINGWALL UNIT REINFORCEMENT ELEVATION

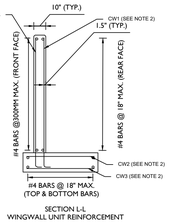
BD-CB5

THE JOINT DETAIL BETWEEN WINGWALL UNITS SHALL BE IN ACCORDANCE WITH DETAILS PRESENTED ON BD-CB8.

ADDITIONAL CULVERT REINFORCEMENT INFORMATION MAY BE FOUND IN THE "NYSDOT REINFORCED CONCRETE BOX CULVERT DESIGN AND ANALYSIS PROGRAM USERS MANUAL".

DIMENSION "X" IS THE LEVEL DISTANCE AT TOP OF WALL TO BE DETERMINED BY DESIGNER FOR ALL CORNERS AND ENTERED INTO THE WINGWALL DATA TABLE ON BD-CB1.

WEEPHOLES NOT SHOWN AS AN EXAMPLE. DESIGNER TO DETERMINE THE NECESSITY FOR WEEPHOLES.



SECTION L-L
WINGWALL UNIT REINFORCEMENT

NOTES:

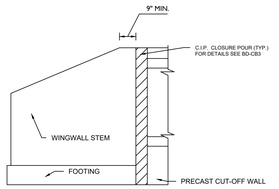
1. TALL WALLS MAY USE DOWEL BAR LAPPED TO A VERTICAL BAR.
2. BAR SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.

NOTES:

BASED ON HANDLING AND SHIPPING CONSTRAINTS, THE CONTRACTOR MAY ELECT TO USE MULTIPLE WINGWALL UNITS TO SATISFY WALL LENGTH REQUIRED ON THE PLANS.

ACTUAL REINFORCEMENT SPACINGS TO BE DETERMINED BY FABRICATOR.

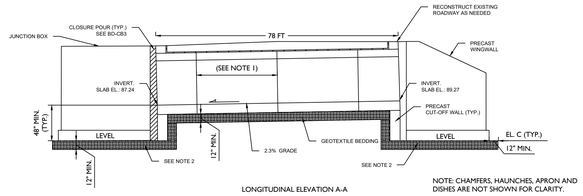
DETAILS ON THE DRAWINGS LABELED "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.



TYPICAL PRECAST WINGWALL UNIT ELEVATION

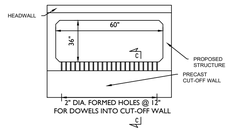
PRECAST CANTILEVER WINGWALL DETAILS

NOT TO SCALE



LONGITUDINAL ELEVATION A-A

NOTE: CHAMFERS, HAUNCHES, APRON AND DISHES ARE NOT SHOWN FOR CLARITY.



CULVERT SECTION B-B

BD-CB1 R1

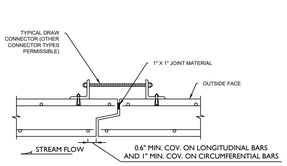
NOTES:

1. THE LENGTH OF EACH CULVERT SEGMENT SHALL BE DETERMINED BY THE CONTRACTOR. IF STAGED CONSTRUCTION IS EMPLOYED, THE PRECAST BOX CULVERT SEGMENT LENGTH MUST BE COMPATIBLE WITH STAGING REQUIREMENTS.
2. PRECAST CUT-OFF WALLS AND WINGWALLS SHALL BE PLACED ON A LEVELING BED OF CRUSHED MATERIAL MEETING THE REQUIREMENTS OF MATERIAL DESIGNATION 703-0201, 703-0202 OR 703-0204 WITH A PRIMARY SIZE DESIGNATION OF 2, AFTER PLACING AND LEVELING THE PRECAST UNITS, THE AREAS BENEATH AND BEHIND THE UNITS SHALL BE GROUTED WITH CONTROLLED LOW STRENGTH MATERIAL MEETING THE REQUIREMENTS OF SECTION 204.
3. FOR SECTUB D-D, SEE DWG. NO. BD-CB3.

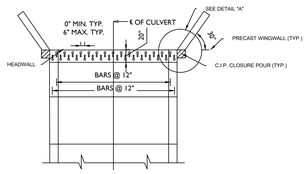
DETAILS ON THE DRAWING LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

PRECAST BOX CULVERT PLAN AND SECTIONS DETAILS

NOT TO SCALE



BOX CULVERT JOINT DETAIL



HEADWALL ON 30° SKEW CULVERT

NOTES:

ALL COVER SHALL BE 2" UNLESS OTHERWISE NOTED.

DETAILS ON THE DRAWING LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

DESIGNER NOTES:

FOR DETAILS "A", "B" AND "C", SEE BD-CB3.

FOR DETAILS OF BASE AND ANCHOR SEE BD-RS7.

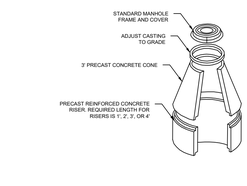
WEEPHOLES SHOWN AS AN EXAMPLE. IF WATERPROOF MEMBRANE IS USED TO TOP OF FOOTING, WEEPHOLES ARE REQUIRED.

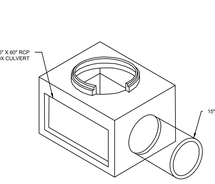
HEADWALL REINFORCEMENT SPACING MAY BE VARIED TO AVOID RAILING ANCHORAGES.

LONGITUDINAL BARS IN HEADWALLS ARE NOT SHOWN FOR CLARITY.

PRECAST BOX CULVERT MISCELLANEOUS DETAILS

NOT TO SCALE





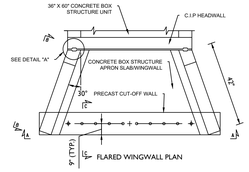
SPECIFICATION NOTES:

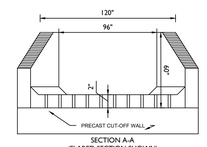
CONCRETE: RISER TO	DESIGN STRENGTH OF 4500 PSI AT 28 DAYS, UNIT IS MONOLITHIC CONSTRUCTION AT FLOOR, FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL REQUIRED DEPTH. RATE FOR H-20 LOADING.
REINFORCEMENT:	GRADE 60 REINFORCED NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
C.I. CASTING: DIMENSIONAL	CASTINGS CONFORM TO ASTM A48 CLASS 30 FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF ASSEMBLY. USE DATA AS SHOWN

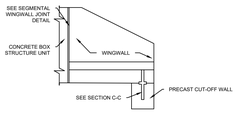
TRANSITIONAL MANHOLE STORM WATER JUNCTION BOX

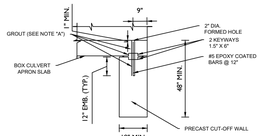
NOT TO SCALE

BD-CB8 R1









NOTE "A":

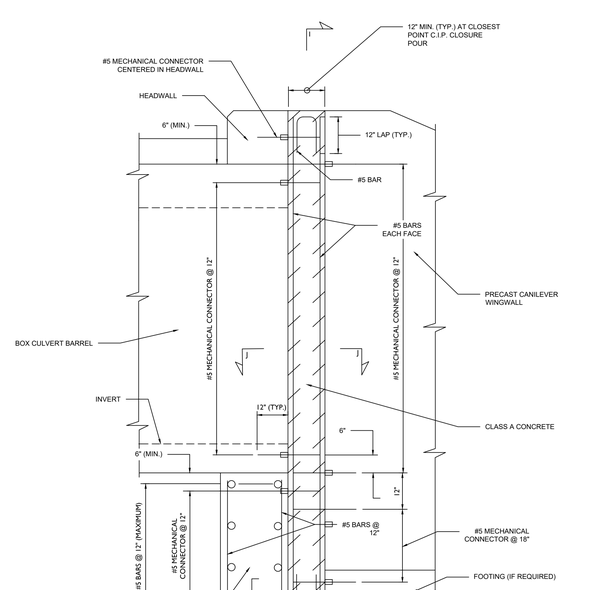
DOWEL BARS USED TO ATTACH THE PRECAST CUT-OFF WALL TO THE BOX CULVERT SHALL BE DRILLED AND GROUTED PER THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 586 EXCEPT THE GROUT SHALL MEET THE REQUIREMENTS OF SECTION 701-06. THE KEYWAY SHALL BE GROUTED WITH THE SAME MATERIAL AS THE DOWELS. WHEN THE GRADE OF THE BOX EXCEEDS 5%, THE TOP OF THE CUT-OFF WALL SHOULD BE BEVELED TO MATCH THE GRADE. PLACE A BEAD OF CAULK, CLOSED CELL FOAM OR OTHER SUITABLE MATERIAL ON BOTH SIDES OF THE KEYWAY TO CONTAIN THE GROUT.

NOTES:

DETAILS ON THE DRAWINGS LABELED "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

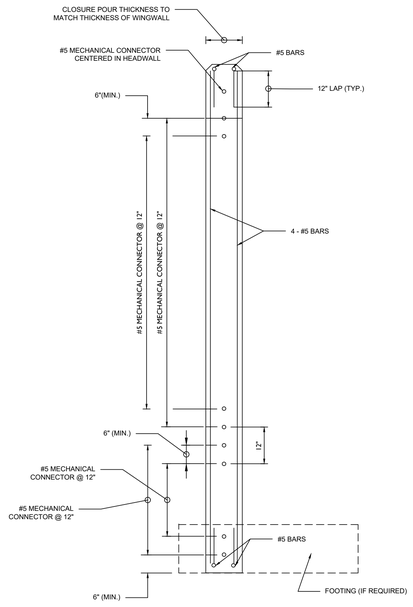
CONCRETE BOX STRUCTURE APRON SLAB DETAILS

NOT TO SCALE



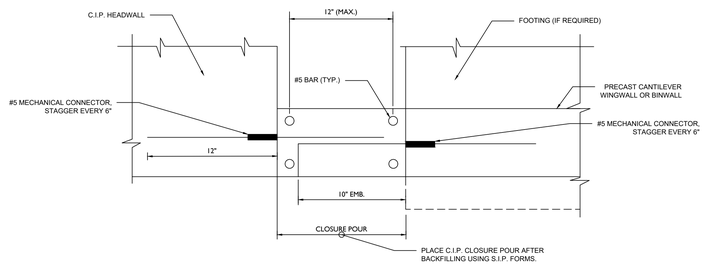
CLOSURE POUR DETAIL

NOT TO SCALE



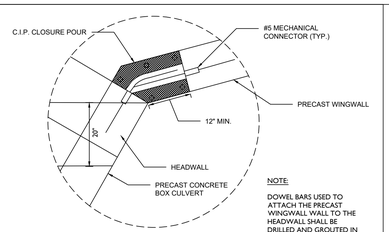
SECTION I-I CLOSURE POUR REINFORCEMENT DETAIL

NOT TO SCALE



SECTION J-J CLOSURE POUR DETAIL

NOT TO SCALE



DETAIL "A"

NOT TO SCALE

NOTE:

DOWEL BARS USED TO ATTACH THE PRECAST WINGWALL WALL TO THE HEADWALL SHALL BE DRILLED AND GROUTED IN THE FIELD PER THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 586 EXCEPT THE GROUT SHALL MEET THE REQUIREMENTS OF SECTION 701-06.

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REV	DATE	DRAWN BY	DESCRIPTION
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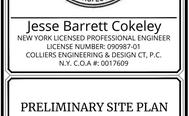
7	03/19/25	MAN	REVISED PER TOWN COMMENTS
6	01/22/25	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
5	11/12/24	MAN	REVISED PER VARIOUS AGENCY COMMENTS.
4	9/9/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
3	7/1/24	JAG	REVISED PER VARIOUS AGENCY COMMENTS.
2	03/06/24	TPS	REVISED PER MANSOUR AGENCY COMMENTS.
1	08/24/23	TPS	REVISED PER RESPONSE OF SUBSURFACE EXPLORATION CHAMBERS.



Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
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COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

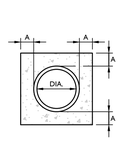
PROJECT NUMBER:	DRAWING NAME:
22002634A	C-DTL5

SHEET TITLE:
CULVERT REPLACEMENT DETAILS

SHEET NUMBER:
22 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2022\22002634A\Engineering\Site Plans\C-DTL5.dwg 2/3 (JULIAN) By: MICHAELANCIERSKO



FULL ENCASEMENT

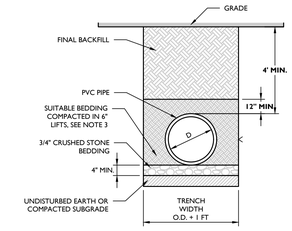
DIMENSIONS	
DIA	A
6" OR LESS	5"
8"	6"
10"	6"
12"	6"
15"	6"
18"	6"
24"	6"
27"	6"
30"	7"
36"	8"
42"	9"
48"	10"
54"	12"

NOTES:

1. TO BE CONSTRUCTED WHERE SHOWN ON ON-SITE AND OFF-SITE UTILITY PLANS OR AS DIRECTED BY THE ENGINEER. IN GENERAL, THE VERTICAL SEPARATION AT A CROSSING OF SEWER AND WATER SHALL BE AT LEAST 18" WITH WATER ON TOP. WHERE THIS IS NOT POSSIBLE THE SEWER SHALL BE D.I.P. OR SHALL BE ENCASED IN CONCRETE FOR A DISTANCE OF AT LEAST 10'-0" ON EITHER SIDE OF THE CROSSING. ALSO, GRAVITY SANITARY SEWER SHALL BE ENCASED IN CONCRETE WHERE HORIZONTAL SEPARATION FROM WATER MAIN IS LESS THAN 10'-0" AND SEWER IS EITHER ABOVE OR LESS THAN 18" BELOW THE WATER MAIN VERTICALLY.
2. CONCRETE TO BE K-CRETE OR 3,000 PSI.

