

Scale: 1 inch= 20 Ft.



408 W 14th Street, New York, NY 10014
888 722-1000 • rablighting.com

Prepared For:
Rouzer Group
7003 West Lake Street
Suite 300
Louis Park, MN 55426
Tel: 952-737-6320

Job Name:
Vorpahl Tennis
Deephaven, NC
Lighting Layout
Version A

Scale: as noted

PROJECT #: 210744

Date: 6/21/2023

CASE #: 01097918

Filename: 78 Lafayette Avenue Layout 01119516A.AGI

Drawn By: Margaret Koenig

The Lighting Analysis, EZLayout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by RAB Lighting Inc. ("RAB") represents an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. These design parameters and information provided by others have not been field verified by RAB and therefore actual measured results may vary from the actual field conditions. RAB recommends that design parameters and other information be field verified to reduce variation.


RAB does not warranty, either implied or stated, actual measured light levels or energy consumption levels as compared to those illustrated by the Lighting Design.

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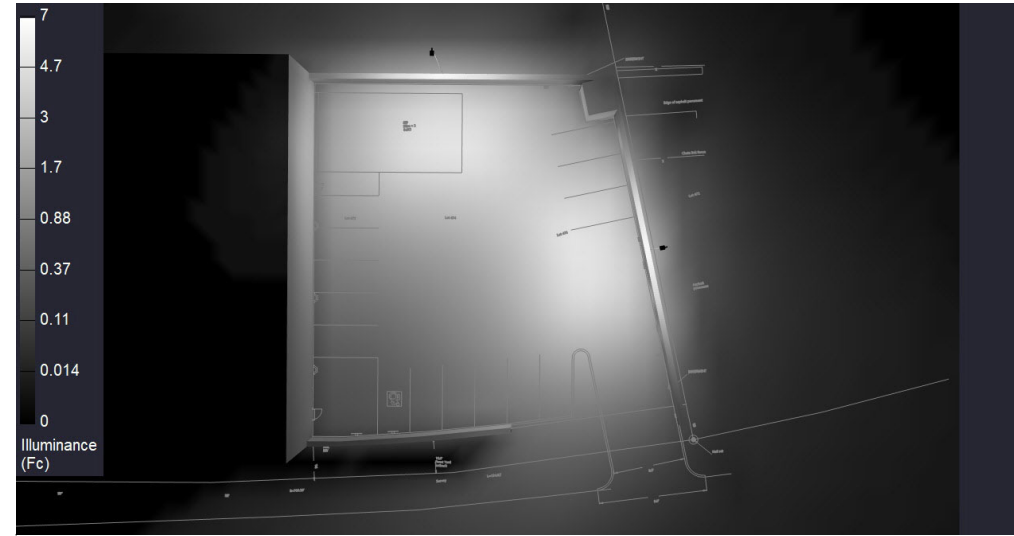
Filename: Z:\Job Files\Damin Sales\Damin Sales 105354\78 Lafayette Avenue\Working Files\AGI\78 Lafayette Avenue Layout 01119516A.AGI

Calculation Summary											
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description	PtSpcLr	PtSpcTb	Meter Type
Property Line	Illuminance	Fc	0.18	1.0	0.0	N.A.	N.A.	Readings taken at 5' AFG	10	N.A.	Vert-PerpCCW
Site	Illuminance	Fc	1.05	5.2	0.0	N.A.	N.A.	Readings taken at 0'0" AFG	10	10	Horizontal
Parking	Illuminance	Fc	2.37	5.2	0.3	7.90	17.33	Readings taken at 0'0" AFG			

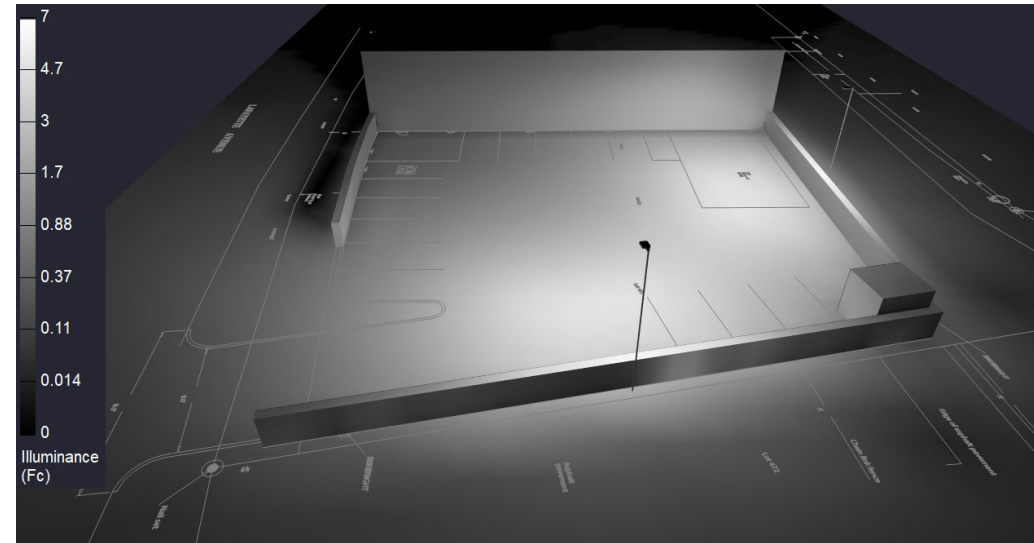
Luminaire Schedule												
Symbol	Qty	Tag	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	BUG Rating
	2	A	ALEDM4T-90w + ALEDMHS	Single	11613	11613	1.000	Pole Mounted (Type IV Drilled 90W 5000K) + Shield	91.2	91.2	182.4	B1-U0-G3

Expanded Luminaire Location Summary						
LumNo	Tag	X	Y	MTG HT	Orient	Tilt
1	A	241.675	100.018	23	191.388	0
2	A	184.561	148.167	23	269.775	0
Total Quantity: 2						

****NOTE:** Fixtures mounted to RAB 20' poles with a 3' base provided by others.



Plan View



Iso View

NOTES:

* The light loss factor (LLF) is a product of many variables. RAB's standard is to use the initial 1.0 LLF in accordance with most municipal lighting ordinance light trespass requirements, unless otherwise noted.

* Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.

* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of RAB Lighting Inc.

* Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.

* RAB disclaims all responsibility for the suitability of existing or proposed poles and bases to support proposed fixtures. This is the owner's, installer's and/or end-user's responsibility based on the weight and effective projected area ("EPA") of the proposed fixtures and the owner's site and soil conditions, wind zone, and many other factors. A professional engineer licensed to practice in the state the site is located should be engaged to assist in this determination.

* The landscape material shown hereon is conceptual and is not intended to be an accurate representation of any particular plant, shrub, bush, or tree, as these materials are living objects, and subject to constant change. The conceptual objects shown are for illustrative purposes only. The actual illumination values measured in the field will vary.

* Photometric model elements such as buildings, rooms, plants, furnishings or any architectural details which impact the dispersion of light must be detailed by the customer documents for inclusion in the RAB Lighting Design. The owner/contractor/customer/end-user must provide accurate and complete construction drawings that reflect what will be the final construction RAB is not responsible for any inaccuracies caused by incomplete, inaccurate, or outdated information provided by the owner/contractor/customer/end-user.

* RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending may apply. Please see www.rablighting.com/ip.

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Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type	Constant Current	Watts	150W
120V	1.25A	Color Temp	5000K (Cool)
208V	0.73A	Color Accuracy	85 CRI
240V	0.63A	L70 Lifespan	100,000 Hours
277V	0.55A	Lumens	10610/12625/19204 lm
Input Watts	75.2/90.6/146.6W	Efficacy	141.1/139.3/131 lm/W

Technical Specifications

Field Adjustability

Field Adjustable (Wattage):

Field adjustable light output in 3 discrete steps:
Medium Housing: 150W/90W/78W (factory default 150W)

Compliance

UL Listed:

Suitable for wet locations

IP Rating:

Ingress protection rating of IP66 for dust and water

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

DLC Listed:

This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities. Designed to meet DLC 5.1 requirements.

DLC Product Code: S-AH0R16

LED Characteristics

LEDs:

Long-life, high-efficacy, discrete, surface-mount LEDs

Color Consistency:

7-step MacAdam Ellipse binning to achieve

Color Stability:

LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for (SSL) Products, ANSI C78.377-2017.

Electrical

Driver:

78W: Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.65A, 208V: 0.38A, 240V: 0.33A, 277V: 0.29A

90W: Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.75A, 208V: 0.44A, 240V: 0.38A, 277V: 0.33A

150W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 1.25A, 208V: 0.73A, 240V: 0.63A, 277V: 0.55A

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims down to 10%.

THD:

3.67% at 120V, 8.03% at 277V

Power Factor:

100% at 120V, 95.7% at 277V

Surge Protection:

Line to Line: 10kV

Performance

Lifespan:

100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Wattage Equivalency:

Equivalent to 400W Metal Halide

Construction

IES Classification:

The Type IV distribution is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semicircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

Cold Weather Starting:

The minimum starting temperature is -40°C (-40°F)

Ambient Temperature :

Max Power Temp Rating: 40°C (104°F)

Middle Power Temp Rating: 52°C (125°F)

Low Power Temp Rating: 54°C (130°F)

consistent fixture-to-fixture color

Line to Ground: 6kV

Technical Specifications (continued)

Construction

Housing:

Die-cast aluminum

Mounting:

Universal mounting arm compatible for hole spacing patterns from 1" to 5 1/2" center to center. Round Pole Adaptor plate included as a standard. Easy slide and lock to mount fixture with ease.

Lens:

Polycarbonate lens

Reflector:

Aluminum reflector with white polycarbonate

Vibration Rating:

3G vibration rating per ANSI C136.31

Effective Projected Area:

EPA = 0.34

Gaskets:

High-temperature silicone gaskets

Finish:

Formulated for high durability and long-lasting color

Green Technology:

Mercury and UV free. RoHS-compliant components.

Optical

Bug Rating:

BUG Rating 150W: B2 U0 G4

BUG Rating 90W: B1 U0 G3

BUG Rating 78W: B1 U0 G3

Other

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of ten (10) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

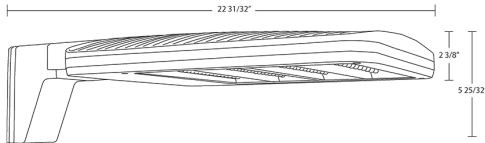
Trade Agreements Act Compliant:

This product is a product of Cambodia and a "designated country" end product that complies with the Trade Agreements Act

Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Dimensions: ALEDM4T



Features

0-10V dimmable standard

IP66 Rated

100,000-Hour LED lifespan

10-Year, No-Compromise Warranty

Ordering Matrix

Family	Housing Size	Distribution	Mounting	Color Temp	Finish	Voltage	Options
ALED	M	4T					
	S = Small (80W/60W/40W) M = Medium (150W/90W/78W) L = Large (260W/220W/170W) XL = Extra Large (385W/345W/300W)	2T = Type II 3T = Type III 4T = Type IV 5T = Type V AT = Auto Dealership Optic	Blank = Universal Pole Mount SF = Slipfitter WM = Wall Mount	Blank = 5000K Cool N = 4000K Neutral Y = 3000K Warm	Blank = Bronze W = White B = Black	Blank = 120-277V, 0-10V Dimming /480 = 480V, 0-10V Dimming	Blank = No Option /7PR = 7 Pin Twistlock Receptacle /WS2 = Wattstopper, 20ft lens /WS4 = Wattstopper, 40ft lens



Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

Color: Bronze

Weight: 136.7 lbs

Project:	Type:
Prepared By:	Date:

Technical Specifications

Compliance

CSA Listed:

Suitable for wet locations

Construction

Shaft:

46,000 p.s.i. minimum yield.

Hand Holes:

Reinforced with grounding lug and removable cover

Base Plates:

Slotted base plates 36,000 p.s.i.

Shipping Protection:

All poles are shipped in individual corrugated cartons to prevent finish damage

Color:

Bronze powder coating

Height:

20 ft.

Weight:

137 lbs

Gauge:

11

Wall Thickness:

1/8"

Shaft Size:

4"

Hand Hole Dimensions:

3" x 5"

Bolt Circle:

8 1/2"

Base Dimension:

8"

Technical Specifications (continued)

Construction

Anchor Bolt:

Galvanized anchor bolts and galvanized hardware and anchor bolt template. All bolts have a 3" hook.

Anchor Bolt Templates:

WARNING Template must be printed on 11" x 17" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available [online](#).

Pre-Shipped Anchor Bolts:

Bolts can be pre-shipped upon request for additional freight charge

Max EPA's/Max Weights:

70MPH 10.7 ft./360 lb.
 80MPH 7.0 ft./350 lb.
 90MPH 4.3 ft./350 lb.
 100MPH 2.5 ft./350 lb.
 110MPH 1.1 ft./350 lb.
 120MPH 0.1 ft./340lb

Other

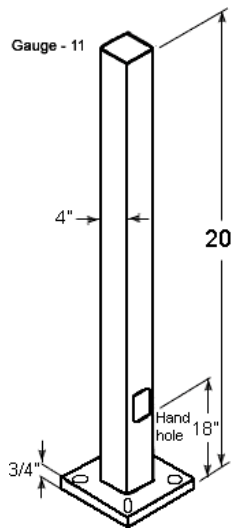
Terms of Sale:

Pole Terms of Sale is available [online](#).

Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Dimensions



Features

- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Pole caps, base covers & bolts are sold separately
- Custom manufactured for each application

ALFONZETTI ENGINEERING, P.C.

14 Smith Ave, Mt. Kisco, N.Y. 10549

(914) 666-9800

Info@AlfonzettiEng.com

Engineer's Estimate-78 Lafayette Avenue

Date: November 21, 2023

Approximate Quantity	Units	Description	Unit Cost	Engineer's Estimate Total
5	EA.	Tree Removal, Stump Removal/Clearing and Grubing (for building)	\$500.00	\$2,500
1	L.S.	Stabilized Construction Entrance	\$1,500.00	\$1,500.00
156	L.F.	Silt Fence	\$7.00	\$1,092.00
407	C.Y.	Topsoil stripping and stockpiling	\$10.00	\$4,070.00
407	C.Y.	Topsoil spreading	\$10.00	\$4,070.00
5	EA.	Inlet Protection	\$250.00	\$1,250.00
1	EA.	Filter Fabric (Non-Woven Geotextile Fabric Cut Roll, 15'x300')	\$700.00	\$700.00
1,252	C.Y.	Common earth excavation	\$7.00	\$8,764.00
1	EA.	Landscaping-Seeding	\$750.00	\$750.00
1	EA.	Landscaping-Mulching	\$750.00	\$750.00
153	L.F.	Drainage pipe (6" pvc SDR35)	\$20.00	\$3,050.00
139	L.F.	Drainage pipe (8" pvc SDR35)	\$25.00	\$3,472.50
137	L.F.	Drainage pipe (10" hdpe)	\$30.00	\$4,110.00
85	L.F.	Drainage pipe (15" hdpe)	\$40.00	\$3,388.00
5	EA.	Catch Basins/Manholes, frame and grate (including excav. & backfill)	\$3,000.00	\$15,000.00
1	EA.	Control structures/Manholes	\$3,500.00	\$3,500.00
38	L.F.	4" pvc sdr35 (sewer service)	\$25.00	\$960.00
29	L.F.	1" Water Service Line	\$25.00	\$717.50
1	L.S.	Retaining Wall	\$70,000.00	\$70,000.00
1	L.S.	Signage/Pavement Markings	\$1,000.00	\$1,000.00
Project Sub-Total				\$130,644.00
Miscellaneous, Contingencies including engineering and surveying services			10.0% of Subtotal	\$13,064.40
Total				\$143,708.40
Use				\$143,709.00

ALFONZETTI ENGINEERING, P.C.
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Drainage Analysis

for

78 Lafayette Avenue
Town of North Castle

November 21, 2023

ALFONZETTI ENGINEERING, P.C.
14 Smith Avenue, Mt. Kisco, NY 10549

(914) 666-9800

Info@AlfonzettiEng.com

PROJECT: 78 Lafayette Avenue
Town of North Castle, NY

SCOPE: Drainage Analysis

DATE: November 21, 2023

Introduction:

The subject site is located at 78 Lafayette Avenue, in the Town of North Castle, New York. The site consists is an existing vacant lot. The applicant is proposing an office/warehouse building, parking lot, associated improvements. The change in surface cover and addition of impervious surface warrants this drainage assessment.

The subject property's tax map identification is Section 122.12, Block 1, Lot 29 and the total lot area is 0.6115 acres.

Discussion:

The site is located in an area tributary to the Bronx River Basin. Site disturbance is approximately 22,636 s.f. or 0.520 acres.

Stormwater Quantity:

The existing and proposed runoff volumes for the project site were computed using HydroCad.

Deep test hole and a percolation tests were performed on site to determine the suitability of the soil for subsurface infiltration/detention. The results are shown in the appendix of this report. In addition, the soils in the area of disturbance are classified as Urban land-Charlton-Chatfield complex, hilly, very rocky. A hydrologic soil group of 'D' is used.

The existing and proposed conditions were entered using a HydroCad model. To ensure no off-site flooding occurs as a result of the proposed construction, a subsurface infiltration system is proposed to capture the required storage volume. The infiltration system is located in the parking lot. The infiltration system consists of twenty-eight (28) 'Cultec' stormwater chambers, model '330xl HD', or approved equal, surrounded by crushed stone and filter fabric.

Using the dimensions of the chambers, a stone void ratio of 33%, and a design percolation rate of 6 min./inch, the peak flow comparison is shown below.

The table below summarizes the data used for the stormwater calculations for the watersheds.

Watershed Designation	Area (Square Feet)	Curve Number	Travel Time (Minutes)
EXWS1	26,639	80	6.0
PRWS1	15,807	98	6.0
PRWS2	10,832	80	6.0

Existing Watershed 1 EXWS1 is the area of the existing vacant lot composed of lawn area. This watershed drains from northwest to southeast offsite.

Proposed Watershed 1 PRWS1 is the proposed impervious area of the proposed building and parking. This watershed is routed through the proposed infiltration system before draining to an existing drain inlet offsite.

Proposed Watershed 2 PRWS2 is the remaining lawn area of the site including area above the proposed retaining wall.

Peak Flow Comparison:

DESIGN POINT 1			
Storm Event	Existing Peak Runoff (cfs)	Proposed Peak Runoff (cfs)	Net Change (cfs)
1 Year	0.8	0.3	-0.5
10 Year	2.2	1.0	-1.2
100 Year	4.7	4.7	0

Calculations and additional information are shown in the appendix of this report. Details are shown on the site plan.

Conclusion:

The proposed infiltration system consisting of twenty-eight (28) 'Cultec' stormwater chambers, model '330xl HD' will mitigate the small increase in stormwater runoff, therefore there should be no adverse impacts due to stormwater as a result of the proposed improvements.

Ralph Alfonzetti, P.E.
ALFONZETTI ENGINEERING, P.C.



Test Hole Information: (designations are shown on the plan)

Deep Test Hole Descriptions

Designation	Depth	Description
DT-1	0 – 6" 6"-84"	Topsoil Sand With Cobbles No Water No Ledge
DT-2	0"-6" 6"-97"	Topsoil Light Brown Sandy Loam with Broken Rock No Water No Ledge
DT-3	0"-6" 6"-12" 12"-84"	Gravel Topsoil Brown Sands with Cobbles No Water No Ledge

Percolation Test Hole Descriptions

Designation	Depth
PT-1	6 Min./In.
PT-2	No Perc.
PT-3	5 Min./In.
PT-4	3.3 Min./In.

































* A design percolation of 10 min./inch was used.

Note: Percolation tests were conducted as per New York State Design Manual.

Hydrologic Soil Group Map (from USDA):



Hydrologic Soil Group—Westchester County, New York

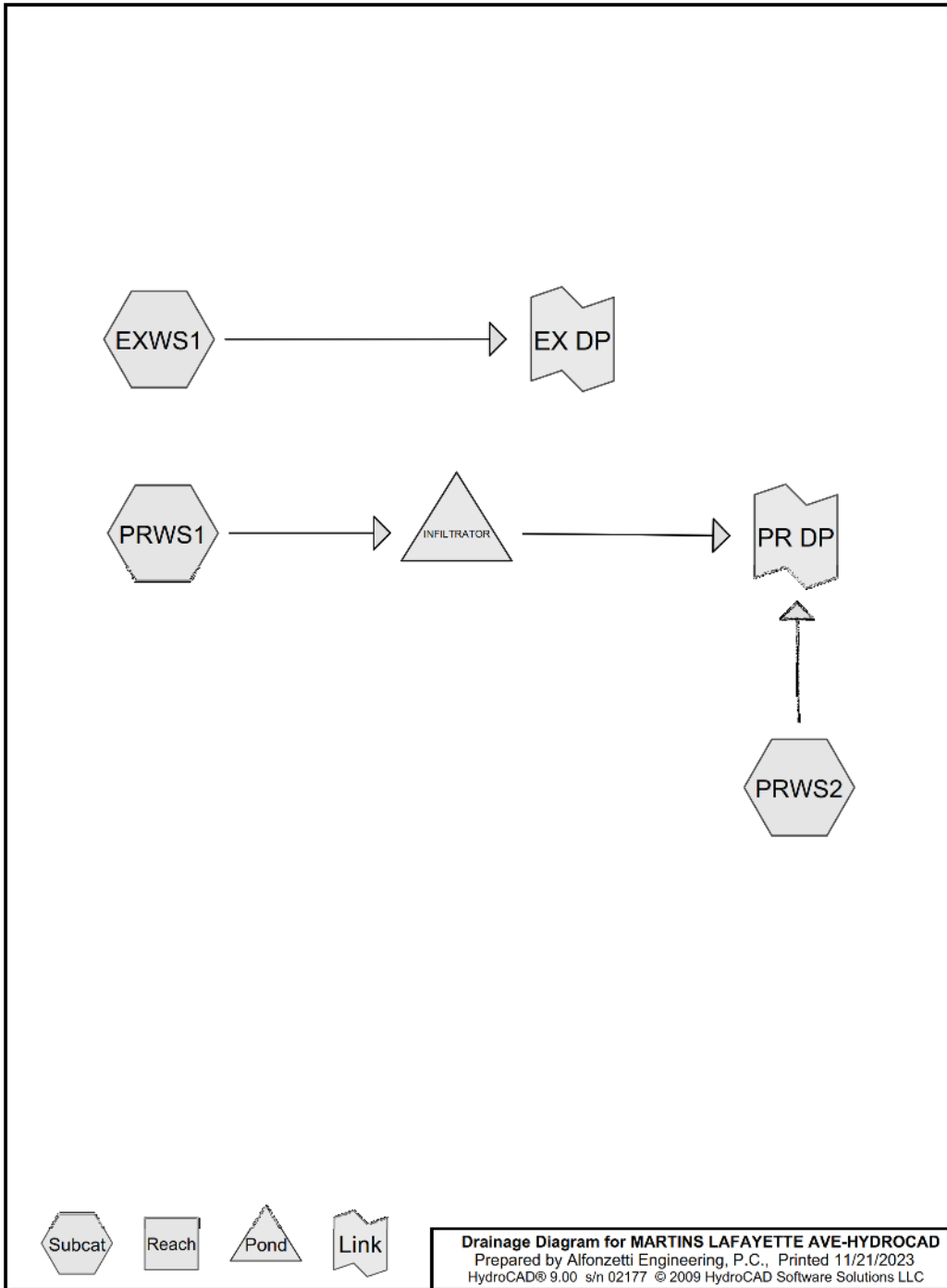
MAP LEGEND		MAP INFORMATION	
<p>Area of Interest (AOI)</p> <p> Area of Interest (AOI)</p> <p>Soils</p> <p>Soil Rating Polygons</p> <p> A</p> <p> A/D</p> <p> n</p> <p> B/D</p> <p> C</p> <p> C/D</p> <p> D</p> <p> Not rated or not available</p> <p>Soil Rating Lines</p> <p> A</p> <p> A/D</p> <p> B</p> <p> B/D</p> <p> C</p> <p> C/D</p> <p> D</p> <p> Not rated or not available</p> <p>Soil Rating Points</p> <p> A</p> <p> A/D</p> <p> B</p> <p> B/D</p>	<p> C</p> <p> C/D</p> <p> D</p> <p> Not rated or not available</p> <p>Water Features</p> <p> Streams and Canals</p> <p>Transportation</p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p>Background</p> <p> Aerial Photography</p>	<p>The soil surveys that comprise your AOI were mapped at 1:12,000.</p> <p>Warning: Soil Map may not be valid at this scale.</p> <p>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.</p> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>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.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Westchester County, New York Survey Area Data: Version 18, Sep 10, 2022</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Oct 4, 2020—Oct 31, 2020</p> <p>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.</p>	

