

**STORM WATER
POLLUTION PREVENTION
PLAN**

for

German Brothers Boat Storage
North Street
Canandaigua, New York



Prepared By:

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December 11, 2015

STORM WATER POLLUTION PREVENTION PLAN

German Brothers Boat Storage – North Street Canandaigua, New York

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Operations & Maintenance Plan	Stormwater System Operations and Maintenance Plan
SWPPP Plan	“Stormwater Pollution Prevention Plan” dated 12/11/15, prepared by Venezia and Associates.

OVERVIEW

In compliance with the provisions of the Clean Water Act and its amendments, operators of large and small construction activities must apply for coverage under the terms of the National Pollutant Discharge Elimination System (NPDES) general permit or by a state permit program. The U. S. Environmental Protection Agency (EPA) has issued the Construction General Permit (CGP) to authorize the discharge of stormwater associated with construction activities under the NPDES. New York State's SPDES (State Pollutant Discharge Elimination System) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law (ECL). The CGP authorizes the stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the United States or a municipal storm system leading to surface waters of the United States. The discharges are subject to the conditions set forth in the CGP.

The goal of the CGP is to reduce or eliminate stormwater pollution from construction activities by requiring the planning and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to protect the water quality of receiving surface water bodies. The SWPPP identifies potential sources of pollution from the construction site that may affect the quality of storm water discharges, describes practices to be used to reduce such pollutants, and assures compliance with the terms and conditions of the CGP. The SWPPP is a comprehensive guide, which when followed, will result in the placement of erosion and pollution prevention measures, maintenance and monitoring of the in-place measures, and means to modify the plan.

In order to obtain coverage under the CGP for authorized stormwater discharges, the operator must prepare and submit a *Notice of Intent (NOI) for Storm Water discharges associated with Construction Activity under a SPDES General Permit*. A SWPPP must be prepared prior to the submission of an NOI. A copy of the SWPPP must be kept at the project site from project initiation to the date of final stabilization. Upon final stabilization of the site, a Notice of Termination must be submitted to the State of New York. A notice of the permit and SWPPP must be posted conspicuously near the entrance to the site.

In the State of New York, the Department of Environmental Conservation is the SPDES permitting authority.

STORM WATER POLLUTION PREVENTION PLAN

German Brothers Boat Storage – North Street
Canandaigua, New York

Project Owner: German Brothers Industrial Park, LLC

Operator/General Contractor: German Brothers Industrial Park, LLC
3907 County Road 16
Canandaigua, NY 14424

Civil Engineer: Venezia and Associates
5120 Laura Lane
Canandaigua, NY 14424

SITE DESCRIPTION

Description of the Project

The project involves the construction of a new boat service facility on the north side of County Road 30 in the Town of Canandaigua, NY. The boat storage facility will consist of one building to service boats, six warehouse-style buildings for the indoor storage of boats and associated parking and driveways. According to soil survey information collected and mapped by the National Resources Conservation Service (NRCS) the site is mostly silty loam and clay soils with a hydrologic soil group of C. Venezia and Associates also performed soil testing at the site on December 8, 2015 to confirm NRCS information and to determine approximate groundwater elevations for the drainage system design. Soil test pit information can be found on the Site Plan.

In order to be conservative in the anticipated water quantity discharging from the site in the post developed condition, the site infiltration practices were not modeled with ‘discarded’ infiltration volumes, though we do expect infiltration to occur at the proposed underground infiltration areas and the several shallow depressions scattered around the site. The project seeks to mitigate stormwater in small pockets throughout the site, as opposed to a central drainage basin. By breaking up the site into smaller water quality treatment pockets, we are able to maximize the stormwater quality treatment volume and provide enhanced phosphorous removal, especially considering that the project is located in the Sucker Brook/Canandaigua Lake Watershed which is phosphorus restricted.

The existing site is undeveloped and is currently farmed with a straight row crop. The site drains east to west towards Sucker Brook which runs southerly, just off the western property line of the development.

The difference in impervious area pre- and post- development has been broken up per the catchment areas defined later in this report and in the hydrologic model. The following is a summary of the impervious areas before and after development:

Impervious Cover Breakdown in Watershed			
<u>Drainage Area</u>	<u>Existing Impervious</u>	<u>Proposed Impervious (sf)</u>	<u>Proposed Impervious (acre)</u>
Area 1	0	23356	0.536
Area 2	0	48536	1.114
Area 3	0	17100	0.393
Area 4	0	18676	0.429
Area 5	0	18676	0.429
Area 6	0	12750	0.293
Area 7	0	0	0.000
Total EXIST:	0	TOTAL NEW:	3.193

Site Hydrology

The existing site slopes from east to west and Sucker Brook, which flows southerly towards Canandaigua Lake, is located just to the west of the site. The site is currently undeveloped and used as a corn field. There is no stormwater collection system on the site. See Existing Conditions Figure 1.

The proposed project intends to maintain the existing drainage pattern while incorporating stormwater quality and quantity management systems including underground infiltration trenches and an engineered gravel/recharge area to treat and mitigate stormwater from the proposed pavement areas. See Proposed Drainage Areas Figure 2.

Stormwater Quality for Enhanced Phosphorous Removal:

The stormwater runoff from the development site discharges to Sucker Brook, which ultimately discharges to Canandaigua Lake. Discharge to Sucker Brook and/or Canandaigua Lake requires enhanced phosphorous treatment and therefore water quality treatment practices that provide phosphorous removal are being incorporated into the proposed stormwater management system in the form of infiltration basins and an engineered gravel parking area. The water quality volume has been designed to capture and treat 100% of the volume from the 1-year 24-hour design storm for all impervious areas.

Typically the Water Quality Volume (WQv) used in the design represents a volume of runoff from impervious surfaces such as roofs and pavement. However, in the case of enhanced phosphorous removal, the WQv is analyzed as a volume associated with the post development watershed and includes runoff from both pervious and impervious areas. In the case of the boat storage facility project, the WQv is defined as the estimated runoff volume (acre-feet) resulting from the 1-year, 24-hour design storm over



the post-development watershed. Per the Hydrologic Model and calculations provided in the revised SWPPP report, the required treatment volume is equal to 0.488 acre-feet.

The required WQv for enhanced phosphorous removal is being provided as follows:

<u>Water Quality Volume Calculations: Enhanced Phosphorous Removal</u>			
<u>WQv per Chapter 10:</u>			
WQv= Approximate Volume of 1-year 24-hour storm			
Per Hydrologic Model:	0.488	acre-feet	
<u>Area to be Treated</u>	<u>WQv Required</u>	<u>Volume Reduction Technique</u>	<u>WQv Provided (acre-ft)**</u>
Area 1	0.071	Infil Trench #1	0.170
Area 2	0.139	Gravel Pave	0.251
Area 3	0.06	Infil Trench #2-4	0.138
Area 4	0.058	Infil Trench #10-11	0.000
Area 5	0.057	Infil Trench #8-9	0.000
Area 6	0.058	Infil Trench #5-7	0.094
Area 7	0.045	No Imperv. In Watershed	0.000
Total Provided:	0.488	Total Provided:	0.653
*Calculations per the NYS Stormwater Design Manual (2015)			
** Refer to Hydrologic Model			

Volume Reduction

Volume reduction is achievable in the infiltration trenches and the engineered gravel parking area (below the overflow weir). Please refer to the table above for volume reduction calculations based on Water Quality Volume.