CONCRETE ENCASEMENT DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2300 | 07/01/19

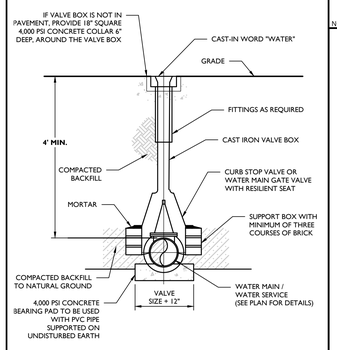


NOTES:

1. ALL PVC GRAVITY PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
2. GRAVITY SANITARY PIPE SHALL BE PVC SDR 35 PER ASTM D3034 OR AS REQUIRED BY THE GOVERNING AUTHORITY.
3. SUITABLE BEDDING MATERIAL SHALL BE COARSE SAND OR ¾" CRUSHED STONE.
4. SUITABLE FINAL BACKFILL MATERIAL SHALL BE SITE SOILS, CLEAN FILL, OR ITEM 4 STONE COMPACTED IN MAX. 9" LIFTS. BACKFILL MATERIAL WITHIN 2' OF THE PIPE MUST BE FREE AND CLEAR OF DEBRIS, FROZEN MATERIAL, LARGE CLODS OR STONES, ORGANIC MATTER, OR OTHER UNSUITABLE MATERIALS.
5. STONES LARGER THAN 2" FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 4" BELOW THE PIPE.
6. FOR INSTALLATION IN PAVEMENT, REFER TO THE APPLICABLE PAVEMENT DETAIL TO ESTABLISH FINAL GRADE. BACKFILL REQUIREMENTS BEYOND THE DEPTH OF THE PAVEMENT DETAIL SHALL BE IN ACCORDANCE WITH THIS DETAIL.

PVC SANITARY PIPE BEDDING (GRAVITY) DETAIL

NOT TO SCALE | PVC | 07/01/19

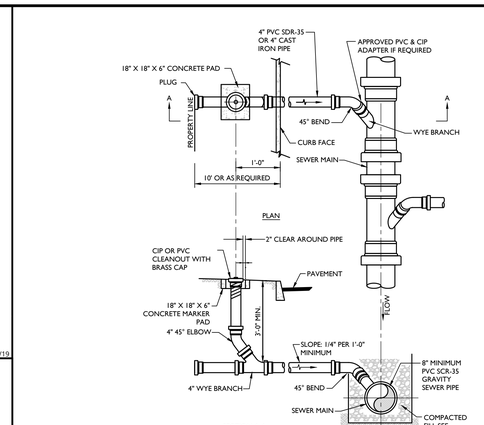


NOTES:

1. VALVE BOX SHOULD HAVE EXTENSION IF WATER MAIN OR SERVICE IS PLACED DEEPER THAN 5 FEET.
2. CURB STOP VALVE BOX SHALL BE MUELLER EXTENSION TYPE WITH ARCH PATTERN BASE, OR APPROVED EQUAL.
3. WATER MAIN VALVE BOX SHALL BE SCREW TYPE ADJUSTABLE MODE, **FIGURE # 4910-23 AS MANUFACTURED BY BINGHAM & TAYLOR OR APPROVED EQUAL.**

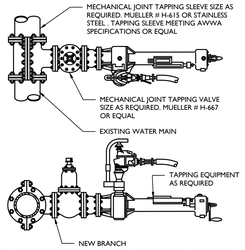
WATER VALVE BOX DETAIL

NOT TO SCALE | MCNY-UTIL-WATR-1600 | 07/01/19



SANITARY SEWER LATERAL & CLEANOUT DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1601 | 07/01/19



NOTES:

1. WET TAP VALVE CAN BE INSTALLED IN EITHER VERTICAL OR HORIZONTAL POSITION.
2. CONTRACTOR SHALL VERIFY DEPTH OF BURY, MATERIAL, DIAMETER (O.D.) AND OPERATING PRESSURE OF EXISTING WATER MAIN PRIOR TO ORDERING OF WET TAP UNIT.

WET TAP DETAIL

NOT TO SCALE | MCNY-UTIL-WATR-1200 | 07/01/19

NUMBER AND SIZE OF RODS REQUIRED AND PIPE LENGTH IN FEET TO BE RESTRAINED									
PIPE SIZE IN INCHES	90° TEE OR DEAD END PLUG			45° BEND			22½° BEND		
	No.	SIZE	L*	No.	SIZE	L*	No.	SIZE	L*
4	2	¾"	30'	2	¾"	10'	2	¾"	5'
6	2	¾"	40'	2	¾"	10'	2	¾"	5'
8	4 or 2	¾" or ⅞"	50'	2	¾"	15'	2	¾"	5'
10	4 or 2	¾" or 1"	60'	2	¾"	20'	2	¾"	5'
12	4	⅞"	70'	2	¾"	20'	2	¾"	5'
14	4	1"	80'	2	¾"	25'	2	¾"	5'
16	4	1"	80'	2	¾"	25'	2	¾"	5'

L* = LENGTH OF PIPE TO BE RESTRAINED IS FOR EACH SIDE OF BEND

NOTES:

1. USE OF MECHANICAL JOINT RETAINER GLANDS SHALL PROVIDE A THRUST RESTRAINT SYSTEM EQUIVALENT TO THAT LISTED IN THE TABLE FOR CLAMPS AND RODS.
2. LENGTHS ARE BASED ON THE FOLLOWING CRITERIA: 150 PSI MAXIMUM PRESSURE AND 3'-6" OF COVER. TABLE IS FOR USE WITH CAST IRON PIPE OR DUCTILE IRON PIPE ONLY. IF TEST CONDITIONS ARE MORE SEVERE OR LARGER PIPES ARE PROPOSED, THEN SPECIAL COMPUTATIONS MUST BE PROVIDED BY LICENSED PROFESSIONAL ENGINEER.

JOINT RESTRAINT SCHEDULE DETAIL

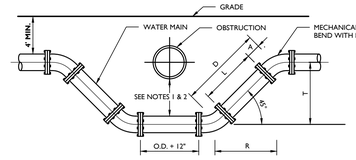
NOT TO SCALE | MCNY-UTIL-WATR-1500 | 07/01/19

NOTES:

1. ALL PIPE SYSTEMS AND BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600.
2. WATER MAIN PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) PRESSURE CLASS 150, THICKNESS CLASS 52 WITH ASPHALTIC EPOXY TYPE COATING, INSTALLED W/ THREE (3) BRONZE WEDGES PER JOINT FOR CONDUCTIVITY.
3. SUITABLE BACKFILL MATERIAL SHALL BE SAND, WELL GRADED GRAVEL < 2", OR 3/4" CRUSHED STONE.
4. SUITABLE FINAL BACKFILL MATERIAL SHALL BE SITE SOILS, CLEAN FILL, 3/4" CRUSHED STONE, OR ITEM 4 STONE - COMPACTED IN MAX. 9" LIFTS.
5. STONES LARGER THAN 2" FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 4" BELOW THE PIPE.
6. FOR INSTALLATION IN PAVEMENT, REFER TO THE APPLICABLE PAVEMENT DETAIL TO ESTABLISH FINAL GRADE. BACKFILL REQUIREMENTS BEYOND THE DEPTH OF THE PAVEMENT DETAIL SHALL BE IN ACCORDANCE WITH THIS DETAIL.
7. MAXIMUM ALLOWABLE DEFLECTION AT PIPE JOINTS SHALL BE LIMITED TO 80% OF THE VALUES PUBLISHED IN AWWA C600, LATEST REVISION.

DIP WATER PIPE BEDDING DETAIL

NOT TO SCALE | DIP PIPE BED | 07/01/19



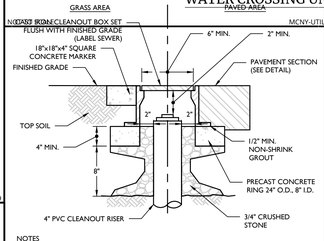
MECHANICAL JOINTS			
ANGLE	D =	R =	L =
45°	T x 1.414	T x 1.000	D-2A
22.5°	T x 2.613	T x 2.414	D-2A
11.25°	T x 5.126	T x 5.027	D-2A

NOTES:

1. WATER MAIN MAY CROSS ABOVE OBSTRUCTION IF 4' MINIMUM COVER IS MAINTAINED ABOVE THE WATER MAIN AND FINISH GRADE.
2. MINIMUM VERTICAL SEPARATION BETWEEN SANITARY OR STORM SEWER TO WATER MAIN SHALL BE 18" IF THE HORIZONTAL SEPARATION IS LESS THAN 10'. BETWEEN WATER MAIN AND OTHER UTILITIES, THE MINIMUM VERTICAL SEPARATION SHALL BE 12".
3. WATER MAIN SHALL BE SIZE AND MATERIAL SPECIFIED ON THE PLAN, WITH MECHANICAL JOINT OR PUSH-ON AND ALL FITTINGS BE CAST IRON MECHANICALLY JOINT.
4. OFFSETS MAY BE SUBSTITUTED FOR A "T" OF UP TO 24" IF APPROVED BY THE ENGINEER.
5. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE.
6. TIE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS IF THRUST BLOCK IS NOT USED. DETAILS OF THE TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. TIE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 100 PSI WORKING PRESSURE. MEGALUG RESTRAINT ALSO ACCEPTABLE IN PLACE OF TIE RODS.

WATER CROSSING UNDER UTILITIES DETAIL

NOT TO SCALE | MCNY-UTIL-WATR-1300 | 07/01/19



NOTES

1. ALL PVC CLEANOUTS TO HAVE CAST IRON FRAME AND COVER PROTECTION BOX. DESIGN FOR H20 LOADING.

CLEANOUT PROTECTION BOX DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-1600 | 07/01/19

LIST OF STANDARD WATER SUPPLY MATERIALS

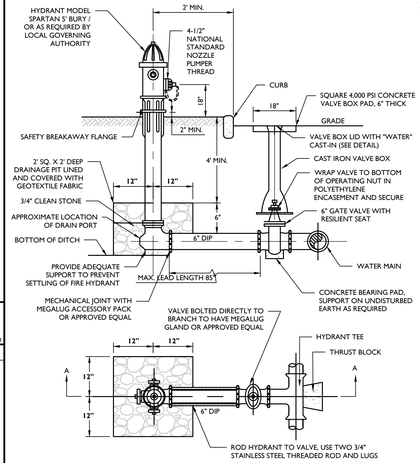
MOD: 12/16/22

MCNY-UTIL-WATR-2500 | 07/01/19

ANY EXCEPTIONS TO THE MATERIALS LISTED BELOW SHALL BE APPROVED IN WRITING BY THE DESIGN ENGINEER.

HYDRANTS	VWNY DIVISION: SIGELOCK SYSTEMS, LLC. SPARTAN 5' BURY OR APPROVED DEPTH BY VWNY
VALVES	MUELLER TYPE T-2361 RWGV M/XFL OR EQUAL
CURB STOPS	MUELLER CO. MODEL H-1502-2 FOR ¾ND 1 INCH SIZES MUELLER CO. MODEL B-25204 FOR 1.5 AND 2 INCH SIZES
CORPORATION STOPS	MUELLER CO. MODEL H-15020 FOR ¾ AND 1 INCH SIZES MUELLER CO. MODEL H-10310 FOR 1.5 AND 2 INCH SIZES
PIPE	DUCTILE IRON PIPE SHALL BE CLASS 52 WITH MECHANICAL-JOINT OR PUSH-ON JOINT CONNECTIONS
TAPPING SLEEVES	MUELLER #H-615, #H-616 OR EQUAL
VALVE BOXES	STAINLESS STEEL, TELESCOPING AND AT LEAST 5 1/4 " IN DIAMETER
CURB BOXES	BINGHAM & TAYLOR, 2-1/2" N.S. CURB SERVICE BOXES (GENUINE BUFFALO STYLE CAST IRON) FIG. NO. 4901 SIZE NO. 93-D, EXTENSION RANGE 33"-48". CONSISTING OF TOP SECTION & COVER MARKED WATER, BOTTOM SECTION AND ROD, RING AND PIN.

NOTE:
ALL UTILITY WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND DETAILS OF THE MUNICIPALITY.

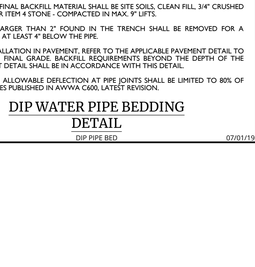


NOTES:

1. HYDRANT SHALL BE SPARTAN 5' BURY OR APPROVED TRAFFIC MODEL DESIGN WITH THE FOLLOWING SPECIFICATION.
   A. SAFETY COUPLED STANDPIPE.
   B. 6" MECHANICAL JOINT INLET CONNECTION
   C. TWO 2-1/2" NATIONAL STANDARD THREAD HOSE NOZZLES.
   D. ONE 4-1/2" NATIONAL STANDARD THREAD STEAMER NOZZLE, FACING THE ROAD.
   E. HYDRANT OPERATORS AND HYDRANT NOZZLE CAP NUTS SHALL BE IN ACCORDANCE WITH AWWA/ANSI STANDARD C502.
   F. HYDRANT HOSE CAPS SHALL BE ATTACHED BY MEANS OF CHAINS.
   G. HYDRANT BARRELS SHALL BE PAINTED - RED, BONNETS - YELLOW, AND NOZZLE CAPS - BLACK TO INDICATE THE AVAILABLE FIRE FLOW OR AS IN ACCORDANCE WITH THE LOCAL REQUIREMENTS.
   H. HYDRANTS SHALL OPEN COUNTER CLOCKWISE.
2. STANDPIPE (BREAK-AWAY) COUPLING SHALL NOT EXCEED A MAXIMUM OF 5 INCHES FROM THE TOP OF THE CURB TO THE BOTTOM OF COUPLING.
3. THE DRAIN VALVE SHALL BE CLEAR OF ANY OBSTRUCTIONS, AND 3/4" CLEAN GRAVEL BE PLACED FROM THE BOTTOM OF THE HYDRANT TO A POINT 6" ABOVE THE HYDRANT LATERAL PIPE.
4. THRUST BLOCKS SHALL BE MADE OF 4,000 PSI CONCRETE, PROVIDED BEHIND THE HYDRANT SHOE.
5. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE LOCAL JURISDICTION.
6. GATE VALVE SHALL BE T.W.W. 6" U.S. PIPE METROSEAL 250 R/S (RESILIENT SEALED) MECHANICAL JOINT END (RIGHT HAND).
7. WATER LATERAL SHALL BE 6" DUCTILE IRON CEMENT LINED CLASS 52 PIPE.
8. TIE ROD SHALL BE 3/4" DIAMETER TIE ROD WITH EYE BOLTS - TWO REQUIRED (SIDE VIEW SHOWN), RESTRAIN ALL JOINTS ON HYDRANT TEE, VALVE, AND HYDRANT LEAD.
9. HYDRANT TEE SHALL BE U.S. PIPE CATALOG #U-592 TRIM-TYTE DUCTILE IRON, MECHANICAL JOINT OR AN T.W.W. APPROVED SUBSTITUTE.