Hydrologic Soil Group—Westchester County, New York

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CuD	Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes	D	6.8	12.9%
Ff	Fluvaquents-Udifluvents complex, frequently flooded	A/D	10.2	19.5%
HrF	Hollis-Rock outcrop complex, 35 to 60 percent slopes	D	2.1	4.0%
RhB	Riverhead loam, 3 to 8 percent slopes	A	6.0	11.5%
Uf	Urban land		12.2	23.4%
UID	Urban land-Charlton-Chatfield complex, hilly, very rocky		14.5	27.6%
UwB	Urban land-Woodbridge complex, 3 to 8 percent slopes	D	0.6	1.2%
Totals for Area of Interest			52.3	100.0%

HydroCad Report:



MARTINS LAFAYETTE AVE-HYDROCAD

Prepared by Alfonzetti Engineering, P.C.
HydroCAD® 9.00 s/n 02177 © 2009 HydroCAD Software Solutions LLC

Printed 11/21/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.860	80	>75% Grass cover, Good, HSG D (EXWS1, PRWS2)
0.201	98	Paved parking, HSG D (PRWS1)
0.162	98	Roofs, HSG B (PRWS1)
1.223		TOTAL AREA

MARTINS LAFAYETTE AVE-HYDROCAD

Prepared by Alfonzetti Engineering, P.C.
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Printed 11/21/2023

Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
0.162	HSG B	PRWS1
0.000	HSG C	
1.061	HSG D	EXWS1, PRWS1, PRWS2
0.000	Other	
1.223		TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)
1	INFILTRATOR	98.90	98.50	11.0	0.0364	0.013	15.0	0.0

MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 1 YR Rainfall=2.80"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EXWS1: Runoff Area=26,639 sf 0.00% Impervious Runoff Depth=1.10"
Tc=6.0 min CN=80 Runoff=0.8 cfs 0.056 af

Subcatchment PRWS1: Runoff Area=15,807 sf 100.00% Impervious Runoff Depth=2.57"
Tc=6.0 min CN=98 Runoff=1.0 cfs 0.078 af

Subcatchment PRWS2: Runoff Area=10,832 sf 0.00% Impervious Runoff Depth=1.10"
Tc=6.0 min CN=80 Runoff=0.3 cfs 0.023 af

Pond INFILTRATOR: Peak Elev=99.25' Storage=869 cf Inflow=1.0 cfs 0.078 af
Discarded=0.1 cfs 0.074 af Primary=0.1 cfs 0.004 af Outflow=0.2 cfs 0.078 af

Link EX DP: Inflow=0.8 cfs 0.056 af
Primary=0.8 cfs 0.056 af

Link PR DP: Inflow=0.3 cfs 0.026 af
Primary=0.3 cfs 0.026 af

Total Runoff Area = 1.223 ac Runoff Volume = 0.157 af Average Runoff Depth = 1.54"
70.33% Pervious = 0.860 ac 29.67% Impervious = 0.363 ac

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Type III 24-hr 1 YR Rainfall=2.80"

Printed 11/21/2023

Summary for Subcatchment EXWS1:

Runoff = 0.8 cfs @ 12.09 hrs, Volume= 0.056 af, Depth= 1.10"

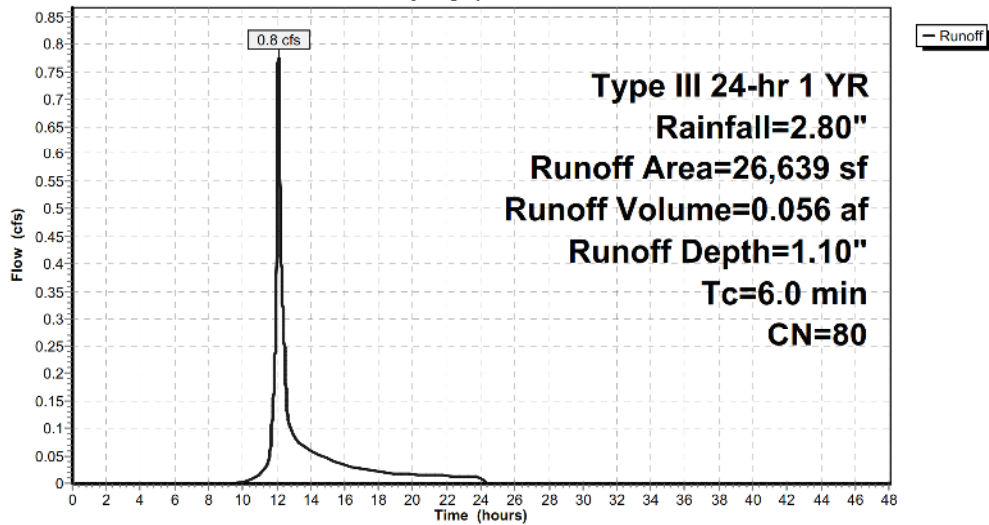
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1 YR Rainfall=2.80"

Area (sf)	CN	Description
26,639	80	>75% Grass cover, Good, HSG D
26,639		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EXWS1:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

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Type III 24-hr 1 YR Rainfall=2.80"

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Summary for Subcatchment PRWS1:

Runoff = 1.0 cfs @ 12.08 hrs, Volume= 0.078 af, Depth= 2.57"

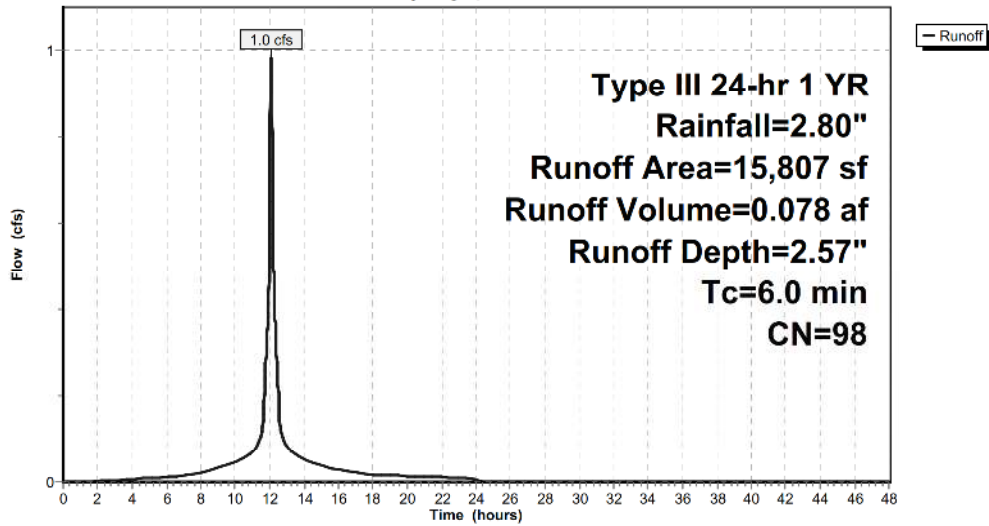
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1 YR Rainfall=2.80"

Area (sf)	CN	Description
7,070	98	Roofs, HSG B
8,737	98	Paved parking, HSG D
15,807	98	Weighted Average
15,807		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS1:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 1 YR Rainfall=2.80"

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Summary for Subcatchment PRWS2:

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.023 af, Depth= 1.10"

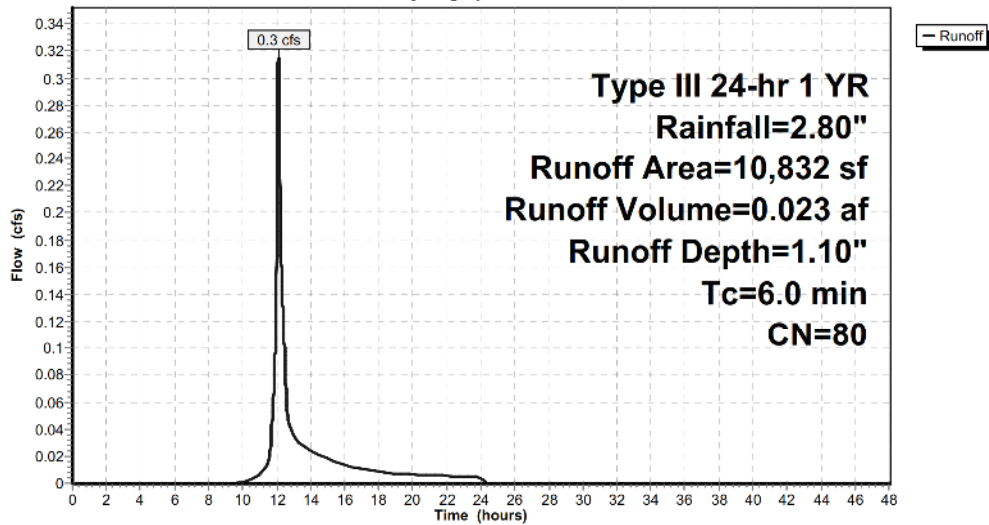
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1 YR Rainfall=2.80"

Area (sf)	CN	Description
10,832	80	>75% Grass cover, Good, HSG D
10,832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS2:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

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Type III 24-hr 1 YR Rainfall=2.80"

Printed 11/21/2023

Summary for Pond INFILTRATOR:

Inflow Area = 0.363 ac, 100.00% Impervious, Inflow Depth = 2.57" for 1 YR event
 Inflow = 1.0 cfs @ 12.08 hrs, Volume= 0.078 af
 Outflow = 0.2 cfs @ 12.47 hrs, Volume= 0.078 af, Atten= 77%, Lag= 23.2 min
 Discarded = 0.1 cfs @ 11.65 hrs, Volume= 0.074 af
 Primary = 0.1 cfs @ 12.47 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.25' @ 12.47 hrs Surf.Area= 1,060 sf Storage= 869 cf

Plug-Flow detention time= 29.1 min calculated for 0.078 af (100% of inflow)
 Center-of-Mass det. time= 29.1 min (788.4 - 759.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.00'	918 cf	35.33'W x 30.00'L x 3.54'H Field A 3,754 cf Overall - 1,460 cf Embedded = 2,294 cf x 40.0% Voids
#2A	98.50'	1,460 cf	Cultec R-330XL x 28 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
		2,378 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.00'	6.000 in/hr Exfiltration over Surface area
#2	Primary	98.90'	15.0" Round Culvert L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 98.50' S= 0.0364 '/1 Cc= 0.900 n= 0.013
#3	Device 2	99.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	101.00'	2.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.1 cfs @ 11.65 hrs HW=98.04' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=0.1 cfs @ 12.47 hrs HW=99.25' (Free Discharge)
 ↳ **2=Culvert** (Passes 0.1 cfs of 0.4 cfs potential flow)
 ↳ **3=Orifice/Grate** (Orifice Controls 0.1 cfs @ 1.70 fps)
 ↳ **4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

MARTINS LAFAYETTE AVE-HYDROCAD

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Type III 24-hr 1 YR Rainfall=2.80"

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Pond INFILTRATOR: - Chamber Wizard Field A

Chamber Model = Cultec R-330XL

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf

Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap

52.0" Wide + 6.0" Spacing = 58.0" C-C

4 Chambers/Row x 7.00' Long = 28.00' + 12.0" End Stone x 2 = 30.00' Base Length

7 Rows x 52.0" Wide + 6.0" Spacing x 6 + 12.0" Side Stone x 2 = 35.33' Base Width

6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

28 Chambers x 52.2 cf = 1,460.4 cf Chamber Storage

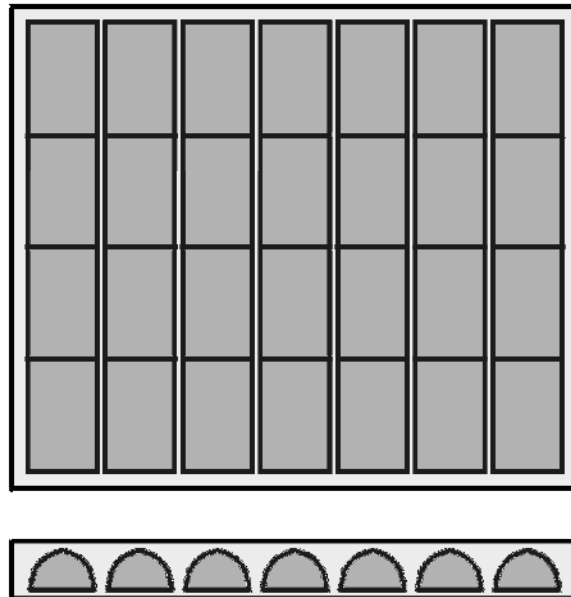
3,754.2 cf Field - 1,460.4 cf Chambers = 2,293.8 cf Stone x 40.0% Voids = 917.5 cf Stone Storage

Stone + Chamber Storage = 2,377.9 cf = 0.055 af

28 Chambers

139.0 cy Field

85.0 cy Stone



MARTINS LAFAYETTE AVE-HYDROCAD

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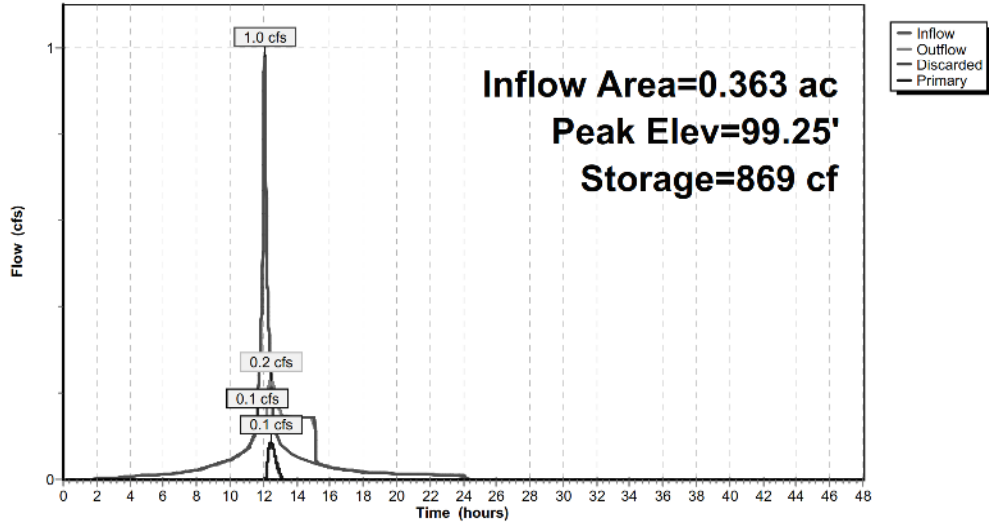
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Type III 24-hr 1 YR Rainfall=2.80"

Printed 11/21/2023

Pond INFILTRATOR:

Hydrograph



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Type III 24-hr 1 YR Rainfall=2.80"

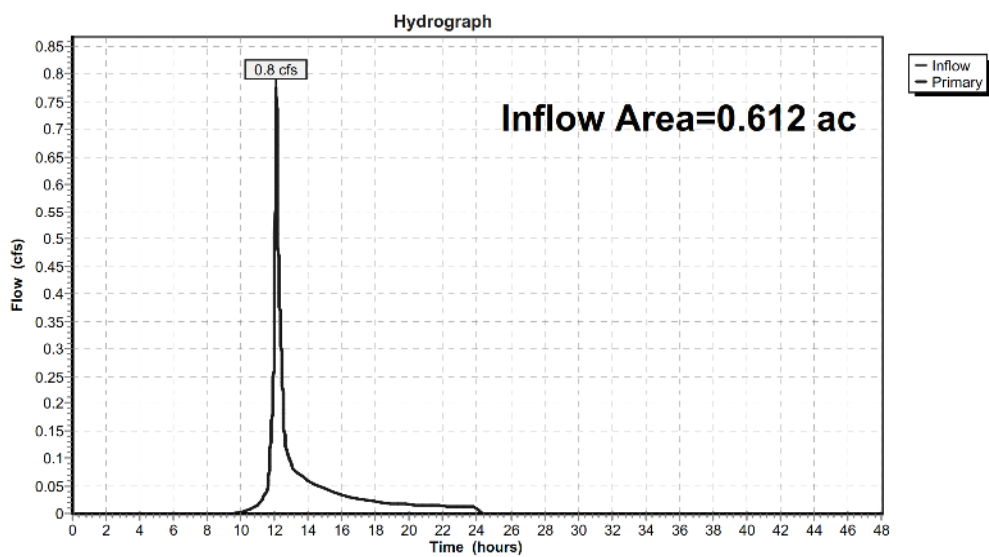
Printed 11/21/2023

Summary for Link EX DP:

Inflow Area = 0.612 ac, 0.00% Impervious, Inflow Depth = 1.10" for 1 YR event
Inflow = 0.8 cfs @ 12.09 hrs, Volume= 0.056 af
Primary = 0.8 cfs @ 12.09 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EX DP:



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Type III 24-hr 1 YR Rainfall=2.80"

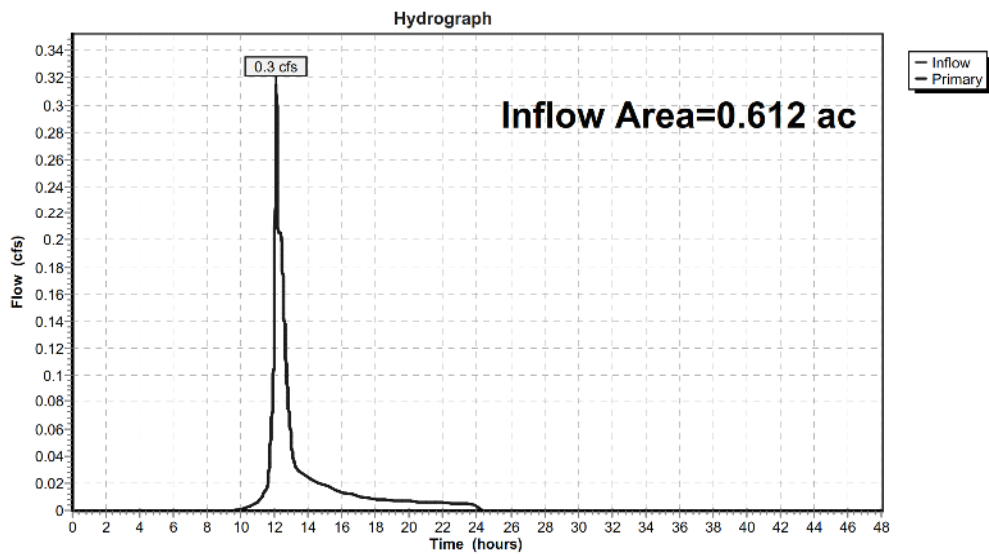
Printed 11/21/2023

Summary for Link PR DP:

Inflow Area = 0.612 ac, 59.34% Impervious, Inflow Depth = 0.52" for 1 YR event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 0.026 af
Primary = 0.3 cfs @ 12.09 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PR DP:



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EXWS1: Runoff Area=26,639 sf 0.00% Impervious Runoff Depth=3.01"
Tc=6.0 min CN=80 Runoff=2.2 cfs 0.153 af

Subcatchment PRWS1: Runoff Area=15,807 sf 100.00% Impervious Runoff Depth=4.89"
Tc=6.0 min CN=98 Runoff=1.8 cfs 0.148 af

Subcatchment PRWS2: Runoff Area=10,832 sf 0.00% Impervious Runoff Depth=3.01"
Tc=6.0 min CN=80 Runoff=0.9 cfs 0.062 af

Pond INFILTRATOR: Peak Elev=100.42' Storage=1,812 cf Inflow=1.8 cfs 0.148 af
Discarded=0.1 cfs 0.115 af Primary=0.3 cfs 0.033 af Outflow=0.4 cfs 0.148 af

Link EX DP: Inflow=2.2 cfs 0.153 af
Primary=2.2 cfs 0.153 af

Link PR DP: Inflow=1.0 cfs 0.095 af
Primary=1.0 cfs 0.095 af

Total Runoff Area = 1.223 ac Runoff Volume = 0.363 af Average Runoff Depth = 3.57"
70.33% Pervious = 0.860 ac 29.67% Impervious = 0.363 ac

MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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Summary for Subcatchment EXWS1:

Runoff = 2.2 cfs @ 12.09 hrs, Volume= 0.153 af, Depth= 3.01"

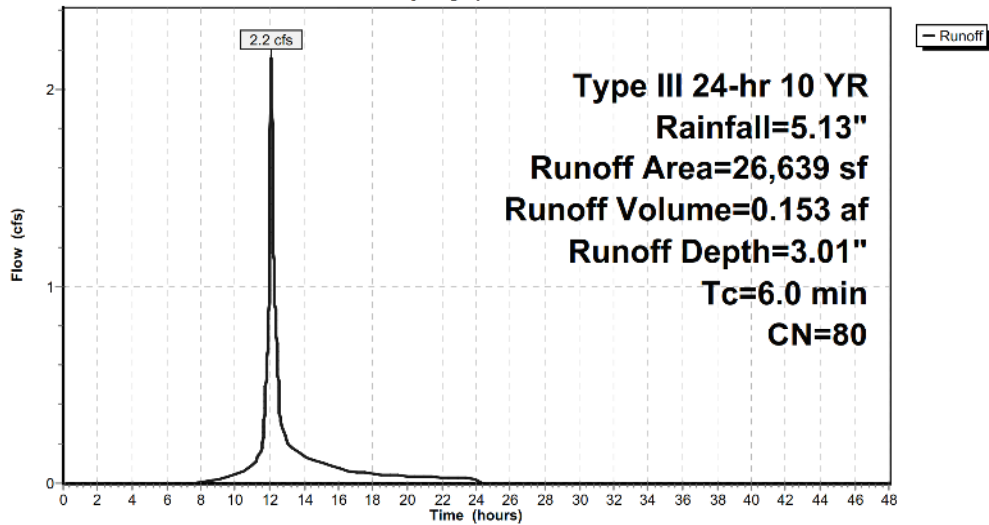
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10 YR Rainfall=5.13"

Area (sf)	CN	Description
26,639	80	>75% Grass cover, Good, HSG D
26,639		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EXWS1:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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Summary for Subcatchment PRWS1:

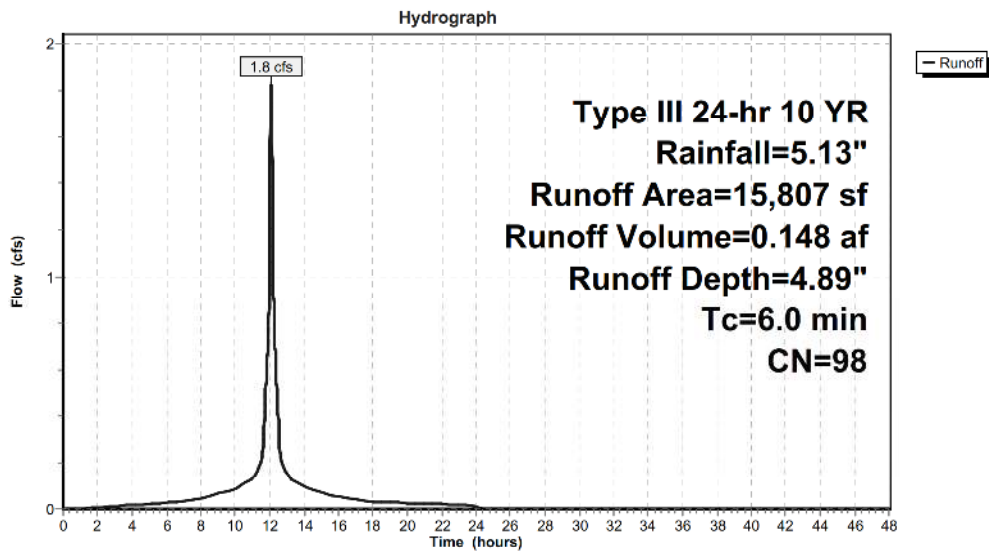
Runoff = 1.8 cfs @ 12.08 hrs, Volume= 0.148 af, Depth= 4.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10 YR Rainfall=5.13"

Area (sf)	CN	Description
7,070	98	Roofs, HSG B
8,737	98	Paved parking, HSG D
15,807	98	Weighted Average
15,807		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS1:



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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Summary for Subcatchment PRWS2:

Runoff = 0.9 cfs @ 12.09 hrs, Volume= 0.062 af, Depth= 3.01"

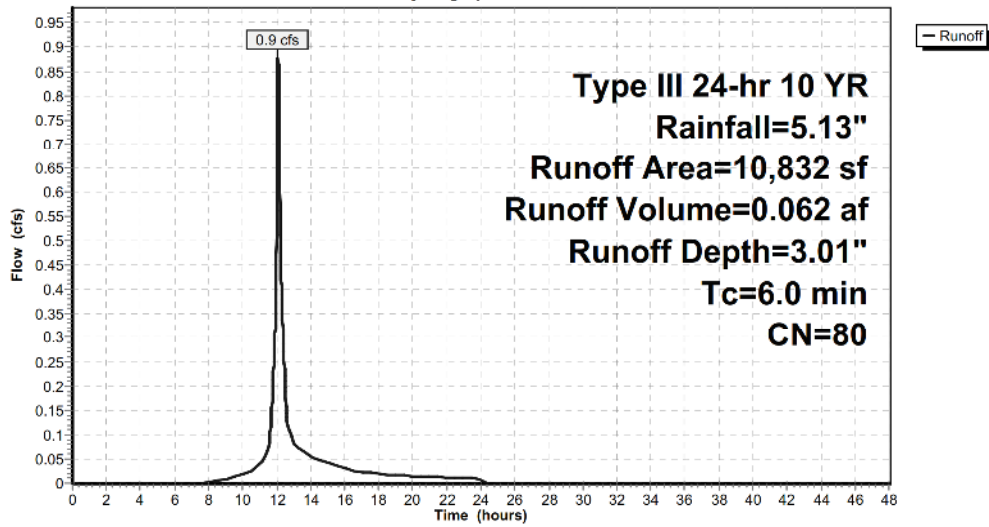
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10 YR Rainfall=5.13"

Area (sf)	CN	Description
10,832	80	>75% Grass cover, Good, HSG D
10,832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS2:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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Summary for Pond INFILTRATOR:

Inflow Area = 0.363 ac, 100.00% Impervious, Inflow Depth = 4.89" for 10 YR event
 Inflow = 1.8 cfs @ 12.08 hrs, Volume= 0.148 af
 Outflow = 0.4 cfs @ 12.48 hrs, Volume= 0.148 af, Atten= 77%, Lag= 23.5 min
 Discarded = 0.1 cfs @ 11.20 hrs, Volume= 0.115 af
 Primary = 0.3 cfs @ 12.48 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.42' @ 12.48 hrs Surf.Area= 1,060 sf Storage= 1,812 cf

Plug-Flow detention time= 38.1 min calculated for 0.148 af (100% of inflow)
 Center-of-Mass det. time= 38.1 min (785.7 - 747.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.00'	918 cf	35.33'W x 30.00'L x 3.54'H Field A 3,754 cf Overall - 1,460 cf Embedded = 2,294 cf x 40.0% Voids
#2A	98.50'	1,460 cf	Cultec R-330XL x 28 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
		2,378 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.00'	6.000 in/hr Exfiltration over Surface area
#2	Primary	98.90'	15.0" Round Culvert L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 98.50' S= 0.0364 '/' Cc= 0.900 n= 0.013
#3	Device 2	99.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	101.00'	2.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.1 cfs @ 11.20 hrs HW=98.04' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=0.3 cfs @ 12.48 hrs HW=100.42' (Free Discharge)
 ↳ **2=Culvert** (Passes 0.3 cfs of 4.4 cfs potential flow)
 ↳ **3=Orifice/Grate** (Orifice Controls 0.3 cfs @ 5.48 fps)
 ↳ **4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

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Type III 24-hr 10 YR Rainfall=5.13"

Printed 11/21/2023

Pond INFILTRATOR: - Chamber Wizard Field A

Chamber Model = Cultec R-330XL

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf

Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap

52.0" Wide + 6.0" Spacing = 58.0" C-C

4 Chambers/Row x 7.00' Long = 28.00' + 12.0" End Stone x 2 = 30.00' Base Length

7 Rows x 52.0" Wide + 6.0" Spacing x 6 + 12.0" Side Stone x 2 = 35.33' Base Width

6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

28 Chambers x 52.2 cf = 1,460.4 cf Chamber Storage

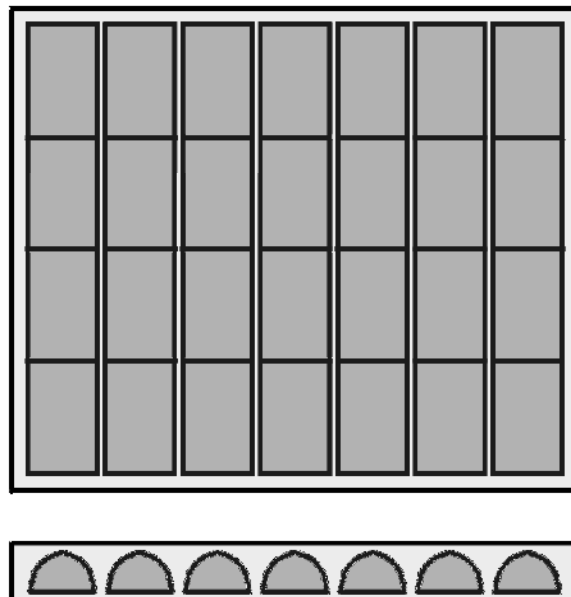
3,754.2 cf Field - 1,460.4 cf Chambers = 2,293.8 cf Stone x 40.0% Voids = 917.5 cf Stone Storage

Stone + Chamber Storage = 2,377.9 cf = 0.055 af

28 Chambers

139.0 cy Field

85.0 cy Stone



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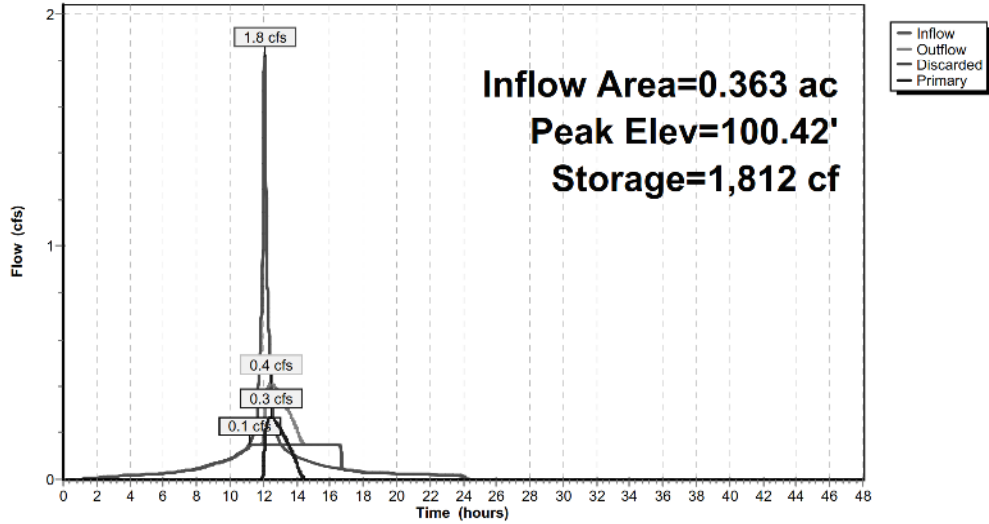
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Type III 24-hr 10 YR Rainfall=5.13"

Printed 11/21/2023

Pond INFILTRATOR:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

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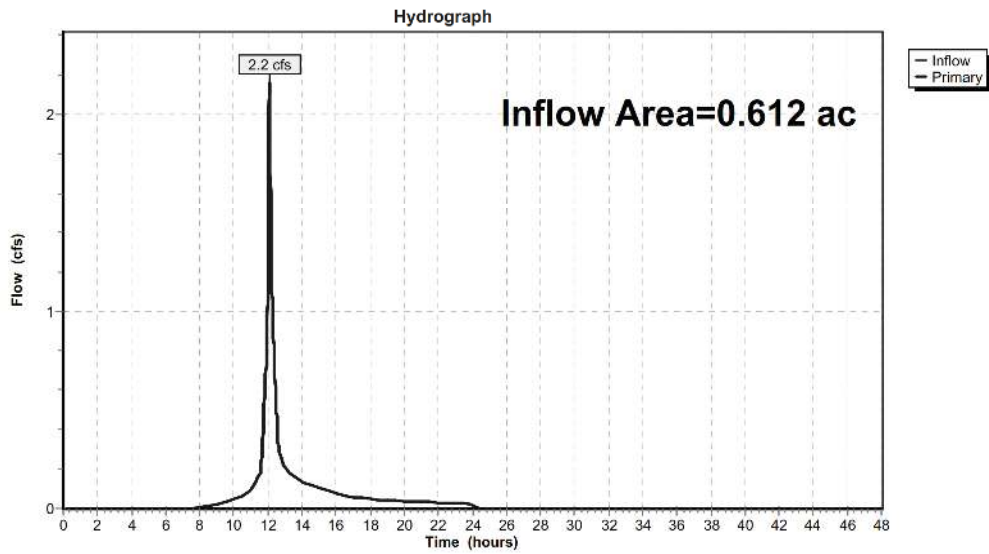
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Summary for Link EX DP:

Inflow Area = 0.612 ac, 0.00% Impervious, Inflow Depth = 3.01" for 10 YR event
Inflow = 2.2 cfs @ 12.09 hrs, Volume= 0.153 af
Primary = 2.2 cfs @ 12.09 hrs, Volume= 0.153 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EX DP:



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 10 YR Rainfall=5.13"

Prepared by Alfonzetti Engineering, P.C.

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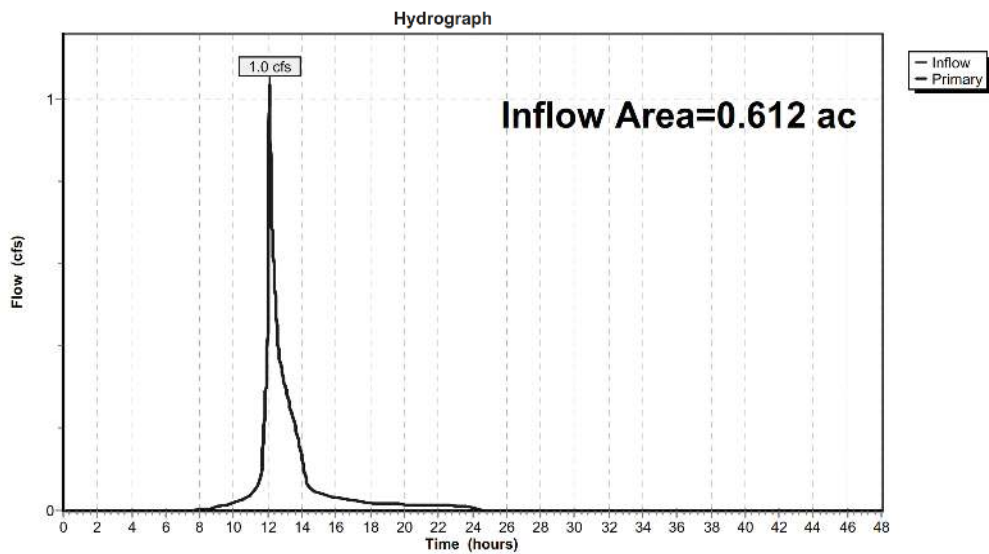
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Summary for Link PR DP:

Inflow Area = 0.612 ac, 59.34% Impervious, Inflow Depth = 1.86" for 10 YR event
Inflow = 1.0 cfs @ 12.10 hrs, Volume= 0.095 af
Primary = 1.0 cfs @ 12.10 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PR DP:



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

Prepared by Alfonzetti Engineering, P.C.

Printed 11/21/2023

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EXWS1: Runoff Area=26,639 sf 0.00% Impervious Runoff Depth=6.73"
Tc=6.0 min CN=80 Runoff=4.7 cfs 0.343 af

Subcatchment PRWS1: Runoff Area=15,807 sf 100.00% Impervious Runoff Depth=8.93"
Tc=6.0 min CN=98 Runoff=3.3 cfs 0.270 af

Subcatchment PRWS2: Runoff Area=10,832 sf 0.00% Impervious Runoff Depth=6.73"
Tc=6.0 min CN=80 Runoff=1.9 cfs 0.139 af

Pond INFILTRATOR: Peak Elev=101.49' Storage=2,355 cf Inflow=3.3 cfs 0.270 af
Discarded=0.1 cfs 0.164 af Primary=2.9 cfs 0.106 af Outflow=3.1 cfs 0.270 af

Link EX DP: Inflow=4.7 cfs 0.343 af
Primary=4.7 cfs 0.343 af

Link PR DP: Inflow=4.7 cfs 0.246 af
Primary=4.7 cfs 0.246 af

Total Runoff Area = 1.223 ac Runoff Volume = 0.752 af Average Runoff Depth = 7.38"
70.33% Pervious = 0.860 ac 29.67% Impervious = 0.363 ac

MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

Prepared by Alfonzetti Engineering, P.C.

Printed 11/21/2023

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Summary for Subcatchment EXWS1:

Runoff = 4.7 cfs @ 12.09 hrs, Volume= 0.343 af, Depth= 6.73"

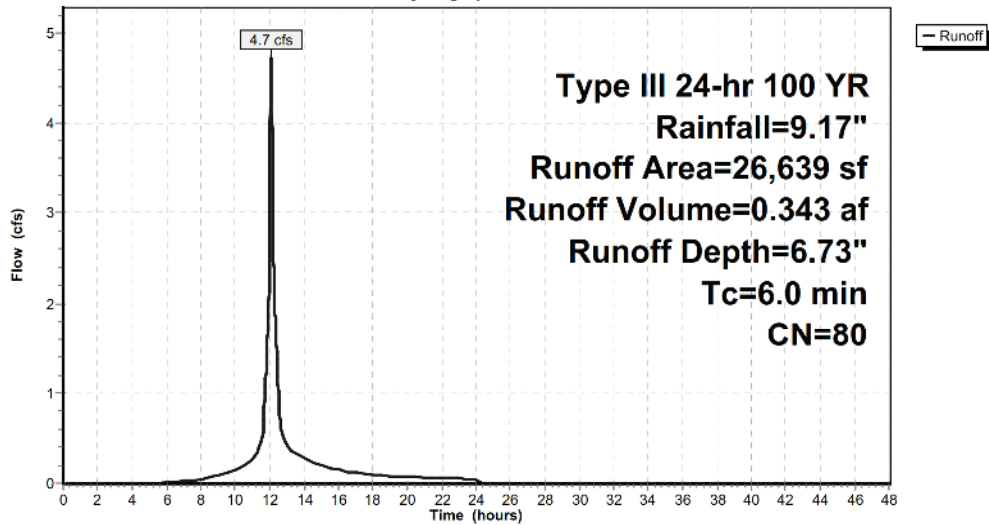
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 YR Rainfall=9.17"

Area (sf)	CN	Description
26,639	80	>75% Grass cover, Good, HSG D
26,639		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EXWS1:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

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Summary for Subcatchment PRWS1:

Runoff = 3.3 cfs @ 12.08 hrs, Volume= 0.270 af, Depth= 8.93"

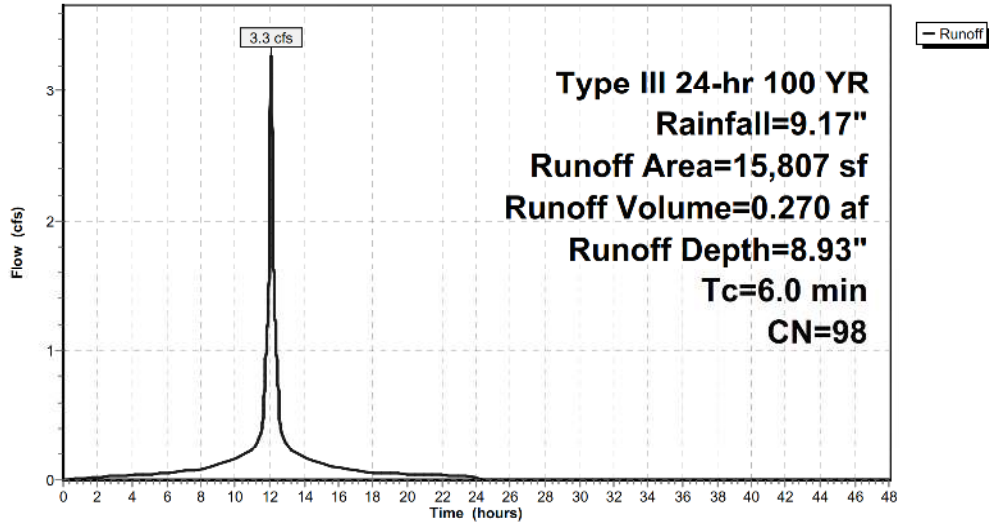
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 YR Rainfall=9.17"

Area (sf)	CN	Description
7,070	98	Roofs, HSG B
8,737	98	Paved parking, HSG D
15,807	98	Weighted Average
15,807		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS1:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

Prepared by Alfonzetti Engineering, P.C.

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Summary for Subcatchment PRWS2:

Runoff = 1.9 cfs @ 12.09 hrs, Volume= 0.139 af, Depth= 6.73"

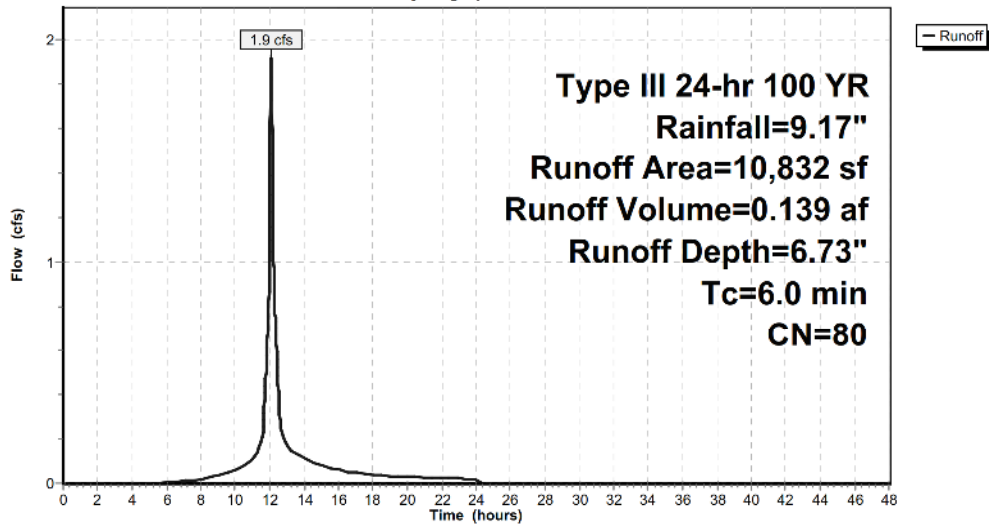
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 YR Rainfall=9.17"

Area (sf)	CN	Description
10,832	80	>75% Grass cover, Good, HSG D
10,832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PRWS2:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

Prepared by Alfonzetti Engineering, P.C.

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Summary for Pond INFILTRATOR:

Inflow Area = 0.363 ac, 100.00% Impervious, Inflow Depth = 8.93" for 100 YR event
Inflow = 3.3 cfs @ 12.08 hrs, Volume= 0.270 af
Outflow = 3.1 cfs @ 12.11 hrs, Volume= 0.270 af, Atten= 6%, Lag= 1.9 min
Discarded = 0.1 cfs @ 9.73 hrs, Volume= 0.164 af
Primary = 2.9 cfs @ 12.11 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 101.49' @ 12.11 hrs Surf.Area= 1,060 sf Storage= 2,355 cf

Plug-Flow detention time= 36.6 min calculated for 0.270 af (100% of inflow)
Center-of-Mass det. time= 36.6 min (776.2 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	98.00'	918 cf	35.33'W x 30.00'L x 3.54'H Field A 3,754 cf Overall - 1,460 cf Embedded = 2,294 cf x 40.0% Voids
#2A	98.50'	1,460 cf	Cultec R-330XL x 28 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
		2,378 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.00'	6.000 in/hr Exfiltration over Surface area
#2	Primary	98.90'	15.0" Round Culvert L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 98.50' S= 0.0364 '/' Cc= 0.900 n= 0.013
#3	Device 2	99.00'	3.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	101.00'	2.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.1 cfs @ 9.73 hrs HW=98.04' (Free Discharge)
↑ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=2.9 cfs @ 12.11 hrs HW=101.49' (Free Discharge)
↑ **2=Culvert** (Passes 2.9 cfs of 6.5 cfs potential flow)
↑ **3=Orifice/Grate** (Orifice Controls 0.4 cfs @ 7.40 fps)
↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 2.5 cfs @ 2.08 fps)

MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

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Pond INFILTRATOR: - Chamber Wizard Field A

Chamber Model = Cultec R-330XL

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf

Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap

52.0" Wide + 6.0" Spacing = 58.0" C-C

4 Chambers/Row x 7.00' Long = 28.00' + 12.0" End Stone x 2 = 30.00' Base Length

7 Rows x 52.0" Wide + 6.0" Spacing x 6 + 12.0" Side Stone x 2 = 35.33' Base Width

6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

28 Chambers x 52.2 cf = 1,460.4 cf Chamber Storage

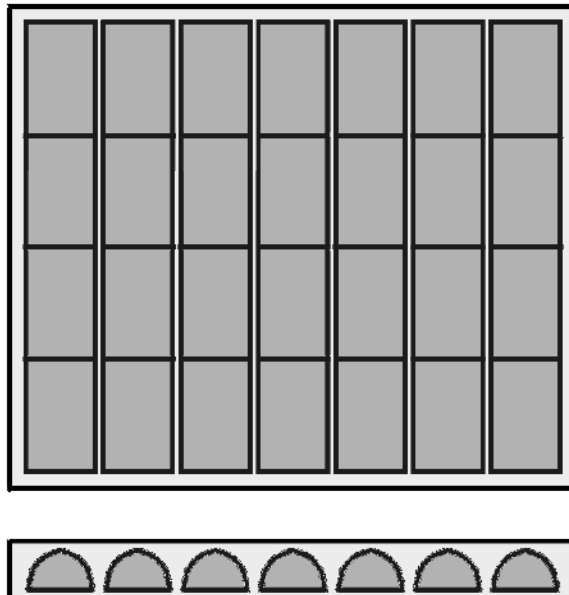
3,754.2 cf Field - 1,460.4 cf Chambers = 2,293.8 cf Stone x 40.0% Voids = 917.5 cf Stone Storage

Stone + Chamber Storage = 2,377.9 cf = 0.055 af

28 Chambers

139.0 cy Field

85.0 cy Stone



MARTINS LAFAYETTE AVE-HYDROCAD

Prepared by Alfonzetti Engineering, P.C.