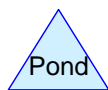
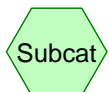
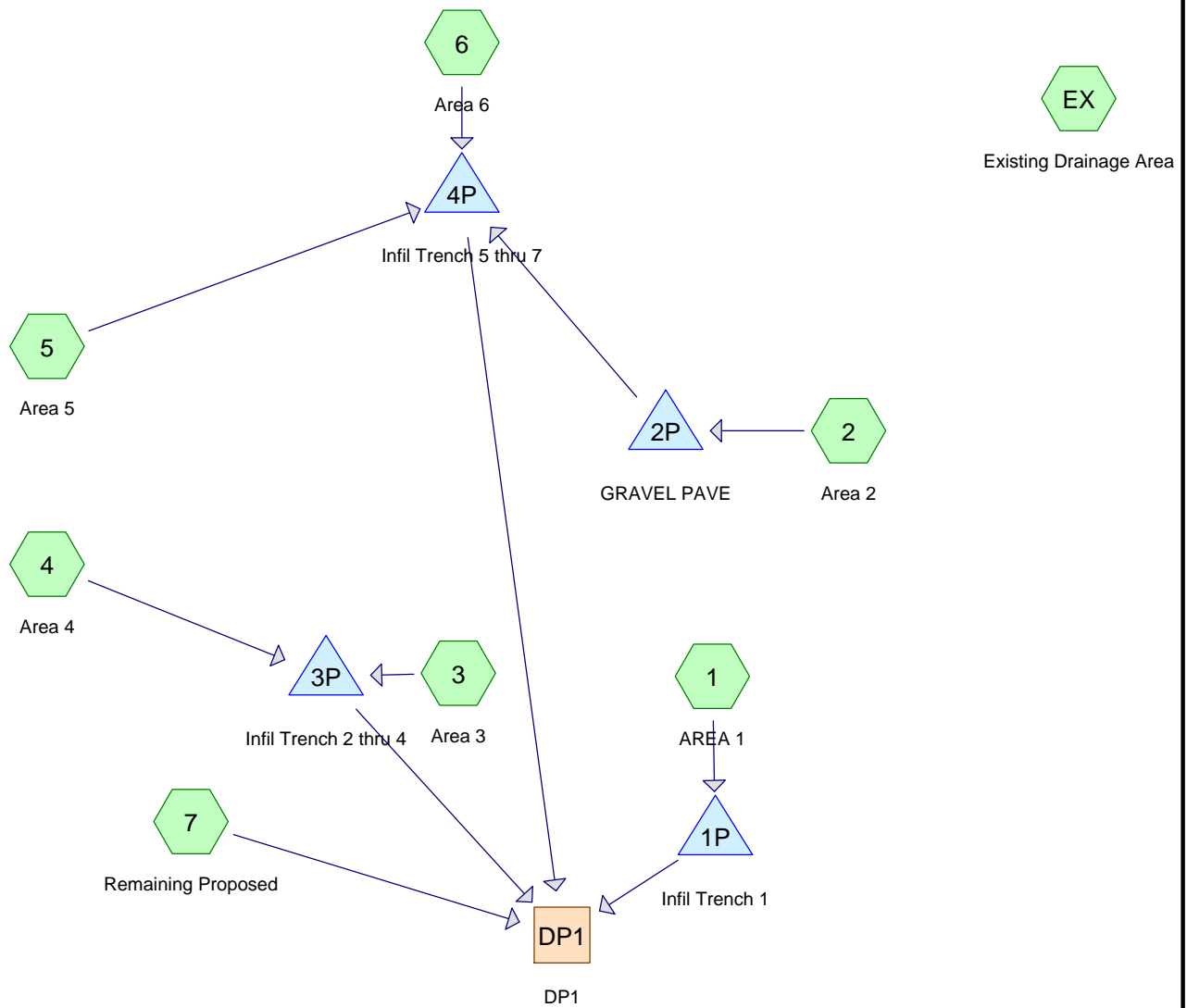
Stormwater Quantity:**Comparison of Existing and Proposed Runoff Conditions:**

<i>Return Period</i>	<i>Design Point #1 (Off-site to West) Peak Runoff</i>	
	<i>Existing</i>	<i>Proposed</i>
2-year	7.49	0.65
10-year	14.78	4.44
25-year	23.05	20.07
100-year	28.73	24.05

REFER TO ATTACHED HYDROLOGIC MODEL FOR MORE INFORMATION

The proposed drainage area has been modeled using HydroCAD Version 9.10 hydrologic modeling software. Please refer to the following calculations for information regarding the proposed model. Calculations to determine runoff from the 2-, 10-, 25-, and 100-year 24-hour design storms have also been included in this report and are based on the hydrologic model from HydroCAD.

HYDROLOGIC MODEL



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Type II 24-hr 2-Year Rainfall=2.25"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

Subcatchment 1: AREA 1	Runoff Area=41,540 sf 56.23% Impervious Runoff Depth>1.02" Tc=5.0 min CN=87 Runoff=1.90 cfs 0.081 af
Subcatchment 2: Area 2	Runoff Area=61,930 sf 78.37% Impervious Runoff Depth>1.44" Tc=5.0 min CN=93 Runoff=3.81 cfs 0.171 af
Subcatchment 3: Area 3	Runoff Area=40,760 sf 41.95% Impervious Runoff Depth>0.84" Tc=5.0 min CN=84 Runoff=1.56 cfs 0.066 af
Subcatchment 4: Area 4	Runoff Area=31,508 sf 59.27% Impervious Runoff Depth>1.08" Tc=5.0 min CN=88 Runoff=1.52 cfs 0.065 af
Subcatchment 5: Area 5	Runoff Area=33,630 sf 55.53% Impervious Runoff Depth>1.02" Tc=5.0 min CN=87 Runoff=1.54 cfs 0.065 af
Subcatchment 6: Area 6	Runoff Area=52,200 sf 24.43% Impervious Runoff Depth>0.65" Tc=5.0 min CN=80 Runoff=1.53 cfs 0.065 af
Subcatchment 7: Remaining Proposed	Runoff Area=56,552 sf 0.00% Impervious Runoff Depth>0.41" Flow Length=390' Slope=0.0050 '/' Tc=16.1 min CN=74 Runoff=0.65 cfs 0.045 af
Subcatchment EX: Existing Drainage Area	Runoff Area=318,120 sf 0.00% Impervious Runoff Depth>0.74" Flow Length=420' Slope=0.0050 '/' Tc=15.0 min CN=82 Runoff=7.49 cfs 0.450 af
Reach DP1: DP1	Inflow=0.65 cfs 0.072 af Outflow=0.65 cfs 0.072 af
Pond 1P: Infil Trench 1	Peak Elev=781.39' Storage=0.081 af Inflow=1.90 cfs 0.081 af Outflow=0.00 cfs 0.000 af
Pond 2P: GRAVEL PAVE	Peak Elev=782.52' Storage=0.171 af Inflow=3.81 cfs 0.171 af Outflow=0.00 cfs 0.000 af
Pond 3P: Infil Trench 2 thru 4	Peak Elev=782.44' Storage=0.131 af Inflow=3.08 cfs 0.131 af Outflow=0.00 cfs 0.000 af
Pond 4P: Infil Trench 5 thru 7	Peak Elev=782.26' Storage=0.104 af Inflow=3.07 cfs 0.130 af Outflow=0.09 cfs 0.027 af

Total Runoff Area = 14.606 ac Runoff Volume = 1.008 af Average Runoff Depth = 0.83"
78.14% Pervious = 11.413 ac 21.86% Impervious = 3.193 ac

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Type II 24-hr 2-Year Rainfall=2.25"

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Summary for Subcatchment 1: AREA 1

Runoff = 1.90 cfs @ 11.96 hrs, Volume= 0.081 af, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
19,356	98	Paved parking, HSG C
4,000	98	Unconnected roofs, HSG C
18,184	74	>75% Grass cover, Good, HSG C
41,540	87	Weighted Average
18,184		43.77% Pervious Area
23,356		56.23% Impervious Area
4,000		17.13% Unconnected

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

Summary for Subcatchment 2: Area 2

Runoff = 3.81 cfs @ 11.95 hrs, Volume= 0.171 af, Depth> 1.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
40,840	98	Paved parking, HSG C
7,696	98	Roofs, HSG C
13,394	74	>75% Grass cover, Good, HSG C
61,930	93	Weighted Average
13,394		21.63% Pervious Area
48,536		78.37% Impervious Area

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

Summary for Subcatchment 3: Area 3

Runoff = 1.56 cfs @ 11.96 hrs, Volume= 0.066 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

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Area (sf)	CN	Description
17,100	98	Roofs, HSG C
23,660	74	>75% Grass cover, Good, HSG C
40,760	84	Weighted Average
23,660		58.05% Pervious Area
17,100		41.95% Impervious Area

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

Summary for Subcatchment 4: Area 4

Runoff = 1.52 cfs @ 11.96 hrs, Volume= 0.065 af, Depth> 1.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
12,750	98	Roofs, HSG C
12,832	74	>75% Grass cover, Good, HSG C
5,926	98	Unconnected pavement, HSG C
31,508	88	Weighted Average
12,832		40.73% Pervious Area
18,676		59.27% Impervious Area
5,926		31.73% Unconnected

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

Summary for Subcatchment 5: Area 5

Runoff = 1.54 cfs @ 11.96 hrs, Volume= 0.065 af, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
12,750	98	Roofs, HSG C
14,954	74	>75% Grass cover, Good, HSG C
5,926	98	Unconnected pavement, HSG C
33,630	87	Weighted Average
14,954		44.47% Pervious Area
18,676		55.53% Impervious Area
5,926		31.73% Unconnected

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Type II 24-hr 2-Year Rainfall=2.25"

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

Summary for Subcatchment 6: Area 6

Runoff = 1.53 cfs @ 11.96 hrs, Volume= 0.065 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
12,750	98	Roofs, HSG C
39,450	74	>75% Grass cover, Good, HSG C
52,200	80	Weighted Average
39,450		75.57% Pervious Area
12,750		24.43% Impervious Area