FIRE HYDRANT (VALVE IN PAVEMENT) DETAIL

NOT TO SCALE | MCNY-UTIL-WATR-1001 | 07/01/19



NOTES:

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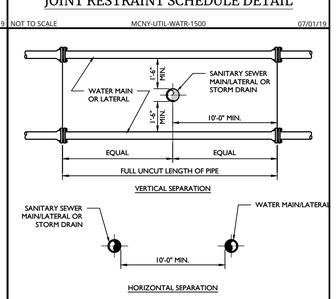
DIP WATER PIPE BEDDING DETAIL

NOT TO SCALE | DIP PIPE BED | 07/01/19



NOTE:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DEPARTMENT OF HEALTH

SANITARY/STORM SEWER-WATER MAIN SEPARATION DETAIL

NOT TO SCALE | MCNY-UTIL-SSWR-2400 | 07/01/19

REV	DATE	DRAWN BY	DESCRIPTION
1	08/2023	TPS	REVISED PER REVIEW OF SUBSURFACE PERCOLATION CHAMBERS
2	10/2023	TPS	REVISED PER VARIOUS AGENCY COMMENTS
3	7/2024	JAG	REVISED PER VARIOUS AGENCY COMMENTS
4	9/2024	JAG	REVISED PER VARIOUS AGENCY COMMENTS
5	11/2024	MAN	REVISED PER VARIOUS AGENCY COMMENTS
6	01/2025	MAN	REVISED PER TOWN COMMENTS
7	03/2025	MAN	REVISED PER TOWN COMMENTS
8	05/2025	MAN	REVISED PER TOWN COMMENTS
9	10/2025	MAN	REVISED PER TOWN COMMENTS
10	11/2025	MAN	REVISED PER TOWN COMMENTS

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Doing Business as MASER CONSULTING

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

PRELIMINARY SITE PLAN

FOR

622 ROUTE 303 LLC

PROJECT AL FOXIE

SBL: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
WOODCLIFF LAKE
300 TICE BOULEVARD
Suite 101
WOODCLIFF LAKE, 07677
Phone: 845.352.0411
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/03/2023	MAS	CDR

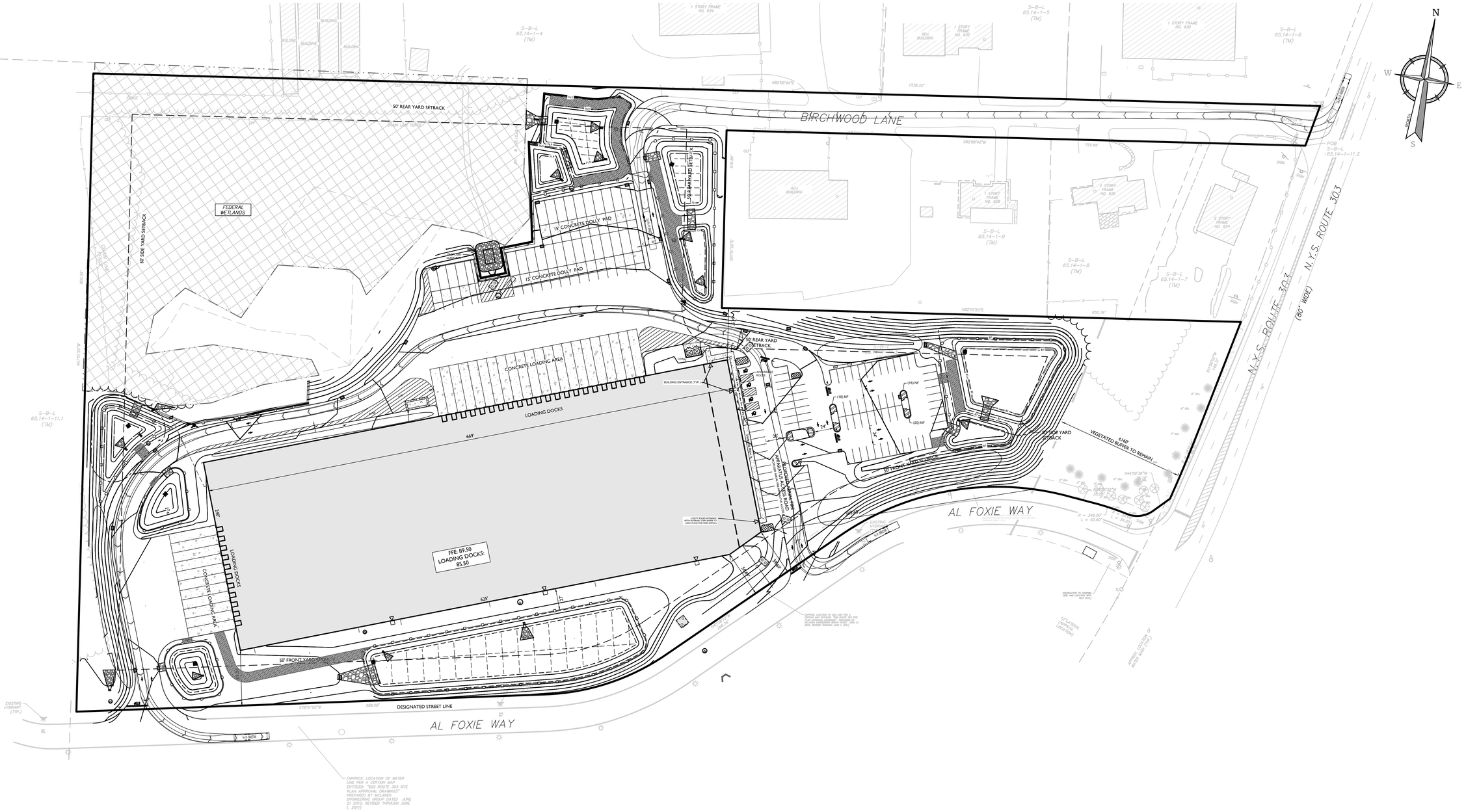
PROJECT NUMBER:	DRAWING NAME:
22002634A	C-DTL5

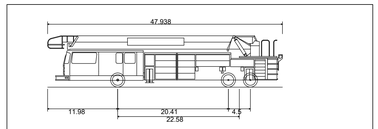
SHEET TITLE:
WATER & SEWER DETAILS

SHEET NUMBER:
23 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2022\22002634A\Engineering\Civil\Plans\C-DTL5.dwg, 2-26 WATER & SEWER DETAILS By: MICHAELA MCDONALD





Copy of Fire - NY - ORANGETOWN	
Overall Length	47.938ft
Overall Width	8.250ft
Overall Body Height	10.475ft
Min Body Ground Clearance	0.906ft
Track Width	8.250ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	35.540ft

50 0 50 100

SCALE : 1" = 50'

Colliers
Engineering & Design

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Doing Business as MASER CONSULTING

811 Know what's Call before you dig. Below,

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

REV	DATE	DRAWN BY	DESCRIPTION
1	4.27.23	TPS	REVISED PER REMOVAL OF SUBSURFACE DETENTION CHAMBERS
2	07.05.23	TPS	REVISED PER VARIOUS COMMENT LETTERS.
3	7.17.24	JAG	REVISED PER VARIOUS COMMENT LETTERS.
4	9.9.24	JAG	REVISED PER VARIOUS COMMENT LETTERS.

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-01
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

EXHIBIT

FOR

622 ROUTE 303 LLC

S.B.L.: 65.14-1-11.2 & 11.3

TOWN OF ORANGETOWN
ROCKLAND COUNTY
NEW YORK STATE

Colliers Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
COLLIERS ENGINEERING & DESIGN CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/06/2023	JAG	JF
PROJECT NUMBER:	DRAWING NAME:		
22002634A	C-EXBT		

SHEET TITLE:
FIRE TRUCK TURN EXHIBIT

SHEET NUMBER:
24 of 24

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

J:\2022\22002634A\Engineering\Exhibits\C-EXBT.dwg, C-EXBT, By: MICHAEL.MCCORMICK

Contract No.: D014891
Supplemental Agreement No.: 2
Date Prepared: _____

SUPPLEMENTAL AGREEMENT No. 2 to Contract No. D014891

This Supplemental Agreement is by and between:

the New York State Department of Transportation ("NYSDOT"), having its principal office at 50 Wolf Road, Albany, NY 12232, on behalf of New York State ("State"); and the

TOWN OF ORANGETOWN ("Municipality")
Acting by and through the _____.

This amends the existing Municipal Snow and Ice Agreement between the parties in the following respects only *(check all that apply):*

☐ Amending the contract end date ONLY
☐ Amending the number of lane miles/specific roads covered under Paragraphs 7 and 9 of the Original Agreement (revised map attached)
☒ Amending the estimated expenditure for the 25/26 season by:
  ☐ adding funding due to exceeding the Estimated Expenditure for the above-mentioned season (required Amendment B attached with a copy of the final snow & ice voucher, if applicable)
  ☒ adding funding to adjust the Estimated Expenditure to account for increases in labor, materials, equipment, and/or overall costs, per the terms in Paragraphs 9 and 10 in the Original Agreement (Adjustment Worksheet and Municipal Resolution attached)
☐ Extending the Agreement attached hereto and incorporated herein for an additional 5-year period (Extension No. ____ of a maximum of 3)
☐ Amends a previously adopted Agreement by replacing the Appendix A dated October 2019 with the Appendix A dated June 2023
☐ Other: _____

Contract No.: D014891
Supplemental Agreement No.:2
Date Prepared: _____

IN WITNESS THEREOF, the parties have caused this Agreement to be executed by their duly authorized officials as of the date first above written.

THE PEOPLE OF THE STATE OF NEW YORK

By: _____
For Commissioner of Transportation

Date: _____

MUNICIPALITY:

By: _____

Print Name: _____

Title: _____

STATE OF NEW YORK

)ss.:

COUNTY OF ___

On this _____ day of _____, 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____; that he/she is the _____ of the Municipality described in and which executed the above instrument; that it was executed by order of the _____ of said Municipality pursuant to a resolution that was duly adopted on _____ and which a certified copy is attached and made a part hereof; and that he/she signed his/her name thereto by like order.

_____
Notary Public

APPROVED AS TO FORM
STATE OF NEW YORK ATTORNEY GENERAL

By:_____

APPROVAL BY NYS COMPTROLLER'S OFFICE

By: _____

NYSDOT Municipal Snow & Ice Program

AGREEMENT ADJUSTMENT/CALCULATION WORKSHEET
For Indexed Lump Sum Agreements

2025/26 Snow & Ice Season
Current Contract Period: 7/1/2024 to 6/30/2029

Municipality	TOWN OF ORANGETOWN	**Contract #**	D014891
County	ROCKLAND	**Region**	8
Contract LM	62.50		

2024/25 Season's Estimated Expenditure					$233,445.97	
%	**Labor**	39.49%	**Materials**	325.58%	**Equipment**	34.93%
Value	$92,078.87		$59,631.83		$81,435.27	

LABOR *

Labor Portion of 2024/25 Estimated Expenditure	$92,078.87	
% Labor Increase/Decrease for 2025/26 Season	x 2.5	%
Additional/Less Labor Costs for 2025/26	2301.97	
Labor Portion of 2025/26 Season Estimated Expenditure		$ 94,380.84

* *Attach Municipality's certification of applicable labor cost increase*

MATERIALS

Materials Portion of 2024/25 Extension's Estimated Expenditure $59,631.83

	% Materials	2024/25 Total Material $	I. Proportionate $ Amount	2025/26 Price Per Unit	2024/25 Price Per Unit	Difference (Show +/-)	II. ± ▲ %	I. x II. Inc/Dec
Salt	100%	$59,631.83	$59,631.83	$75.10	$73.00	$2.10	2.88%	$1,715.44
Sand								
Other								
							Materials Total	

Materials Portion of 2025/26 Season's Estimated Expenditure	$61,347.27

EQUIPMENT

Equipment Portion of 2024/25 Estimated Expenditure	$81,435.27	
% Equipment Increase/Decrease for 2025/26 Season	25.57%	
Additional/Less Equipment Costs for 2025/26	$20,823.00	
Equipment Portion of 2025/26 Season Estimated Expenditure		$102,258.27

SUBTOTAL of Labor + Materials + Equipment	$257,986.38

FIXED COSTS (fill out if necessary)

Salt Storage (Barns)		N/A
DTN Weather Service		$300
Snow Fence		N/A
	Total Fixed Costs	$300.00

2025/26 SEASON ESTIMATE (Labor + Materials + Equipment + Fixed Costs)	$258,286.38

SUMMARY OF COSTS

	2024/25 $	%	2025/26 $	%
Labor	$92,078.87	39.49%	$94,380.84	36.5
Materials	$59,631.83	25.58%	$61,347.27	23.7
Equipment	$81,435.27	34.93%	$102,258.27	39.5
Fixed Costs	$300.00		$300 -	.3
Totals	$233,445.97	100%	$258,286.38	100

A: Original Base Season Estimate from Current Agreement:	$233,445.97
B: 2025/26 Season Estimate	$258,286.38
Increase or Decrease (B minus A)*	$24,840.41

**If an increase is needed for the 2025/26 season, an amendment (Supplemental Agreement) to the contract will be required and will be subject to OSC approval.*

Estimate Recommended/Reviewed By: _____
Resident Engineer

Estimate Reviewed By: _____
Municipality

Estimate Approved By: _____
S&I Program Manager

FIRST AMENDMENT
TO
LICENSE AGREEMENT

This FIRST AMENDMENT TO LICENSE AGREEMENT (the "**First Amendment**") is entered into as of the 1st day of January, 2026 ("**Effective Date**"), by and between TOWN OF ORANGETOWN, a New York municipal corporation ("**Town**"), and TROON GOLF, L.L.C., a Delaware limited liability company ("**Troon**").