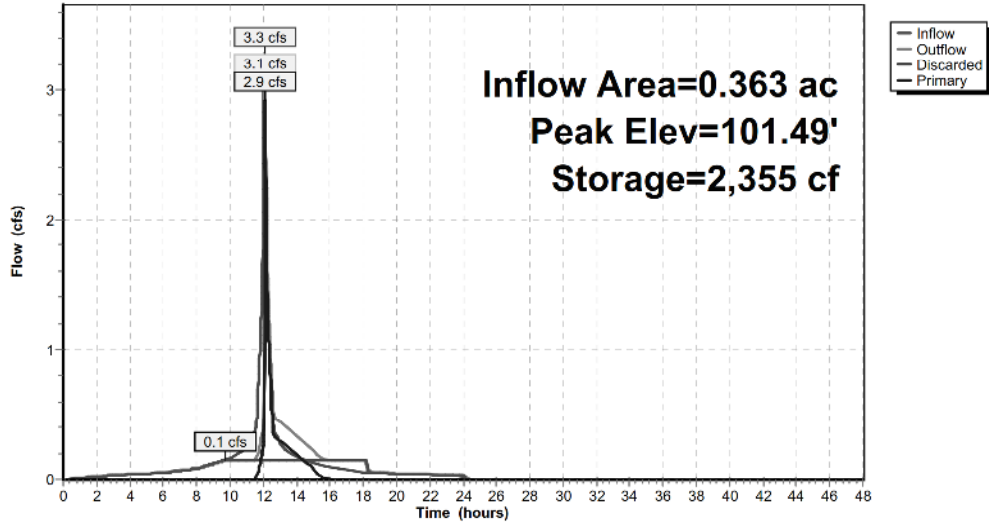
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Type III 24-hr 100 YR Rainfall=9.17"

Printed 11/21/2023

Pond INFILTRATOR:

Hydrograph



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

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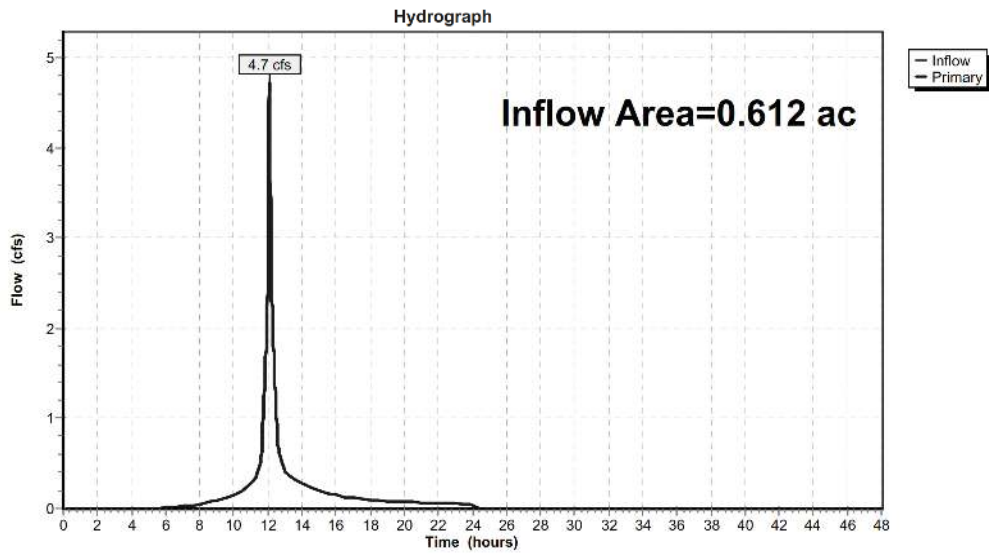
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Summary for Link EX DP:

Inflow Area = 0.612 ac, 0.00% Impervious, Inflow Depth = 6.73" for 100 YR event
Inflow = 4.7 cfs @ 12.09 hrs, Volume= 0.343 af
Primary = 4.7 cfs @ 12.09 hrs, Volume= 0.343 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EX DP:



MARTINS LAFAYETTE AVE-HYDROCAD

Type III 24-hr 100 YR Rainfall=9.17"

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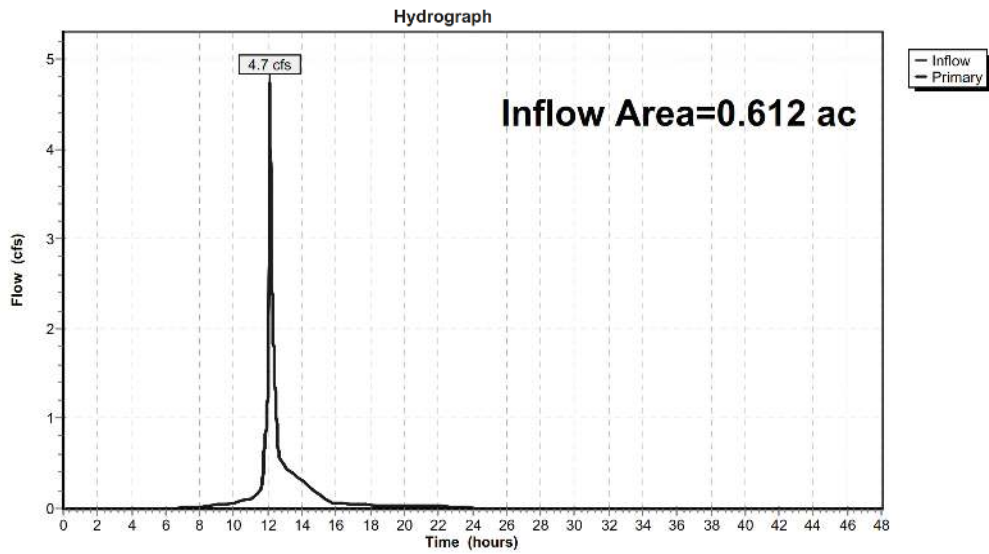
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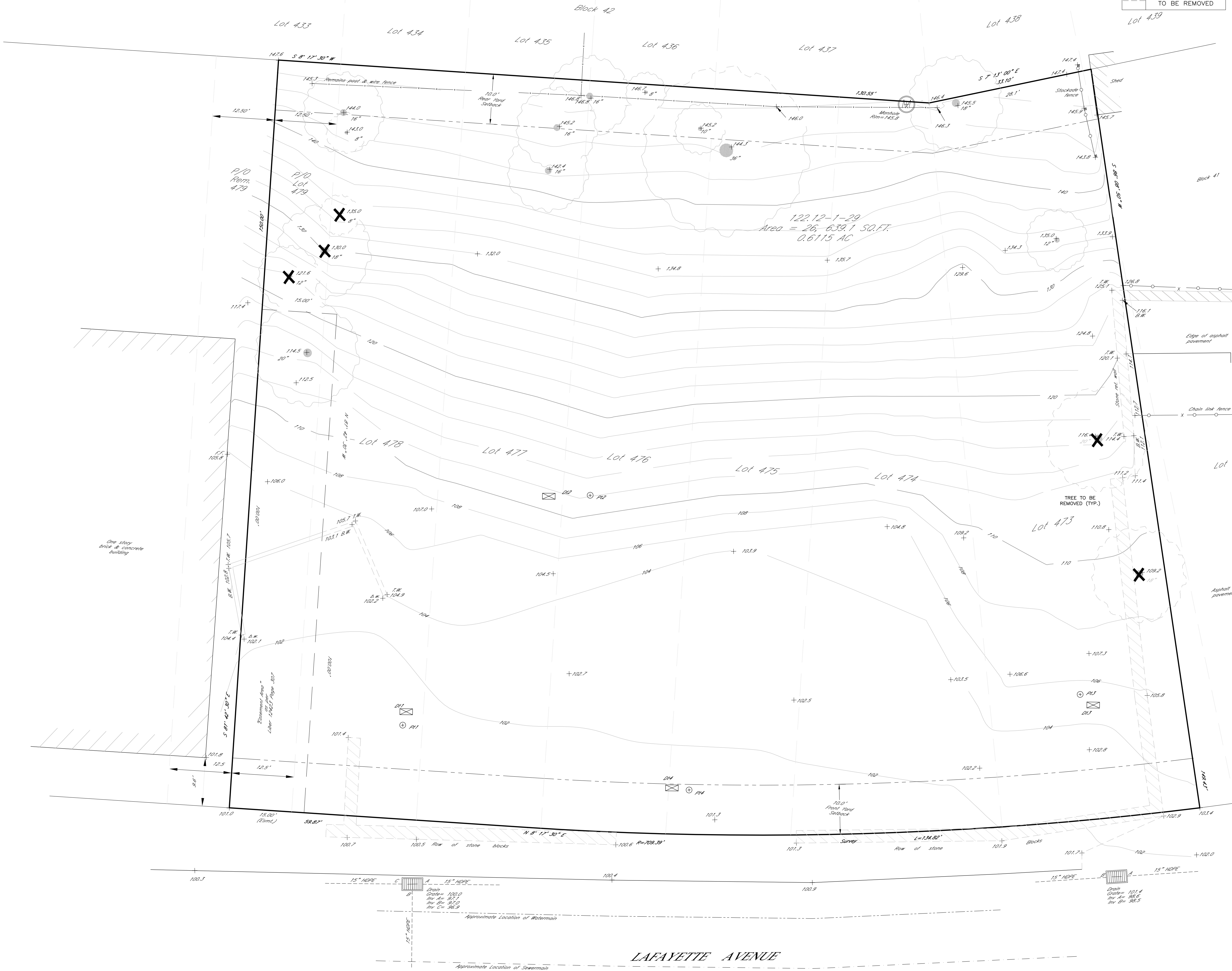
Summary for Link PR DP:

Inflow Area = 0.612 ac, 59.34% Impervious, Inflow Depth = 4.82" for 100 YR event
Inflow = 4.7 cfs @ 12.11 hrs, Volume= 0.246 af
Primary = 4.7 cfs @ 12.11 hrs, Volume= 0.246 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PR DP:





DEMOLITION LEGEND

- X TREE TO BE REMOVED
- - - EXISTING FEATURE TO BE REMOVED

DEEP TEST HOLE DESCRIPTIONS

DT-1	0"-6" TOP SOIL 6"-84" SAND WITH COBBLES NO WATER NO LEDGE
DT-2	0"-6" TOP SOIL 6"-97" LIGHT BROWN SANDY LOAM WITH BROKEN ROCK NO WATER NO LEDGE
DT-3	0"-6" TOP SOIL 6"-99" SAND WITH COBBLES NO WATER NO LEDGE
DT-4	0"-6" GRAVEL 6"-12" TOP SOIL 12"-84" BROWN SANDS WITH COBBLES NO WATER NO LEDGE

PERCOLATION TEST

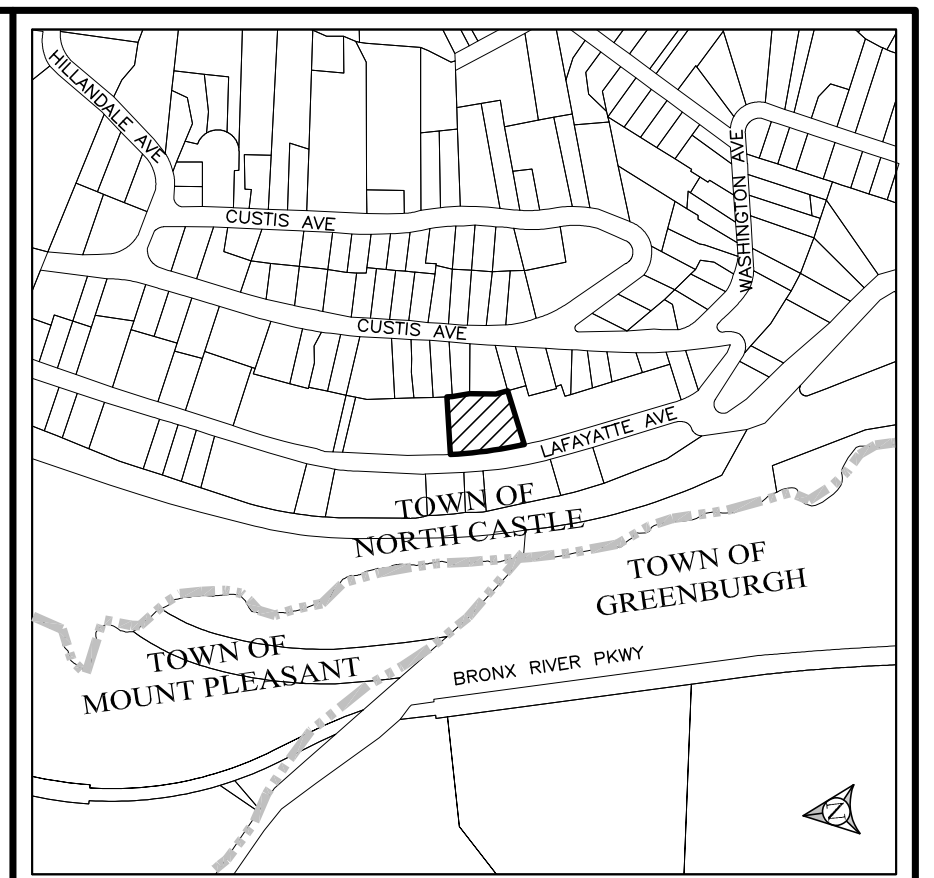
PT1	6 MIN/INCH
PT2	NO PERC
PT3	5 MIN/INCH
PT4	3.3 MIN/INCH

*10 MIN/INCH WAS UTILIZED FOR THE SIZING CALCULATIONS OF THE STORMWATER DETENTION SYSTEM.

TREE DEMO LIST

SIZE	NAME/TREE	QTY
8"	TREE	1
12"	TREE	1
18"	TREE	2
20"	TREE	1
TOTAL		5

TREE NOTE:
1. A TOTAL OF THREE (3) TREES SHALL BE REMOVED ON THIS APPLICATION.



LOCATION MAP N.T.S.

- CONSTRUCTION NOTES:**
- THE CONTRACTOR SHALL LOCATE AND VERIFY IN THE FIELD ALL UTILITIES: SEWER, WATER, GAS, ELECTRICAL, ETC. PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL CALL CODE 753 (FORMERLY CODE 53) PRIOR TO THE START OF CONSTRUCTION.
 - THE INSTALLATION OF WATER AND SEWER SHALL BE INSPECTED UNDER THE DIRECTION OF A N.Y. STATE LICENSED PROFESSIONAL ENGINEER.
 - EROSION AND SEDIMENT CONTROL MEASURES, SHALL BE REQUIRED AS INDICATED ON THIS PLAN OR THE EROSION CONTROL PLAN OR AS DIRECTED BY THE GOVERNING AGENCY, IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS" (BLUE BOOK).
 - AS BUILT PLANS IF REQUIRED, SHALL BE CERTIFIED BY A N.Y. STATE LICENSED SURVEYOR OR PROFESSIONAL ENGINEER.
 - ALL PROPERTY DISTURBED IN THE RIGHT-OF-WAY OR ON PRIVATE LANDS, SHALL BE RESTORED TO ACCEPTABLE CONDITIONS, AS REQUIRED BY THE GOVERNING AGENCY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL APPLICATIONS AND PERMITS REQUIRED FOR CONSTRUCTION.
 - THE ROAD AND UTILITIES SHALL BE STAKED IN THE FIELD BY A NEW YORK STATE LICENSED SURVEYOR OR ENGINEER.
 - UNDERGROUND UTILITIES: GAS, ELECTRIC, CABLE, TELEPHONE, ETC. SHALL BE AS REQUIRED BY THE GOVERNING AGENCY AND THE APPROPRIATE UTILITY COMPANY.
 - ALL PROPOSED OR DISTURBED SLOPES, 1H:3V OR GREATER SHALL BE STABILIZED WITH AN EROSION CONTROL BLANKET.
 - IN LIEU OF BLASTING, ROCK RIPPING WILL BE USED WHEREVER POSSIBLE. IF BLASTING IS REQUIRED, BLASTING WILL OCCUR IN ACCORDANCE WITH REGULATIONS AND STANDARDS PRESCRIBED BY THE GOVERNING AGENCY. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY PERMITS IF BLASTING IS REQUIRED.
 - NO REPRESENTATION OF THE SUB-SURFACE SOIL CONDITIONS ON THIS SITE ARE MADE OR IMPLIED. IT IS THE DEVELOPER/CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL IMPROVEMENTS ARE PLACED ON SOIL WITH A SUITABLE BEARING CAPACITY.

GENERAL NOTES:

- EXISTING FEATURES SHOWN HEREON WERE TAKING FROM SURVEY MAP ENTITLED "TOPOGRAPHIC SURVEY OF PROPERTY SITUATE IN THE TOWN OF NORTH CASTLE, WESTCHESTER COUNTY, NEW YORK, PREPARED BY LINK LAND SURVEYORS P.C. DATED MAY 9, 2022".



IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209(2), FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER ANY ITEM ON THIS PLAN IN ANY WAY. IF ANY ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

North arrow pointing up, labeled 'Z'.

Graphic scale: 0 5 10 20 feet. SCALE: 1" = 10'

Professional Engineer Seal for Ralph Alfonzetti, State of New York, License No. 07623.

ALFONZETTI ENGINEERING, P.C.
14 SMITH AVE, MT. KISCO, N.Y. 10549
914-666-9800 INFO@ALFONZETTIENG.COM

SITE DATA		DRAWING	
OWNER/APPLICANT: 2012 MARIA MARTINS IRREVOCABLE TRUST	SITE ADDRESS: 78 LAFAYETTE AVE, NORTH WHITE PLAINS, NY 10603	TAX MAP #: 122.12-1-29	REVISIONS:
LOT AREA: 0.6115 AC	ZONING: IND-A	DATE: NOVEMBER 21, 2023	NOVEMBER 21, 2023
DATE: JUNE 8, 2023	DATE: DECEMBER 12, 2022	DATE: JUNE 13, 2022	DATE: JUNE 13, 2022
<p>EXISTING CONDITIONS & DEMOLITION PLAN</p> <p>JUNE 13, 2022</p> <p>78 LAFAYETTE AVENUE TOWN OF NORTH CASTLE, WESTCHESTER COUNTY, NEW YORK</p>		<p>SHEET 01 OF 05</p>	

FIRE DISTRICT: NORTH WHITE PLAINS FD
SCHOOL DISTRICT: VALHALLA
WATER DISTRICT: NORTH CASTLE WD#1

APPROVED BY TOWN OF NORTH CASTLE
PLANNING BOARD RESOLUTION,
DATED: _____

DATE: _____

CHRISTOPHER CARTHY, CHAIRMAN
TOWN OF NORTH CASTLE PLANNING BOARD

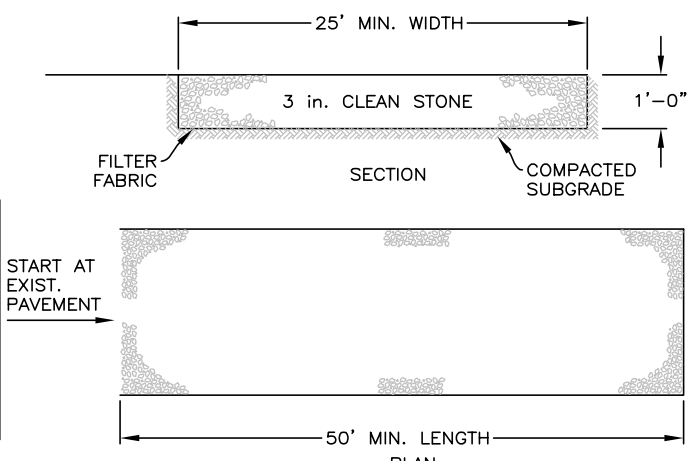
ENGINEERING PLANS REVIEWED FOR
CONFORMANCE TO RESOLUTION:
DATE: _____

JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING
CONSULTING TOWN ENGINEERS

LAFAYETTE AVENUE

EROSION CONTROL NOTES:

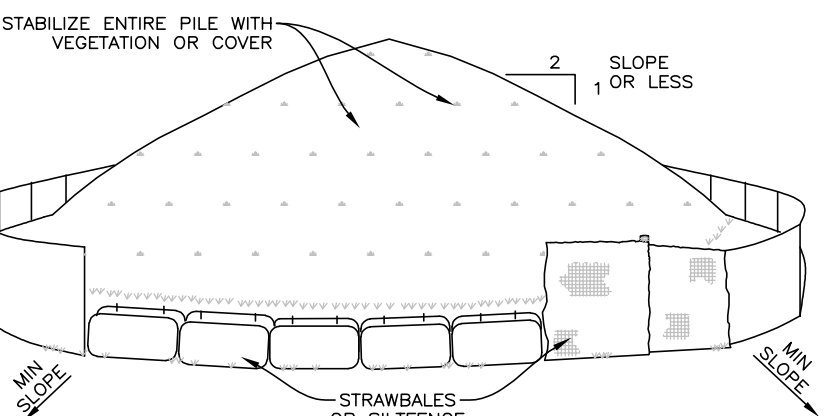
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD OR UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- PRIOR TO ANY EXCAVATION, SILT FENCE SHALL BE INSTALLED AT THE LOCATIONS NOTED ON THE EROSION CONTROL PLAN. ADDITIONAL SILT FENCE MAY BE REQUIRED BY THE ENGINEER IN THE FIELD. SILT FENCING SHALL BE MAINTAINED IN EFFECTIVE CONDITION AND SHALL NOT BE REMOVED UNTIL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
- INSTALL ANTI-TRACKING PAD AT ALL CONSTRUCTION ENTRANCES. ANTI-TRACKING PAD SHALL BE 2'-3" DIAMETER CRUSHED STONE 6" DEEP.
- TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT REMOVING DEVICES SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. SEDIMENT SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ADDITIONAL EROSION OR POLLUTION. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND IMMEDIATELY AFTER EACH RAINFALL TO INSURE PROPER OPERATION AS DESIGNED. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS OR OTHERWISE STABILIZED. DO NOT STOCKPILE MATERIALS ON STEEP SLOPES, IN DRAINAGE SWALES OR IN WETLAND AREAS. SURROUND ALL STOCKPILE AREAS WITH STAKED HAYBALES OR SILT FENCE.
- ALL SLOPES CONSTRUCTED WITH FILL MATERIAL AND ALL SLOPES WITH GRADE 3:1 OR STeeper SHALL BE TOPSOILED, SEEDED, MULCHED AND STABILIZED WITH STAKED TOBACCO NETTING, OR EROSION BLANKET AS NOTED, UNLESS OTHERWISE DIRECTED.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.
- ALL DISTURBED AREAS WITHIN 500 FEET OF A BUILDING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL. A WATERING TRUCK WILL BE USED IN DRY SEASON TO WET DOWN DUST AREAS.
- THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
- ALL CATCH BASINS AND DRAIN INLETS ARE TO BE PROTECTED WITH SEDIMENT FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE STABILIZED.
- UTILITY LINE EXCAVATED MATERIAL SHALL BE TEMPORARILY STOCKPILED ON THE HIGH SIDE OF EXCAVATION SO RUNOFF IS DIRECTED AWAY FROM TRENCH. AFTER BACK-FILLING, AREA IS TO BE TOPSOILED, SEEDED AND MULCHED.
- SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
- ALL AREAS OF DISTURBED SOIL SHALL BE STABILIZED BY THE CONTRACTOR. IN ADDITION TO ALL SPECIFIED EROSION CONTROL DEVICES, THE CONTRACTOR SHALL TAKE ALL STEPS PRUDENT AND NECESSARY TO STABILIZE THE SITE AT ALL TIMES.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS" (BLUE BOOK).



