STORMWATER MANAGEMENT PLAN & DRAINAGE ANALYSIS

11 Lyman Place
Village of Dobbs Ferry - New York

June 15, 2023
Revised November 20, 2023

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INTRODUCTION

This Stormwater Management Plan presents the proposed Best Management Practices (BMPs) to control erosion and sedimentation and manage stormwater during and upon construction of the two proposed single-family dwellings with associated driveways and walkways at 11 Lyman Place in the Village of Dobbs Ferry, Westchester County, New York.

This Plan consists of this narrative and a plan set entitled: "Proposed 2-Lot Subdivision, 11 Lyman Place, Village of Dobbs Ferry, Westchester County - New York", all as prepared by Hudson Engineering and Consulting, P.C., Elmsford, New York, last revised November 20, 2023. The design is in accordance with the Village of Dobbs Ferry requirements. The approximate area of the limits of disturbance is 0.30-acres. Since the project disturbance is less than one acre the New York State Department of Environmental Conservation [NYSDEC] stormwater regulations are not applicable.

METHODOLOGY

The stormwater analysis was developed utilizing the Soil Conservation Service (SCS) TR-20, 24-hour Type III storm events (HydroCad®) to assist with the design of the mitigating practices. The "Curve Number" (CN) value determination is based on soil type, vegetation, and land use. The design is in accordance with the Village of Dobbs Ferry's stormwater regulations. The CN and T_c data are input into the computer model. The project site is then modeled for the peak rates of runoff from the 100-year Type III – 24-hour storm event in the post-developed condition.

PRE-DESIGN INVESTIGATIVE ANALYSIS

A pre-design investigative analysis was performed including percolation and deep-hole tests in the locations shown on the plans. Percolation tests were completed as follows: A 36-inch-deep hole was excavated, and an 8-inch percolation test hole was excavated approximately 24 inches in the hole. A 4-inch diameter pipe was inserted into the percolation hole and backfilled around. The hole was pre-soaked for 24 hours prior to running the tests. The pipe was filled with 24 inches of water and monitored for 1 hour or until the test-hole completely drained, whichever came first. The runs were repeated for a minimum of 4 runs and a consistent percolation rate. Percolation tests were performed in

the vicinity of the potential stormwater mitigation practice [TP-1] until a constant rate was achieved, the results are as follows:

- TP-1: A percolation rate of 1.13-minutes per inch (53.3-inches per hour) was observed. This location was not utilized in the design.

- TP-2: A percolation rate of 2.86-minutes per inch (21-inches per hour) was observed. A percolation rate of 15-inches per hour was utilized in the design.

- TP-3: A percolation rate of 1.33-minutes per inch (45.11-inches per hour) was observed. A percolation rate of 20-inches per hour was utilized in the design.

The percolation test data sheet is attached.

Four (4) deep test holes were excavated and labeled [TP-1, TP-2, TP-3 & TP-4] as shown on the plans.

- TP-1 was excavated to a depth of 72-inches. The test revealed topsoil to a depth of 12-inches and silty loam to the invert. No groundwater was observed. Ledge rock was encountered at 72-inches deep.

- TP-2 was excavated to a depth of 60-inches. The test revealed topsoil to a depth of 12-inches and silty loam with rocks to the invert. No groundwater was observed. Ledge rock was encountered at 60-inches deep.

- TP-3 was excavated to a depth of 72-inches. The test revealed topsoil to a depth of 12-inches and fill with silty loam with rocks to the invert. No groundwater was observed. Ledge rock was encountered at 72-inches deep.

- TP-4 was excavated to a depth of 36-inches. The test revealed topsoil to a depth of 12-inches and fill with silty loam to the invert. No groundwater was observed. Ledge rock was encountered at 36-inches deep.

The deep test-hole log is attached.

PRE-DEVELOPED CONDITION

In the pre-developed condition, the site is characterized as generally sloping from east to west. The site is located along the southern side of Lyman Place approximately 100 linear feet from the intersection with Luzern Road. The site consists of an existing dwelling, driveway and garage.