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

Summary for Subcatchment 7: Remaining Proposed

Runoff = 0.65 cfs @ 12.11 hrs, Volume= 0.045 af, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

Area (sf)	CN	Description
56,552	74	>75% Grass cover, Good, HSG C
56,552		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	50	0.0050	0.08		Sheet Flow, Grass: Short n= 0.150 P2= 2.50"
5.0	340	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
16.1	390	Total			

Summary for Subcatchment EX: Existing Drainage Area

Runoff = 7.49 cfs @ 12.08 hrs, Volume= 0.450 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.25"

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Type II 24-hr 2-Year Rainfall=2.25"

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Area (sf)	CN	Description
318,120	82	Row crops, SR + CR, Good, HSG C
318,120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	50	0.0050	0.16		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.50"
9.7	370	0.0050	0.64		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
15.0	420	Total			

Summary for Reach DP1: DP1

Inflow Area = 7.303 ac, 43.72% Impervious, Inflow Depth > 0.12" for 2-Year event
 Inflow = 0.65 cfs @ 12.11 hrs, Volume= 0.072 af
 Outflow = 0.65 cfs @ 12.11 hrs, Volume= 0.072 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Infil Trench 1

Inflow Area = 0.954 ac, 56.23% Impervious, Inflow Depth > 1.02" for 2-Year event
 Inflow = 1.90 cfs @ 11.96 hrs, Volume= 0.081 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 781.39' @ 20.00 hrs Surf.Area= 0.161 ac Storage= 0.081 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	779.50'	0.048 af	10.00'W x 350.00'L x 1.50'H Prismatic 0.121 af Overall - 0.002 af Embedded = 0.119 af x 40.0% Voids
#2	781.00'	0.161 af	10.00'W x 350.00'L x 2.00'H Prismatic
#3	780.00'	0.002 af	6.0" D x 350.0'L Pipe Storage Inside #1
		0.210 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	100.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=779.50' TW=0.00' (Dynamic Tailwater)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Type II 24-hr 2-Year Rainfall=2.25"

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Summary for Pond 2P: GRAVEL PAVE

Inflow Area = 1.422 ac, 78.37% Impervious, Inflow Depth > 1.44" for 2-Year event
Inflow = 3.81 cfs @ 11.95 hrs, Volume= 0.171 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 782.52' @ 20.00 hrs Surf.Area= 0.478 ac Storage= 0.171 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	781.50'	0.251 af	130.00'W x 160.00'L x 1.50'H Prismatic 0.716 af Overall x 35.0% Voids
#2	783.00'	0.478 af	130.00'W x 160.00'L x 1.00'H Prismatic
		0.728 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	783.25'	100.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=781.50' TW=780.00' (Dynamic Tailwater)
↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 3P: Infil Trench 2 thru 4

Inflow Area = 1.659 ac, 49.50% Impervious, Inflow Depth > 0.95" for 2-Year event
Inflow = 3.08 cfs @ 11.96 hrs, Volume= 0.131 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 782.44' @ 20.00 hrs Surf.Area= 0.228 ac Storage= 0.131 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	780.00'	0.062 af	10.00'W x 115.00'L x 2.00'H Prismatic x 3 0.158 af Overall - 0.003 af Embedded = 0.156 af x 40.0% Voids
#2	780.50'	0.003 af	8.0" D x 115.0'L Pipe Storage x 3 Inside #1
#3	782.00'	0.149 af	Custom Stage Data (Prismatic) Listed below (Recalc)
		0.214 af	Total Available Storage

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Type II 24-hr 2-Year Rainfall=2.25"

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Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
782.00	0.149	0.000	0.000
783.00	0.149	0.149	0.149

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	100.0' long x 5.0' breadth Broad-Crested Rectangular Weir X 2.00 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=780.00' TW=0.00' (Dynamic Tailwater)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 4P: Infil Trench 5 thru 7

Inflow Area = 3.392 ac, 54.12% Impervious, Inflow Depth > 0.46" for 2-Year event
Inflow = 3.07 cfs @ 11.96 hrs, Volume= 0.130 af
Outflow = 0.09 cfs @ 15.20 hrs, Volume= 0.027 af, Atten= 97%, Lag= 194.2 min
Primary = 0.09 cfs @ 15.20 hrs, Volume= 0.027 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 782.26' @ 15.20 hrs Surf.Area= 0.228 ac Storage= 0.104 af

Plug-Flow detention time= 325.3 min calculated for 0.027 af (21% of inflow)

Center-of-Mass det. time= 227.5 min (1,025.7 - 798.2)

Volume	Invert	Avail.Storage	Storage Description
#1	780.00'	0.062 af	10.00'W x 115.00'L x 2.00'H Prismatic x 3 0.158 af Overall - 0.003 af Embedded = 0.156 af x 40.0% Voids
#2	780.50'	0.003 af	8.0" D x 115.0'L Pipe Storage x 3 Inside #1
#3	782.00'	0.149 af	Custom Stage Data (Prismatic) Listed below (Recalc)
		0.214 af	Total Available Storage

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
782.00	0.149	0.000	0.000
783.00	0.149	0.149	0.149

Device	Routing	Invert	Outlet Devices
#1	Primary	782.25'	40.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.09 cfs @ 15.20 hrs HW=782.26' TW=0.00' (Dynamic Tailwater)

↑1=Broad-Crested Rectangular Weir (Weir Controls 0.09 cfs @ 0.23 fps)

Drainage Study 121115

Prepared by Venezia and Associates

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German Brothers Boat Storage
Type II 24-hr 10-Year Rainfall=3.25"

Printed 12/10/2015

Page 9

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

Subcatchment 1: AREA 1	Runoff Area=41,540 sf 56.23% Impervious Runoff Depth>1.82" Tc=5.0 min CN=87 Runoff=3.31 cfs 0.145 af
Subcatchment 2: Area 2	Runoff Area=61,930 sf 78.37% Impervious Runoff Depth>2.34" Tc=5.0 min CN=93 Runoff=5.98 cfs 0.277 af
Subcatchment 3: Area 3	Runoff Area=40,760 sf 41.95% Impervious Runoff Depth>1.59" Tc=5.0 min CN=84 Runoff=2.89 cfs 0.124 af
Subcatchment 4: Area 4	Runoff Area=31,508 sf 59.27% Impervious Runoff Depth>1.90" Tc=5.0 min CN=88 Runoff=2.60 cfs 0.115 af
Subcatchment 5: Area 5	Runoff Area=33,630 sf 55.53% Impervious Runoff Depth>1.82" Tc=5.0 min CN=87 Runoff=2.68 cfs 0.117 af
Subcatchment 6: Area 6	Runoff Area=52,200 sf 24.43% Impervious Runoff Depth>1.32" Tc=5.0 min CN=80 Runoff=3.11 cfs 0.132 af
Subcatchment 7: Remaining Proposed	Runoff Area=56,552 sf 0.00% Impervious Runoff Depth>0.96" Flow Length=390' Slope=0.0050 '/' Tc=16.1 min CN=74 Runoff=1.66 cfs 0.104 af
Subcatchment EX: Existing Drainage Area	Runoff Area=318,120 sf 0.00% Impervious Runoff Depth>1.45" Flow Length=420' Slope=0.0050 '/' Tc=15.0 min CN=82 Runoff=14.78 cfs 0.880 af
Reach DP1: DP1	Inflow=4.44 cfs 0.348 af Outflow=4.44 cfs 0.348 af
Pond 1P: Infil Trench 1	Peak Elev=782.19' Storage=0.145 af Inflow=3.31 cfs 0.145 af Outflow=0.00 cfs 0.000 af
Pond 2P: GRAVEL PAVE	Peak Elev=783.06' Storage=0.277 af Inflow=5.98 cfs 0.277 af Outflow=0.00 cfs 0.000 af
Pond 3P: Infil Trench 2 thru 4	Peak Elev=782.51' Storage=0.141 af Inflow=5.50 cfs 0.239 af Outflow=0.75 cfs 0.099 af
Pond 4P: Infil Trench 5 thru 7	Peak Elev=782.35' Storage=0.117 af Inflow=5.79 cfs 0.249 af Outflow=2.83 cfs 0.145 af

Total Runoff Area = 14.606 ac Runoff Volume = 1.893 af Average Runoff Depth = 1.56"
78.14% Pervious = 11.413 ac 21.86% Impervious = 3.193 ac

Drainage Study 121115

Prepared by Venezia and Associates

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German Brothers Boat Storage
Type II 24-hr 25-Year Rainfall=4.30"