RECITALS:

A. Town and Troon are parties to that certain License Agreement dated January 1, 2021 (the "**Agreement**"), concerning the golf facilities and related improvements known as the "*Blue Hill Golf Course*" located in Pearl River, New York and "*Broadacres Golf Course*" located in Orangeburg, New York (collectively, the "**Facilities**").

B. Town and Troon have agreed to modify the Agreement, all in accordance with the terms and conditions herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

AGREEMENTS:

1. Recitals. The foregoing recitals are incorporated herein by this reference. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Agreement.

2. Term. The Parties are hereby exercising the five (5) year renewal period outlined in Section 3(A) of the Agreement. For the avoidance of doubt, the Term shall be extended until December 31, 2030.

3. License Fee. Notwithstanding anything to the contrary in the Agreement, beginning on the Effective Date, and continuing for the remainder of the Term, Section 2(B) shall be amended as follows:

(a) On January 1, 2026, the License Fee for Blue Hill Golf Course shall increase by NY-NJ-PA CPI as outlined in Section 3(B) of the Agreement plus an additional One Hundred and Twenty-Five Thousand Dollars ($125,000.00). Thereafter, the License Fee for Blue Hill Golf Course shall only increase by NY-NJ-PA CPI. For the avoidance of doubt, the License Fee for Broadacres Golf Course shall only increase by NY-NJ-PA CPI for calendar year 2026.

(b) On January 1, 2026, the Revenue Targets amounts outlined in Section 2(B) shall be:

Blue Hill Golf Course: $2,800,000
Broadacres Golf Course: $975,000

If during the Term a Major Capital Project is commenced at either Facility that results in the closure of the golf course for play for more than ten (10) consecutive calendar days or an aggregate of more than ten (10) calendar days within calendar year, then the Revenue Targets for the affected calendar year shall be equitably prorated to account for the period and extent of such closure.

In making such proration, the parties shall take into consideration, in good faith, (a) the number of days during which play or amenities were unavailable on each affected golf course, (b) the portion of the calendar year impacted, (c) the anticipated impact on play, amenities and revenue based on historical performance for the corresponding period(s), and (d) any offsetting operational or revenue adjustments implemented during the closure. The parties shall cooperate in good faith to document the adjusted Revenue Targets in writing within thirty (30) days following the end of the applicable closure, but no later than thirty (30) days following the end of the applicable calendar year.

For purposes of this Section, "Major Capital Project" means any Capital Improvement and Repair project that either exceeds eighty thousand dollars ($80,000.00) or materially interferes with or restricts regular golf operations on one or both golf courses, including but not limited to substantial course renovation, reconstruction, or replacement of greens, tees, or fairways.

4. Town Capital Expenditure Contributions. Beginning on the Effective Date, the last paragraph under Section 2(A) of the Agreement shall be deleted and replaced with the following:

> "Licensee shall remit $24,000 per year to the Town as a License Fee for the Blue Hill restaurant; and Licensee shall contribute a minimum of $200,000 toward Capital Improvement and Repair for the Facilities over the five-year renewal period (January 1, 2026 – December 31, 2030) of the Term. The term "Capital Improvement and Repair" as used herein shall be those necessary and reasonable capital costs incurred in the normal course of conducting and operating the business affairs of the Facilities, which include, but are not limited to:
>
> (i) Non-maintenance repairs or replacement of buildings;
> (ii) Non-maintenance repairs or replacement of the course irrigation system;
> (iii) Replacement of golf course signs, markers, ball washers, etc.;
> (iv) Non-maintenance repairs or replacement of golf carts, equipment and furnishings; and
> (v) Golf course renovations and projects, including design, bunkers, tree work, etc.
>
> It is acknowledged and agreed that Troon shall have no obligation to make Capital Improvement sand Repairs to the Facilities and shall not make any Capital Improvements and Repairs to the Facilities without the prior written consent of the Town, and if required by law, such consent shall be evidenced by a duly adopted resolution of the Town Board."

5. General.

(a) This First Amendment shall be governed by and construed in accordance with the laws of the State of New York.

(b) Each person signing below represents and warrants that he or she is fully authorized to execute and deliver this First Amendment in the capacity set forth beneath his or her signature.

(c) This First Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

(d) This First Amendment constitutes the entire agreement of the parties with respect to the subject matter of the First Amendment, and may be amended only by written agreement signed by all parties; and, to the extent that the terms and provisions of the Agreement are not specifically amended by this First Amendment, then all terms and provisions of the Agreement, not specifically amended in this First Agreement, shall remain in full force and effect.

(e) This First Amendment may be executed in two or more counterparts (including facsimile), each of which shall be deemed to be an original and all of which together shall be deemed to constitute one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this First Amendment to License Agreement to be executed on the day and year first written above.

Town:	Troon:
TOWN OF ORANGETOWN a New York municipal corporation	TROON GOLF, L.L.C., a Delaware limited liability company
By:_____ Its: _____	By:_____ Its: _____

Memorial Bench Request

Town of Orangetown

Department of Parks, Recreation and Building Maintenance

Memorial Bench Donation Agreement

Thank you for your interest in donating a Memorial Bench to the Town of Orangetown. This bench will provide an opportunity for visitors to our facilities and parks to better enjoy their experience.

A donor may request placement of a bench in a particular park or facility, however the site and specific donation of the bench on the site will be determined by Parks and Recreation staff based upon specific conditions and the number of benches already present on the site.

As some parks and facilities already have a specific style of bench in place, it may be necessary to require that the donated bench conform to the current standards. In all cases Parks and Recreation staff must make final approval on the style, material and color of the bench being purchased.

Parks and Recreation staff reserve the right to approve the content of the message on the plaque/dedication, including the right to approve and reject names that are considered illegal, inappropriate or inconsistent with the mission of the Parks and Recreation Department.

The Town of Orangetown will not be responsible for the replacement of the bench or plaque in the event of loss due to vandalism or natural acts. However the donor may choose to replace the same bench and/or same plaque at the donors expense. The Town of Orangetown reserves the right to remove the bench if it is damaged or defaced and the right to relocate the bench if necessary for safety, environmental or land management reasons. The donor may be notified of the new location of the bench.

Read and Accept Conditions *	☑ Accepted
Name *	Meghan Casey
Phone Number *	8456411570
Date *	1/20/2026
Email *	meghanannecasey@gmail.com
Engraving Message *	In Loving Memory of Jane and Edmund Shanley ☘ Faith - Family - Community ☘ The - should be bulletpoints
Describe Preferred location *	On the rail trail in Blauvelt behind St. Catharines where the cut through is
Signature *	

Memorial Bench Request

Town of Orangetown

Department of Parks, Recreation and Building Maintenance

Memorial Bench Donation Agreement

Thank you for your interest in donating a Memorial Bench to the Town of Orangetown. This bench will provide an opportunity for visitors to our facilities and parks to better enjoy their experience.

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Read and Accept Conditions *	☑ Accepted
Name *	Meghan Casey
Phone Number *	8456411570
Date *	1/20/2026
Email *	meghanannecasey@gmail.com
Engraving Message *	Together Forever ☘ Jim and Eleanor Casey
Describe Preferred location *	On the rail trail in Blauvelt behind St.Catharines where the little cut through is.
Signature *	

LICENSE AGREEMENT FOR USE OF THE RAMAPO POLICE RANGE FACILITY BY OUTSIDE AGENCIES

This Agreement made as of the 1st day of January 2026, between the TOWN OF RAMAPO, a Municipal Corporation with principal offices at the Ramapo Town Hall, 237 Route, Suffern, New York 10901 hereinafter referred to as "TOWN" and

TOWN OF ORANGETOWN, a municipal corporation of the State of New York, with offices at 26 Orangeburg Road, Orangeburg, New York 10962, hereinafter referred to as "LICENSEE".

WITNESSETH:

1. DESCRIPTION AND LOCATION

The TOWN hereby grants the LICENSEE, and LICENSEE hereby accepts from the TOWN, a license to use the Town of Ramapo Police Range Facility located at the end of Bailer Road in the Town of Ramapo. Said use shall include and be limited to training officers in firearms knowledge and proficiency.

2. TERM

The term of this License Agreement shall be for one year from January 1, 2026 through December 31, 2026 and may be renewed on a yearly basis upon the same terms and conditions provided the same is mutually acceptable to both parties.

(a) The parties understand and agree that this is a License Agreement and not a lease, and is, therefore, revocable by the TOWN at will when, in the judgment of the TOWN Board, it is deemed that such termination is necessary either by operation of law or for any other public purpose, and the TOWN reserves the right to cancel this license on written notice to the LICENSEE whenever it desires in good faith to do so.

(b) This License Agreement is specifically conditioned upon the representation by the LICENSEE that such LICENSEE, trainers and trainees shall be familiar with and comply with the Town of Ramapo Police Range Facility Policy (GO-105) and as said policy may from time to time be amended. A copy of GO-105 is attached hereto and made a part hereof.

3. CONSIDERATION

(a) The LICENSEE, in consideration for this license, shall agree to provide the TOWN with insurance, pursuant to Paragraph 5 of this License Agreement, naming the TOWN as an additional insured, and shall indemnify and hold the TOWN harmless by reason of any claim against all suits or liability regardless of origin or nature arising out of LICENSEE'S use of the Town of Ramapo Police Range Facility. With respect to the insurance for which the TOWN is designated as an additional insured, the certificate must also indicate that the insurance is primary to the TOWN.

(b) Although there is no fee charged for the use of the Ramapo Police Range Facility in 2026, the TOWN will be adding improvements to the facility in order to comply with Federal and State requirements. The TOWN anticipates charging a fee commencing in 2027.

4. COMPLIANCE WITH LAW

LICENSEE agrees to comply with all Federal, State and Local Laws and regulations and orders of the TOWN affecting the licensed premises in regard to all matters.

5. INSURANCE

The LICENSEE shall not use the Ramapo Police Range Facility under this license until it has obtained all insurance required under this paragraph and such insurance has been approved by the TOWN.

(a) Compensation Insurance - The LICENSEE shall take out and maintain during the life of this contract Workers' Compensation Insurance for its employees who use and/or are at the subject premises.

(b) General Liability and Property Damage Insurance - The LICENSEE shall take out and maintain during the life of this contract such general liability and property damage insurance as shall protect it from claims for damages for personal injury including accidental death and from claims for property damage which may arise from operations under this contract. The amounts of such insurance shall be as follows:

General Liability Insurance in a General Aggregate amount not less than $5,000,000 and not less than $5,000,000 on account of any one occurrence.

(c) INTENTIONALLY OMITTED.

(d) Defense of Action or Suits - Neither the TOWN nor any of its officers or agents shall in any manner be answerable or responsible for any loss or damages that may occur to the premises pursuant to the rights and obligations of the LICENSEE hereunder, or to any part or parts thereof, or to any materials, equipment or other property that may be used therein, or placed upon the ground, during the LICENSEE'S use of the premises. Neither the TOWN nor any of its officers or agents shall be in any manner answerable or responsible for any injury done, or damages or compensation required to be paid under any present or future law, to any person or persons whatever, whether employees of the LICENSEE or otherwise, or for damages to any property, whether belonging to the employees and/or agents of the LICENSEE or otherwise, or for damages to any property, whether belonging to the contractor or others, occurring during or resulting from the LICENSEE'S use of the premises. The LICENSEE shall properly guard against all injuries and damages. The LICENSEE shall indemnify and save harmless the TOWN, its officers and employees, and agents

against all such injuries, damages and compensation arising or resulting from causes other than the TOWN'S negligence. The LICENSEE shall, throughout the term hereunder and any use of the premises, that may occur at any time after the termination of this agreement, maintain General Liability Insurance in the amounts hereinbefore stated for the protection of the LICENSEE and the TOWN, and shall furnish duplicates of the policies to the TOWN, stamped by the insurer "Premium Paid." These policies shall be written by an insurance company or companies approved by the TOWN.

(e) The LICENSEE shall furnish the TOWN with satisfactory proof of coverage of the insurance required.

Each policy and certificate shall have endorsed thereon:

"No cancellation of or change in the policy shall become effective until after 10 days' notice by Certified Mail to the TOWN Attorney, TOWN OF RAMAPO, TOWN Hall, 237 Route 59, Suffern, New York 10901."

(f) If, at any time, any of the said policies shall be or become unsatisfactory to the TOWN as the form or substance, or if a Company issuing any such polices shall become unsatisfactory to the TOWN, and notification is given to LICENSEE in writing of same, LICENSEE shall promptly obtain a new policy, submit the same to the TOWN for approval, and submit a certificate thereof as hereinabove provided, Upon failure of LICENSEE to furnish, deliver and maintain such insurance as above provided, this license may, if such policy or policies are not secured within fifteen (15) days after written notice is given LICENSEE, at the election of the TOWN, be forthwith declared suspended, discontinued or terminated and any and all payments made by LICENSEE on account of this license shall thereupon be retained by the TOWN as liquidated damages. Failure of LICENSEE to purchase and/or maintain any required insurance shall not relieve LICENSEE from any liability under the license, nor shall the insurance requirements be construed to conflict with the obligations of LICENSEE concerning indemnification. All required insurance must remain in effect during the life of the license and any use of the premises after the expiration of the license. This paragraph shall survive the expiration of the term herein.