POST-DEVELOPED CONDITION

In the Post-Developed Condition, the project site is modeled as two (2) Watersheds, denoted as *Watershed 1 and Watershed 2*. Watershed 1 is analyzed as follows:

Watershed 1 contains 1,782 square feet of impervious area in the form of the proposed dwelling and front porch. The weighted Complex Number (CN) value is 98 and the Time of Concentration ($T_{c)}$ is calculated as a direct entry of 1 minute. The stormwater runoff from this tributary area is conveyed via a comprehensive drainage system to six (6) Cultec© Recharger 100HD stormwater chambers set in one foot of gravel at the sides and six inches at the invert. The system is designed to fully accept (no release) the entire stormwater runoff volume for the 100-year storm event from the watershed and exfiltrate the runoff into the surrounding soil.

Watershed 2 contains 1,371 square feet of impervious area in the form of the front half of the proposed dwelling, driveway and front porch. The weighted Complex Number (CN) value is 98 and the Time of Concentration ($T_{c)}$ is calculated as a direct entry of 1 minute. The stormwater runoff from this tributary area is conveyed via a comprehensive drainage system to five (5) Cultec© Recharger 100HD stormwater chambers set in one foot of gravel at the sides and at the invert. The system is designed to fully accept (no release) the entire stormwater runoff volume for the 100-year storm event from the watershed and exfiltrate the runoff into the surrounding soil. Note, no credit is taken for the 12-inches of gravel below the units in the design calculations.

Watershed 3 contains 8211 square feet of impervious area in the form of the rear half of the proposed dwelling. The weighted Complex Number (CN) value is 98 and the Time of Concentration ($T_{c)}$ is calculated as a direct entry of 1 minute. The stormwater runoff from this tributary area is conveyed via a comprehensive drainage system to three (3) Cultec© Recharger 100HD stormwater chambers set in one foot of gravel at the sides and at the invert. The system is designed to fully accept (no release) the entire stormwater runoff volume for the 100-year storm event from the watershed and exfiltrate the runoff into the surrounding soil. Note, no credit is taken for the 12-inches of gravel below the units in the design calculations.

EROSION AND SEDIMENT CONTROL COMPONENTS

The primary aim of the soil and sediment control measures is to reduce soil erosion from areas stripped of vegetation during and after construction and to prevent silt from reaching the off-site drainage structures and downstream properties. The Sediment and Erosion Control Components are an integral component of the construction sequencing and will be implemented to control sedimentation and re-establish vegetation.

Planned erosion and sedimentation control practices during construction include the installation, inspection and maintenance of the inlet protection, soil stockpile areas, diversion swales, and silt fencing. General land grading practices, including land stabilization and construction sequencing are also integrated into the Sediment and Erosion Control Plan. Dust control is not expected to be a problem due to the limited area of exposure, the undisturbed perimeter of trees around the project area and the relatively short time of exposure. Should excessive dust be generated, it will be controlled by sprinkling.

All proposed soil erosion and sediment control practices have been designed in accordance with the following publications:

- New York State standards and Specifications for Erosion and Sediment Control, July 2016.
- New York State General Permit for Stormwater Discharges, GP-0-20-002 (General permit).
- "Reducing the Impacts of Stormwater Runoff from New Development," as published by the New York State Department of Environmental Conservation (NYSDEC), second edition, April 1993.

The proposed soil erosion and sediment control devices include the planned erosion control practices outlined below. Maintenance procedures for each erosion control practice have also been outlined below.

- **SILT FENCE**

  Silt fence (geo-textile filter cloth) shall be placed in locations depicted on the approved plans. The purpose of the silt fence is to reduce the velocity of sediment laden stormwater from small drainage areas and to intercept the transported sediment load. In general, silt fence shall be used at the toe of slopes or intermediately within slopes where obvious channel concentration of stormwater is not present.

  <u>Maintenance</u>

  Silt fencing shall be inspected at a minimum of once per week and prior to and within 24 hours following a rain event ½" or greater. Inspections shall include ensuring that the fence material is tightly secured to the woven wire and the wire is secured to the wood posts. In addition, overlapping filter fabric shall be secured and the fabric shall be maintained a minimum of six (6) inches below grade. If any "bulges" develop in the fence, that section of fence shall be replaced within 24 hours with new fence section. Any sediment build-up against the fence shall be removed within 24 hours and deposited on-site a minimum of 100 feet outside of any wetland or watercourse.