INSTALLATION NOTES

- STONE SIZE - USE 3" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - 25' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
- FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA FROM PLACING OR STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE, IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE WITH WATER WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE (ANTI-TRACKING PAD) N.T.S.

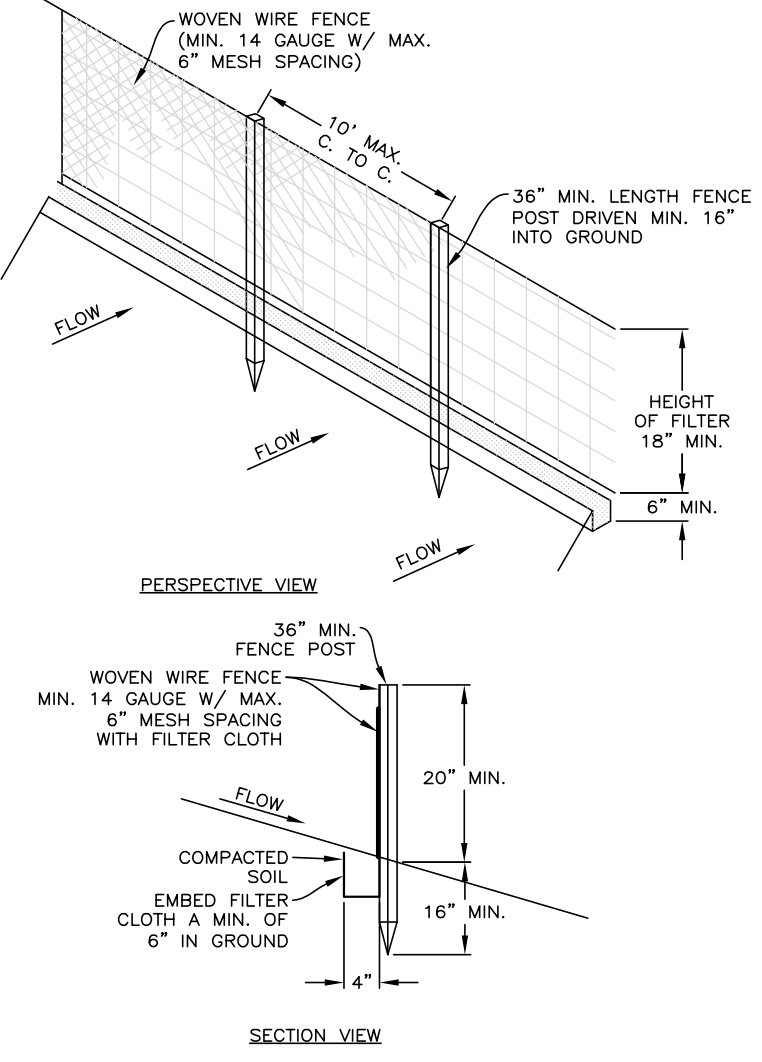
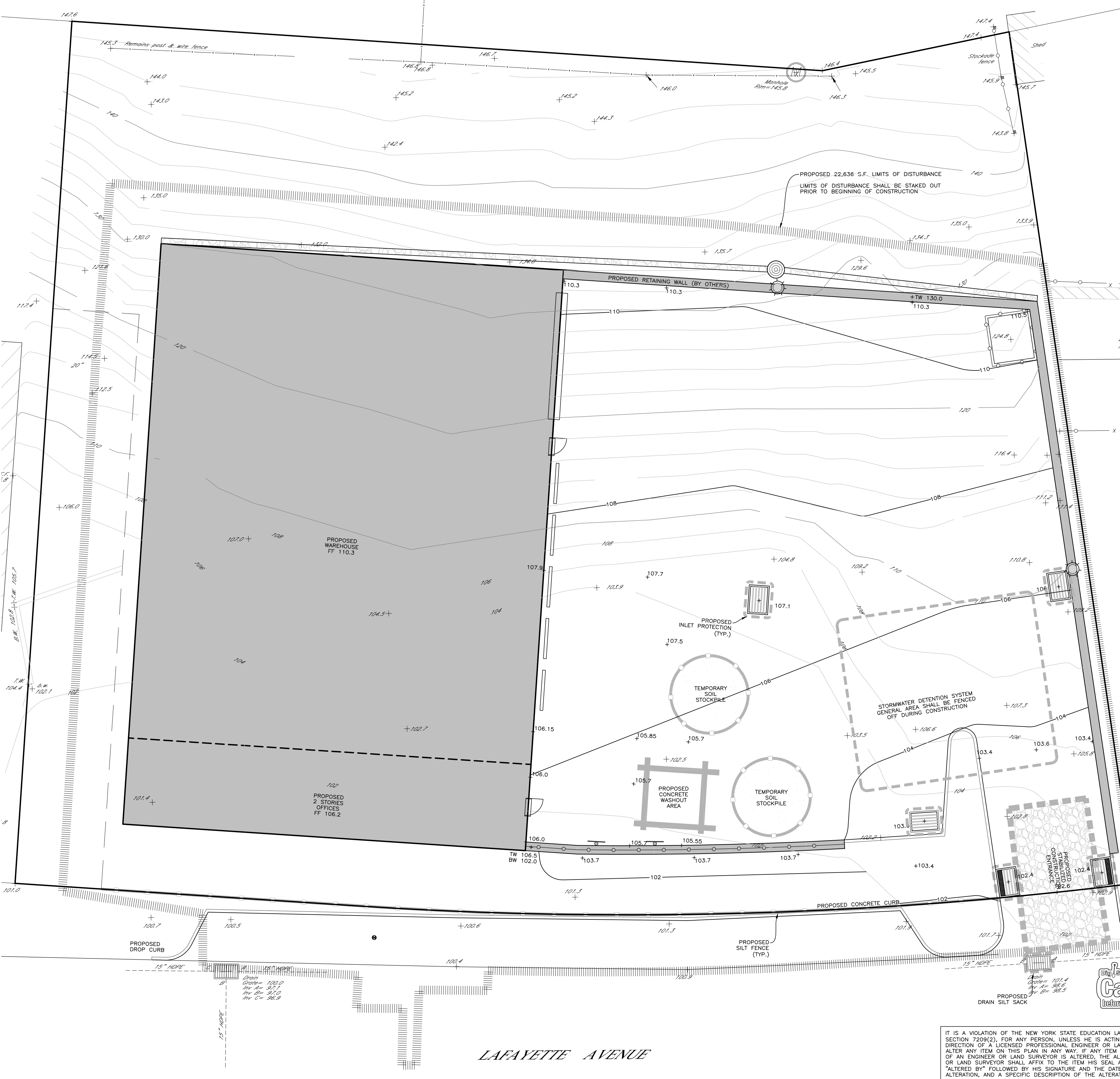


- TO BE USED WHERE TOPSOIL PRESERVATION IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS. TOPSOIL IS APPLIED TO SUBSOILS THAT ARE DROUGHTY (HAVING LOW AVAILABLE MOISTURE FOR PLANTS), STONY, SALTY, HAVE LOW PERMEABILITY, OR ARE EXTREMELY ACID. IT IS ALSO USED TO BACKFILL AROUND SHRUBS AND TREE TRANSPLANTS. PRESERVATION OF EXISTING TOPSOIL IS BENEFICIAL FOR ALL TYPES OF LAWN OR ORNAMENTAL PLANTINGS.
- TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVER, MULCH, NON-VEGETATIVE COVER, AND PERMANENT SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND REQUIRED DURATION OF USE.

INSTALLATION NOTES

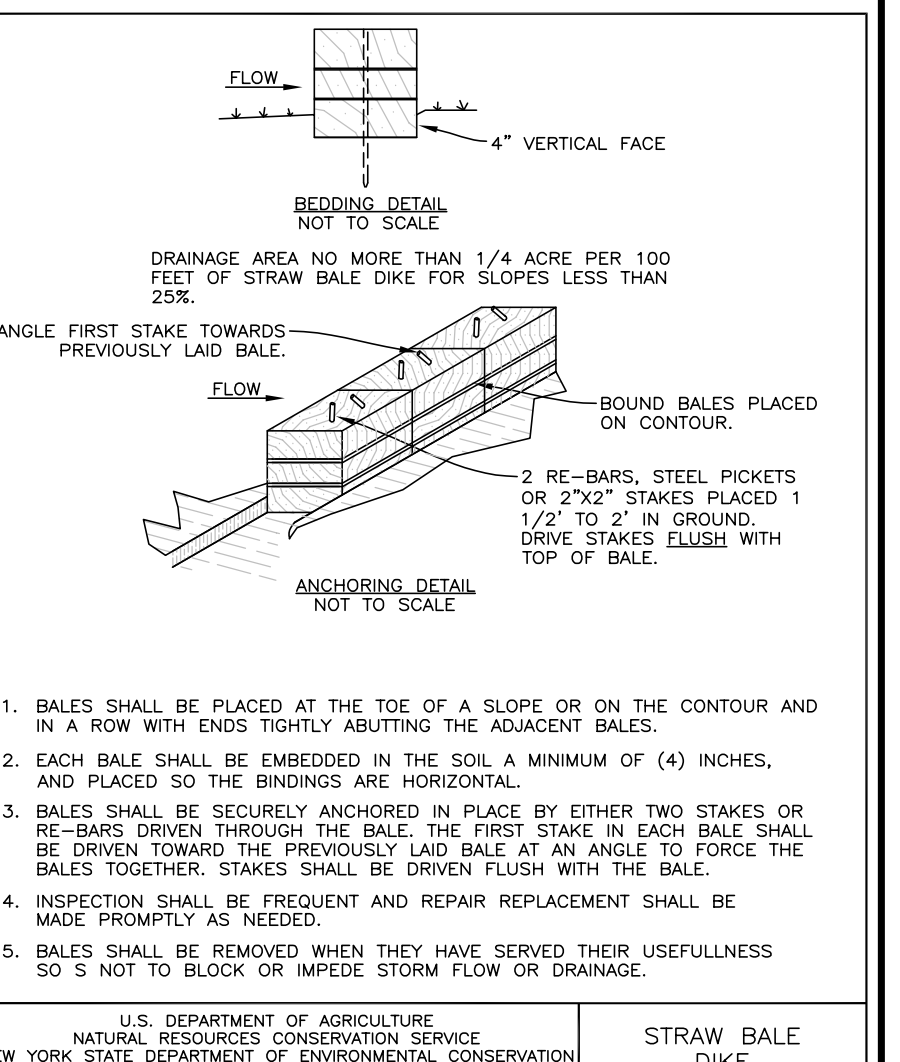
- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
- UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

TEMPORARY MATERIAL STOCKPILE N.T.S.



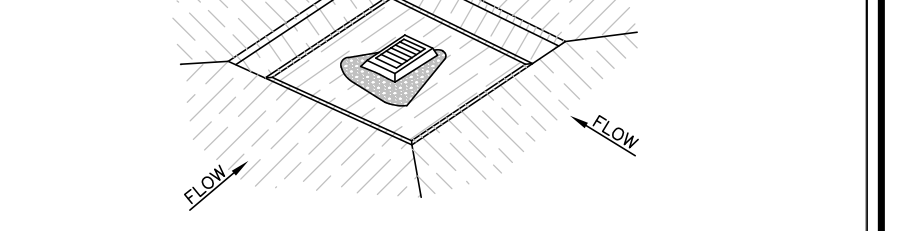
- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES. POST SHALL BE STEEL EITHER "I" OR "U" TYPE OR HARDWOOD.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER 1, MIRA 100X, STABILUM 1300, OR APPROVED EQUIVALENT.
 - PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

- SILT FENCE N.T.S.**
- THE CONSTRUCTION WILL BE IN A SEQUENCE THAT WILL MINIMIZE THE POTENTIAL FOR EROSION. CONSTRUCTION IS ANTICIPATED TO BEGIN IN FALL 2023 AND BE COMPLETED BY FALL 2025.
- THE GENERAL SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:
- PRE-CONSTRUCTION MEETING, STAKEOUT, EROSION CONTROL MEASURES, CLEARING
 - PRE-CONSTRUCTION MEETING, STAKEOUT, EROSION CONTROL MEASURES, CLEARING
 - A PRE-CONSTRUCTION MEETING WILL TAKE PLACE WITH THE TOWN ENGINEER, APPLICANT, APPLICANT'S REPRESENTATIVE, UTILITY COMPANY AND CONTRACTORS.
 - THE INITIAL FIELDWORK SHALL CONSIST OF SURVEYING AND STAKING FOR DISTURBANCE LIMITS AND EROSION CONTROL INSTALLATION.
 - THE PLACEMENT OF A CONSTRUCTION TRAILER AND/OR FIELD OFFICE AND A CONSTRUCTION STAGING AREA, IF NECESSARY SHALL COMMENCE.
 - ALL TREES TO BE PRESERVED WITHIN THE DISTURBANCE LIMITS SHALL BE MARKED AND PROTECTED PRIOR TO THE START OF CLEARING OPERATIONS. EROSION CONTROL STRUCTURES SHALL BE INSTALLED AS SHOWN ON THE EROSION CONTROL PLAN AND AS PER THE RESPECTIVE EROSION CONTROL DETAILS PER THE CONSTRUCTION SEQUENCE.
 - SILT FENCE AND HAYBALES, WHERE INDICATED, SHALL BE INSTALLED.
 - ANTI-TRACKING PADS SHALL BE INSTALLED AT ALL CONSTRUCTION ENTRANCES.
 - TREES TO BE REMOVED SHALL BE CUT AT THIS TIME. TREE STUMP REMOVAL SHALL ONLY INCLUDE STUMPS WITHIN THE IMMEDIATE WORK AREA. SILT FENCE DAMAGED BY TREE STUMP REMOVAL SHALL BE REPLACED.
 - DEMOLITION AND EARTHWORK
 - INSTALL STRAW BALES AND SILT FENCE.
 - CLEAR AND GRUB FOR REMAINING WORK AREA.
 - SOIL STRIPPING AND STOCKPILING OCCUR AT THIS TIME.
 - AFTER SILT FENCE AND HAYBALES HAVE ALL BEEN INSTALLED PRELIMINARY EARTHWORK OPERATIONS SHALL BEGIN.
 - RETAINING WALLS
 - RETAINING WALLS TO BE CONSTRUCTED AS PER STRUCTURAL ENGINEER'S DRAWINGS.
 - ONCE RETAINING WALLS ARE CONSTRUCTED, BUILDING CONSTRUCTION SHALL COMMENCE.
 - BUILDING CONSTRUCTION/GRADING/DRAINAGE/SYSTEM INSTALLATION/UTILITY INSTALLATION
 - BUILDING EXCAVATION FOR THE FOOTINGS AND THE FOUNDATIONS SHALL BEGIN.
 - THE BUILDING'S SUPERSTRUCTURE CONSTRUCTION BEGINS ONCE THE FOUNDATIONS HAVE PROPERLY CURED AND BACKFILLING IS COMPLETE.
 - UTILITIES SUCH AS DRAINAGE, SEWER CONNECTION, AND ELECTRIC ALONG WITH OTHERS, AS REQUIRED, SHALL BE INSTALLED, BACKFILLED AND COMPACTED WHILE THE SUPERSTRUCTURE IS BEING BUILT.
 - BEFORE THE DRAINAGE SYSTEM IS INSTALLED A DEEP AND PERCOLATION TEST SHALL BE PERFORMED. ALSO IT SHALL BE PROTECTED TO ENSURE SEDIMENT DOES NOT ENTER THE SYSTEM. DRAIN INLETS AND CATCH BASINS SHALL BE RAISED APPROXIMATELY 1' ABOVE FINISHED GRADE DURING CONSTRUCTION, PRIOR TO PAVING, AND PRIOR TO BINDER COURSE INSTALLATION.
 - THE INFILTRATION SYSTEM SHALL BE INSTALLED AND PROTECTED FROM HEAVY MACHINERY.
 - THE APPROPRIATE PROPOSED UTILITY SERVICES ARE INSTALLED TO THE PROPOSED BUILDING.
 - ONCE ROUGH GRADING OPERATIONS ARE COMPLETED, FINAL GRADING WILL COMMENCE AND BINDER COURSE WILL BE INSTALLED. AFTER BINDER COURSE IS INSTALLED, INLET PROTECTION SHALL BE PAVED SURFACE INLET PROTECTION.
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 - STABILIZATION
 - ROADWAYS/PARKING AREAS SHALL BE PAVED WITH TOP COURSE AND STRIPPED AS HEAVY EQUIPMENT IS NO LONGER REQUIRED ONSITE.
 - REMOVAL OF EROSION CONTROL DEVICES
 - AS AREAS ARE STABILIZED, SEDIMENT SHALL BE REMOVED AND EROSION CONTROL DEVICES SHALL BE DISCARDED IN AN APPROPRIATE MANNER. FINAL STABILIZATION FOR VEGETATED AREAS REQUIRES AT LEAST 80% VEGETATIVE COVER. ALL DRAINAGE STRUCTURES SHALL BE INSPECTED AND CLEANED IF NECESSARY.



HAYBALE SEDIMENT BARRIERS N.T.S.

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



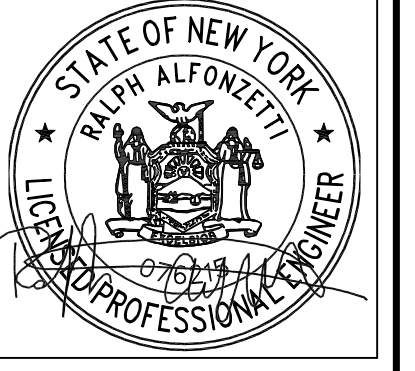
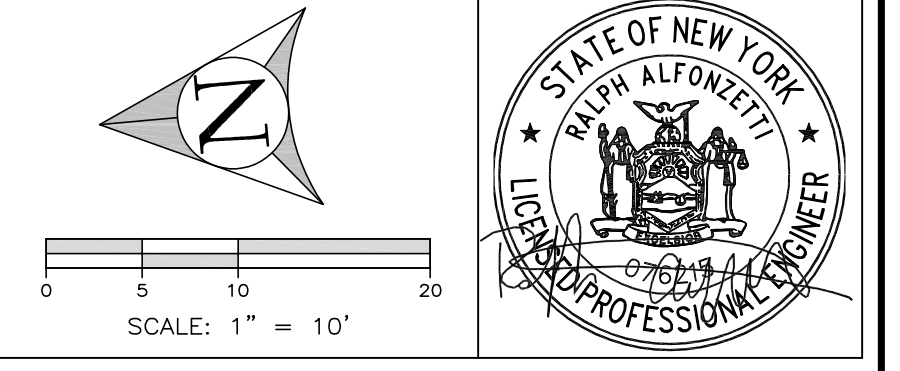
- CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
- GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
- WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
- UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING. MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION N.T.S.

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- INSTALL STRAW BALES AND SILT FENCE.
- CLEAR AND GRUB FOR REMAINING WORK AREA.
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EXCAVATED DROP INLET PROTECTION