Printed 12/10/2015

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

Subcatchment 1: AREA 1	Runoff Area=41,540 sf 56.23% Impervious Runoff Depth>2.72" Tc=5.0 min CN=87 Runoff=4.83 cfs 0.216 af
Subcatchment 2: Area 2	Runoff Area=61,930 sf 78.37% Impervious Runoff Depth>3.29" Tc=5.0 min CN=93 Runoff=8.24 cfs 0.390 af
Subcatchment 3: Area 3	Runoff Area=40,760 sf 41.95% Impervious Runoff Depth>2.45" Tc=5.0 min CN=84 Runoff=4.36 cfs 0.191 af
Subcatchment 4: Area 4	Runoff Area=31,508 sf 59.27% Impervious Runoff Depth>2.81" Tc=5.0 min CN=88 Runoff=3.76 cfs 0.170 af
Subcatchment 5: Area 5	Runoff Area=33,630 sf 55.53% Impervious Runoff Depth>2.72" Tc=5.0 min CN=87 Runoff=3.91 cfs 0.175 af
Subcatchment 6: Area 6	Runoff Area=52,200 sf 24.43% Impervious Runoff Depth>2.12" Tc=5.0 min CN=80 Runoff=4.92 cfs 0.211 af
Subcatchment 7: Remaining Proposed	Runoff Area=56,552 sf 0.00% Impervious Runoff Depth>1.66" Flow Length=390' Slope=0.0050 '/' Tc=16.1 min CN=74 Runoff=2.91 cfs 0.179 af
Subcatchment EX: Existing Drainage Area	Runoff Area=318,120 sf 0.00% Impervious Runoff Depth>2.27" Flow Length=420' Slope=0.0050 '/' Tc=15.0 min CN=82 Runoff=23.05 cfs 1.383 af
Reach DP1: DP1	Inflow=20.07 cfs 0.746 af Outflow=20.07 cfs 0.746 af
Pond 1P: Infil Trench 1	Peak Elev=782.51' Storage=0.170 af Inflow=4.83 cfs 0.216 af Outflow=0.16 cfs 0.046 af
Pond 2P: GRAVEL PAVE	Peak Elev=783.26' Storage=0.373 af Inflow=8.24 cfs 0.390 af Outflow=0.10 cfs 0.018 af
Pond 3P: Infil Trench 2 thru 4	Peak Elev=782.58' Storage=0.151 af Inflow=8.12 cfs 0.361 af Outflow=9.76 cfs 0.221 af
Pond 4P: Infil Trench 5 thru 7	Peak Elev=782.45' Storage=0.131 af Inflow=8.83 cfs 0.404 af Outflow=8.07 cfs 0.300 af

Total Runoff Area = 14.606 ac Runoff Volume = 2.916 af Average Runoff Depth = 2.40"
78.14% Pervious = 11.413 ac 21.86% Impervious = 3.193 ac

Drainage Study 121115

Prepared by Venezia and Associates

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German Brothers Boat Storage
Type II 24-hr 100-Year Rainfall=5.00"

Printed 12/10/2015

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

Subcatchment 1: AREA 1	Runoff Area=41,540 sf 56.23% Impervious Runoff Depth>3.34" Tc=5.0 min CN=87 Runoff=5.85 cfs 0.265 af
Subcatchment 2: Area 2	Runoff Area=61,930 sf 78.37% Impervious Runoff Depth>3.93" Tc=5.0 min CN=93 Runoff=9.73 cfs 0.466 af
Subcatchment 3: Area 3	Runoff Area=40,760 sf 41.95% Impervious Runoff Depth>3.05" Tc=5.0 min CN=84 Runoff=5.36 cfs 0.238 af
Subcatchment 4: Area 4	Runoff Area=31,508 sf 59.27% Impervious Runoff Depth>3.44" Tc=5.0 min CN=88 Runoff=4.53 cfs 0.207 af
Subcatchment 5: Area 5	Runoff Area=33,630 sf 55.53% Impervious Runoff Depth>3.34" Tc=5.0 min CN=87 Runoff=4.74 cfs 0.215 af
Subcatchment 6: Area 6	Runoff Area=52,200 sf 24.43% Impervious Runoff Depth>2.68" Tc=5.0 min CN=80 Runoff=6.17 cfs 0.268 af
Subcatchment 7: Remaining Proposed	Runoff Area=56,552 sf 0.00% Impervious Runoff Depth>2.16" Flow Length=390' Slope=0.0050 '/' Tc=16.1 min CN=74 Runoff=3.80 cfs 0.234 af
Subcatchment EX: Existing Drainage Area	Runoff Area=318,120 sf 0.00% Impervious Runoff Depth>2.85" Flow Length=420' Slope=0.0050 '/' Tc=15.0 min CN=82 Runoff=28.73 cfs 1.736 af
Reach DP1: DP1	Inflow=24.05 cfs 1.105 af Outflow=24.05 cfs 1.105 af
Pond 1P: Infil Trench 1	Peak Elev=782.52' Storage=0.171 af Inflow=5.85 cfs 0.265 af Outflow=0.73 cfs 0.095 af
Pond 2P: GRAVEL PAVE	Peak Elev=783.26' Storage=0.375 af Inflow=9.73 cfs 0.466 af Outflow=0.30 cfs 0.093 af
Pond 3P: Infil Trench 2 thru 4	Peak Elev=782.59' Storage=0.152 af Inflow=9.89 cfs 0.445 af Outflow=11.69 cfs 0.305 af
Pond 4P: Infil Trench 5 thru 7	Peak Elev=782.48' Storage=0.136 af Inflow=10.91 cfs 0.576 af Outflow=10.30 cfs 0.471 af

Total Runoff Area = 14.606 ac Runoff Volume = 3.629 af Average Runoff Depth = 2.98"
78.14% Pervious = 11.413 ac 21.86% Impervious = 3.193 ac

SEQUENCE OF MAJOR ACTIVITIES

Due to the vast size of the project (overall site disturbance is 318,00 sf or 7.3 acres), the developer plans to construct the project in two (2) to three (3) phases. The first phase will consist of construction of the boat service building, the outdoor boat storage area, parking areas around the boat service building, and construction of Boat Storage Building A and Boat Storage Building B. Phase 2 and Phase 3, which could happen at the same time, will consist of the construction of Boat Storage Building C and Boat Storage Building D (Phase 2) and Boat Storage Building E and Boat Storage Building F (Phase 3). **At no time will the Owner disturb more than five (5) acres of soil at once.**

The general order of activities shall be as follows (typical at a Phase Limit):

1. Install all perimeter erosion and sedimentation control devices at phase limit, install stabilized construction entrance and concrete wash station, install temporary sediment basins and diversion swales and mobilize and set up temporary storage areas at the site.
2. Mark areas for proposed infiltration practices (i.e. porous pavement and underground infiltration area) to eliminate the movement of construction equipment over these areas.
3. Begin general construction activities to establish grade of building footprints and parking areas.
4. Mark proposed area for porous pavement/underground infiltration area and avoid directing construction runoff to these areas.
5. Begin general construction.
6. Complete stormwater management system installation.
8. Permanently stabilize all areas.
9. Remove erosion controls and cease monitoring only after approval has been granted by the Town of Canandaigua and/or their Project Representative.

CONTROLS

In accordance with the Contract Documents, erosion and sedimentation controls will be incorporated during all phases of the project. Temporary stormwater controls will be implemented throughout the course of the project.

The sections of the project specifications that govern erosion and sediment controls are included at the end of this report.

Erosion and Sedimentation Controls:

Temporary Controls

1. Contractor shall minimize site disturbance as much as possible during the duration of the project.
2. All areas disturbed by construction that will not see any further disturbance or construction activity will be stabilized no later than 7 days from the last construction activity in the area. Landscaped areas that are disturbed will be stabilized by seeding. Paved areas that are disturbed will be stabilized with crushed stone.
3. All excavated soil will be stockpiled in the designated areas on site and stabilized if it will not be used within a period of 7 calendar days or more. It shall be stabilized with temporary seeding and mulching. Hay bales may be placed around the perimeter of stockpiles to contain sediments.
4. Inlet protection to trap sediment and debris will be placed in catch basins and area drains.

Permanent Controls

When the project is completed, all disturbed areas will be permanently stabilized. The areas disturbed will be replaced in kind as shown in the Contract Documents (paved areas will be stabilized with bituminous concrete while landscaped areas will be stabilized by placing 4" of loam and hydroseeding).

Storm Water Management During Construction:

Stormwater runoff will be carefully managed during construction to limit the potential for sediment loss from the site.

OTHER CONTROLS

Waste Disposal:

Waste Material

1. Construction waste will be collected in dumpsters and emptied at least once per week and more often as necessary. Dumpsters will not be located in disturbed areas.
2. All waste will be removed from the site and legally disposed of.
3. No waste disposal will occur onsite.

Hazardous Waste

1. All hazardous materials used onsite will be disposed of in a manner specified by the manufacturer of the material and as required by local, state, and Federal regulation.
2. Each respective contractor and subcontractor will instruct site personnel using these materials in these practices.