The installation of silt fencing will be maintained or replaced until the fencing is no longer necessary. Once the site is stabilized, all silt fences shall be removed. The immediate area occupied by the silt fence will be shaped to an acceptable grade and stabilized.

- **SOIL/SHOT ROCK STOCKPILING**

All soil and shot rock stripped from the construction area during grubbing and mass grading shall be stockpiled in locations shown on the plans, but in no case shall they be placed within 100' of a wetland or watercourse. The stockpiled soils shall be re-used during finish-grading to provide a suitable growing medium for plant establishment. Soil stockpiles shall be protected from erosion by vegetating the stockpile with rapidly –germinating grass seed (during the May 1st – October 30th) planting season or covering the stockpile with tarpaulin the remainder of the year. Install silt fence around toe of slope.

Maintenance

Sediment controls (silt fence) surrounding the stockpiles shall be inspected according to the recommended maintenance outline above. *All stockpiles shall be inspected for signs of erosion or problems with seed establishment weekly or tarpaulin and prior to and within 24 hours following a rain event ½" or greater.*

- **GENERAL LAND GRADING**

The intent of the Erosion &Sediment Control Plan is to control disturbed areas such that soils are protected from erosion by temporary methods and by permanent vegetation. Where practicable, all cut and fill slopes shall be kept to a maximum slope of 2:1. In the event that a slope must exceed a 2:1 slope, it will be stabilized with stone riprap. On fill slopes, all material will be placed in layers not to exceed 12 inches in depth and compacted. Diversion swales shall be constructed on the top of all fill embankments to divert any overland flows away from the fill slopes.

- **SURFACE STABILIZATION**

All disturbed areas will be protected from erosion with the use of vegetative measures (i.e., grass seed mix, sod) hydro mulch netting or hay. When activities temporarily cease during construction, soil stockpiles and exposed soil should be stabilized by seed, mulch, or other appropriate measures within7 days after construction activity has ceased, or 24 hours prior to a rain event ½" or greater.

All seeded areas will be re-seeded areas as necessary and mulched according to the site plan to maintain a vigorous, dense vegetative cover,

Erosion control barriers (silt fencing) shall be placed around exposed areas during construction. Where exposed areas are immediately uphill from a wetland or watercourse, the erosion control barrier will consist of double rows of silt fencing. Any areas stripped of vegetation during construction will be vegetated and/or mulch, but in no case more than 14 days to prevent erosion of the exposed soils. And topsoil removed during construction will be temporarily stockpiled for future use in grading and landscaping.

As mentioned above, temporary vegetation will be established to protect exposed soil areas during construction. If growing conditions are not suitable for the temporary vegetation, mulch will be used to the satisfaction of the Town Engineer. Materials that may be used for mulching include straw, hay, salt hay, wood fiber, synthetic soil stabilizers, mulch netting, sod or hydromulch. In site areas where significant erosion potential exists (steep slopes) and where specifically directed by the Town's representative, Curlex Excelsior erosion control blankets (manufactured by American Excelsior or approved equal) shall be installed. A permanent vegetative cover will be established upon completion of construction of those areas that have been brought to finish-grade and to remain undisturbed.

- **Temporary Stabilization (May 1st through October 31st planting season)**

  The following seeding application should be used depending on the time of year.

  - Spring/summer or early fall, seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (0.7 lb./1000 sq. ft. or use 1 lb/1000 sq. ft.).

  - Late fall or early winter, seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs/1000 sq. ft.).

- **Permanent Stabilization (May 1st through October 31st planting season)**

  1. Provide minimum of four (4) inches topsoil for all new lawn areas. Top dress all existing disturbed lawn areas with two (2) inches of topsoil.

  2. Grass seed shall be evenly sown by mechanical seeder at a rate of 3.0-4.0 pounds per 1,000 square feet.

  3. Fine rake, roll and water to a depth of one inch all seeded areas.

  4. Apply air-dried hay or straw mulch to provide 90% coverage of surface (90 lbs. per 1,000 SF). Use small grain straw where mulch is maintained for more than three months

  5. Contractor shall provide, at his own expense, protection against trespassing and other damage to lawn areas.

6. Lawn seed mix shall include:

   a. General Recreation areas and lawns:

      - 65% Kentucky Bluegrass blend
      - 20% Perennial Rye
      - 15% Fine fescue

      Sod may be used as an alternate to seeding in select areas.