- DEMOLITION AND EARTHWORK
- INSTALL STRAW BALES AND SILT FENCE.
- CLEAR AND GRUB FOR REMAINING WORK AREA.
- SOIL STRIPPING AND STOCKPILING OCCUR AT THIS TIME.
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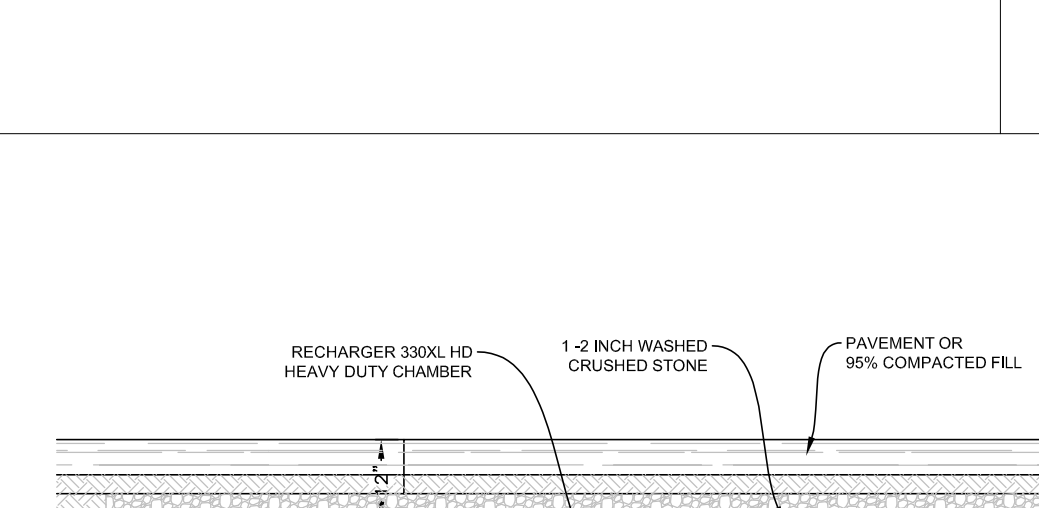
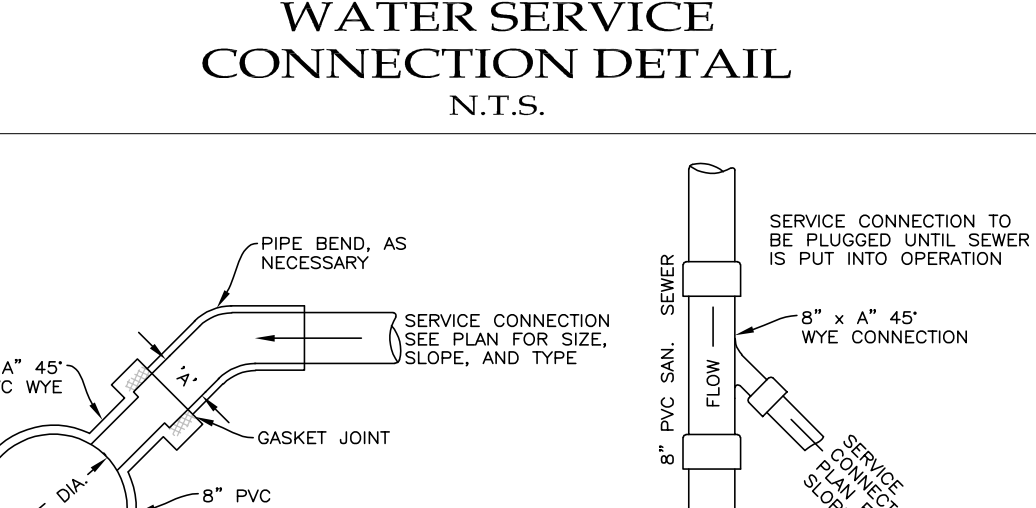
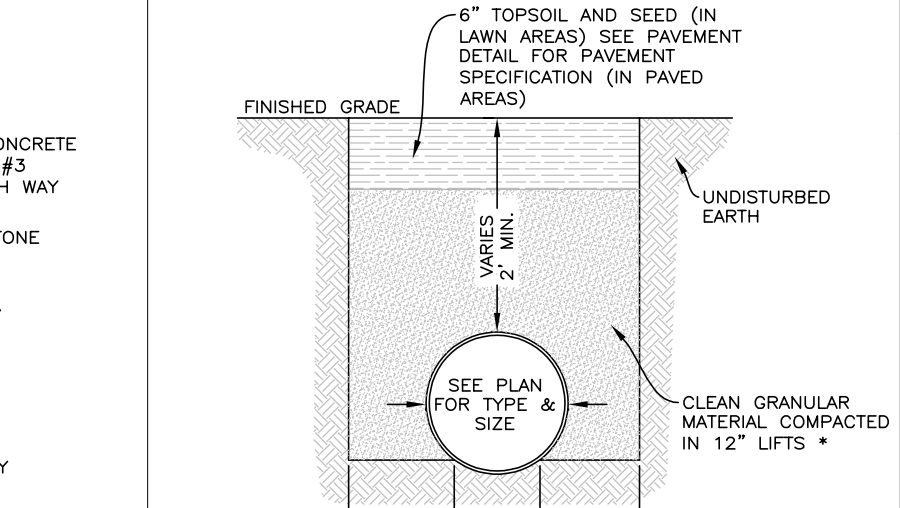
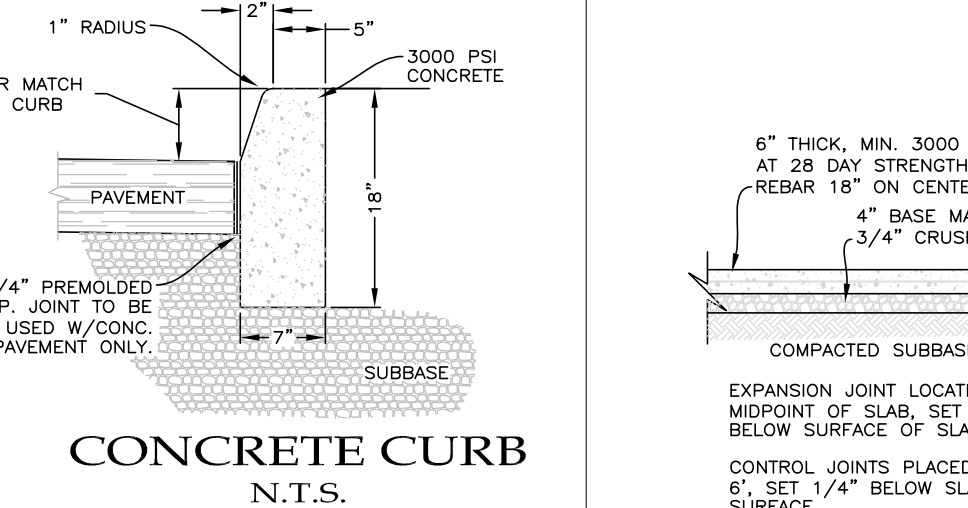
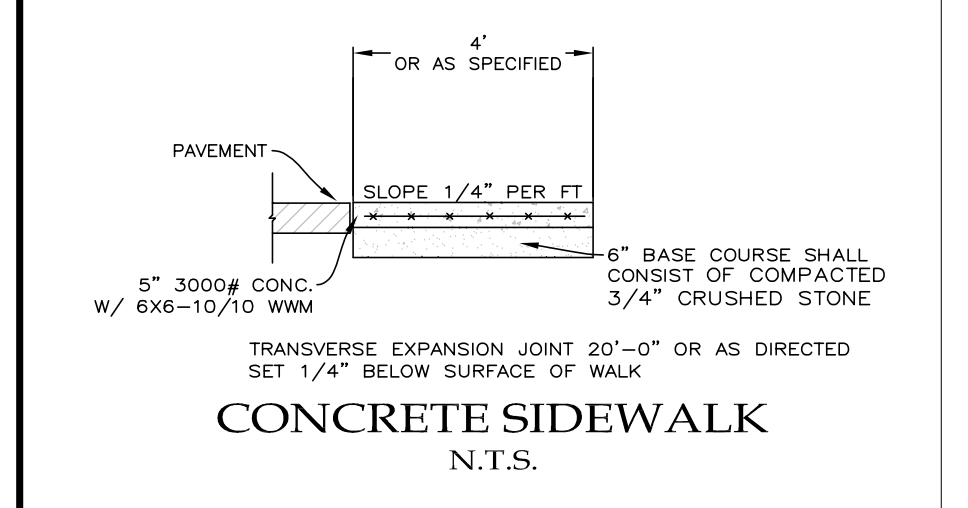
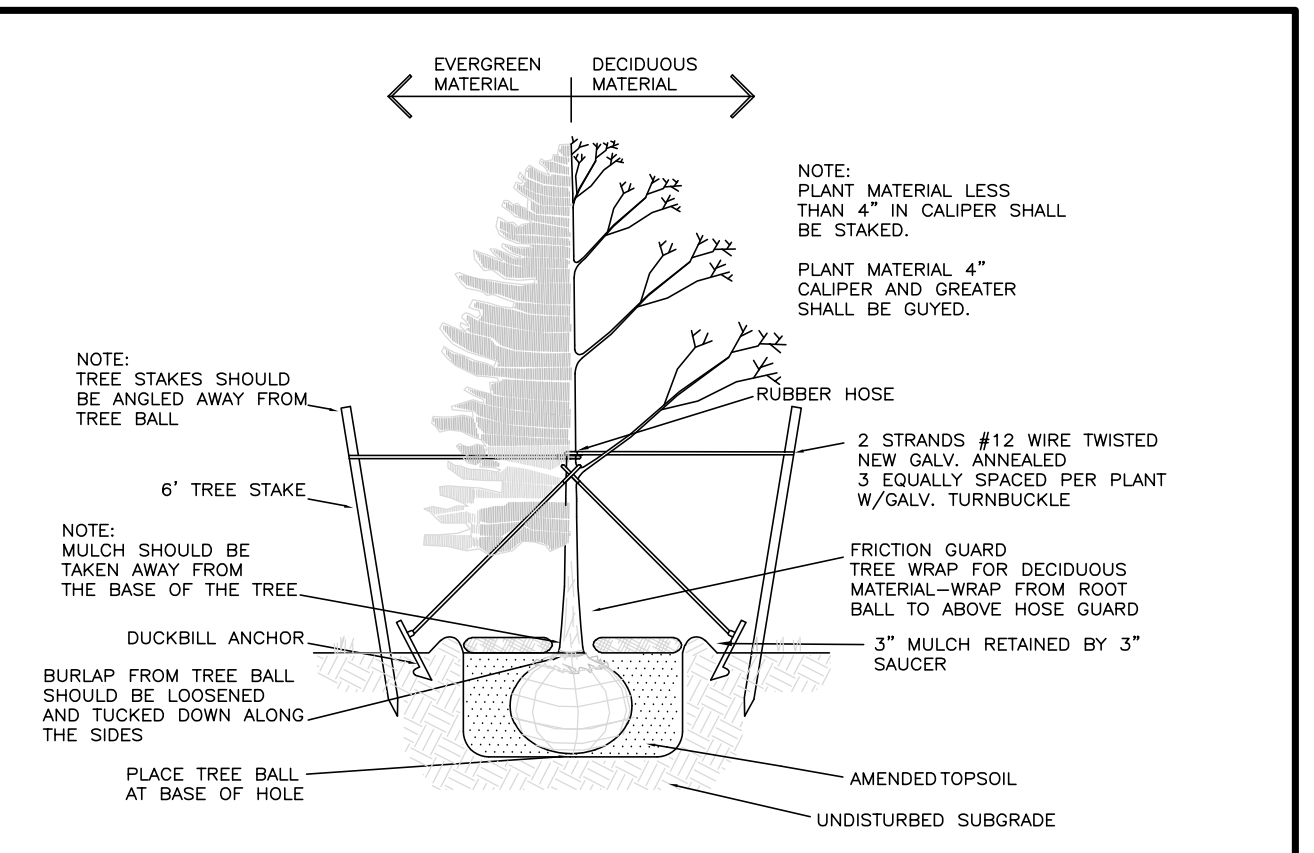
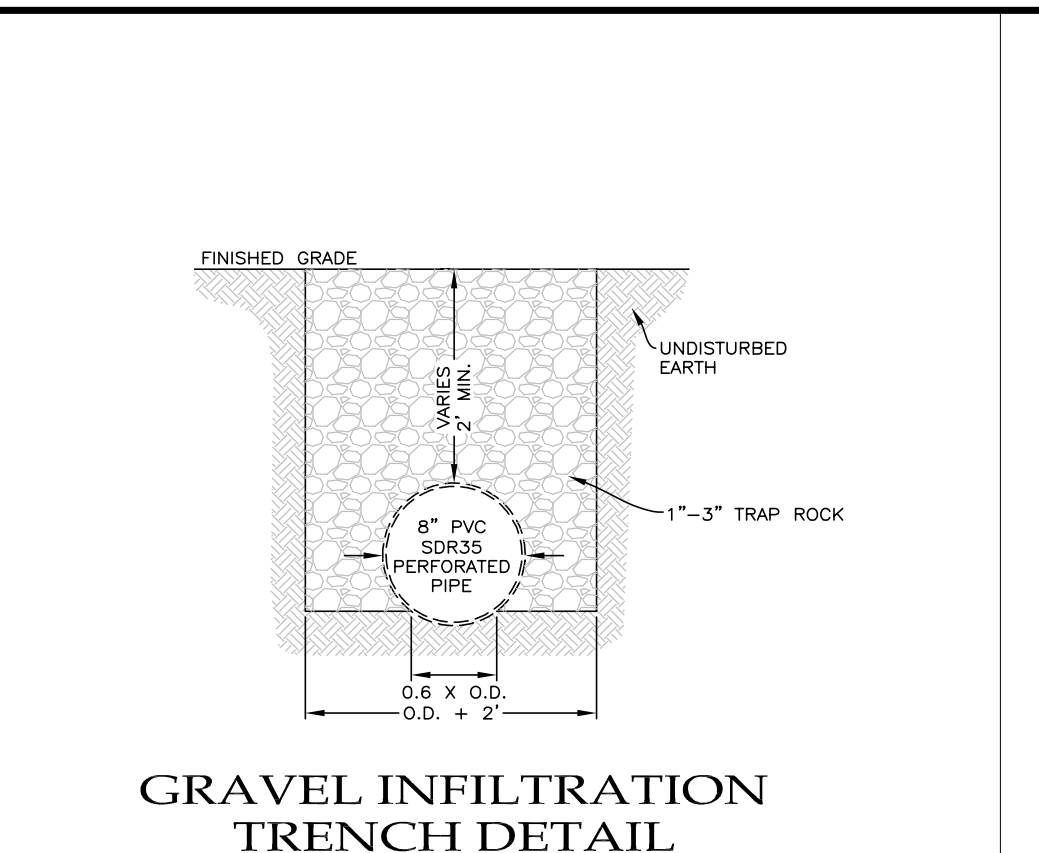
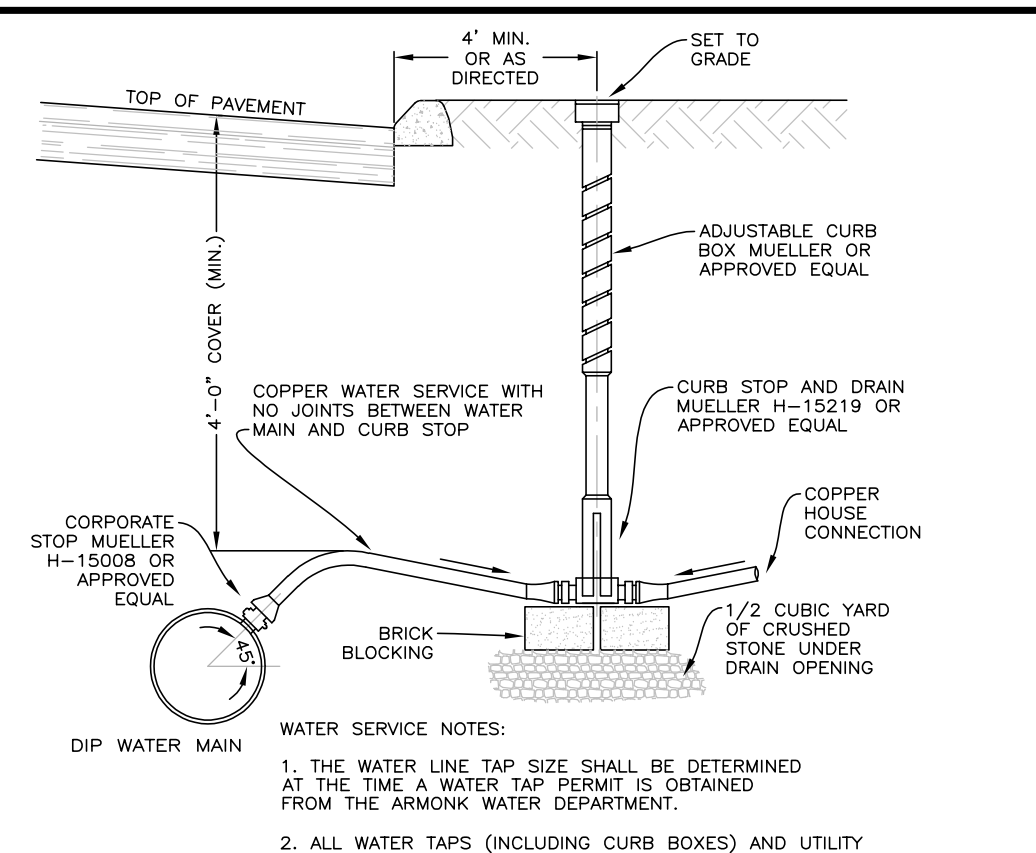
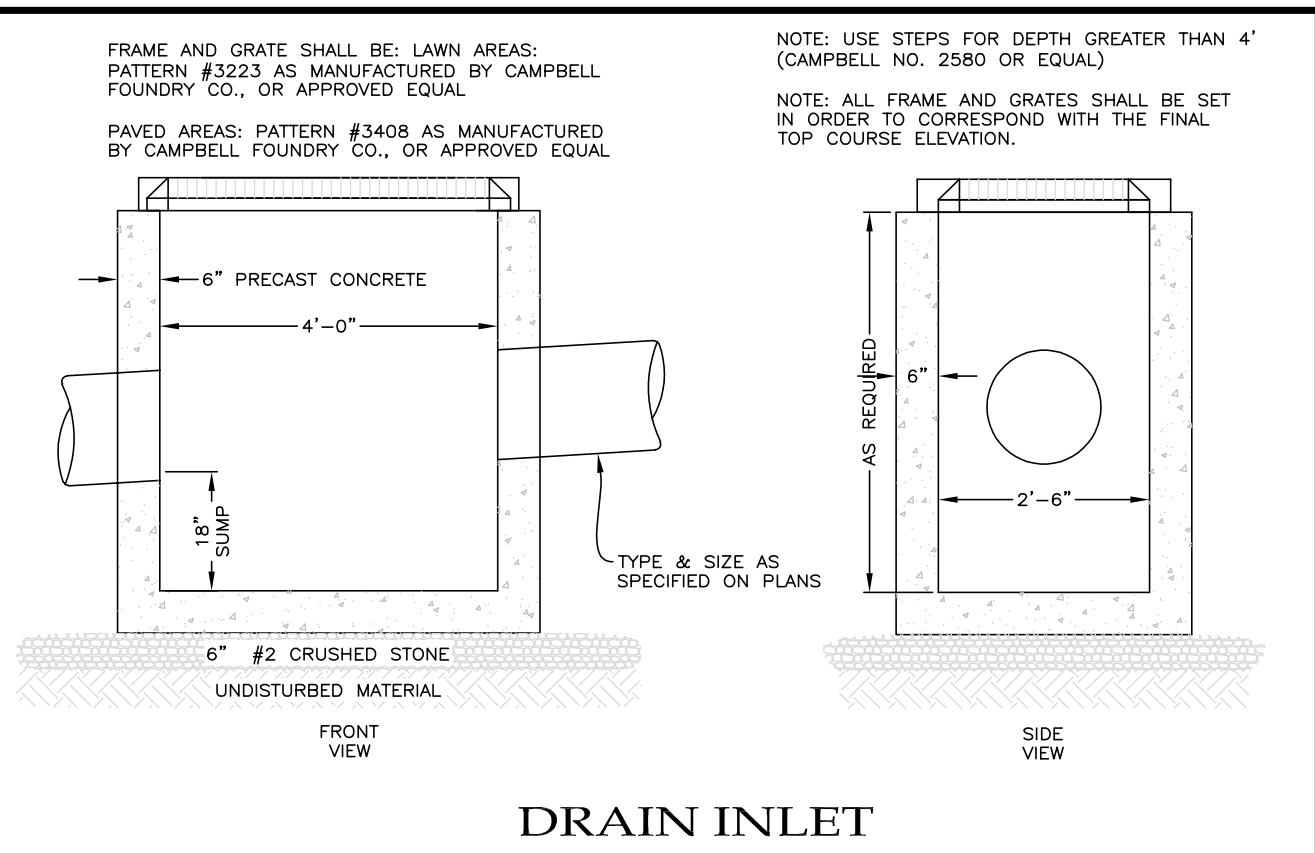
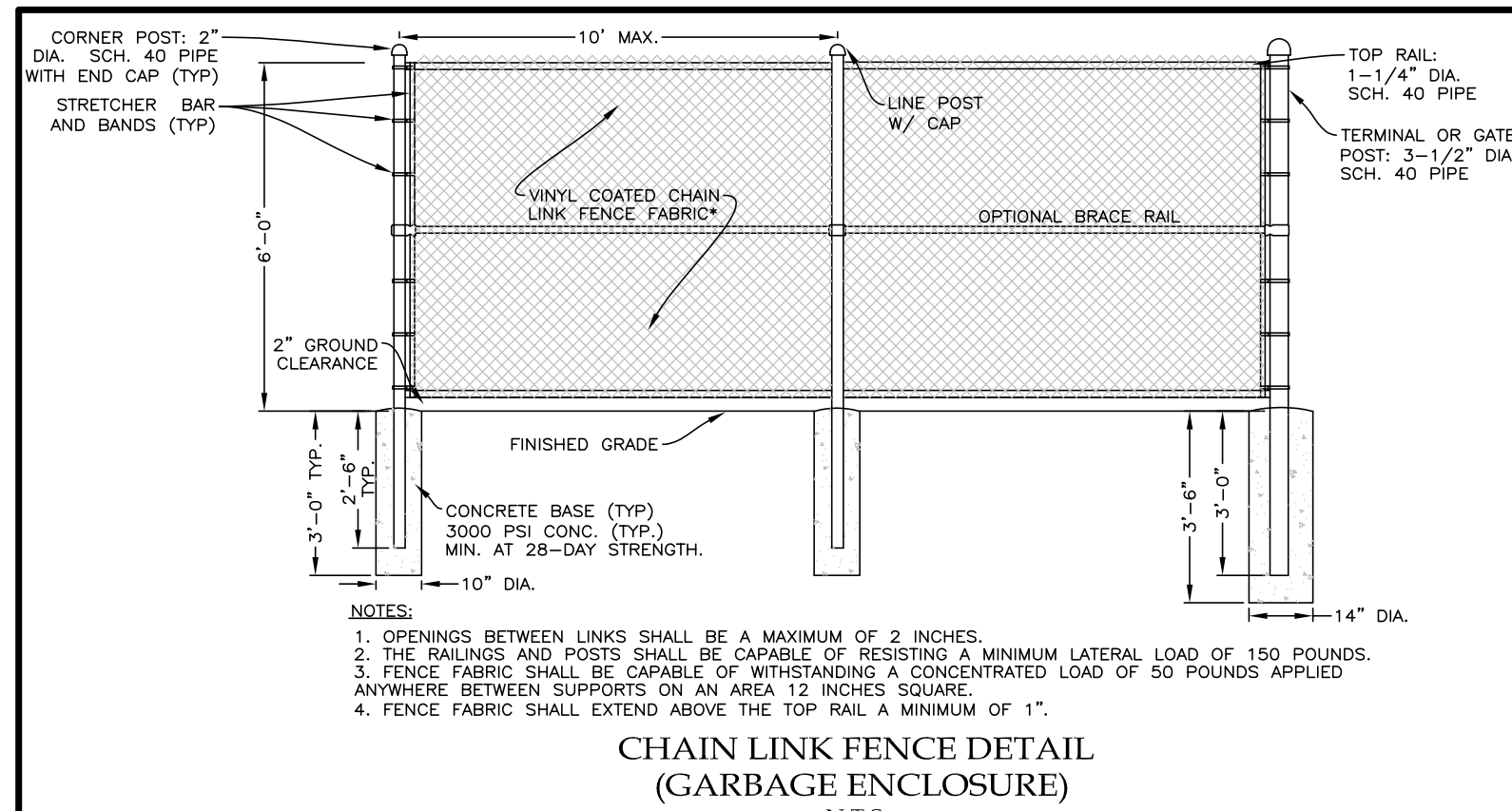
ALFONZETTI ENGINEERING, P.C.
 14 SMITH AVE, MT. KISCO, N.Y. 10549
 914-666-9800 INFO@ALFONZETTIENG.COM

SITE DATA		FIRE DISTRICT: NORTH WHITE PLAINS FD SCHOOL DISTRICT: VALHALLA WATER DISTRICT: NORTH CASTLE WD#1
OWNER/APPLICANT: 2012 MARIA MARTINS IRREVOCABLE TRUST	TAX MAP #: 221212-129	
SITE ADDRESS: 78 LAFAYETTE AVE, NORTH WHITE PLAINS, NY 10603		APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED: _____
LOT AREA: 0.6115 AC	ZONING: IND-A	DATE: _____
REVISION: NOVEMBER 21, 2023	REVISION: JUNE 8, 2023	REVISION: DECEMBER 12, 2022
SOIL AND EROSION CONTROL PLAN		
JUNE 13, 2022		
78 LAFAYETTE AVENUE		
TOWN OF NORTH CASTLE, WESTCHESTER COUNTY, NEW YORK		

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209(2), FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER ANY ITEM ON THIS PLAN IN ANY WAY, IF ANY ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED. THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

LAFAYETTE AVENUE





SEPARATOR ROW™ SPECIFICATIONS

GENERAL

1. CULTEC'S SEPARATOR ROW IS USED AS AN INEXPENSIVE MEANS OF REMOVING TOTAL SUSPENDED SOLIDS FROM THE CHAMBER SYSTEM, AS WELL AS PROVIDING EASIER ACCESS FOR INSPECTION AND MAINTENANCE.

2. THE SEPARATOR ROW PERFORMANCE SHALL BE TESTED AND VERIFIED TO THE PROTOCOLS AND PROCEDURES AS DEFINED BY ENVIRONMENTAL TECHNOLOGY VERIFICATION (ETV) CANADA TO ACHIEVE BOX TSS REMOVAL.

INSTALLATION INSTRUCTIONS

A SEPARATOR ROW IS INSTALLED ON A 1-2 INCH [25-51 mm] WASHED, CRUSHED STONE BASE. TYPICALLY, THE CULTEC CHAMBER MODEL USED FOR THE SEPARATOR ROW IS THE SAME CHAMBER USED THROUGHOUT THE ENTIRE CHAMBER BED.

STORMWATER IS DISTRIBUTED TO THE SEPARATOR ROW BY A PRIMARY FEED SYSTEM THAT DIVERTS THE FLOW OF CLEAN WATER TO THE OTHER PARTS OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. THE DISTRIBUTION SYSTEM MAY BE BY PIPES SET AT A LOWER ELEVATION THAT PERMIT THE FIRST FLUSH TO THE SEPARATOR ROW VERSUS OTHER PARTS OF THE UNDERGROUND STORMWATER SYSTEM. THIS INITIAL FLOW MAY BE MANAGED BY A BAFFLE OR WEIR THE SIZING OF THE PIPE(S) THAT PROVIDE STORM WATER TO THE SEPARATOR ROW IS TO BE DETERMINED BY THE DESIGN ENGINEER AND IS BASED UPON THE REQUIREMENT TO ACCOMMODATE THE DESIGN FLOW AND SERVICE CONVENIENCE.