Offsite Vehicle Tracking:

1. Surrounding streets in the vicinity of the site shall be inspected daily and swept as required during excavation activities.
2. A stabilized construction entrance will be provided at the vehicle entrances to reduce the tracking of sediments by site vehicles.

Dust Control:

1. The contractor shall employ dust control measures to minimize the creation of airborne dust during the entire construction process.
2. Water will be used as required for dust control.
3. Calcium chloride may be used for dust control only in areas not designated to receive loam and seed and/or landscaping.

MAINTENANCE AND INSPECTION PROCEDURES

1. All erosion control measures will be inspected at a minimum of once a week. The person responsible for the Contractor's operations onsite shall conduct the said inspections.
2. A monthly inspection report shall be filed in the Contractor's main offices and in the job site trailer.
3. All measures will be inspected after rainfall events of more than one-half inch (0.5") of precipitation.
4. All measures will be maintained in good working order and repairs will be made to measures within 24 hours of being reported.
5. Built-up sediment will be removed from the silt fences when it has reached one-third the height of the fence.
6. Catch basin inlets will be maintained with silt sacks or filter fabric to minimize sediment transport through the drainage system.
7. Silt fence and hay bale lines will be inspected to ensure these measures are intact. Hay bale lines will be securely staked in an unbroken line, and silt fences will be securely keyed into the ground and supported on stakes.
8. Permanent seeding will be inspected for washout and health of cover. Washouts will be repaired within 24 hours of being reported. Bare spots will be re-seeded.

NON-STORMWATER DISCHARGES

The following non-storm water discharges from the site may occur during the construction period: water from water line flushing if required.

INVENTORY FOR POLLUTION PREVENTION PLAN

The following material may be present onsite: concrete, detergents, paints and stains (enamel and latex), masonry, petroleum-based products, cleaning solvents, and fertilizers.

SPILL PREVENTION

Housekeeping Measures:

1. The Contractor's representative will inspect daily for proper use, storage, and cleanup of material used on the job site.
2. Store only enough material onsite required for that job as to satisfy current construction needs.
3. Store required materials in tightly lidded containers under cover.
4. Store materials in original containers with clearly legible labels.
5. Separate and store materials apart from each other.
6. Do not mix materials unless specifically in accordance with manufacturers' recommendations.
7. Use all products from a container before disposing of the container.
8. Follow manufacturers' instructions for handling, storage, and disposing of all materials.

Hazardous Materials:

1. Keep products in their original containers.
2. Original container labels should be clearly visible.
3. Material safety data sheets will be kept onsite and be available.
4. Follow all state, local, and Federal regulations regarding the handling, use, storage, and disposal of hazardous material.

Petroleum Products:

1. Only skilled personnel in a designated area will perform fueling of vehicles onsite.
2. Vehicles used onsite will be monitored for fuel and oil leaks.
3. Vehicles used onsite will be maintained in good working order.
4. Asphalt substances will be applied in accordance with manufacturers' recommendations.
5. The use of petroleum products as a release agent for asphalt transport trucks is prohibited.
6. Vehicle fueling will only be done in vehicle fueling area indicated.

Fertilizers:

1. Fertilizers will be used at the application rates called for in the specifications for the project.
2. Once applied, fertilizer will be worked into the soil to minimize wash off from irrigation and stormwater.
3. Fertilizer will be stored under cover.
4. The contents of partially used fertilizer bags will be transferred to resealable, watertight containers clearly labeled with their contents.

Paints:

1. All paint containers will be tightly sealed when not in use.
2. Remove excess paint in original labeled containers from the jobsite.
3. Paint will not be disposed of onsite. Remove excess paint material from the site and legally dispose of.

Concrete Trucks:

1. All concrete trucks will wash down in the designated area. Accumulated concrete shall be removed from the site and legally disposed off-site as required.

Spill Control Practices:

1. Manufacturers' recommended spill control methods will be posted and site personnel will be made aware of the requirements.
2. Cleanup supplies will be kept onsite in a materials storage area. This equipment will include: goggles, brooms, dustpans, mops, rags, gloves, oil absorbent, sawdust, plastic and metal trash cans, and other materials and supplies specifically designated for cleanup.
3. All spills will be immediately cleaned up after discovery.
4. The spill area will be well ventilated.
5. Cleanup personnel will wear suitable protective clothing.

6. Spills of toxic and/or hazardous material will be reported to state, local, and Federal authorities, as required by law. Spills shall also be reported immediately to the owner.
7. A spill incident report will be filed detailing the amount and extent of the spill, material(s) involved, and effectiveness of the cleanup. This report will be on file at the contractor's office, as well as kept onsite in the field office. A copy shall also be filed with the HCC.
8. The Contractor will designate someone onsite that will serve as the Spill Cleanup Coordinator. At least two other personnel will be designated as alternate spill coordinators. All spill control personnel will be trained in spill prevention, control, and cleanup. The names of the responsible personnel will be posted at the jobsite office of the Contractor.

OWNER/OPERATOR CERTIFICATION

The owner or operator shall have each of the contractors and subcontractors identified, sign a copy of the following certification statement below before they commence any construction activity. The owner/operator shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site.

Site Location: German Brothers Boat Storage - North Street, Canandaigua, NY

“ I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (“SPDES”) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.”

Name and Title

Date

Company Representing

SWPPP Inspection Checklist

[illegible]

Log of Changes to the SWPPP

[illegible]

Log of Corrective Action

[illegible]

Log of Corrective Action

[illegible]

Project Name & Location

Owner:

Contractor:

Date: _____

Time: _____

Permit No. _____

Weather: _____

Soil Cond. _____

Job No. _____

Observations By: _____

Receiving Waters:

Wetland	Storm Sewer
Stream	Others
N/A	


Construction Stage	Distribution:	Date:	Faxed	Mailed	E-mail
Clearing & Grubbing	Owner				
Temp. Stabilization	Contractor				
Rough Grading	Municipality				
No Construction Activity	Town Engineering				
Building Const.					
Utility Installation					
Final Stabilization					

Inspection Frequency: Semiweekly Weekly Monthly Other _____

Checklist:			Comments:
Yes	No	N/A	
			Is there evidence of turbidity in the receiving waters, or causing a substantial visible contrast to natural conditions?
			Is evidence of sedimentation in the receiving waters?
			Adjoining properties and downstream waterways protected from erosion and sediment due to stormwater runoff from the site?
			Have all erosion control measures been installed/constructed per Grading & Erosion Control Plan?
			Are check dams in good condition?
			Has accumulated sediment been removed from check dams?
			Do all operational storm inlets have adequate inlet protection?
			Are perimeter erosion control measures functioning?
			Have sediment basins and traps been constructed according to approved plans?
			Have the stabilized construction entrances been installed & maintained?
			Have public roadways and site access roads been kept free of mud & debris?
			Is dust control needed?
			Is Construction site litter & debris appropriately managed?
			Are soil stabilization measures being implemented in a timely manner per plan?
			Are finished cut & fill slopes adequately stabilized?
			Is the site adequately stabilized at this time ?

Checklist:			Comments:
Yes	No	N/A	
			Have temporary measures that are no longer needed been removed?
			Are areas where soil disturbances have ceased been stabilized within 7 days of last disturbance?
			Are soil stockpiles in appropriate locations and covered, mulched & vegetated?
			Are additional temporary erosion control measures needed?
			Have all permanent stormwater management facilities been installed/constructed?
			Has construction sequences been followed?
			Are erosion control measures in need of repair, replacement or enhancement?
			Have all deficiencies from previous reports been addressed?
See attached sketch (if necessary)			SWPP Modification (see attached)
			See Attached Photos

Misc. Notes:



P.E.

R.L.A.