      Slow-release fertilizers will be applied by hand to horticultural plantings as part of regular horticultural maintenance program and shall be limited to a single spring application.

CONSTRUCTION PRACTICES TO MINIMIZE STORMWATER CONTAMINATION

Adequate measures shall be taken to minimize contaminant particles arising from the discharge of solid materials, including building materials, grading operations, and the reclamation and placement of pavement, during project construction, including but not limited to:

- Building materials, garbage, and debris shall be cleaned up daily and deposited into dumpsters, which will be periodically removed from the site and appropriately disposed of.

- Dump trucks hauling material from the construction site will be covered with a tarpaulin.

- The paved street adjacent to the site entrance will be swept daily to remove excess mud, dirt, or rock tracked from the site.

- Petroleum products will be stored in tightly sealed containers that are clearly labeled.

- All vehicles on site will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.

- All spills will be cleaned up immediately upon discovery. Spills large enough to reach the storm system will be reported to the National Response Center at 1-800-424-8802.

- Materials and equipment necessary for spill cleanup will be kept in the temporary material storage trailer onsite. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, and sand, saw dust, and plastic and metal trash containers.

- All paint containers and curing compounds will be tightly sealed and stored when not required for use. Excess paint will not be discharged to

the storm system but will be properly disposed according to the manufacturer's instructions.

- Sanitary waste will be collected from portable units a minimum of two times a week to avoid overfilling.

- Any asphalt substances used on-site will be applied according to the manufacturer's recommendation.

- Fertilizers will be stored in a covered shed and partially used bags will be transferred to a sealable bin to avoid spills and will be applied only in the minimum amounts recommended by the manufacturer and worked into the soil to limit exposure to stormwater.

- No disturbed area shall be left un-stabilized for longer than 14 days during the growing season.

- When erosion is likely to be a problem, grubbing operations shall be scheduled and performed such that grading operations and permanent erosion control features can follow within 24 hours thereafter.

- As work progresses, patch seeding shall be done as required on areas previously treated to maintain or establish protective cover.

- Drainage pipes and swales/ditches shall be constructed in a sequence from outlet to inlet to stabilize outlet areas and ditches before water is directed to the new installation or any portion thereof unless conditions unique to the location warrant an alternative method.

STORMWATER MANAGEMENT FACILITIES MAINTENANCE PROGRAM

The following maintenance plan has been developed to maintain the proper function of all drainage and erosion and sediment control facilities:

- Minimize the use of road salt for maintenance of driveway areas.

- Drainage inlets shall be vacuum swept twice a year, at the conclusion of the landscape season in the fall and at the conclusion of the sand and de-icing season in the spring.

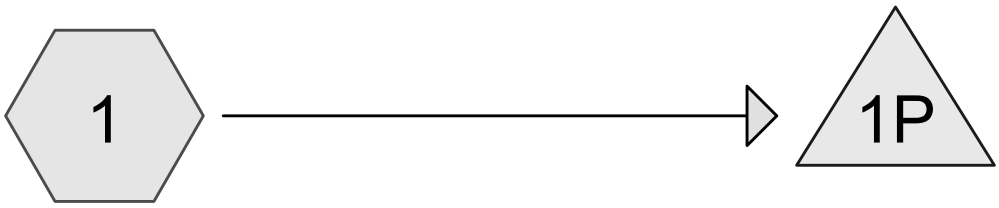
- All infiltration systems shall be inspected immediately after construction as well as every six (6) months (spring and fall) for clogging of inlet and outlet piping. During dry weather conditions, inlet and outlet piping shall be manually cleaned and cleared of debris. All debris accumulated within the infiltration system shall be vacuumed out or removed manually. To prevent sediment

from accumulating within system, the pre-treatment basin shall be cleaned as recommended above.

The permanent maintenance program will be managed by the future homeowners upon completion of construction and acceptance of the improvements.