(g) The total amount of insurance coverage set forth in paragraph 25(a) herein may be increased by the TOWN during the term of this License or any extension term hereof if reasonably deemed in the best interest of the TOWN.

6. HOLD HARMLESS

The LICENSEE, in addition to any public liability insurance obtained under this Contract, agrees to save, indemnify and hold harmless the TOWN and all of its agents, officers, servants and employees, including any consultant of the TOWN, by reason of any claim against all suits or liability regardless of origin or nature arising out of the use of the facility by the LICENSEE, including all laborers, employees, agents, servants, and

officers of the LICENSEE, whether by violation or statute, law, ordinance, regulation, order or decree or common law liability and whether or not a negligent act or omission is claimed and the LICENSEE agrees to pay the TOWN for defending such suit, all costs, expenses and reasonable attorney's fees incurred therein, or at the option of the TOWN, shall, at the LICENSEE'S own expense, defend any and all such actions.

7. LIABILITY TO THE TOWN

The TOWN shall not be liable for any damage to persons or properties at the Town of Ramapo Police Range Facility. The LICENSEE agrees that all personal property upon the demised premises shall be at the risk of the LICENSEE and that the TOWN shall not be liable for any damage thereto or loss or theft thereof.

8. MISCELLANEOUS PROVISIONS

(a) LICENSEE agrees to abide by all reasonable rules and regulations that the TOWN may, from time to time, make or adopt.

(b) The failure of the TOWN to insist upon the strict performance of any of the terms, conditions and covenants herein shall not be deemed a waiver of any rights or remedies that the LICENSEE may have, and shall not be deemed a waiver of any subsequent breach or default in the terms, conditions, or covenants herein contained.

(c) If any term, covenant or condition of this license, or the application thereof to any person or circumstance shall to any extent be invalid or enforceable, the remainder of this license shall not be affected thereby and each remaining term, covenant and condition of this license shall be valid and remain in full force and effect.

9. MODIFICATION

This instrument contains all of the agreement and conditions made between the parties and may not be modified orally or in any other manner other than by an agreement in writing signed by all of the parties or their respective successors in interest.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be signed by their corporate officers and have caused their corporate seals to be affixed hereto.

DATE: _____

TOWN OF ORANGETOWN

By: _____

_____
Print Name & Title

TOWN OF RAMAPO

By: _____
MICHAEL B. SPECHT
SUPERVISOR

State of New York)
) SS:
County of Rockland)

On the_____day of_____in the year 2026, before me, the undersigned, a Notary Public in and for said State, personally appeared_____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that (s)he executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
) SS:
County of Rockland)

On the _____ day of _____ in the year 2026, before me, the undersigned, a Notary Public in and for said State, personally appeared Michael B. Specht, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that (s)he executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

Town of Ramapo Police Department
GENERAL ORDER

General Order No. 105 | **Issuance Date: May 26, 2005**
Subject: Police Range Facility Policy
Cross Reference: GO 111 | **Effective Date: June 1, 2005**
Accreditation Ref:
Distribution: All Members | **Rescinded Date:**
Issuing Authority: Chief Peter Brower

Reevaluation						Amended					

105.1 Purpose

It is the purpose of this order to provide guidelines for the use of the Town of Ramapo Police Range Facility.

105.2 Policy

The Town of Ramapo Police Department maintains a facility used for the purpose of training officers in firearms knowledge and proficiency. It is the policy of the Department that there shall be formal control over the use of the Police Range Facility.

105.3 Definitions

A. ***Police Range Facility:*** The area located at the end of Bailer Road in the Town of Ramapo known as the "Range" and used for firearms training.

B. ***Licensee:*** Any Department or Agency who has a valid Contract and Agreement executed and filed with the Town of Ramapo to use the Ramapo Police Range Facility.

C. ***Range Manager:*** That person designated by the Chief of Police responsible for overseeing all aspects of the Ramapo Police Range Facility.

D. ***Firearms Instructor:*** Any police officer who has completed a Federal Bureau of Investigation or New York State Firearms Instructor's Course, holds a valid certificate of completion, and has been assigned this duty by the Chief of Police.

E. ***Senior Firearms Instructor:*** The Firearms Instructor charged with overseeing the Ramapo Police Range Facility in the absence of the Range Manager.

F. ***Range Officer:*** Any police officer designated by the Range Manager to assist and work under the direction of a Firearms Instructor.

105.4 Procedures

A. The Town of Ramapo Police Department may utilize the Ramapo Police Range Facility for any training or activity deemed safe and suitable.

1. The Range Manager shall be consulted prior to authorization of range use so as not to cause safety issues or conflicts with scheduled training.

(a) In the absence of the Range Manager, a Firearms Instructor shall be consulted with.

2. When firearms instruction is being conducted, there should be at least one Firearms Instructor or Range Officer present for every three trainees.

(a) This ratio may be altered by the Range Manager or Senior Firearms Instructor after carefully considering the experience level of trainers and trainees, and any other conditions which may affect the safe operation of the Ramapo Police Range.

B. Designated parking shall be on the stone covered area within the gates of the Ramapo Police Range Facility. Vehicles are to be parked in plain view so that anyone entering the Police Range Facility can clearly see the vehicles and know that the Range is in use.

C. Upon arrival, that person in command of the Range, shall assure that the Police Range is checked for safety hazards, damage, or any required maintenance to the Range or Equipment. If necessary, it shall be reported to the Range Manager or Senior Firearms Instructor. Officers are to use care in and around the Range Facility and Storage Trailer to avoid contact with animals which may find their way inside, including rattlesnakes.

D. When the Range is active, the sign at the entrance gate shall be flipped to indicate that the Police Range is in use. It shall be flipped back upon completion.

E. Rubbish shall be placed in proper receptacles.

F. Additional procedures for Off-Duty Police Range Facility use.

1. After obtaining permission from the Range Manager, individual officers may use the Ramapo Police Range for practice, at their own risk, and will not be considered on duty.

2. When more than one officer is using the Ramapo Police Range, a Firearms Instructor or Range Officer should be present. The Range Manager will make a determination based upon the individual officer's knowledge and experience.

3. The Range Manager may authorize an officer to be accompanied by a non-department member for safety purposes on an individual basis.

4. Prior to entering the Police Range and upon completion of its use, Desk Sergeant or on duty squad supervisor shall be notified.

   a. If the range is already in use, the supervisor shall advise the officer of its active condition for safety purposes.

   b. The supervisor shall assure that the Shift OIC is notified.

5. Officers utilizing the Police Range shall have a means of communicating with ECC Personnel such as a portable police radio or a working cellular telephone. The cellular phone number shall be provided to the ECC.

G. Safety.

1. Prior to any Firearms Training Session, a Safety Lecture shall be given, including but not limited to the following points:

   a. All firearms are to be always considered loaded;
   b. Firearms are to be holstered and secured at all times unless actively involved in a course of fire and have been given a command to un-holster and/or fire by a Firearms Instructor or Range Officer;
   c. Unless in use during training, all rifles and shotguns will be kept with the action open and the safety on;
   d. Firearms will never be pointed at or in the direction of a person;
   e. Firearms will never be pointed at anything you are not willing to damage or destroy;
   f. Finger is to remain off the trigger until a decision has been made to shoot;
   g. Shooters are to be aware of any hazards in the shooting environment and beyond prior to initiating any shots;
   h. While on the line and involved in a training exercise, talking should be kept to a minimum so as not to interfere with range operations;
   i. Anyone who sees, or simply believes that a safety hazard exists, shall immediately yell the word, "ABORT" loud enough for everyone to hear;
   j. Upon hearing an "ABORT", everyone on the range shall immediately cease all shooting activity, safely holster and secure any handguns in their possession, and remain in their present position if not in danger. If rifles or shotguns are in use, the safety shall be applied, and the muzzle positioned vertically, above the head of the tallest person present at the range. They will then await further instructions from a Firearms Instructor or Range Officer;
   k. Shooters shall not move from their line positions until instructed to do so by a Firearms Instructor or Range Officer;

l. Shooters are not to bend over to pick up anything while on the line, including weapon magazines, until the line has been declared safe by a Firearms Instructor or Range Officer;

m. Whenever shooting is taking place, all personnel on the range must wear ear protection, safety glasses, and a baseball style cap with a brim that covers the top of their safety glasses.

2. Distance Shooting

a. Shooting at distances of greater than 75 yards shall only be conducted on Range #1 (also known as the "Main Range" consisting of the turning-target system).

b. The Police Range Facility gate shall be closed and locked to exclude all unauthorized personnel from the Range Facility.

c. One officer shall be posted as an observer to announce a cease fire or abort if anyone should enter the Range Facility.

d. Extended shooting points shall remain within the width of Range #1. No shooting points shall originate to the left of target point #1, or to the right of target point #25. The purpose of this is to prohibit firing at angles across the range from a position that may not be clearly visible or expected.

H. Qualification with Off Duty Firearms.

1. Non-probationary Active members of the Ramapo Police Department may be certified to carry off duty firearms other than their service weapon by successfully completing a qualification course approved by the Range Manager.

2. Off duty weapon qualification courses shall be for firearms of .32 caliber or greater, and officers shall provide the Range Manager or Senior Firearms Instructor with the make, model, serial number, and caliber of the firearm used during the qualification course.

3. Retired members shall be permitted to complete a qualification course for off-duty weapons and upon successful completion, will be provided with a letter from the Range Manager or Senior Firearms Instructor indicating the date that they successfully completed the qualification course. The letter shall include make, model, serial number, and caliber of the firearm used for the qualification course. Their decision to possess a firearm shall be guided by any applicable laws or statutes. Records shall be maintained by the Range Manager.

105.5 Lines of Authority

When firearms are in use or to be used at the Ramapo Police Range Facility, the following personnel are in command of the Range:

A. The Range Manager, followed by;

B. the Senior Firearms Instructor, followed by;

C. the highest ranking Firearms Instructor, followed by;

D. the highest ranking officer present, followed by;

E. the highest ranking Range Officer, followed by;

F. the most senior officer.

105.6 Use of Ramapo Police Range by Outside Agencies

A. Any outside agency wishing to utilize the Ramapo Police Range Facility, shall request such use in writing to the Chief of Police, and if approved, will be referred to the Ramapo Town Attorney's Office for contract.

B. Licensees in contract with the Town of Ramapo may use the Ramapo Police Range Facility for Departmental Firearms Training **ONLY**.

C. The contract is designed to accommodate the Licensee when no other Range Facility is available for their training. If another location is available to the Licensee, then the Ramapo Police Range Facility shall not be used. Other training, not directly related to firearms, shall be conducted off premises.

D. Training must be performed under the direct supervision of a Firearms Instructor.

1. Officers may remain at the Ramapo Police Range during a meal period provided that a Firearms Instructor is actually present at the facility.

E. Only officers actually involved in the training activity and their supervisors, may be present at the Ramapo Police Range Facility.

F. Under no circumstances shall anyone not covered under the Licensee's Agreement and/or Contract be present at the Range Facility.

G. Licensees, Trainers, and Trainees shall be familiar with and comply with all provisions of this policy. Failure to comply with this policy will result in the immediate withdrawal of the Agreement and Contract.

1. If for any reason any part of this policy is in question or violation, the Licensee is subject to the direction of the Ramapo Police Officer in Charge (OIC), Range Manager, or Senior Firearms Instructor.

H. Licensee's or their agent(s) shall provide a copy of the signed contract and schedule all training with the Ramapo Police Range Manager prior to the commencement of any training.

1. The Range Manager should ensure that the Licensee's request does not conflict with any other Range Facility use.

2. The Range Manager shall assure that the working squad OIC is notified of the date, time, and length of training scheduled.

I. Licensee shall designate **one** Firearms Instructor as being their Officer in Charge prior to any training.

1. Licensee's OIC shall be responsible to assure compliance with this policy.

2. Licensee's OIC shall notify the Ramapo Police Desk Sergeant on arrival and departure from the Range Facility.

J. Under No Circumstances shall any agency conduct any activity at the Ramapo Police Range Facility until the Agreement has been executed and filed with the Town of Ramapo Attorney's Office.

K. Licensee is not authorized to create or possess copies of the Ramapo Police Range Facility access keys without authorization from the Chief of Police or his/her designee.

1. The Range Manager shall maintain records of agencies and individuals authorized to possess access keys to the Police Range Facility and has the authority to revoke those privileges at any time.

L. Before Rifles are fired, Licensee shall assure that the "C-Shaped" target supports on the Action Target System are removed from the affected target positions. This is to avoid damage to the "C-arm" which is not designed to withstand rifle fire.

Donald Brenner, P.E., LL.B.

Attorney-At-Law • Professional Engineer

4 Independence Avenue, Tappan, New York 10983

Phone 845-359-2210 Fax 845-359-8070

MEMORANDUM

TO: Teresa M. Kenny, Supervisor (supervisor@orangetown.com)

CC: Robert V. Magrino (rmagrino@orangetown.com)

FROM: Donald Brenner, P.E., LL.B.

DATE: February 3, 2026

RE: 276 Sickletown Road
Orangeburg, New York
Section 64.20, Block 1, Lot 9
26-2960

My client received final approval from the Planning Board to construct a lot at the aforementioned premises.

Rockland County Sewer District No. 1 requests that a Resolution from the Town Board is needed approving the hookup of the sewer to the Rockland County Sewer District No. 1 system.

This is for the existing house and the new construction.

A copy of the letter is enclosed.