CPESC

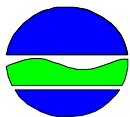
SWT

Date

This Record is intended to provide compliance with the provisions of Part II C.3a of the NYS DEC SPDES General Permit for Stormwater Discharges from Constructions Activities

NOTICE OF INTENT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER A SPDES GENERAL PERMIT
FOR CONSTRUCTION ACTIVITY
GP-0-15-002

NOTICE OF INTENT



New York State Department of Environmental Conservation

Division of Water

625 Broadway, 4th Floor

Albany, New York 12233-3505

NYR

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_____
(for DEC use only)

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Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

- IMPORTANT -

RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

[illegible]

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

[illegible]

Owner/Operator Contact Person First Name

[illegible]

Owner/Operator Mailing Address

[illegible]

City

[illegible]

State

--	--

Zip

					-				
--	--	--	--	--	---	--	--	--	--

Phone (Owner/Operator)

			-				-			
--	--	--	---	--	--	--	---	--	--	--

Fax (Owner/Operator)

			-				-			
--	--	--	---	--	--	--	---	--	--	--

Email (Owner/Operator)

[illegible][illegible]

FED TAX ID

		-							
--	--	---	--	--	--	--	--	--	--

(not required for individuals)

Project Site Information

Project/Site Name

[illegible]

Street Address (NOT P.O. BOX)

[illegible]

Side of Street

☐ North ☐ South ☐ East ☐ West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

[illegible]

State

--	--

Zip

--	--	--	--	--

—

--	--	--	--

County

[illegible]DEC Region

--	--

Name of Nearest Cross Street

[illegible]

Distance to Nearest Cross Street (Feet)

--	--	--	--	--

Project In Relation to Cross Street

☐ North ☐ South ☐ East ☐ West

Tax Map Numbers

Section-Block-Parcel

[illegible]

Tax Map Numbers

[illegible]

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

--	--	--	--	--	--

Y Coordinates (Northing)

--	--	--	--	--	--	--

2. What is the nature of this construction project?

- New Construction

- Redevelopment with increase in impervious area

- Redevelopment with no increase in impervious area

3. Select the predominant land use for both pre and post development conditions.

SELECT ONLY ONE CHOICE FOR EACH

**Pre-Development
Existing Land Use**

- ☐ FOREST
☐ PASTURE/OPEN LAND
☐ CULTIVATED LAND
☐ SINGLE FAMILY HOME
☐ SINGLE FAMILY SUBDIVISION
☐ TOWN HOME RESIDENTIAL
☐ MULTIFAMILY RESIDENTIAL
☐ INSTITUTIONAL/SCHOOL
☐ INDUSTRIAL
☐ COMMERCIAL
☐ ROAD/HIGHWAY
☐ RECREATIONAL/SPORTS FIELD
☐ BIKE PATH/TRAIL
☐ LINEAR UTILITY
☐ PARKING LOT
☐ OTHER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Post-Development
Future Land Use**

- ☐ SINGLE FAMILY HOME
☐ SINGLE FAMILY SUBDIVISION
☐ TOWN HOME RESIDENTIAL
☐ MULTIFAMILY RESIDENTIAL
☐ INSTITUTIONAL/SCHOOL
☐ INDUSTRIAL
☐ COMMERCIAL
☐ MUNICIPAL
☐ ROAD/HIGHWAY
☐ RECREATIONAL/SPORTS FIELD
☐ BIKE PATH/TRAIL
☐ LINEAR UTILITY (water, sewer, gas, etc.)
☐ PARKING LOT
☐ CLEARING/GRADING ONLY
☐ DEMOLITION, NO REDEVELOPMENT
☐ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
☐ OTHER

Number of Lots

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***Note:** for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>

5. Do you plan to disturb more than 5 acres of soil at any one time? ☐ Yes ☐ No

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>

7. Is this a phased project? ☐ Yes ☐ No

8. Enter the planned start and end dates of the disturbance activities.

Start Date	End Date
<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ☐ Yes ☐ No ☐ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

[illegible]

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ☐ **Yes** ☐ **No** ☐ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ☐ Yes ☐ No

19. Is this property owned by a state authority, state agency, federal government or local government? ☐ Yes ☐ No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ☐ Yes ☐ No

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ☐ Yes ☐ No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ☐ Yes ☐ No
- If No, skip questions 23 and 27-39.**

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ☐ Yes ☐ No

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ☐ Professional Engineer (P.E.)
- ☐ Soil and Water Conservation District (SWCD)
- ☐ Registered Landscape Architect (R.L.A.)
- ☐ Certified Professional in Erosion and Sediment Control (CPESC)
- ☐ Owner/Operator
- ☐ Other

[illegible]

SWPPP Preparer

[illegible]

Contact Name (Last, Space, First)

[illegible]

Mailing Address

[illegible]

City

[illegible]

State Zip

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Phone

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Fax

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Email

[illegible][illegible]

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name

[illegible]

MI

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Last Name

[illegible]

Signature

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Date _____

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25. Has a construction sequence schedule for the planned management practices been prepared? ☐ Yes ☐ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ☐ Check Dams
- ☐ Construction Road Stabilization
- ☐ Dust Control
- ☐ Earth Dike
- ☐ Level Spreader
- ☐ Perimeter Dike/Swale
- ☐ Pipe Slope Drain
- ☐ Portable Sediment Tank
- ☐ Rock Dam
- ☐ Sediment Basin
- ☐ Sediment Traps
- ☐ Silt Fence
- ☐ Stabilized Construction Entrance
- ☐ Storm Drain Inlet Protection
- ☐ Straw/Hay Bale Dike
- ☐ Temporary Access Waterway Crossing
- ☐ Temporary Stormdrain Diversion
- ☐ Temporary Swale
- ☐ Turbidity Curtain
- ☐ Water bars

Biotechnical

- Brush Matting
- Wattling

Other

[illegible]

Vegetative Measures

- ☐ Brush Matting
- ☐ Dune Stabilization
- ☐ Grassed Waterway
- ☐ Mulching
- ☐ Protecting Vegetation
- ☐ Recreation Area Improvement
- ☐ Seeding
- ☐ Sodding
- ☐ Straw/Hay Bale Dike
- ☐ Streambank Protection
- ☐ Temporary Swale
- ☐ Topsoiling
- ☐ Vegetating Waterways

Permanent Structural

- ☐ Debris Basin
- ☐ Diversion
- ☐ Grade Stabilization Structure
- ☐ Land Grading
- ☐ Lined Waterway (Rock)
- ☐ Paved Channel (Concrete)
- ☐ Paved Flume
- ☐ Retaining Wall
- ☐ Riprap Slope Protection
- ☐ Rock Outlet Protection
- ☐ Streambank Protection

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ☐ Preservation of Undisturbed Areas
- ☐ Preservation of Buffers
- ☐ Reduction of Clearing and Grading
- ☐ Locating Development in Less Sensitive Areas
- ☐ Roadway Reduction
- ☐ Sidewalk Reduction
- ☐ Driveway Reduction
- ☐ Cul-de-sac Reduction
- ☐ Building Footprint Reduction
- ☐ Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ☐ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ☐ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

. acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques
and Standard Stormwater Management
Practices (SMPs)

RR Techniques (Area Reduction)	Total Contributing Area (acres)	Total Contributing Impervious Area(acres)
○ Conservation of Natural Areas (RR-1) ...	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	and/or <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	and/or <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Tree Planting/Tree Pit (RR-3)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	and/or <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Disconnection of Rooftop Runoff (RR-4) ..	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	and/or <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
RR Techniques (Volume Reduction)		
○ Vegetated Swale (RR-5)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Rain Garden (RR-6)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Stormwater Planter (RR-7)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Rain Barrel/Cistern (RR-8)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Porous Pavement (RR-9)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Green Roof (RR-10)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
Standard SMPs with RRv Capacity		
○ Infiltration Trench (I-1)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Infiltration Basin (I-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Dry Well (I-3)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Underground Infiltration System (I-4)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Bioretention (F-5)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Dry Swale (O-1)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
Standard SMPs		
○ Micropool Extended Detention (P-1)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Wet Pond (P-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Wet Extended Detention (P-3)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Multiple Pond System (P-4)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Pocket Pond (P-5)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Surface Sand Filter (F-1)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Underground Sand Filter (F-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Perimeter Sand Filter (F-3)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Organic Filter (F-4)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Shallow Wetland (W-1)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Extended Detention Wetland (W-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Pond/Wetland System (W-3)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Pocket Wetland (W-4)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>
○ Wet Swale (O-2)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/>

[illegible][illegible][illegible]

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

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 acre-feet

- If Yes, go to question 36.
If No, go to question 32.

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- | | | |
|--|--|--|
| | | |
|--|--|--|
- acre-feet

- If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

- 33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

. acre-feet

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

.

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ☐ Yes ☐ No

If Yes, go to question 36.

If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

. acre-feet

CPv Provided

. acre-feet

- 36a. The need to provide channel protection has been waived because:

- ☐ Site discharges directly to tidal waters or a fifth order or larger stream.
- ☐ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

. CFS

Post-development

. CFS

Total Extreme Flood Control Criteria (Qf)

Pre-Development

. CFS

Post-development

. CFS

37a. The need to meet the Qp and Qf criteria has been waived because:

- ☐ Site discharges directly to tidal waters or a fifth order or larger stream.
- ☐ Downstream analysis reveals that the Qp and Qf controls are not required

- Site discharges directly to tidal waters or a fifth order or larger stream.
- Downstream analysis reveals that the Qp and Qf controls are not required

☐ Yes ☐ No

If Yes, Identify the entity responsible for the long term
Operation and Maintenance

[illegible]

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a)
This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

○ Air Pollution Control

○ Coastal Erosion

☐ Hazardous Waste

○ Long Island Wells

○ Mined Land Reclamation

○ Solid Waste

○ Navigable Waters Protection / Article 15

○ Water Quality Certificate

○ Dam Safety

○ Water Supply

○ Freshwater Wetlands/Article 24

○ Tidal Wetlands

○ Wild, Scenic and Recreational Rivers

○ Stream Bed or Bank Protection / Article 15

○ Endangered or Threatened Species(Incidental Take Permit)

- Individual SPDES

○ SPDES Multi-Sector GP								
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☐ Other

☐ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ☐ ☐ ☐ ☐ ☐ ☐

☐ Yes ☐ No

If Yes, Indicate Size of Impact.					.
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42. Is this project subject to the requirements of a regulated, traditional land use control MS4?
(If No, skip question 43)

☐ Yes ☐ No

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?