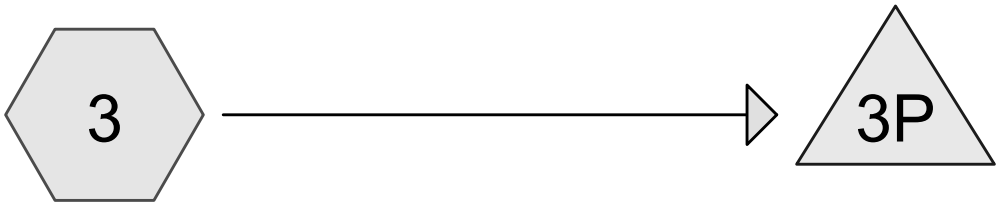
CONCLUSION

The stormwater management plan proposed meets all the requirements set forth by the Village of Dobbs Ferry. Design modification requirements that may occur during the approval process will be performed and submitted for review to the Village of Dobbs Ferry.



Watershed 1 Six Cultec C-100HD

Watershed 2 Five Cultec C-100HD



Watershed 3 Three Cultec C-100HD

Subcat Reach Pond Link

Routing Diagram for Proposed Condition - 2023-11-20
Prepared by Hudson Engineering & Consulting

Summary for Subcatchment 1: Watershed 1

Runoff = 0.43 cfs @ 12.01 hrs, Volume= 0.030 af, Depth= 8.69"
Routed to Pond 1P : Six Cultec C-100HD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.93"

	Area (sf)	CN	Description
*	1,642	98	Proposed Dwelling
*	140	98	Proposed Front Porch
	1,782	98	Weighted Average
	1,782		100.00% Impervious Area

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

Summary for Subcatchment 2: Watershed 2

Runoff = 0.33 cfs @ 12.01 hrs, Volume= 0.023 af, Depth= 8.69"
Routed to Pond 2P : Five Cultec C-100HD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.93"

	Area (sf)	CN	Description
*	821	98	Proposed Dwelling
*	140	98	Proposed Front Porch
*	410	98	Proposed Driveway
	1,371	98	Weighted Average
	1,371		100.00% Impervious Area

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

Summary for Subcatchment 3: Watershed 3

Runoff = 0.20 cfs @ 12.01 hrs, Volume= 0.014 af, Depth= 8.69"
Routed to Pond 3P : Three Cultec C-100HD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.93"

	Area (sf)	CN	Description
*	821	98	Proposed Dwelling
	821		100.00% Impervious Area

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

Summary for Pond 1P: Six Cultec C-100HD

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 8.69" for 100-Year event
Inflow = 0.43 cfs @ 12.01 hrs, Volume= 0.030 af
Outflow = 0.10 cfs @ 11.70 hrs, Volume= 0.030 af, Atten= 77%, Lag= 0.0 min
Discarded = 0.10 cfs @ 11.70 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 2.28' @ 12.34 hrs Surf.Area= 217 sf Storage= 211 cf

Plug-Flow detention time= 8.7 min calculated for 0.030 af (100% of inflow)
Center-of-Mass det. time= 8.7 min (744.0 - 735.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	138 cf	**21.67'W x 10.00'L x 2.54'H Field A** 551 cf Overall - 89 cf Embedded = 461 cf x 30.0% Voids
#2A	1.00'	89 cf	**Cultec C-100HD** x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 6 rows
		228 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**20.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.10 cfs @ 11.70 hrs HW=0.03' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Summary for Pond 2P: Five Cultec C-100HD

Inflow Area = 0.031 ac,100.00% Impervious, Inflow Depth = 8.69" for 100-Year event
Inflow = 0.33 cfs @ 12.01 hrs, Volume= 0.023 af
Outflow = 0.09 cfs @ 11.75 hrs, Volume= 0.023 af, Atten= 73%, Lag= 0.0 min
Discarded = 0.09 cfs @ 11.75 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 1.53' @ 12.30 hrs Surf.Area= 190 sf Storage= 139 cf

Plug-Flow detention time= 6.4 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 6.4 min (741.6 - 735.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	66 cf	**19.00'W x 10.00'L x 1.54'H Field A** 293 cf Overall - 74 cf Embedded = 218 cf x 30.0% Voids
#2A	0.00'	74 cf	**Cultec C-100HD** x 5 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 5 rows
		140 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**20.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.09 cfs @ 11.75 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.09 cfs)