DB/hi

Z:\Docs\1 - Client\2960 - Donnelly, Eamon 276 Sickletown Rd\MEMO - Magrino (2960).wpd

Rockland County
Ed Day, Rockland County Executive

ROCKLAND COUNTY SEWER DISTRICT NO. 1
4 Route 340
Orangeburg, New York 10962
Phone: (845) 365-6111 Fax: (845) 365-6686
RCSD@co.rockland.ny.us

Michael Specht
Chairman

Michael R. Saber, P.E.
Executive Director

January 12, 2026

RECEIVED
JAN 12 2026
TOWN OF ORANGETOWN
LAND USE BOARDS

Ms. Audrey Lupachino
Town of Orangetown Planning Board
26 Orangeburg Road
Orangeburg, NY 10962

Re: Donnelly Subdivision
276 Sickletown Road, Orangeburg
Tax Lot 89/64.20-1-9

Dear Ms. Lupachino:

Our office has received and reviewed a site plan that was last revised on October 16, 2025, which Jay A. Greenwell, P.L.S., LLC prepared for the above referenced project. We thank you for the opportunity to comment on this application. Our comments are as follows:

1. The Orangetown sewer on Sickletown Road to which this project would connect is tributary to the Rockland County Sewer District No. 1 sewer system. Therefore, the sanitary sewer connection from this property is considered an "out-of-District" hookup. A written request to connect to the sewer must be submitted to the Executive Director, who may also require other pertinent information.

    a. A resolution from the Town of Orangetown Town Board approving the hookup of the sewer to the Rockland County Sewer District No. 1 sewer system.

    b. A resolution from the District's Board of Sewer Commissioners approving the hookup of the sewer to the District's sewer system. The applicant must request the out-of-District connection and the resolution in writing.

    c. An out-of-District connection fee of three thousand seven hundred dollars ($3,700.00) per connected unit **(for a total of $7,400.00)**, or as established by resolution of the Board of Sewer Commissioners, which must be paid within thirty (30) days of the Board's approval of the connection.

    d. The area benefit fee, which commences on the date of the Board of Sewer Commissioners' approval of this project. (Area benefit fee is calculated by an annual tax rate per one thousand dollars ($1,000.00) of assessed value. This fee must be paid before release of approval).

    e. The annual sewer use fee for operations and maintenance, which must be paid within ten (10) days of sewer service becoming available and pro-rated as of that date.

    f. An executed copy of a covenant agreeing to abide by the rules, laws and regulations of the District and its Law, as it may be amended, including the payment of annual sewer use fees and annual area benefit fees. This covenant must be:

i. In recordable form, including all prior mortgages or other encumbrances,
ii. Accompanied by requisite fees for recording as set forth by the County Clerk,
iii. Accompanied by an up-to-date Title Report and paid policy of Title Insurance,
iv. Acknowledged by the owner of the land, and
v. Accompanied by a complete site survey and property description.

2. If the use or occupancy of the property exceeds two (2) units (e.g., with an additional dwelling unit or a home occupation), the District will require further review and the owner will have to pay an additional out-of-District fee.

3. Out-of-District connections require approval from the Rockland County Department of Health. A copy of the approval documents must be submitted to the District.

4. Details for sanitary sewer construction must comply with the District's construction standards and should be shown on the plans.

5. Details for the sanitary sewer connection are subject to approval by the Town of Orangetown.

6. If the sanitary sewer connection for the building on Lot 2 crosses Lot 1, an easement must be filed.

Please inform us of all developments in this project. If you have any questions, please contact this office at 845-365-6111.

Very truly yours,

Nicholas King
Engineer II

cc: M. Saber M. Dolphin M. Castro
Jake Palant – Rockland County Department of Planning
Elizabeth Mello, P.E. – Rockland County Department of Health
Bruce Peters, P.E. – Orangetown Dept. of Environmental Management & Engineering

File: TOO 64.20-1-9 – 276 Sickletown Road
Orangetown Out-of-District User
Reader

Town of Orangetown

Town Hall • 26 Orangeburg Road • Orangeburg, NY 10962
Telephone: (845) 359·5100 ext. 2293
Fax: (845) 359·2623
e-mail: supervisor@orangetown.com
website: www.orangetown.com

Teresa M. Kenny
Town Supervisor

Town of Orangetown Street Light Policy –
Adopted by Resolution 2017-54, Amended by Resolution 2026-_____

I. PURPOSE:

The purpose of this policy is to establish a consistent and standardized process to be used by the Town of Orangetown to determine the placement of public streetlights. The policy is intended to provide a procedure for review and approval/denial of streetlight requests, and to provide an ongoing system of prioritizing the need for future installation of streetlights.

Public streetlights are not designed to light private property, or to provide home security improvements that are the private homeowner's responsibility. Street lights requested for protection of private property should be made directly to the appropriate utility company and the applicant is responsible for installation, operation and maintenance costs. Also, residents have the option to install their own outdoor lighting systems for security.

II. STATEMENT OF POLICY:

The purpose of public streetlights is intended to ensure the safety of vehicular and pedestrian traffic.

The Town of Orangetown will determine the placement of street lights according to the following criteria:

1. Initial installation of public streetlights in new developments is regulated by the Orangetown Planning Board, and they are installed in accordance with Planning Board site plan approval.

2. Any streetlights requested outside of a new development shall be as follows:

Streetlights should be placed along streets and roads where increased lighting is necessary for the safety of motor and pedestrian traffic. In general, streetlights may be considered at the following locations:

I. Intersections.

II. Dangerous curves or significant changes in the roadway, whether they are horizontal or vertical.

Ill. Dead end streets and cul-de-sacs that are longer than 300 feet.

IV. Between intersections where the spacing of lights exceeds ~~20000~~200 feet.

Street lights between intersections should generally be located at lot lines and near fire hydrants.

V. Street locations with a high motor vehicle accident history.

VI. Street locations where potentially hazardous or unsafe road conditions have been identified.

VII. Other areas with a high accident history.

The Town will not be responsible for streetlights that are installed to illuminate private property or private driveways.

Ill. OBJECTIVE CRITERIA FOR CONSIDERATION:

Street lighting is a discretionary action. The Town of Orangetown will consider roadway safety, costs, excess lighting onto nearby homes, and energy consumption when making recommendations and decisions about new streetlight installations.

IV: POLICY FOR APPROVAL:

Requests for streetlights will be submitted to the Town of Orangetown, Traffic Advisory Board, which shall review the initial request and decide if it needs to be further evaluated by the Town Highway Department and Police Department for safety need. If appropriate, requests that have been evaluated by both Departments will be forwarded by the Traffic Advisory Board to the Town Council for their review. All requests will be approved or denied based on the following objective criteria:

1. The streetlight is needed to improve the safety of the public as described in Sections I and II of this policy;

2. Other methods of increasing safety such as the use of signs, reflectors and paint do not produce sufficient warning;

3. Improve safety of pedestrian crossings; and

4. Budgetary constraints.

V: PROCEDURE FOR EVALUATION OF NEED AND APPROVAL:

The process for approval for installation of a streetlight or reactivation of an existing streetlight by the Town Council will begin in one of two ways: Citizen Request; and ongoing Municipal Review of Need.

A. Citizen Request:

1. Request for streetlights may be made by residents, business operations, institutions, and other interested parties.

2. All requests will be submitted to the Town Traffic Advisory Board, which will review the request and, when appropriate, assign it to town Highway Department and Police Department for public safety evaluation of need. They will conduct an evaluation of the streetlight application, prepare a report of the location's characteristics, motor vehicle accident history, and potential hazards and unsafe road conditions of the location, and submit the report and recommendation to the Town Council for action.

3. The citizen will be notified in writing if the request is denied.

4. If the request is approved, the Town Council shall direct the order for a new streetlight or reactivation of an existing streetlight, and will inform the citizen making the request.

5. The actual date of installation will be determined by funds budgeted annually for street lighting. **A representative from the Supervisor's Office** ~~The Highway Department~~ will oversee the installation and arrangements will be made with the appropriate electric company.

B. Municipal Review of Needs:

1. The Police Department or Highway Department may identify streetlight need at locations identified from routine patrol as areas in need of future streetlight installation, and forward those reports to the Traffic Advisory Board, which will review and submit to the Town Council for consideration if appropriate.

2. The Town Council will consider the findings of the report, weigh the criteria and considerations described above in this policy, finalize a recommendation, and make a determination.

3. If the Town Council approves the addition of the location, they will direct the **Supervisor's Office** ~~Highway Department~~ to arrange for the installation or reactivation.

VI. APPLICATION:

Any person requesting a street light shall do so by completing the attached application and sending it to the Traffic Advisory Board, Town of Orangetown.

VII. EQUIPMENT:

1. The Orangetown **Engineering Department (DEME)** ~~Highway Department~~ will determine the type and installation details of the lighting, including determining the: luminaire type, wattage, mounting height, light distribution pattern, and in the case of multiple lights an installation pattern.

2. The **Engineering (DEME)** ~~Highway~~ Department shall consult with the electric company to determine feasibility of new lighting technologies to reduce operating and maintenance costs.

3. Existing poles will be used whenever possible.

###

RECEIVED JAN 15 2026 TOWN OF ORANGETOWN HIGHWAY DEPARTMENT

RECEIVED JAN 29 2026 TOWN OF ORANGETOWN HIGHWAY DEPARTMENT

RECEIVED JAN 26 2026 Orangetown Police Department

TOWN OF ORANGETOWN
SPECIAL USE PERMIT FOR USE OF TOWN PROPERTY/ITEMS

PERMIT # 26-SP-002

EVENT NAME: Flying Dutchmen 5K

APPLICANT NAME: Patrick Driscoll

ADDRESS: 15 Dutch Hill Rd Orangeburg, NY 10962

PHONE #: 845-304-6015 CELL # 845-304-6015 FAX # _____

CHECK ONE: PARADE _____ RACE/RUN/WALK X OTHER _____

The above event will be held on Sat 03/21 from 9:00 to 10:15 RAIN DATE: N/A

Location of event: Tappan Zee HS

Sponsored by: ~~Patrick~~ Tappan Zee Track + Field Telephone #: 845-304-6015

Address: 15 Dutch Hill Rd Orangeburg, NY 10962

Estimated # of persons participating in event: 150 runners vehicles 0

Person (s) responsible for restoring property to its original condition: Name-Address-Phone #: (845) 304-6015

Patrick Driscoll 15 Dutch Hill Rd Orangeburg, NY 10962

Signature of Applicant: Patrick Driscoll Date: 01/13/26

GENERAL INFORMATION REQUIRED: (HIGHWAY/PARKS/POLICE)

Letter of Request to Town Board requesting aid for event – Received On: 1/15/26

Certificate of Insurance – Received On: 1/15/26

Hold Harmless Agreement– Received On: 1/15/26

FOR HIGHWAY DEPARTMENT USE ONLY:

Road Closure Permit: Y / N – Received On: X

Rockland County Highway Dept. Permit: Y / N – Received On: X

NYSDOT Permit: Y / N – Received On: X

Route/Map/Parking Plan: Y / N – Received On: 1/15/26

RFS #: 65192 BARRICADES: Y / N CONES: Y / N TRASH BARRELS: Y / N OTHER: _____

APPROVED: _____ DATE: 1/20/26
Superintendent of Highways MP 1/16/26

FOR PARKS & RECREATION DEPARTMENT USE ONLY:

Show Mobile: Y / N – Application Required: _____ Fee Paid – Amount/Check # _____

Port-o-Sans: Y / N: _____ Other: _____

APPROVED: _____ DATE: 1/23/26
Superintendent of Parks & Recreation

FOR POLICE DEPARTMENT USE ONLY:

Police Detail: Y / N: Police Assigned Items: _____

APPROVED: _____ DATE: 1/24/26
Chief of Police

** Please return to the Highway Department to be placed on the Town Board Workshop **

Workshop Agenda Date: 2/10/26 Approved On: _____ TBR #: _____

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

January 13, 2026

Town of Orangetown
26 Orangeburg Road
Orangeburg, NY 10962

To Whom it May Concern:

The Tappan Zee HS Cross Country team plans on holding its 13th Annual "Flying Dutchmen 5k" on Saturday March 21, 2026 from 9:00am- 10:15am. As in the past we have attached the appropriate permit application and request that the following items if they could be provided.

From the Highway Department:
Barricades at the following locations:
3- Parkway Drive South and Carlton Road
3-Parkway Drive South and Convent Road
3- Parkway Drive North and Blauvelt Road

From the Orangetown Police Department:
5 Auxiliary Police Officers for Safe Crossings throughout the route.

Any questions or concerns may be directed to my cell #: 845-304-6015

Regards,

Patrick Driscoll
Tappan Zee High School
Boys & Girls Cross Country
Boys & Girls Track & Field

Flying Dutchmen 5k Race Route March 21, 2026

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

Start at North entrance to high school: Bataan Rd.

Go on Dutch Hill Rd, Make immediate right onto Carlton.

Make Right on Parkway Drive.

Make left onto Blauvelt Rd.

Turn around by Theodore Roosevelt Dr.

Come back towards Tappan Zee High School the same way.

Finish is in Tappan Zee High School back parking lot.

DEFENSE, INDEMNIFICATION AND HOLD HARMLESS AGREEMENT

Patrick Driscoll, with an address of 24 Reservoir Dr. New Ulm, NY, in consideration and as a condition of a special use permit ("Permit Holder"), hereby agrees, covenants, promises, represents and pledges to defend, indemnify and save the Town of Orangetown ("Town"), Town of Orangetown Highway Department ("Highway") and its employees, officials, agents and contractors (collectively, "Indemnified Parties")harmless from and against any and all liability or responsibility of any type whatsoever, including, but not limited to, any and all actions, causes of action, suits, proceedings, judgments, damages, claims, and demands, in law or in equity, including an action, suit, proceeding or claim initiated by the Permit Holder (hereinafter "claims") that arise as part of or as a result or consequence of the activities, events or other activities authorized to be conducted by the Permit Holder, including but not limited to any and all damage to the Town's property, facilities and equipment resulting from, or in connection with, the Permit Holder's event; and any personal injury, illness or death sustained by any person arising out of, or in connection with, the Permit Holder's event;

the Permit Holder further agrees, covenants, promises, represents and pledges to fully reimburse, recompense, indemnify and/or compensate the Town, Highway and Town employees, officials, agents and contractors for all costs, expenses and fees, including reasonable attorney's fees, relating to, arising out of, or occurring in connection with any such claims as referenced hereinabove.

the Permit Holder further agrees that the agreements, covenants, promises and representations set forth hereinabove shall apply regardless of whether such damage or injury is caused, in whole or in part, by the negligence of the Indemnified Parties; and

the Permit Holder's defense, indemnification and hold harmless obligations under this Agreement shall survive the expiration and/or termination of the subject Permit and Agreement;

all of the foregoing as relating to, arising out of, or occurring in connection with the following [DESCRIBE PROJECT OR EVENT]: Flying Dutchmen 5K Run.

