Brighton Hill Storage

East Brighton Ave

City of Syracuse, Onondaga County, NY

Tax Map #062.-02.11.0

RZE #24043

SWPPP

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1.0 – SUMMARY

Mr. Charles proposes development to a 2.86± acre lot located on Brighton Ave in the City of Syracuse, Onondaga County, NY. Currently existing onsite are several garage structures, a residential structure, asphalt and gravel driveways and parking, and wooded regions. Proposed for development of the site is a three (3) story self-storage building, associated asphalt parking and drive, a concrete walkway, and stormwater facilities. The proposed development for the site will include approximately 2.86+/- acres disturbance as defined by the NYSDEC Manual. This report has been prepared with supporting documentation and calculations for the stormwater design. Site improvements within the project include buildings, parking areas, stormwater facilities, and general site landscaping.

2.0 – OBJECTIVE

The purpose of this Report is to describe the additional stormwater management and erosion control measures for the site and the rationale for their use. This Report has been prepared in accordance with the United States Department of Agriculture (USDA) - Soil Conservation Service (SCS) “NYS Standards and Specifications for Erosion and Sediment Control,” the New York State Department of Environmental Conservation (NYSDEC) “NYS Stormwater Management Design Manual,” and the NYSDEC “SPDES General Permit for Stormwater Discharges from Construction Activities.”

This report will provide a narrative description of the proposed site improvements including stormwater management structures and erosion control methods to be temporarily or permanently employed at the site.

A copy of this SWPPP shall be maintained on site by the owner/contractor for the duration of the construction process.

3.0 – EXISTING SITE CONDITIONS

Existing Site Use

Mr. Charles proposes development to a 2.86± acre lot located on Brighton Ave in the City of Syracuse, Onondaga County, NY. Currently existing onsite are wooded regions. Proposed demolition includes the removal of 2.805± ac of the existing woods. The location of the site in relation to major roads and other points of reference are presented in Figures 1-3 along with an aerial photo of the site, general environmental mapping, and general vicinity.

For the purposes of analysis, one watershed was delineated for existing conditions. EXDA-1 consists of approximately 2.805± acres of wooded areas and 0.055± acres of paved areas. EXDA-1 discharges at the northwestern side of the parcel to an adjacent property.

According to soil information provided by the National Cooperative Soil Survey the site soils consist of Cazenovia silt loam – HSG Type C, Wassaic-Benson silt loam – HSG Type C. Testing results performed by a Kenney Geotechnical Engineering Services can be found in Appendix A.

The existing land-surface cover descriptions and totals for this site within the site watershed(s) are described as follows:

- Woods/grass comb., HSG C – 2.805± ac
- Impervious Areas, HSG C – 0.055± ac

4.0 – PROPOSED SITE USE AND IMPROVEMENTS

Proposed Site Use

For purposes of analysis, the site disturbed area watersheds were analyzed under pre- and post-conditions to determine peak runoff conditions associated with the design of the stormwater control facilities. Further discussion of the analysis is discussed in the next few report sections. The site is connected to public water and sanitary sewer systems. Access to the site during construction will be made via a temporary construction entrance in the location of the permanent entrance to the site. In post-development conditions for DA-1 the watershed is smaller than in pre-conditions. The Tc flowpath and discharge point changes per approval by the City of Syracuse Engineering Department.

Site Improvements

The proposed grading and drainage plan for the site is designed to maintain the site drainageways within it, attempting to improve existing storm runoff conditions. Stormwater runoff from site improvements will flow to proposed stormwater management systems via sheet flow, shallow concentrated flow, and channel flow through the proposed drainage system. All stormwater runoff from the subject site eventually discharges to Onondaga Creek.

The proposed land-surface cover descriptions and totals for this site within the site watershed are described as follows:

- 50-75% Grass Cover, Fair, HSG C – 0.480± ac
- Impervious Cover (building, pavement, etc.) – 1.543± ac

5.0 – STORMWATER RUNOFF COMPUTATIONS

This section of the Report outlines the results of a stormwater runoff analysis that was conducted for the proposed site. The analysis includes a comparison of pre-development hydrologic conditions with those of the post-development conditions. This analysis is based on the site watershed's total area under both Pre- and Post-Development Conditions.

HydroCAD Version 10.00 was utilized in this Report for estimating runoff and peak discharges from the site disturbed area watershed. This computerized model was developed by the USDA-SCS to determine runoff volumes and peak rates of discharge, and takes into account watershed area, rainfall frequency, runoff coefficients characterizing land surfaces, flow duration or time of concentration, and average watershed slopes. Pre- and post-development calculations were generated for a 1, 2, 5, 10, 25, 50 and 100-year frequency, 24-hour storm event. Exhibits outlining stormwater runoff information referenced from the New York Standards and Specifications for Erosion and Sediment Control are presented in Appendix I.

The SCS has developed curve numbers characterizing land surfaces for urban areas and agricultural lands, which were utilized in the computer modeling of this site.

The time of concentration (t_c) value is utilized in the modeling of stormwater runoff for a site. Time of concentration is the duration that it takes for runoff to travel from the hydraulically most distant point of the watershed to a point of interest (outfall) within the watershed. It is also the sum of the travel time from the various consecutive flow segments along the flow path of the watershed to the outfall. The time of concentration is dependent on the velocity of the runoff, and is a function of the surface roughness, slope of the surface, and flow segment length.