☐ Yes ☐ No

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name

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MI

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Print Last Name

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Owner/Operator Signature

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Date

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SEDIMENT AND EROSION CONTROL SPECIFICATION

CONSTRUCTION SPECIFICATIONS
SEDIMENTATION AND EROSION CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. The work of the Section consists of all sedimentation and erosion control as indicated on the Contract Drawings and/or specified herein and includes but is not limited to the following:
 - a. Silt fence.
 - b. Hay bale barriers.
 - c. Temporary covers for drainage structures.
 - d. Temporary protective soil coverings.
 2. The Contract Drawings indicate the minimum requirements for sedimentation control. The Contractor shall install all measures needed to control sediment and erosion as required by the Contractor and Sub-contractor's construction methods and operations, the weather conditions, and as directed by the Engineer.

1.2 SUBMITTALS

1. The Contractor shall provide the following samples and/or submittals for approval. Do not order materials until approval of samples, certifications or test results has been obtained. Delivered materials shall closely match the approved samples.
 - a. Siltation Fence: Submit manufacturer's literature, material specification, and installation instructions.
 - b. Mulch Material: Submit one cubic foot sample(s).
 - c. Mesh or Blanket Matting: submit one square foot sample(s) and manufacturer's literature, material specification, and installation instructions.
2. The Contractor shall install and maintain sedimentation control devices during construction to prevent the movement of sediment from the construction site to off site areas, into adjacent water bodies via surface runoff or into underground drainage systems. Measures to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at no additional cost to the Owner.

1.3 REFERENCE STANDARDS

- A. The following standards are applicable to the work of this Section to the extent referenced herein:
1. "New York Standards and Specifications for Erosion and Sediment Controls (August 2005)", prepared by the New York State Department of Environmental Conservation.
 2. "New York State Stormwater Management Design Manual (August 2010)", prepared by the New York State Department of Environmental Conservation.

1.4 EXAMINATION OF SITE AND DOCUMENTS

- A. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of a lack of knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation of the site.
- B. Plans, surveys, measurements and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period and formed his own conclusions as to the full requirements of the work involved.

1.5 PERMITS, CODES AND REGULATION

- A. Comply with all rules, regulations, laws and ordinances of the Town and State, and all other authorities having jurisdiction over the project site. All labor, materials, equipment and services necessary to make the work comply with such requirements shall be provided by the Contractor without additional cost to the Owner.
- B. Comply with all applicable regulations of the New York State Department of Environmental Conservation (DEC) and the United State Environmental Protection Agency (EPA).

1.6 STORM WATER POLLUTION PREVENTION PLAN

- A. A professional engineer has prepared a Storm Water Pollution Prevention Plan (SWPPP). The Contractor shall locate the SWPPP and review its contents thoroughly. Upon the award of the Contract, the Contractor becomes responsible for implementing the SWPPP and meeting the requirements and standards detailed within the SWPPP. The Contractor is also responsible for all record keeping associated with maintaining the SWPPP and for maintaining in good operating condition all SWPPP controls. The Professional Engineer who prepared the SWPPP shall modify the SWPPP as necessary to reflect changes in project scope, schedule, or approach, as coordinated with the Contractor. All labor, materials, equipment and services necessary to make the work comply with such requirements shall be provided by the Contractor without additional cost to the Owner.
- B. The Contractor shall fill out all pertinent information within the SWPPP.
- C. The Contractor shall locate the New York State DEC Division of Water "Notice of Intent" for Storm Water Discharges Associated with CONSTRUCTION ACTIVITY under State Pollutant Discharge Elimination System (SPDES) General Permit #GP-0-15-002 (NOI) form in the SWPPP.
- D. The Contractor is responsible for filling in the Contractor and Sub-Contractor information in the areas indicated within the SWPPP and for completing the Contractor's Certification portion of the SWPPP.
- E. The Contractor is responsible for maintaining the following records on site:
 - 1. Completed SWPPP as indicated in sections B, C, D and E.
 - 2. Completed Inspection Reports
 - 3. Completed Maintenance Reports
 - 4. Construction Activity Reports
 - 5. Spill Records
 - 6. Other Materials relevant to the NOI Permit and SWPPP
 - 7. A copy of the Notice of Termination
- F. The Contractor is responsible for filing a Notice of Termination once the project has been completed and is permanently stabilized. Stabilization is complete when all temporary storm water and erosion controls have been removed, all permanent storm water and erosion controls are in place and functional and all vegetated areas are at least 70% viable.
- G. All labor, materials, equipment and services necessary to make the work comply with the above requirements shall be provided by the Contractor without additional cost to the Owner."

PART 2 – PRODUCTS

2.1 SILTATION FENCE

A. Siltation fence shall consist of the following elements:

1. Fabric for siltation fence shall be a minimum width of 3 feet and conforming to the following criteria:

MINIMUM ACCEPTABLE

<u>Fabric Properties</u>	<u>Value</u>	<u>Test Method</u>
Grab Tensile Strength (lbs)	124	ASTM D 4632
Elongation of Failure (%)	15	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	65	ASTM D 4833
Flow Rate (gal/min/sf)	10	ASTM D 4491
Apparent Opening Size (sieve)	30	ASTM D 4751
Ultraviolet Radiation (% strength retained)	70	ASTM D 4355

2. Use only commercially available fabric that is certified in writing by the manufacturer for the purpose intended.
3. Acceptable fabric materials include "Mirafi Envirofence" by TC Mirafi, "Style 2130" by Amoco Fabrics Co., and "FX-55" by Carthage Mills, or approved equal by the Engineer.
4. Silt fence posts: Posts may be wood or metal. Wood post shall be a minimum 1¼ inch by 1¼ inch by 5 feet long hardwood stakes commonly used to support siltation fabric. Metal posts shall be a minimum of 1 inch wide and 5 feet long. Posts shall be spaced at a maximum distance of 8 feet on center.
5. Provide suitable heavy nylon cord for securing abutting silt fence posts.

2.2 HAY BALES

- A. Hay bales shall be of wire or nylon bound bales of hay.
- B. Stakes for bales shall be one of the following materials. Lengths shall be approximately three feet (3').
1. Wood stakes of sound hardwood, one inch by one inch (1" x 1") in size.
 2. Steel reinforcing bars of at least No. 4 size.

2.3 TEMPORARY COVERS FOR DRAINAGE STRUCTURES

- A. Filter fabric for use as temporary covers for drainage structures shall be the same as noted above for siltation fence.
- B. Wire mesh for use at temporary drainage structure covers shall be 6" x 6", W2.9 welded wire mesh.
- C. Silt-Sac, or approved equal, may be used in lieu of hay bales and filter fabric at catch basins.

A. During establishment of vegetative covers, provide temporary protective coverings on ground areas subject to erosion of one of the following protective measures, as directed by the Engineer:

- ## PART 3 – EXECUTION

A. The Contractor shall provide suitable and adequate means of sedimentation and erosion control during construction. Control measures shall prevent all erosion, siltation and sedimentation of waterways, drainage systems, construction areas, adjacent areas and off-site areas. Work shall be accomplished on and/or adjacent to the following work areas:

- B. Means of protection as noted on the Contract Drawings indicate the minimum provisions necessary. Additional means of protection shall be provided by the Contractor as required for continued or unforeseen erosion problems, at no additional expense to the Owner.

- C. Periodic maintenance of all sediment control installations shall be provided to ensure intended purposes are accomplished. Sediment control measures shall be in working condition at the end of each day.

- D. After any significant rainfall, sediment control devices shall be inspected for integrity. Any damaged device shall be corrected immediately.

- E. The Contractor shall provide adequate means of control of runoff, as to not detrimentally impact downstream conditions during construction. The Contractor shall plan his operations so that permanent drainage mitigation systems such as detention/retention/infiltration basins and chambers are in place and properly functioning prior to connecting upland drainage flows to these systems. The Contractor shall plan his operations such that downstream drainage mitigation measures are in place and functioning before attempting to tie in upgradient drainage systems.
- F. In the event that the Contractor is unable to sequence the work so that construction of the permanent drainage mitigation systems precedes the upland work, then the Contractor shall submit a plan indicating his proposed methods of otherwise controlling runoff from the site.
- G. The "New York Standards and Specifications for Erosion and Sediment Controls (August 2005)", should be consulted as a guide for the selection and installation of Best Management Practices to suit the conditions encountered.