Permit Holder agrees to provide certificate(s) of insurance in such amounts as the Town shall deem appropriate, which insurance shall name the Town as an additional insured and which insurance shall cover the requirements to defend, indemnify and hold the Town harmless as set forth herein.

I affirm, pursuant to NY CPLR §2106 this 13th day of January, 2026, under the penalties of perjury under the laws of New York, which may include a fine or imprisonment, that the foregoing is true, that by signing below I am authorized to sign this document on behalf of and bind the entity set forth above, and I understand that this document may be filed in an action or proceeding in a court of law.

By: Patrick Driscoll

[TYPE NAME OF AUTHORIZED SIGNATORY OF PRIVATE ENTITY ABOVE]

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 9/3/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Haylor, Freyer & Coon, Inc.
PO Box 4743
Syracuse NY 13221

RECEIVED JAN 15 2026 SOUTHORANG TOWN OF ORANGETOWN HIGHWAY DEPARTMENT

INSURED
South Orangetown Central School District
District; 160 Van Wyck Rd
Blauvelt NY 10913

CONTACT NAME: Suzanne LeBarron
PHONE (A/C, No, Ext): 315-800-1786 **FAX (A/C, No):**
E-MAIL ADDRESS: slebarron@haylor.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Republic Franklin Insurance Co.	12475
INSURER B : Utica National Ins.of Texas	43478
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 1443267612 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	Y		CPP5520413	7/1/2025	7/1/2026	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 1,000,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 3,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 3,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY	Y		BAC5526853	7/1/2025	7/1/2026	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR	Y		CULP5526854	7/1/2025	7/1/2026	EACH OCCURRENCE	$ 15,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 15,000,000
	DED X RETENTION $ 10,000							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A					PER STATUTE / OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
A	Abuse or Molestation Liability Professional Liability			CPP5520413	7/1/2025	7/1/2026	$1,000,000 occ $1,000,000 occ	$2,000,000 agg $3,000,000 agg

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
General Liability Additional Insured as required by written contract per form 8E3042NY
General Liability Primary and Non-Contributory as required by written contract per form CG2001
Auto Liability Additional Insured as required by written contract per form 8E3143
Umbrella Follows Form

Certificate Holder included as additional insured per above referenced forms to the extent provided therein.
Use of premises/facilities for the District's events during the policy period.

CERTIFICATE HOLDER

Town of Orangetown
26 Orangeburg Road
Orangeburg NY 10962

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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RECEIVED JAN 15 2026 TOWN OF ORANGETOWN HIGHWAY DEPARTMENT

RECEIVED JAN 29 2026 TOWN OF ORANGETOWN HIGHWAY DEPARTMENT

RECEIVED JAN 26 2026 Orangetown Police Department

TOWN OF ORANGETOWN
SPECIAL USE PERMIT FOR USE OF TOWN PROPERTY/ITEMS

PERMIT # 26-SP-003

EVENT NAME: AMERICAN LEGION POST 329 - MEMORIAL DAY PARADE

APPLICANT NAME: AMERICAN LEGION POST 329 - JOSEPH ORECCHEO

ADDRESS: 30 RAILROAD AVE PEARL RIVER, NY 10965

PHONE #: 845-721-2721 CELL # 845-721-2721 FAX # N/A

CHECK ONE: PARADE X RACE/RUN/WALK _____ OTHER _____

The above event will be held on MAY 25, 2026 from 9:45AM to 11:45AM RAIN DATE: N/A

Location of event: S. MAIN ST BETWEEN FRANKLIN & CEDRAL AND BRAINARD DORF PARK

Sponsored by: AMERICAN LEGION POST 329 Telephone #: 845-721-2721

Address: 30 RAILROAD AVE PEARL RIVER, NY 10965

Estimated # of persons participating in event: 500 vehicles 10-20

Person (s) responsible for restoring property to its original condition: Name-Address-Phone #:

PEARL RIVER AMERICAN LEGION POST 329 - 845-721-2721

Signature of Applicant: Joe C Orecchio Date: 1/15/26

GENERAL INFORMATION REQUIRED: (HIGHWAY/PARKS/POLICE)

Letter of Request to Town Board requesting aid for event – Received On: 1/15/26

Certificate of Insurance – Received On: 1/15/26

Hold Harmless Agreement– Received On: 1/15/26

FOR HIGHWAY DEPARTMENT USE ONLY:

Road Closure Permit: (Y) / N – Received On: 1/15/26

Rockland County Highway Dept. Permit: (Y) / N – Received On: 1/15/26

NYSDOT Permit: Y / (N) – Received On: X

Route/Map/Parking Plan: (Y) / N – Received On: 1/15/26

RFS #: 65190 BARRICADES: (Y) / N CONES: Y / N TRASH BARRELS: Y / N OTHER: _____

APPROVED: _____ DATE: 1.20.26
Superintendent of Highways

BD 1/20/26

FOR PARKS & RECREATION DEPARTMENT USE ONLY:

Show Mobile: Y / (N) – Application Required: _____ Fee Paid – Amount/Check # _____

Port-o-Sans: Y / (N) _____ Other: _____

APPROVED: _____ DATE: 1/22/26
Superintendent of Parks & Recreation

FOR POLICE DEPARTMENT USE ONLY:

Police Detail: (Y) / N: Police Escort / Honor Guard Items: _____

APPROVED: _____ DATE: 1/26/26
Chief of Police

** Please return to the Highway Department to be placed on the Town Board Workshop **

Workshop Agenda Date: 2/10/26 Approved On: _____ TBR #: _____

JAMES J. DEAN
Superintendent of Highways
Roadmaster IV

Orangetown Representative:
R.C. Soil and Water Conservation Dist.-Chairman
Stormwater Consortium of Rockland County
Rockland County Water Quality Committee

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

HIGHWAY DEPARTMENT
TOWN OF ORANGETOWN
119 Route 303 · Orangeburg, NY 10962
(845) 359-6500 · Fax (845) 359-6062
E-Mail – highwaydept@orangetown.com

Affiliations:
American Public Works Association NY Metro Chapter
NYS Association of Town Superintendents of Highways
Hwy. Superintendents' Association of Rockland County

ROAD CLOSING PERMIT APPLICATION
Section 139 Highway Law

NAME Pearl River American Legion - Joseph Orecchio DATE _____

COMPANY Pearl River American Legion Post 329

ADDRESS 30 Railroad Ave. Pearl River NY 10965

TELEPHONE 845-721-2721

(INCLUDE 24 HOUR EMERGENCY NUMBERS)

ABOVE MENTIONED PARTY REQUESTS PERMISSION TO CLOSE:

S. Main Street Between Central + Franklin and Brandsdorf Place.
(Address number and name of road) Please Bag Meters By 8:30AM

Also Street in Front of American Legion Post (Washington to Central)
(Intersecting streets and/or description of exact location)

REASON FOR CLOSING Memorial Day Parade / Community Event.

DATE OF CLOSING May 25th, 2026 RAIN DATE N/A
TIME ROAD WILL BE CLOSED 9:45AM to 11:45AM / Railroad Ave until 2PM
WILL ROAD BE OPEN TO LOCAL TRAFFIC? NO
WILL ROAD BE OPEN TO EMERGENCY VEHICLES? Yes.

TRAFFIC CONTROL PLAN: PLEASE PROVIDE A DETAILED MAP AND DESCRIPTION OF DETOUR.

PRELIMINARY APPROVAL _____ DATE 1-20-26
JAMES J. DEAN
SUPERINTENDENT OF HIGHWAYS

This permit application will be forwarded to the Rockland County Superintendent of Highways, County of Rockland, 23 New Hempstead Road, New City, NY, 10956. You will receive written confirmation from that office.

8-13-02bjd

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

Joseph C. Orecchio

30 Railroad Ave
Pearl River, NY 10965
845-721-2721

John H. Secor Post 329
Pearl River, NY

15 JAN 2026

Ms. Katie Fairclough
Department of Highways
26 Orangeburg Road
Orangeburg, New York 10962

Re: Pearl River American Legion Memorial Day Parade – Monday May 25, 2026

Dear Ms. Faircloth:

Enclosed please find the application of the Pearl River American Legion Post 329 to conduct its Annual Memorial Day Parade on May 25, 2026.

Also attached to the application is the certificate of insurance for $1,000,000 naming the American Legion as the insured and the Town of Orangetown as an additional insured.

Request that you process this request through the Highway Dept- Town and County as well as appropriate agencies (Police, Town Counsel, others) for full approval. Upon completion further request that you provide me a copy of all approved documentation.

Thank you so much for your support! Thanks for supporting Veterans and their Families and Friends!

Respectfully,

Joseph C. Orecchio
Post Commander
845-721-2721
MP812@hotmail.com

DEFENSE, INDEMNIFICATION AND HOLD HARMLESS AGREEMENT

AMERICAN LEGION POST 329, with an address of 30 RAILROAD AVE, PEARL RIVER, in consideration and as a condition of a Special Use permit ("Permit Holder"), hereby agrees, covenants, promises, represents and pledges to defend, indemnify and save the Town of Orangetown ("Town"), Town of Orangetown Highway Department ("Highway") and Town employees harmless from and against any and all liability or responsibility of any type whatsoever, including, but not limited to, any and all actions, causes of action, suits, proceedings, judgments, damages, claims, and demands, in law or in equity, including an action, suit, proceeding or claim initiated by the Permit Holder (hereinafter referred to as "claims") that arise as part of or as a result or consequence of the activities, events or other activities authorized to be conducted by the Permit Holder ; and

the Permit Holder further agrees, covenants, promises, represents and pledges to fully reimburse, recompense, indemnify and/or compensate the Town, Highway and Town employees for all costs, expenses and fees, including reasonable attorney's fees, relating to, arising out of, or occurring in connection with any such claims; and

all of the foregoing as relating to, arising out of, or occurring in connection with the following [DESCRIBE PROJECT OR EVENT]: PEARL RIVER MEMORIAL DAY PARADE

Permit Holder agrees to provide certificate(s) of insurance in such amounts as the Town shall deem appropriate, which insurance shall name the Town as an additional insured and which insurance shall cover the requirements to defend, indemnify and hold the Town harmless as set forth herein.

(Entity Name: AMERICAN LEGION POST 329)

By: John C Orlando

JOSEPH C. ORLANDO

Sworn to before me this 26 day of February, 2025

Notary Public

CHRISTOPHER J. PIZZO
Notary Public, State of New York
No. 01PI6076328
Qualified in Nassau County
Commission Expires June 24, 2026

RECEIVED

JAN 15 2026

TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

Joseph C. Orecchio

30 Railroad Ave
Pearl River, NY 10965
845-721-2721

John H. Secor Post 329
Pearl River, NY

15 JAN 2026

Town of Orangetown
26 Orangeburg Road
Orangeburg, New York 10962

Subject: Request for Barricade Support - Pearl River American Legion Memorial Day Parade -Monday May 25, 2026

To Whom it May Concern;

In support of the 2025 Pearl River Memorial Day Parade on Monday May 25th, 2026 a request is made for barricades to support the control of traffic during the assembly and execution of the parade. Members and organizations participating in the parade will assemble on Monday May 25th at 9:45am with the Parade beginning at 10:15am. The parade should be complete no later than 11:45am.

Additionally, we request that barricades be provided from 9:45 AM to 2:00 PM at the intersections of Washington Avenue and Railroad Avenue as well as Railroad Avenue and West Central Avenue. This will support and limit traffic during the Pearl River community gathering at the Post.

Thank you for your assistance with this request.

Respectfully,

Joseph C. Orecchio
Post Commander
845-721-2721
MP812@hotmail.com

Joseph C. Orecchio

30 Railroad Ave
Pearl River, NY 10965
845-721-2721

John H. Secor Post 329
Pearl River, NY

RECEIVED

JAN 15 2026

TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

15 JAN 2026

Chief Donald Butterworth
Orangetown Police Department
26 Orangeburg Road
Orangeburg, New York 10962

Re: Pearl River American Legion Memorial Day Parade – Monday May 25, 2026

Chief Butterworth:

Our annual Pearl River American Legion Post 329 Memorial Day Parade application is in the approval process.

We respectfully request the assistance of your agency to open the park booth/substation and the flag pole by 8:30am on the day of the Parade (Monday May 25, 2026). Further request that the parking meters by the park are bagged by 9:00am on Parade Day.

We recognize the many events that are planned on this day in the Town and very much appreciate the continued support that you have shown us. Please note that we are starting the parade at 10:15am with a 9:45am assembly time.

Thank you for your assistance with this request.

Respectfully,

Joseph C. Orecchio
Post Commander
845-721-2721
MP812@hotmail.com

RECEIVED

JAN 15 2026

TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

Joseph C. Orecchio

30 Railroad Ave
Pearl River, NY 10965
845-721-2721

John H. Secor Post 329
Pearl River, NY

15 JAN 2026

Chief Donald Butterworth
Orangetown Police Department
26 Orangeburg Road
Orangeburg, New York 10962

Special Request for Police Color Guard

Dear Chief Butterworth:

Our annual Pearl River American Legion Post 329 Memorial Day Parade is scheduled for Monday May 25th, 2026. We respectfully ask for the participation of the Orangetown Police Department Color Guard. We would be honored to once again have them as part of our event.

If this is possible, please note that we are starting the parade at 10:15am (March Time) with a 9:45am Assembly Time.

Thank you for all of your support.