Summary for Pond 3P: Three Cultec C-100HD

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 8.69" for 100-Year event
Inflow = 0.20 cfs @ 12.01 hrs, Volume= 0.014 af
Outflow = 0.05 cfs @ 11.74 hrs, Volume= 0.014 af, Atten= 74%, Lag= 0.0 min
Discarded = 0.05 cfs @ 11.74 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Peak Elev= 1.46' @ 12.30 hrs Surf.Area= 125 sf Storage= 85 cf

Plug-Flow detention time= 6.6 min calculated for 0.014 af (100% of inflow)
Center-of-Mass det. time= 6.6 min (741.8 - 735.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	45 cf	**5.00'W x 25.00'L x 1.54'H Field A** 193 cf Overall - 43 cf Embedded = 150 cf x 30.0% Voids
#2A	0.00'	43 cf	**Cultec C-100HD** x 3 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows
		88 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**18.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 11.74 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.05 cfs)

HUDSON ENGINEERING & CONSULTING, P.C.

SITE ADDRESS: 11 Lyman Place

TOWN/VILLAGE: Dobbs Ferry

DATE: 04/26/2023 TIME: 10:00am

WEATHER: Overcast TEMP. 62° F

WITNESSED BY: Matt Williams

DEEP TEST HOLE DATA SHEET – STORMWATER MANAGEMENT SYSTEM

DEPTH	HOLE NO. 1	HOLE NO. 2	HOLE NO. 3	HOLE NO. 4
G.L.	0 – 12”	0 – 12”	0 – 12”	0 – 12”
6”	Topsoil	Topsoil	Topsoil	Topsoil
12”				
18”				
24”				12 – 36”
30”				Silty loam
36”				**Ledge @ 36”**
42”		12 – 60”		**No GW**
48”		Silty loam w/		
54”		rocks	12 – 72”	
60”	12 – 72”	**Ledge @ 60”**	Fill w/ silty loam	
66”	Silty loam	**No GW**		
72”	**Ledge @ 72”**		**Ledge @ 72”**	
78”	**No GW**		**No GW**	
84”				
90”				
96”				
102”				
108”				

- *Indicate level at which Ground Water (GW), Mottling and/or Ledge Rock is encountered.*
- *Indicate level for which water level rises after being encountered.*

EXCAVATION PERFORMED BY: **PRECISION FIELD TESTING**

HUDSON ENGINEERING & CONSULTING, P.C.

SITE ADDRESS: 11 Lyman Place

TOWN/VILLAGE: Dobbs Ferry

DATE: 04/24/2023 TIME: 1:00pm

WEATHER: Partly Cloudy TEMP. 65° F

WITNESSED BY: Matt Williams

PERCOLATION TEST HOLE DATA SHEET – STORMWATER MANAGEMENT SYSTEM

Owner _____

HOLE #	CLOCK TIME				PERCOLATION				
					Depth to Water From Ground Surface			Soil Rate	
Hole Number	Run No.	Start	Stop	Elapse Time (Min.)	Start Inches	Stop Inches	Water Level in Inches Drop in inches	Min. per inch	Inches per Hour
# 1	1	1:26	1:54	28	22	46	24	1.17	51.28
	2	1:55	2:21	26	22	46	24	1.08	55.56
4" Ø	3	2:22	2:48	26	22	46	24	1.08	55.56
	4	2:49	3:16	27	22	46	24	1.125	53.33
	5								
# 2	1	1:28	2:28	60	22	44	22	2.73	22
	2	2:28	3:28	60	22	44	22	2.73	22
4" Ø	3	3:29	4:29	60	22	43.5	21.5	2.79	21.5
	4	4:30	5:30	60	22	43	21	2.86	21
	5								
# 3	1	1:31	1:55	24	22	46	24	1	60
	2	1:56	2:24	28	22	46	24	1.17	51.28
4" Ø	3	2:36	3:06	30	22	46	24	1.25	48
	4	3:07	3:39	32	22	46	24	1.33	45.11
	5								

Notes:

1) Tests to be repeated at the same depth until approximately equal soil rates are obtained at each percolation test hole. All data to be submitted for review.
2) Depth measurements to be made from top of hole.