THE CHAMBERS UTILIZED IN THE SEPARATOR ROW ARE TO BE COMPLETELY WRAPPED WITH CULTEC NO. 410 NON-WOODEN GEOTEXTILE. THIS CREATES A PASS-THROUGH FILTER ARRANGEMENT TO SEPARATE TOTAL SUSPENDED SOLIDS IN THE TRANSFER OF STORM WATER TO OTHER CHAMBERS THROUGHOUT THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM.

ONCE WRAPPED, THE SEPARATOR ROW IS TO BE TOWEN ENTIRELY OVER 1 LAYER OF CULTEC NO. 4800 WOVEN GEOTEXTILE. THIS WOVEN GEOTEXTILE PROVIDES A DURABLE SURFACE WITHIN THE ROW FOR MAINTENANCE PROCEDURES AS WELL AS TO PREVENT ANY SCOURING OF THE STONE BASE DURING HIGH PRESSURE JETTING.

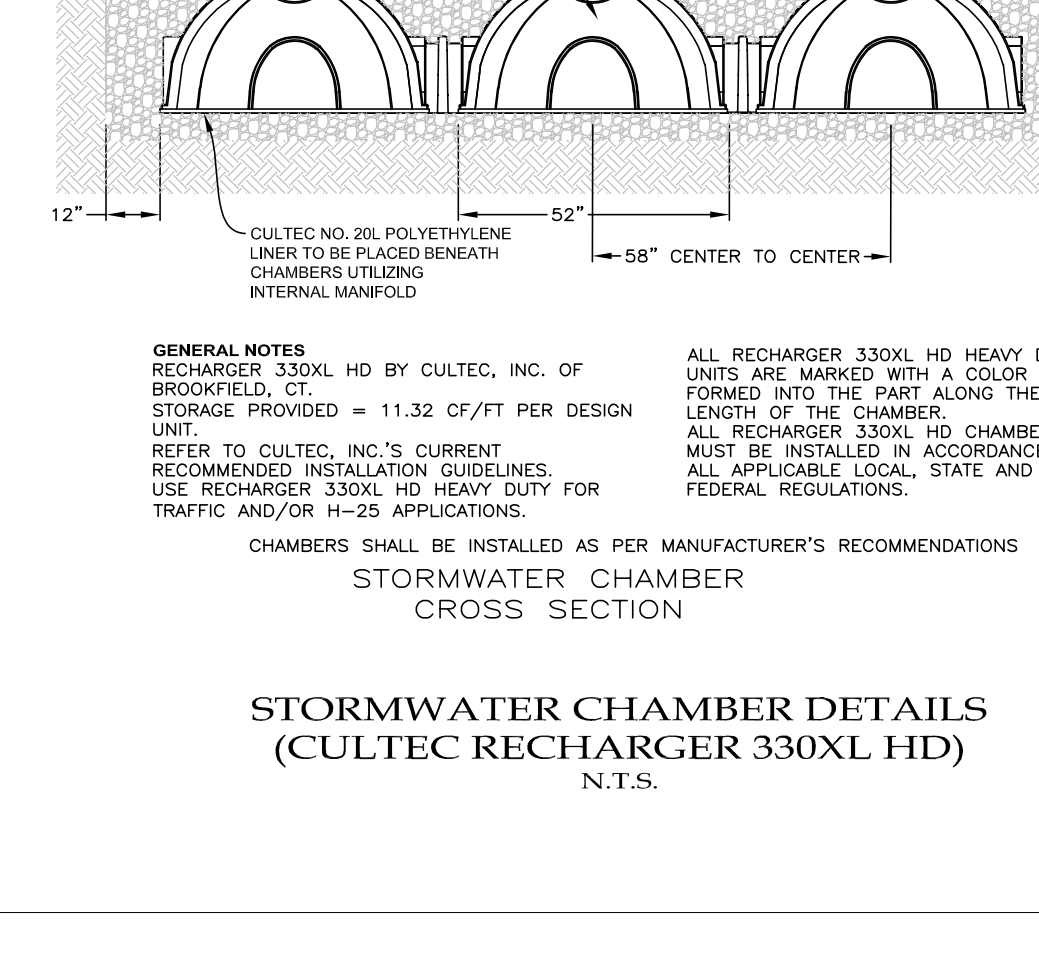
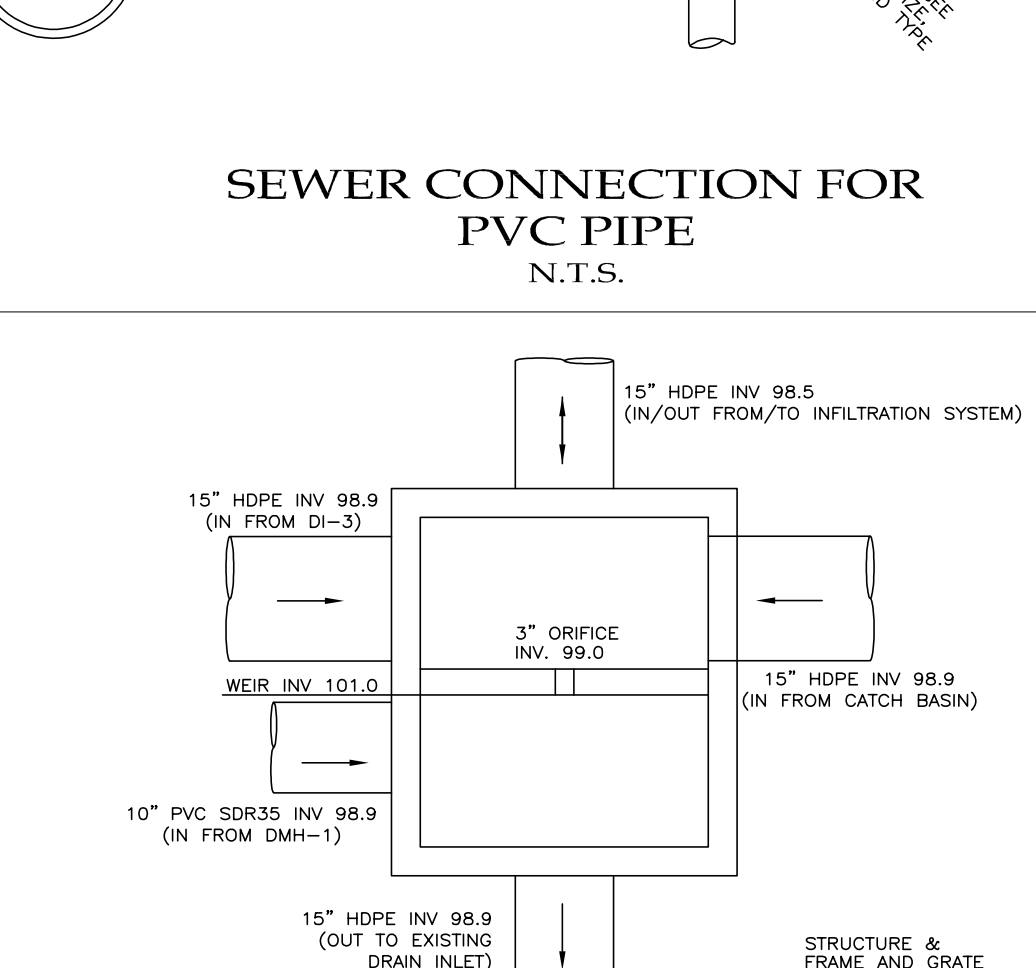
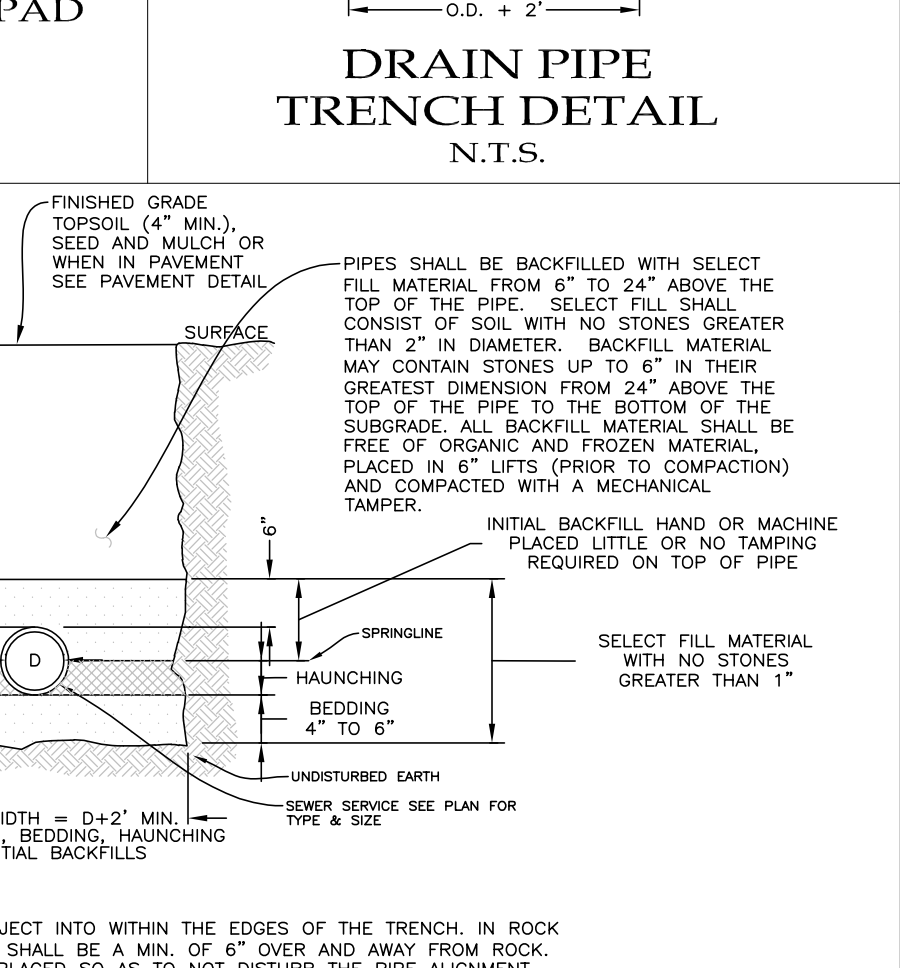
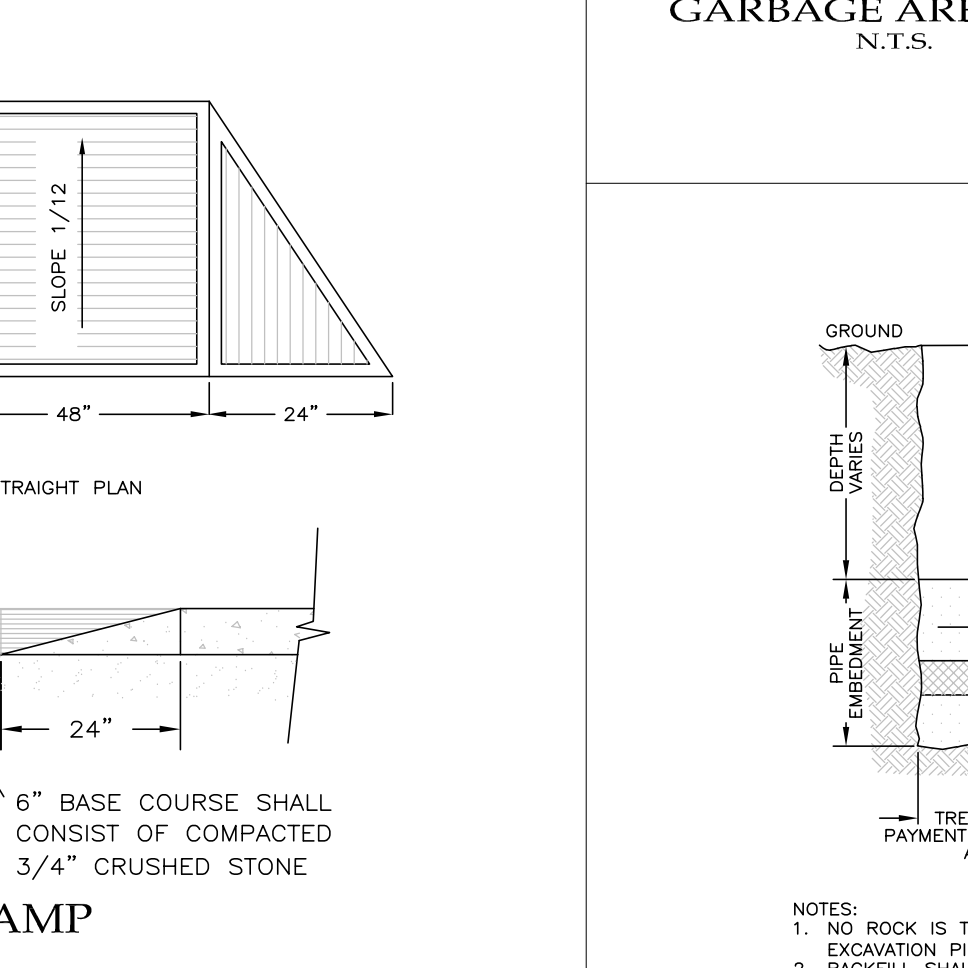
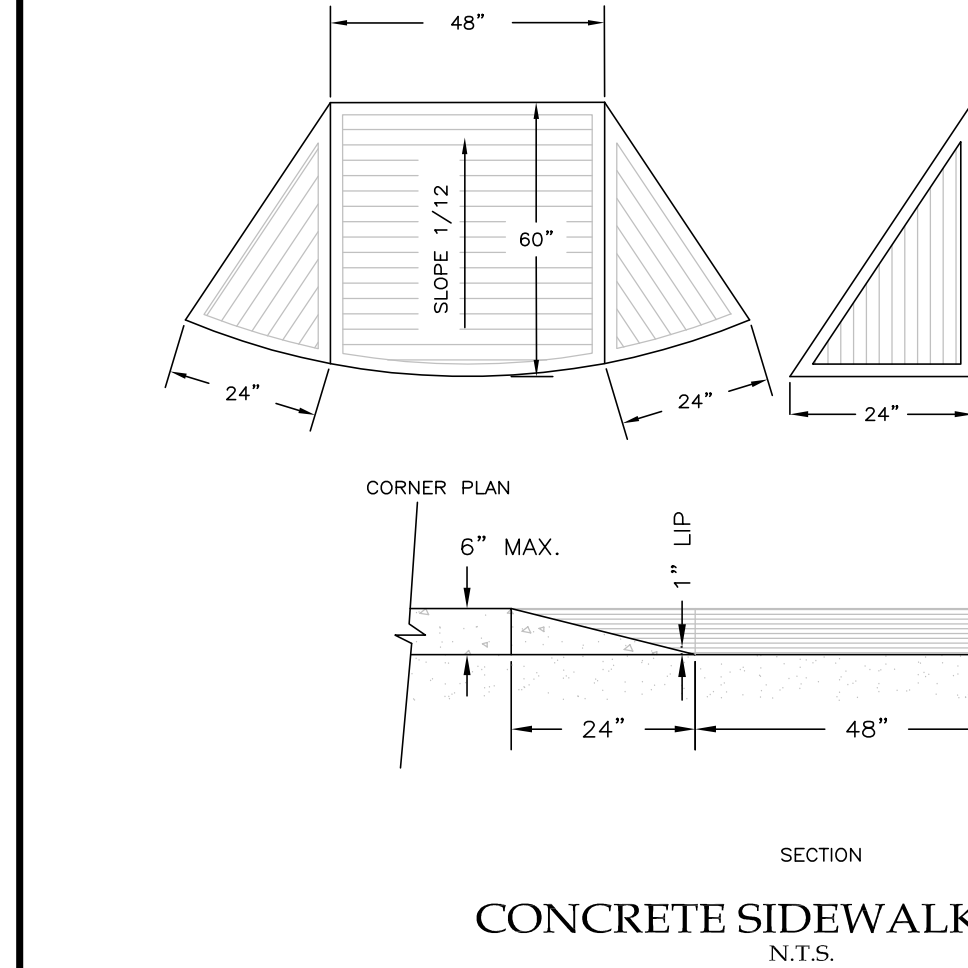
THE RECOMMENDED INSTALLATION OF SEPARATOR ROW CHAMBERS, IN REGARD TO STONE SEPARATION AND STONE ABOVE THE UNIT, ALONG WITH OTHER MINIMUM BURIAL, MATERIALS AND METHOD SPECIFICATIONS DETAILED FOR THE PROPER INSTALLATION, IS THE SAME AS CULTEC'S REQUIREMENT DETAILED IN THE COMPANY'S INSTALLATION GUIDELINES WITH THE EXCEPTION OF THE PLACEMENT OF THE REQUIRED FILTERING FABRICS. PLEASE REFER TO CULTEC'S CURRENT INSTALLATION INSTRUCTIONS FOR STORMWATER CHAMBERS AS A GUIDE.

MAINTENANCE PROCEDURES

CULTEC RECOMMENDS INSPECTIONS OF THE SEPARATOR ROW TO BE PERFORMED EVERY SIX MONTHS FOR THE FIRST YEAR. THE FREQUENCY OF INSPECTION CAN THEN BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION.

WHILE CLEANING IS POSSIBLE FROM A SINGLE MANHOLE IN SHORTER LINES, A CLEAN-OUT OPTION FROM EITHER END OF A LINE IS PREFERABLE, PARTICULARLY FOR LONGER LINES. ACCESS INVOLVES FLUSHING SEDIMENT FROM THE BASE FABRIC OF THE SEPARATOR ROW. CLEANING WILL BE PROVIDED VIA A MANHOLE(S) LOCATED AT THE END(S) OF THE ROW FOR CLEAN OUT.

MAINTENANCE OF THE SEPARATOR ROW IS TO BE ACCOMPLISHED WITH A JETVAC PROCESS. THE JETVAC IS TO BE SENT DOWN THE ENTIRE LENGTH OF THE SEPARATOR ROW, AS THE HIGH PRESSURE WATER NOZZLE IS RETRIEVED, THE CAPTURED SEDIMENTS ARE PUSHED BACK INTO THE MANHOLE FOR VACUUMING.



GENERAL NOTES

RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT

STORAGE PROVIDED = 11.32 CF/PER DESIGN UNIT

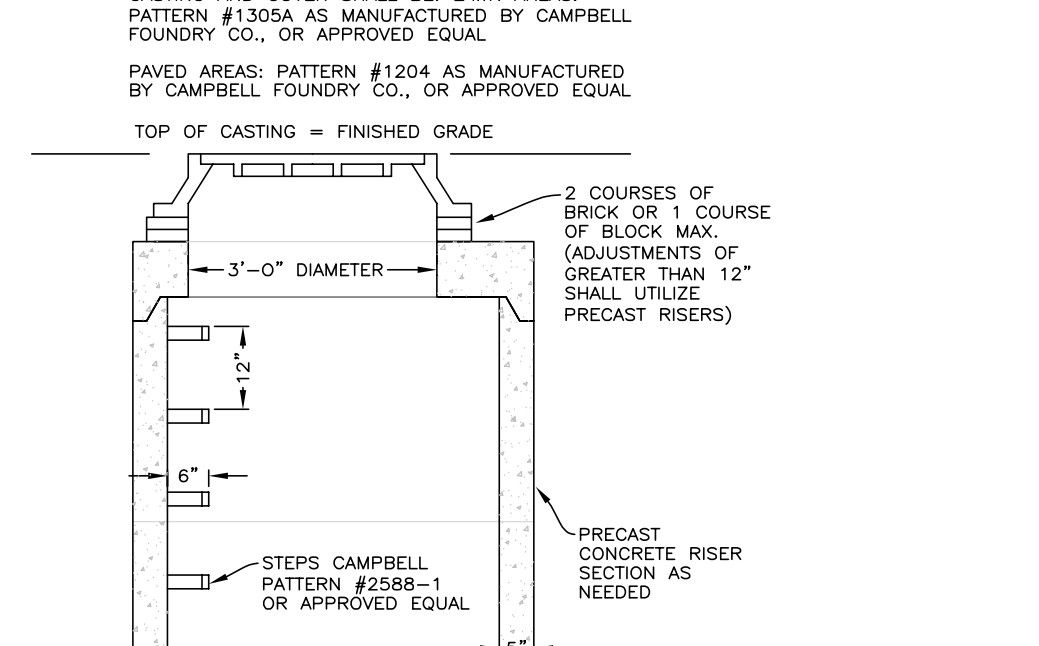
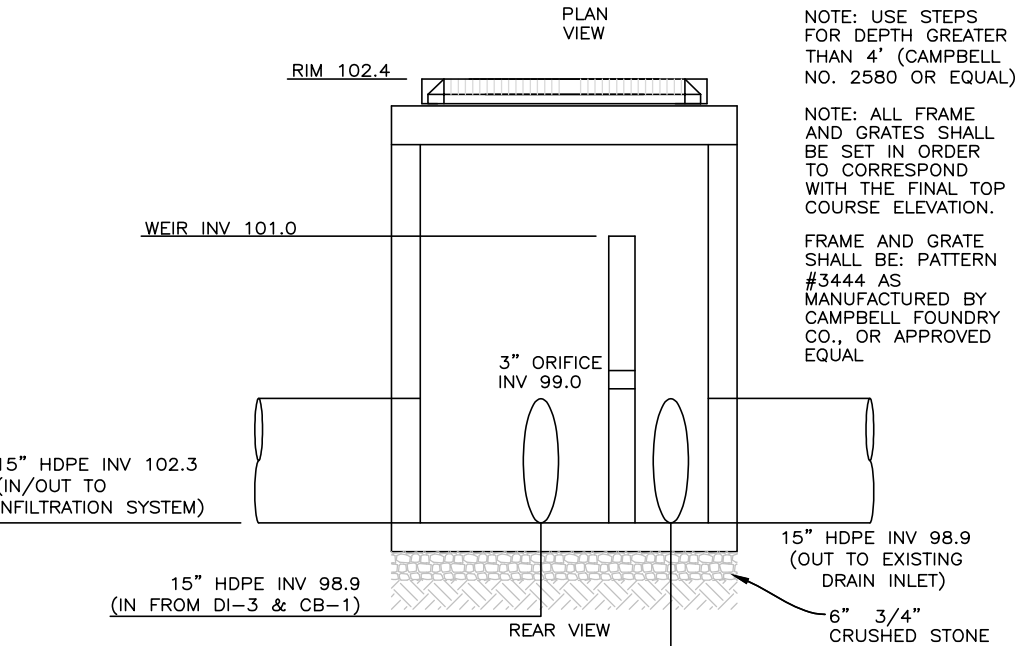
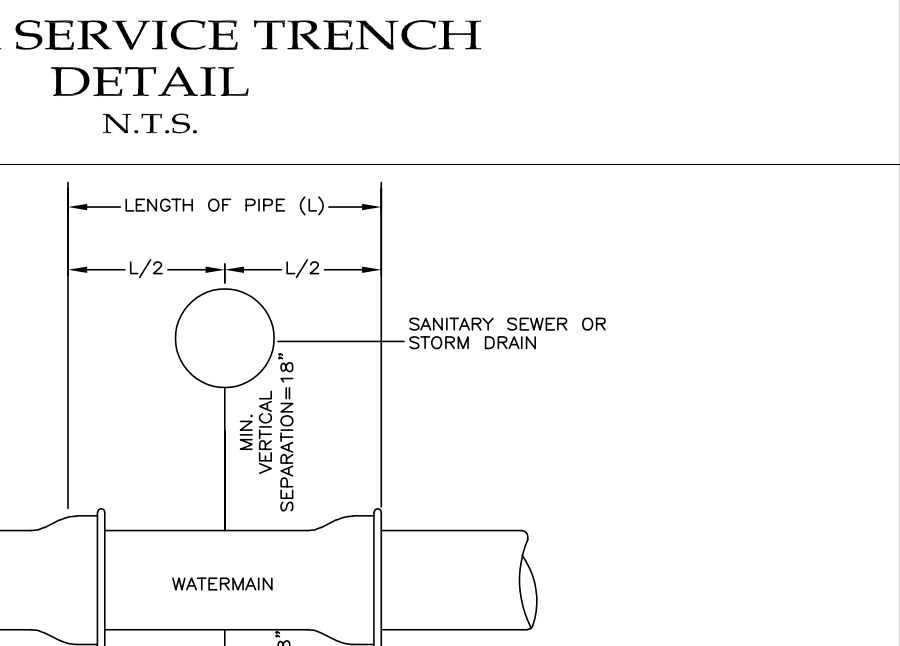
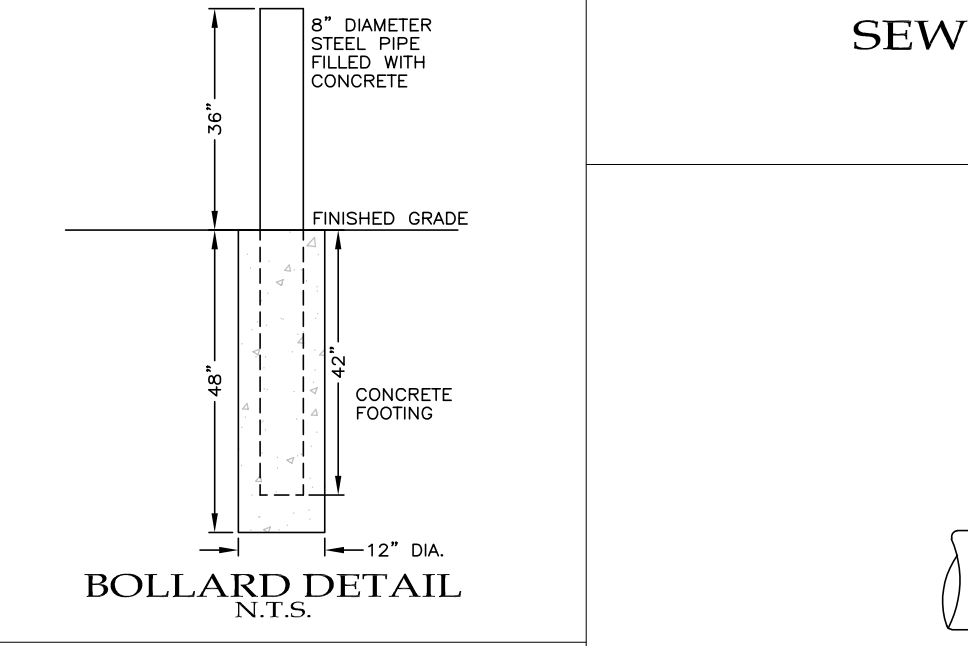
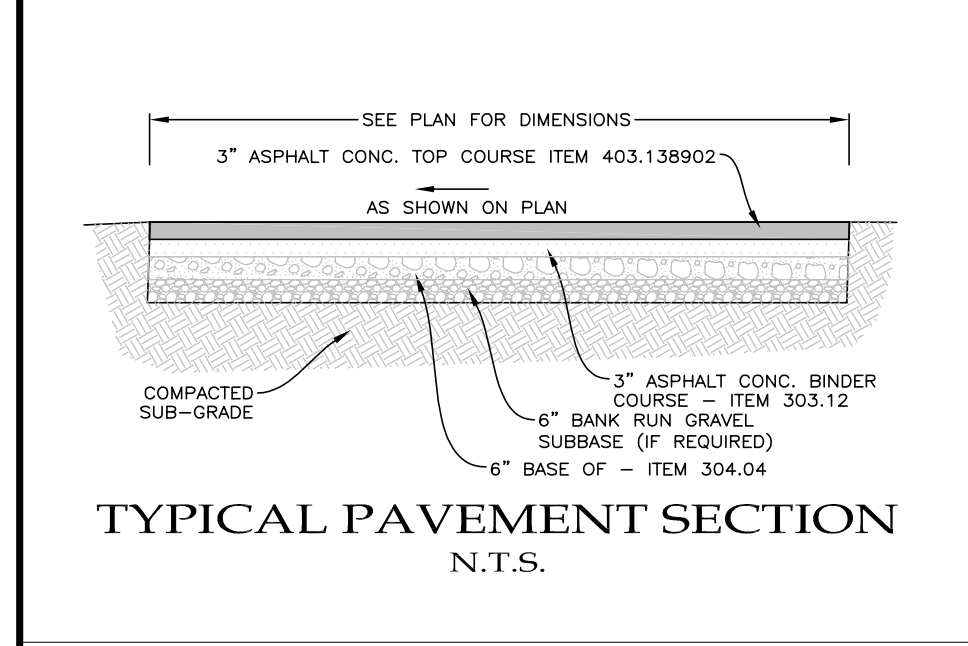
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. USE RECHARGER 330XL HD HEAVY DUTY FOR TRAFFIC AND/OR H-25 APPLICATIONS.