Respectfully,

Joseph C. Orecchio
Post Commander
845-721-2721
MP812@hotmail.com

OP ID: TM

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/14/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Raymond Sheridan Financial Inc
19 E. Washington Ave.
Pearl River, NY 10965
Raymond Sheridan

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

CONTACT NAME:
PHONE (A/C, No, Ext):
FAX (A/C, No):
E-MAIL ADDRESS:
PRODUCER CUSTOMER ID #: AMERI-1

INSURED
American Legion Post 329
30 Railroad Ave
Pearl River, NY 10965

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Associated Mutual	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER POLICY PRO-JECT LOC			80034283	12/02/2025	12/02/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ $ 1,000 $ 1,000,000 $ 1,000,000 $ 1,000,000
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (PER ACCIDENT)	$ $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DEDUCTIBLE RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
MEMORIAL DAY PARADE
CERTIFICATE HOLDER IS ADDITIONAL INSURED

CERTIFICATE HOLDER

Town of Orangetown
26 Orangeburg Road
Orangetown, NY 10962

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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OP ID: TM

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/14/2026

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PRODUCER
Raymond Sheridan Financial Inc
19 E. Washington Ave.
Pearl River, NY 10965
Raymond Sheridan

RECEIVED
JAN 15 2026
TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

CONTACT NAME:
PHONE (A/C, No, Ext):
FAX (A/C, No):
E-MAIL ADDRESS:
PRODUCER CUSTOMER ID #: AMERI-1

INSURED
American Legion Post 329
30 Railroad Ave
Pearl River, NY 10965

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Associated Mutual	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

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INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER POLICY PRO-JECT LOC			80034283	12/02/2025	12/02/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ $ 1,000 $ 1,000,000 $ 1,000,000 $ 1,000,000
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (PER ACCIDENT)	$ $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DEDUCTIBLE RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A					WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
MEMORIAL DAY PARADE
CERTIFICATE HOLDER IS ADDITIONAL INSURED

CERTIFICATE HOLDER

County of Rockland
11 New Hempstead Road
New City, NY 10956

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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RECEIVED

JAN 15 2026

TOWN OF ORANGETOWN
HIGHWAY DEPARTMENT

ROCKLAND COUNTY HIGHWAY DEPARTMENT

APPLICATION FOR PERMIT TO USE/CLOSE A COUNTY ROAD
UNDER SECTION 104 OF THE HIGHWAY LAW

THIS IS A REQUEST FOR ☐ USE / ☒ CLOSE A COUNTY ROAD (check that apply)

Name of Event: Pearl River Memorial Day Parade- American Legion Post 329 Sponser

Date (s): MAY 25, 2026 Time (s): 0945- 1130 No. of Participants: 500+

Type of Event (check all that apply):

☐ Filming ☒ Parade or Procession ☐ Assemblage ☐ Festival ☐ Other _____

Location (Specify Highways by Street Name and/or Route Number)	Municipality (Towns, Villages)
Route of Parade: South on North Middletown Rd, West to Cnetral Ave, South on Main St to Braunsdorf Park where Memorial Service will take hel MAY 25, 2026	Pearl River, NY Orangetown
Also if applicable to County request to close Railroad Ave in front of American Legion Post to support town members to walk and be at Post for food and to meet Veterans (Railroad Ave between Central and Washington until 2PM)	Pearl River, NY Orangetown

Applicant Information:

American Legion Post 329
ATTN: JOSEPH ORECCHIO
Applicant (individual, organization, group)

American Legion Post 329
30 Railroad Ave
Mailing Address

Pearl River, NY 10965
City, State, Zip Code

MP812@HOTMAIL.COM.
Email Address

Authorized Representative (if different from Applicant)

Telephone Number (including area code)

845-721-2721
Cell Phone Number (including area code)

Email Address (if different from Applicant)

ROCKLAND COUNTY HIGHWAY DEPARTMENT

APPLICATION FOR PERMIT TO USE/CLOSE A COUNTY ROAD
UNDER SECTION 104 OF THE HIGHWAY LAW

The following supporting information shall be submitted at the time of application:

1. **Event Map, Event Brochure, or/and Event Application Form** (Whichever available/applicable)
2. **Operation and Safety Plan** (the applicant assumes all responsibility for the set-up, conduct and break-down of the event)
   - Required Traffic Control Devices (e.g. temporary signs, cones, barricades, pavement markings, etc.) and Event Personnel (e.g. police officers, volunteers) for Event
     CONES, BARRICADES, POLICE AT STOP POINT AND KEY INTERSECTIONS TO CONTROL TRAFFIC.
   - Detours (provide map of detour, show detour sign/police locations, etc.)
   - Pre-Event Public Notification (describe type of notification (e.g. mailings, brochure, press release) being provided to the public)
     SOCIAL MEDIA AND PRESS RELEASE
   - Coordination (describe coordination with local police/municipalities/emergency services/other entities)
     REQUEST SUBMITTED TO ORANGETOWN HWY DEPT THAT FORWARDS TO ORANGETOWN POLICE
   - Emergency Services (describe how emergency services will be provided during the event for event participants and spectators)
     EMERGENCY TRAFFIC WILL HAVE ACCESS.
   - Spectator Control (indicate any special measures are being taken to control spectators)
     N/A.
   - Event Support Vehicles (describe any vehicles used in the event)
     PARTICIPATING FIRE DEPT VEHICLES, HISTORIC MILITARY VEHICLES

ROCKLAND COUNTY HIGHWAY DEPARTMENT

APPLICATION FOR PERMIT TO USE/CLOSE A COUNTY ROAD
UNDER SECTION 104 OF THE HIGHWAY LAW

3. **Insurance Certificates** (must be in Applicant's name)
4. **Application Fee** (Please make check payable to Rockland County Commissioner of Finance)
   - Full Day - $500.00
   - Half Day - $250.00

No. of Days 1 Total Amount $ N/A. 0

Non profit

The following information shall be submitted prior to the event date (except filming permit application):

1. **Municipal Approvals** (The applicant shall provide proof of approval from each municipality – Town, Village – through which the event passes indicating that the Municipality has no objection to the event taking place. This proof of approvals may be in the form of a letter, permit, resolution, email, or other.)

Acknowledgement: On behalf of the Applicant, I hereby request a road use/close permit, and do acknowledge and agree to the responsibilities of applicant and obligations set forth in this permit and warrant compliance therewith. The attached documents are also made a part hereof and attached hereto.

Applicant's Representative's Signature — Date: 1/15/2025

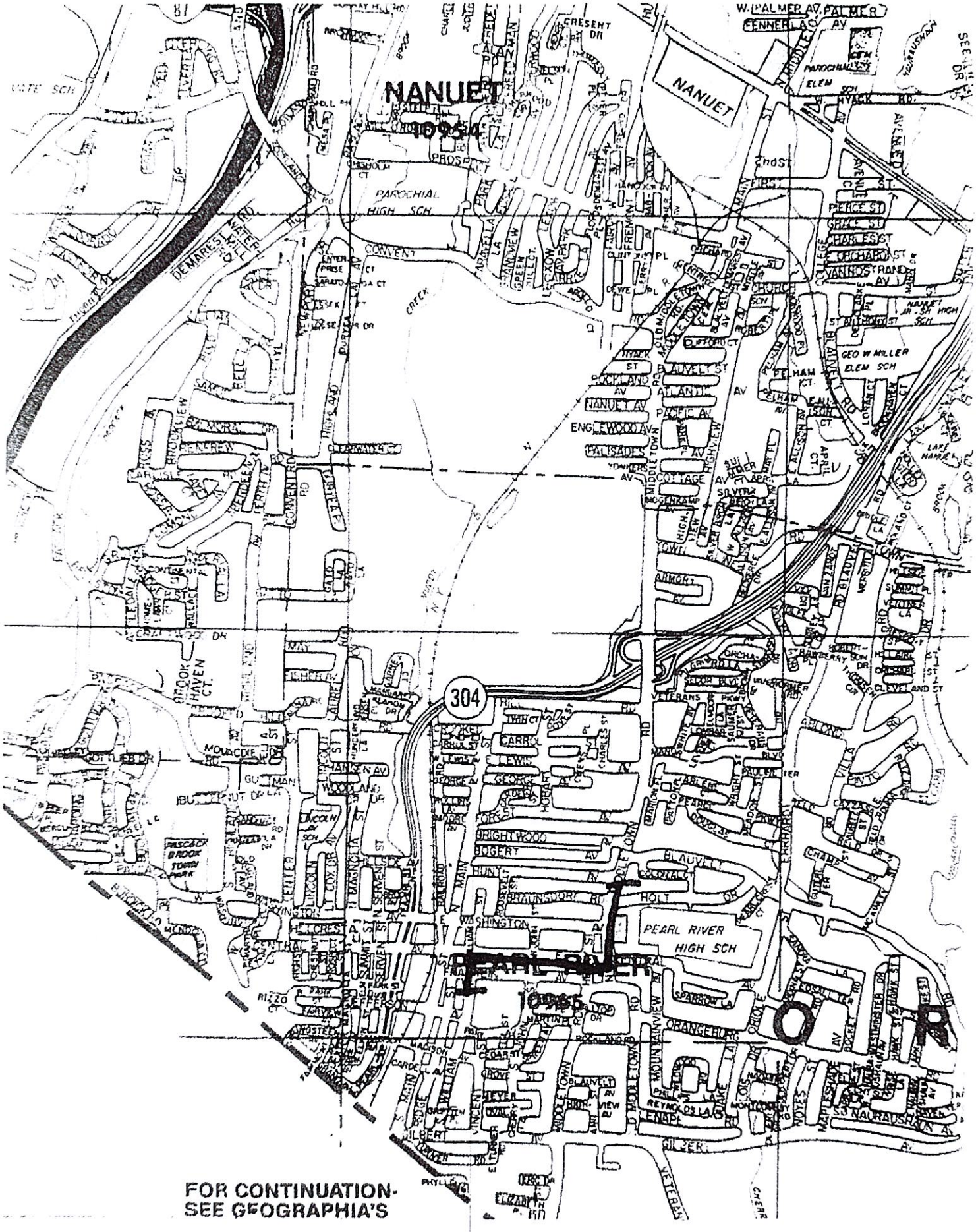
Application Received By:

RCHD Representative's Signature — Date

Application Approved By:

RCHD Superintendent of Highways — Date

The Rockland County Highway Department reserves the right to have the applicant immediately removed from the roadway and traffic restored at any time deemed necessary by the Rockland County Highway Department and/or the local law enforcement agency at such time the said permit will become null and void. Failure to abide may result in trespassing and civil penalties.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10965
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PEARL RIVER HIGH SCH
NANUET
PAROCHIAL HIGH SCH
CONVENT
GEO W MILLER ELEM SCH
FOR CONTINUATION-
SEE GEOGRAPHIA'S

Town of Orangetown

DATE: February, 10, 2026

WARRANT

Warrant Reference	Warrant #		Amount	
Approved for payment in the amount of				
	122425	$	63,757.74	2025 Utilities
	122725	$	253,551.60	2025 Expenses
	122825	$	34,541.94	2025 Utilities
	010726	$	8,216.96	2026 Utilities
	012126	$	55,496.81	2026 Utilities
	013026	$	13,090,380.16	2026 Special Districts
	021026	$	497,732.22	2026 Expenses
		$	14,003,677.43	

The above listed claims are approved and ordered paid from the appropriations indicated.

APPROVAL FOR PAYMENT

AUDITING BOARD

Councilman Gerald Bottari

Councilman Paul Valentine

Councilman Daniel Sullivan

Councilman Brian Donohue

Supervisor Teresa M. Kenny

TOWN OF ORANGETOWN
FINANCE OFFICE MEMORANDUM

TO: THE TOWN BOARD

FROM: JEFF BENCIK, *DIRECTOR OF FINANCE*

SUBJECT: AUDIT MEMO

DATE: 2/5/26

CC: DEPARTMENT HEADS

The audit for the Town Board Meeting of 2/10/2026 consists of 7 warrants for a total of $14,003,677.43.

The first warrant had 12 vouchers for $63,757 and was for utilities (2025 items).

The second warrant had 44 vouchers for $253,551 and had the following items of interest (2025 items).

1. Collier's Engineering & Design - $15,516 for Greenbush Rd. building assessment.
2. Commissioner of Finance - $36,975 for Police training.
3. Geico - $7,500 for property claim settlement.
4. Global Montello - $50,678 for fuel.
5. Goosetown Enterprises - $21,068 for Police equipment.
6. Helmke Industries - $5,705 for snow removal at OHA.
7. Henry Pratt - $8,797 for sewer equipment.
8. RCSWMA - $6,814 for solid waste removal.
9. SOCSD - $95,838 for pool rental.
10. State Comptroller - $35,303 for Justice fines.

The third warrant had 3 vouchers for $34,541 and was for utilities (2025 items).

The fourth warrant had 5 vouchers for $8,216 and was for utilities (2026 items).

The fifth warrant had 11 vouchers for $55,496 and was for utilities (2026 items).

The sixth warrant had 14 vouchers for $13,090,380 and was for special district funding (2026 items).

The seventh warrant had 205 vouchers for $497,732 and had the following items of interest (2026 items).

11. Atlantic Salt - $135,896 for Highway salt purchases.

12. Beckmann Appraisals - $15,000 for Assessor valuations.

13. Corsi Tire - $8,775 for Highway tires.

14. Cotter, Michael - $7,975 for title searches.

15. G&H Auto Group - $40,607 for sewer vehicle.

16. Gentile, Steven - $11,151 for 207c payments.

17. Global Montello - $16,642 for fuel.

18. Goosetown Enterprises - $19,405 for IT leases various departments.

19. Helmke Industries - $62,960 for snow removal at OHA.

20. Northern Supply Inc. - $32,739 for Highway equipment.

21. Reed Systems Ltd. - $6,486 for Highway brine.

22. The Standard Life Insurance Co. - $12,027 for Police life insurance.

23. Verde Electric - $7,852 for traffic signal maintenance contract.

Please feel free to contact me with any questions or comments.

Jeffrey W. Bencik, CFA
845-359-5100 x2204