3.2 SILTATION FENCE

- A. Install silt fence, well-staked at maximum eight-foot intervals in locations as shown on Contract Drawings and as directed. Staking shall occur on the disturbed area side.
- B. Secure fabric to posts on upstream side and bury fabric end within a 6-inch wide by 6-inch deep cut-in trench. Wrap the fabric bottom around the inside of the trench and backfill excavated soil into the fabric pocket to anchor the fence fabric.
- C. Inspect siltation fence after major storm events and periodically and remove accumulated sediment and debris. If a breach or failure of the siltation fence occurs, the fence shall immediately be restored.

3.3 HAY BALE BARRIERS

- A. Install hay in location as shown on Contract Drawings and as directed.
 - 1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
 - 2. Each bale shall be embedded in the soil a minimum of four inches (4").
 - 3. Bales shall be securely anchored in place by stakes or re-bars driven through the bales and a minimum eighteen inches (18") into the soil. The first stake in each bale shall be angled toward the previously laid bale to force bales together.
- B. Inspection shall be frequent and repair or replacement shall be made as needed.
- C. Bales shall be removed when they have served their usefulness so as not to block or impede stormwater flows or drainage.

3.4 TEMPORARY COVERS FOR DRAINAGE STRUCTURES

- A. Install temporary covers at drainage structure locations that may be subject to erosion infiltration and as directed by the Engineer.
- B. Inspect drainage structures periodically. Remove sediment accumulation and regrade or replace materials as required.

3.5 TEMPORARY PROTECTIVE COVERINGS

- A. Place temporary soil coverings to control erosion and sedimentation on all disturbed or graded areas as required by the construction methods employed and as directed by the Engineer. Erosion control

matting shall be installed in all areas seeded or hydroseeded with slopes of one vertical foot to three foot horizontal, or steeper, immediately after such areas have been seeded and a hay mulch applied as follows:

1. The area to receive matting shall have been recently seeded and shall have a smooth surface free from stones, clods or depressions.
 2. Roll out of the matting perpendicular to the slope, do not stretch the fabric. In drainage swales, center the fabric along the flow line. Install the matting in a check slot at the top and bottom of the slope and at the edges of the area to be covered. Check slots shall be six inches deep and six inches wide. Fabric shall extend down one wall of the check slot and across the full width of the base. Overlap edges of matting rolls four (4) inches minimum and overlap the ends eighteen (18) inches minimum.
 3. Install staples in check slots, edges, center and ends of rolls by driving specified steel staples two feet on center over the entire area to be covered except at check slots and ends of rolls, where staples shall be placed six inches on center. All staples shall be driven below finished grade.
 4. Fill check slots with loam and tamp firmly.
 5. Reseed check slots and all disturbed areas per Specifications.
 6. Following matting installation, roll the entire area with a smooth drum roller weighing between fifty and seventy-five (50-75) pounds per linear foot of roller. The finished installation of matting shall be firmly in contact with the seeded area and provide a smooth, finished appearance free from lumps or depressions.
- B. Install erosion control matting as a temporary ground cover in all disturbed or graded areas subject to erosion and as directed by the Engineer. The temporary ground cover shall protect the site from erosion until a full permanent lawn can be installed. Install and anchor in place temporary erosion control matting in accordance with manufacturer's printed instructions or as directed by the Engineer and remove all temporary erosion control matting prior to installation of a permanent lawn.
- C. Inspect protective coverings periodically and reset or replace materials as required.
- 3.6 REMOVAL AND FINAL CLEANUP
- A. Once the site has been fully stabilized against erosion, and with the approval of the Owner's Representative remove sediment control devices and all accumulated silt. Dispose of silt and waste materials offsite. Regrade all areas disturbed during this process and stabilize against erosion with surfacing materials as indicated.

END OF SPECIFICATION

STORMWATER MANAGEMENT SYSTEMS
OPERATIONS AND MAINTENANCE PLANS

Stormwater System Operations and Maintenance Plan

Project: German Brothers Industrial Park, LLC
Boat Storage Facility North Street

Location: 3907 County Road 16
Canandaigua, NY

Client: German Brothers Industrial Park, LLC

Date: December 11, 2015

Prepared by: Venezia and Associates
5120 Laura Lane
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Part I: Stormwater System Components

1. Closed Drainage System

The on-site stormwater management system, consisting of drainage swales, infiltration trenches, an engineered gravel parking area/recharge system, and catch basins collects runoff from the driveway, parking lot and roof top prior to discharging it downstream. Stormwater collected from these surfaces is treated and mitigated using several Stormwater Management Practices (SMPs) prior to discharging to an existing drainage easement on the eastern edge of the property.

2. Water Quality SMPs

The stormwater quality SMPs proposed for the new development include drainage swales, infiltration trenches, an engineered gravel parking area/recharge system. The majority of stormwater runoff generated from the site will be treated using the water quality SMPs to treat 90% of the average annual stormwater runoff volume. The stormwater management system has also been designed so that no increase in the post-development rate of stormwater runoff from the site will occur from any storm event up to and including the 100-year storm.

Part II: Construction of the System

Sediment and erosion control during construction will prevent possible damage to the existing drainage system and downstream facilities. The Contractor shall conform to the guidelines established by the project's Stormwater Pollution Prevention Plan (SWPPP), which include the following control measures:

1. Keep land disturbance to a minimum. Plan the phases of development so that only the areas actively being developed are exposed. All other areas should have natural vegetation preserved, have good temporary cover, or permanent vegetation established.
2. Stabilize disturbed areas. Permanent structures, temporary or permanent vegetation, and mulch should be employed as quickly as possible after land is disturbed.
3. Protect disturbed areas from stormwater runoff. Install erosion control or stormwater management measures to prevent water from entering and running over disturbed areas, and to prevent erosion damage to downstream facilities.
4. Install perimeter control practices. Use practices that isolate the development site from surrounding areas. Siltation fence and a temporary settlement basin shall be utilized.
5. Contractor shall clean/flush entire stormwater system prior to final acceptance of owner.

During construction, all water quality SMPs shall be protected and maintained as described in Part III below.

Part III: Maintenance of the System during Construction

Maintenance Schedule during Construction

	Inspection Frequency and Procedures	Maintenance Thresholds	Maintenance Action
Sweeping (driveway, walkway, parking areas)	Weekly or on an as needed basis <ul style="list-style-type: none">• Check sediment/grit accumulation	If sediment/grit builds up on driveways, walkways, and parking areas	Sweep area with mechanical sweeper or hand sweep area.
Catch Basins	Weekly and after storm events greater than or equal to ½ inch of rainfall over a 24-hour period	If the bottom of the basin appears to be collecting sediment	Clean sediment out

After the site has been fully stabilized all erosion control measures shall be removed.

All sediment removed from SMPs shall be disposed of legally by the Contractor.

During Construction the site shall meet NYSDEC and Canandaigua Stormwater and Erosion Control Standards.

Part IV: Maintenance of the System Post-Construction

	Inspection Frequency and Procedures	Maintenance Thresholds	Maintenance Action
Catch Basins	Quarterly and after storm events greater than or equal to 2 inches of rainfall over 24-hours:	If the bottom of the basin appears to be collecting sediment	Clean sediment out
Stone Trench Infiltration Area	Conduct semi-annual and after large storm events (more than 3.2-inches of rainfall in a 24-hour period) inspections.	If sediment is observed in infiltration trench or overflow catch basins.	Clean sediment out. Jet pipe if sediment is observed in catch basins.
Engineered Gravel*	Monitor to ensure surface drains after storm events. Inspect Annually at a minimum.	If exfiltration capability is found to decline and/or sediment is visible at the surface.	Remove clogged stone area and replace with new material

All sediment removed from SMPs shall be disposed of legally and in accordance with state and local requirements, by the Owner.

*Engineered Gravel Maintenance:

- No Winter Sanding shall be conducted on Engineered Gravel
- Snow Plowing is allowed
- Minimize salt usage during winter months

Part V: Repair of the System

The drainage system shall be maintained by the owner. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants including silt from entering downstream receiving bodies.

Part VI: Reporting

The Owner shall maintain a record of drainage system inspections and maintenance. The records shall be made available to the Town of Canandaigua and Town Engineer, as they are generated. Attached is a prototype of an inspection/maintenance log to be used.

STORMWATER MANAGEMENT SYSTEM OPERATIONS AND MAINTENANCE LOG

[illegible]