CHAMBERS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS

STORMWATER CHAMBER CROSS SECTION

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.

ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

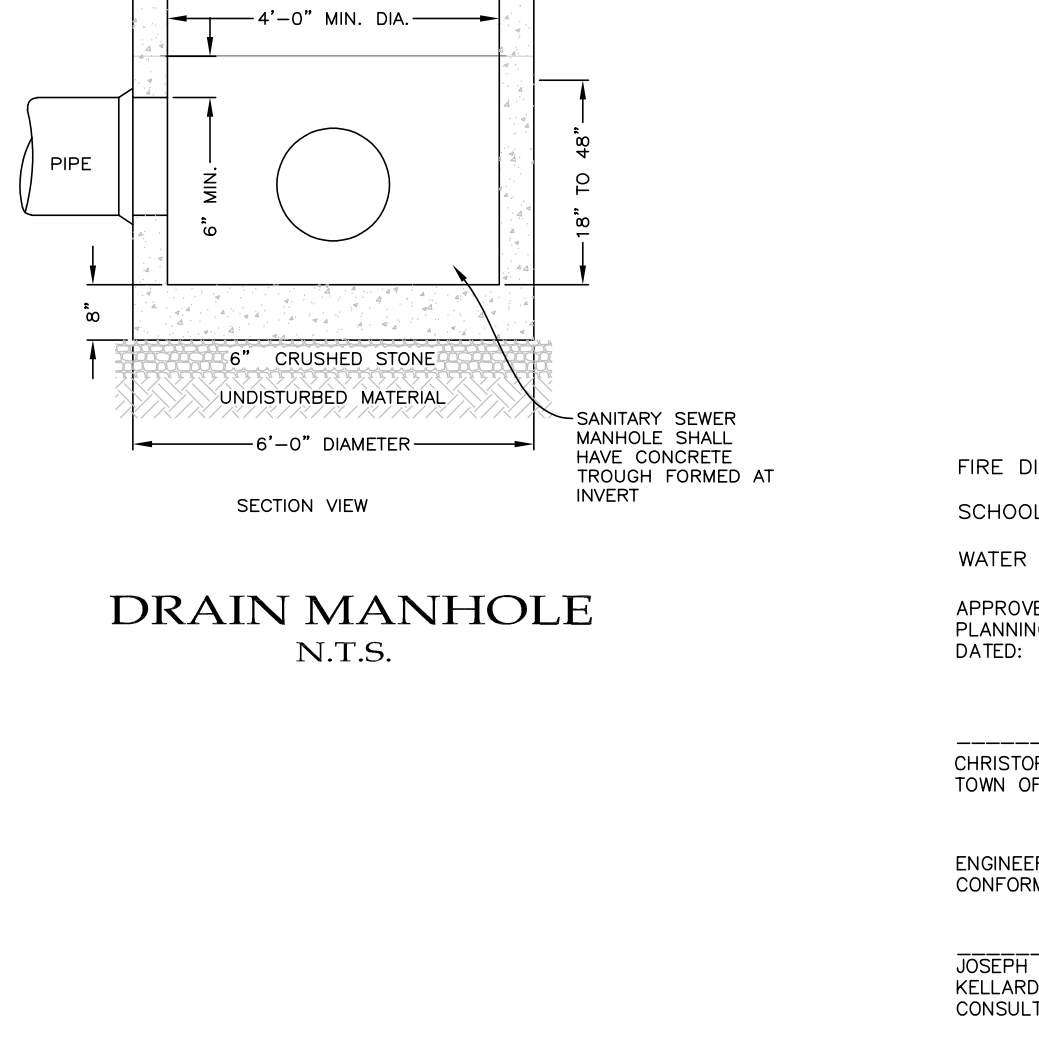
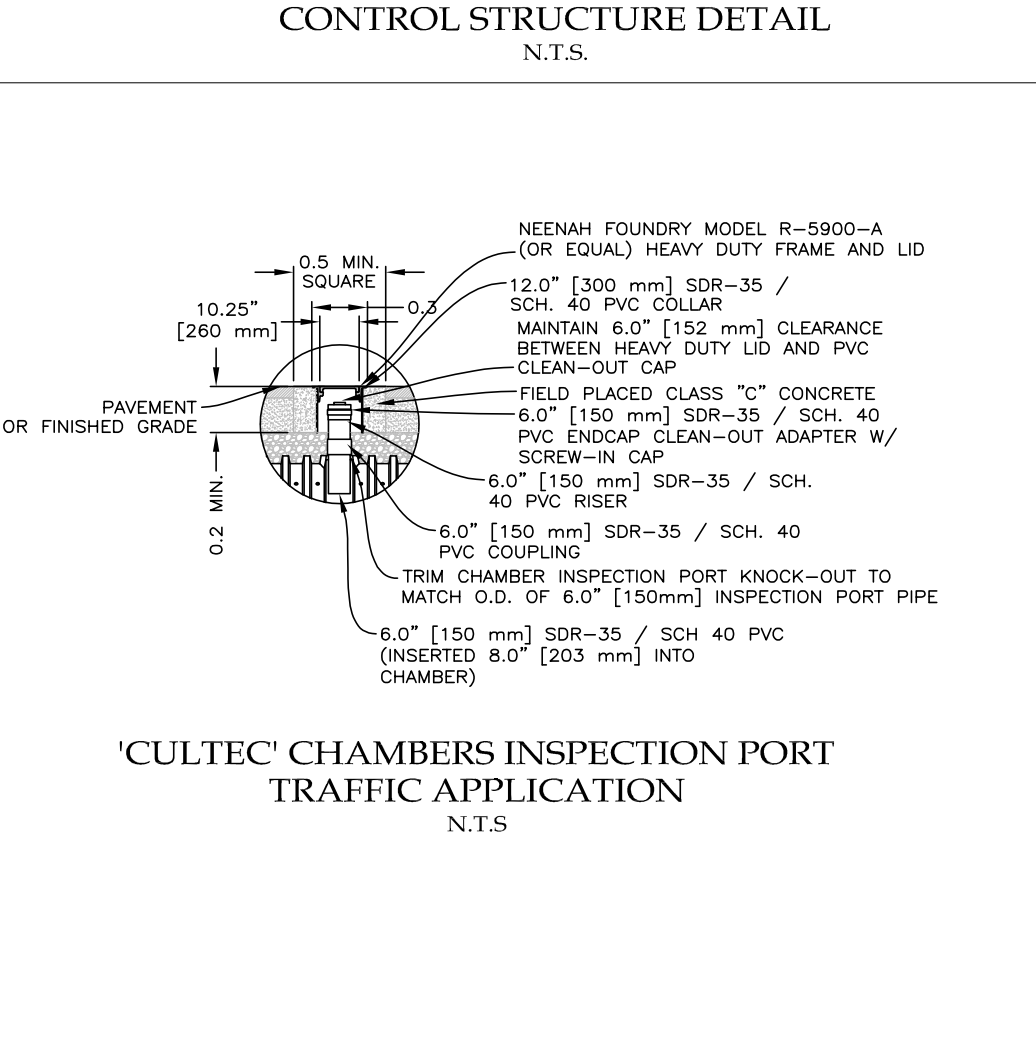
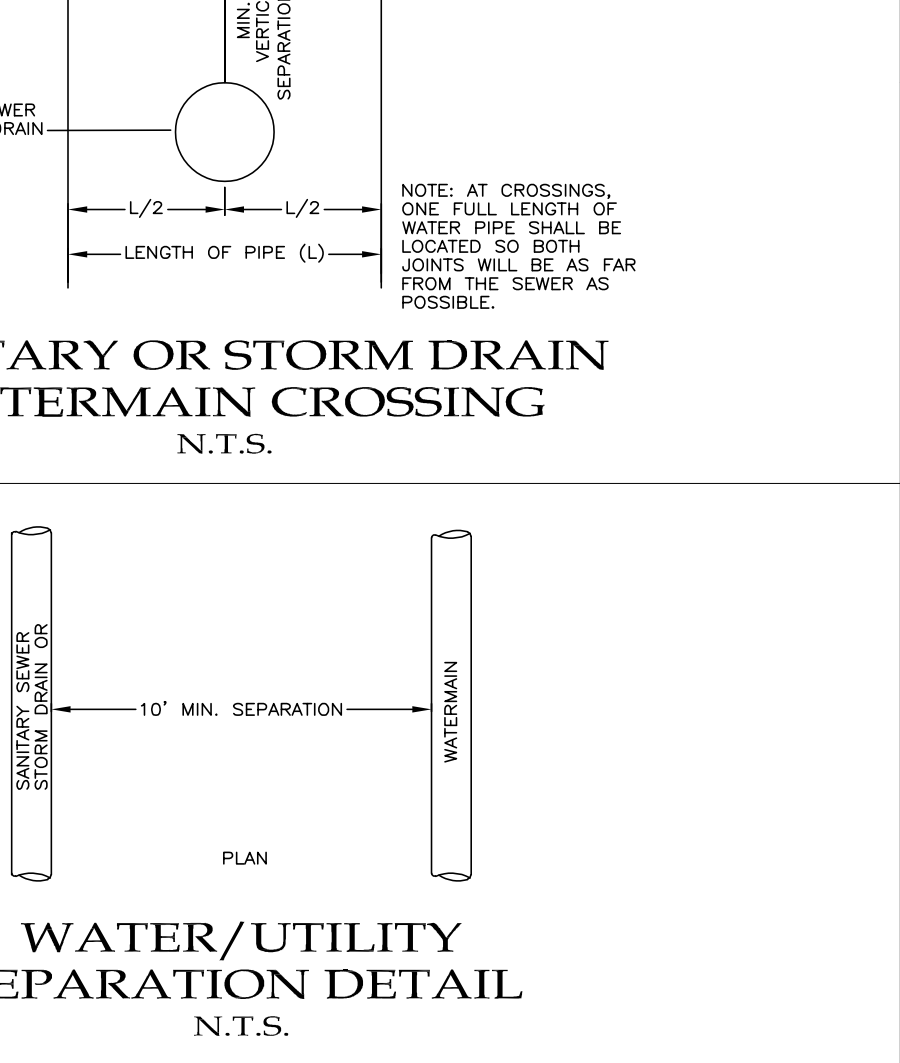
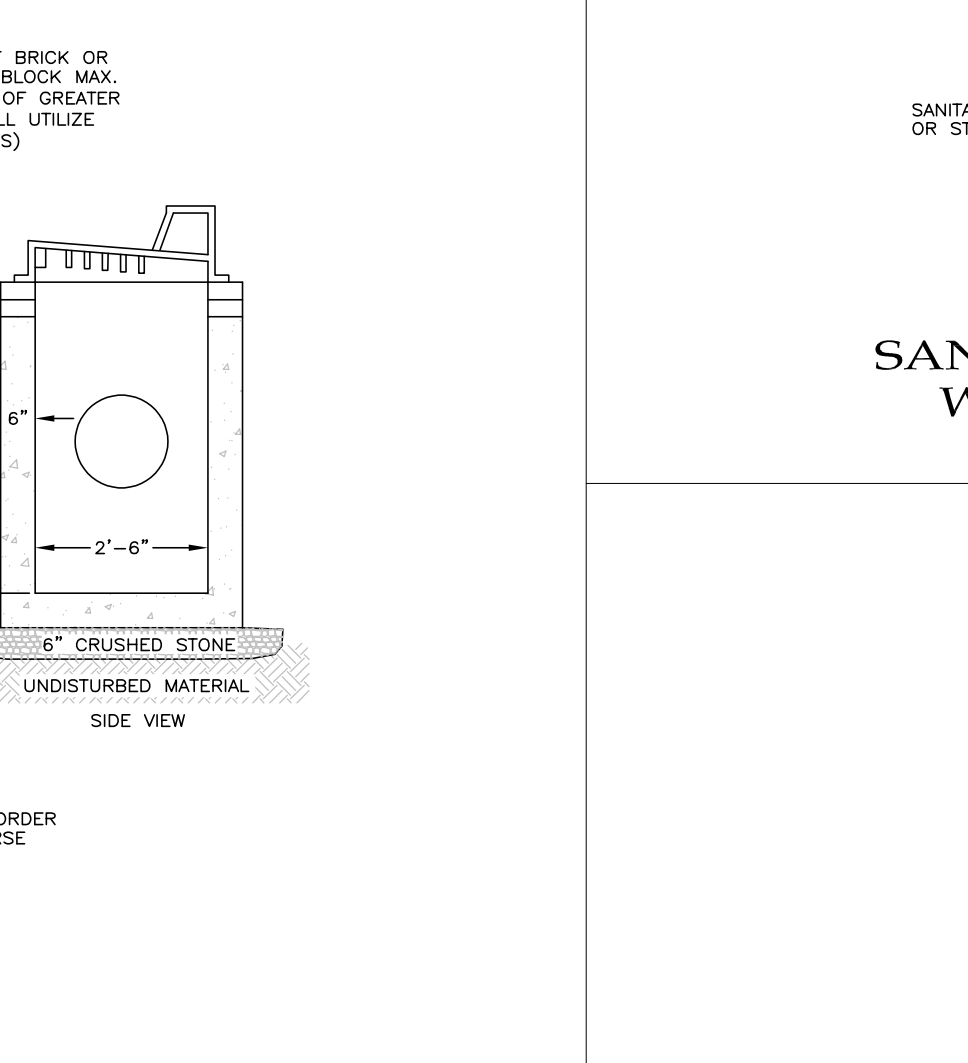
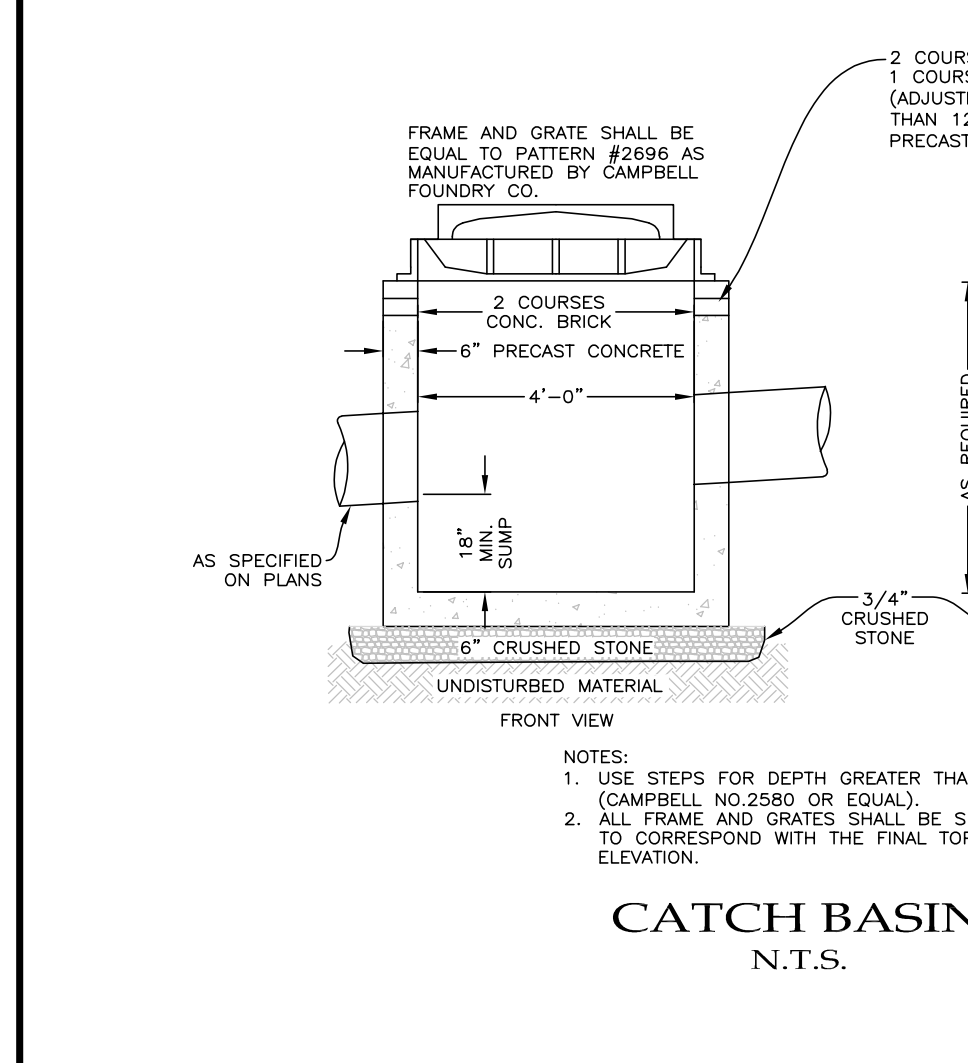


Calton
Landscape Architecture

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STATE OF NEW YORK
Ralph Alfonzetti
LICENSED PROFESSIONAL ENGINEER

SCALE: 1" = 10'



ALFONZETTI ENGINEERING, P.C.
14 SMITH AVE, MT. KISCO, N.Y. 10549
914-666-9800 INFO@ALFONZETTIENG.COM

SITE DATA

OWNER/APPLICANT: 2012 MARIA MARTINS IRREVOCABLE TRUST

SITE ADDRESS: 78 LAFAYETTE AVENUE, NORTH WHITE PLAINS, NY 10603

TAX MAP #: 122.12-1-29

LOT AREA: 0.6115 AC

ZONING: IND-A

REVISIONS:
REVISED: NOVEMBER 21, 2023
REVISED: JUNE 8, 2023
REVISED: DECEMBER 12, 2022

SITE DETAILS
JUNE 13, 2022

78 LAFAYETTE AVENUE
TOWN OF NORTH CASTLE,
WESTCHESTER COUNTY, NEW YORK

DATE: _____
APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, _____
DATE: _____

CHRISTOPHER CATHY, CHAIRMAN
TOWN OF NORTH CASTLE PLANNING BOARD

ENGINEERING PLANS REVIEWED FOR CONFORMANCE TO RESOLUTION: _____
DATE: _____

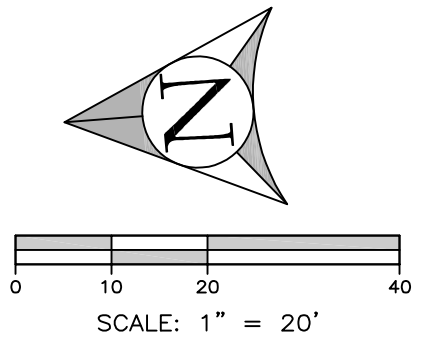
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING
CONSULTING TOWN ENGINEERS

SHEET 05 OF 05



SLOPES TABLE				
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	COLOR	AREA
1	0.00%	25.00%		12686.92 S.F.
2	25.00%	500.00%		9948.98 S.F.

PROPOSED 22,636 S.F.
LIMITS OF DISTURBANCE



ALFONZETTI ENGINEERING, P.C.
14 SMITH AVE, MT. KISCO, N.Y. 10549
914-666-9800 INFO@ALFONZETTIENG.COM

78 LAFAYETTE AVENUE
TOWN OF NORTH CASTLE,
WESTCHESTER COUNTY, NEW YORK

SLOPE DISTURBANCE EXHIBIT
NOVEMBER 20, 2023