Pre-Development Analysis

For purposes of analysis, the disturbed site watersheds were analyzed to determine the existing site peak runoff rate to the downstream discharge point. This peak runoff rate at the downstream discharge point was used as the limiting factor when comparing the post-development rates from the site.

The computer modeling results of the pre-development site conditions for a 1, 2, 5, 10, 25, 50 and 100-year, 24-hour storm event indicates that the following peak runoff rates in cubic feet per second (cfs) are anticipated to discharge from the pre-site condition drainage area. Calculations are presented in Appendix C.

Pre-Development Site Watershed

Drainage Area (I.D.)	Area (Acres)	1 Year Storm Peak Flow (cfs)	2 Year Storm Peak Flow (cfs)	5 Year Storm Peak Flow (cfs)	10 Year Storm Peak Flow (cfs)	25 Year Storm Peak Flow (cfs)	50 Year Storm Peak Flow (cfs)	100 Yr Storm Peak Flow (cfs)
EXDA-1	2.865	1.02	1.24	2.06	3.61	4.25	5.63	7.48

Post-Development Analysis

For purposes of analysis, the proposed site construction limits were analyzed under pre- and post-conditions to determine peak runoff conditions associated with the design of the stormwater control facilities. As stated earlier, EXDA-1 was subdivided under post-development conditions.

The computer modeling results of the post-development site conditions for a 1, 2, 5, 10, 25, 50 and 100-year 24-hour storm event indicates that the following peak runoff rates are anticipated to discharge from the post-site condition drainage area. Calculations are presented in Appendix D.

Post-Development Site Watersheds

Drainage Area (I.D.)	Area (Acres)	1 Year Storm Peak Flow (cfs)	2 Year Storm Peak Flow (cfs)	5 Year Storm Peak Flow (cfs)	10 Year Storm Peak Flow (cfs)	25 Year Storm Peak Flow (cfs)	50 Year Storm Peak Flow (cfs)	100 Yr Storm Peak Flow (cfs)
PRDA-1	2.023	4.99	5.45	7.03	9.65	10.72	12.73	15.39

Comparison of Pre- and Post-Development Runoff

The peak flow conditions for the pre- and post-development watershed areas of the project site are summarized below:

Pre-Development Watershed vs. Post-Development Watershed (Pre Routing)

Drainage Area (I.D.)	Drainage Area (ac)		1 Year Storm Peak Flow (cfs)		2 Year Storm Peak Flow (cfs)		5 Year Storm Peak Flow (cfs)		10 Year Storm Peak Flow (cfs)		25 Year Storm Peak Flow (cfs)		50 Year Storm Peak Flow (cfs)		100 Yr Storm Peak Flow (cfs)	
	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site	Pre Site	Post Site
DA-1	2.865	2.023	1.02	4.99	1.24	5.45	2.06	7.03	3.61	9.65	4.29	10.72	5.63	12.73	7.48	15.39

The above table reflects increases in peak runoff conditions for the DA-1. This increase in peak runoff is due to the installation of the impervious surfaces. Therefore, DA-1 will require quality and quantity controls to be discussed in the next section in accordance with Chapter 10 of the NYS Stormwater Design Manual and City of Syracuse Engineering requirements.

6.0 – STORMWATER MITIGATION AND BMP'S

An I-4 Underground infiltration system is proposed for watershed DA-1. The practices utilized for PRDA-1 are described below. A summary of the stormwater flows post routing are found in the table below and the calculations can be found in Appendix E. A geotechnical report with onsite infiltration testing provided by Kenney Geotechnical Engineering Services revealed satisfactory infiltration rates, see Appendix A.

Pre-Development Watershed vs. Post-Development Watershed (Post Routing)

			1 Year Storm		2 Year Storm		5 Year Storm		10 Year Storm		25 Year Storm		50 Year Storm		100 Year Storm	
Drainage Area	Drainage Area (ac)		Peak Flow (cfs)		Peak Flow (cfs)		Peak Flow (cfs)		Peak Flow (cfs)		Peak Flow (cfs)		Peak Flow (cfs)		Peak Flow (cfs)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
(I.D.)	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site	Site
DA-1	2.865	2.023	1.02	0.00	1.24	0.00	2.06	0.00	3.61	0.00	4.29	0.00	5.63	1.09	7.48	5.12

I-4 Underground Infiltration System with MC-4500 Chambers

The underground storage system located in the southwestern portion of the site will consist of 336± total LF of ADS MC-4500 Chambers (4 rows @ 84 LF, 19 chambers/row), with stone invert at 702.00' and chamber invert at 702.75'. A 6" underdrain is proposed under both the chamber system and the outdoor storage at invert 702.00' to allow for draining of the stone underneath the system after a storm event. The system and underdrain discharges to an onsite outlet structure, which ultimately discharges to the City of Syracuse Stormwater system. The outlet structure has a proposed rim elevation of 708.50'. The structure has a weir wall with a 4" x 4" cutout at an invert of 706.96' with the top of the weir wall is at an invert of 707.29' A 15" HDPE Outlet Pipe is proposed at an invert of 702.00'. The outlet pipe discharges to the storm system that runs along East Seneca Turnpike. The WQv for PRDA-1 is provided below the invert of the #" orifice. The required WQv for PRDA-1 is 0.253 ac-ft, the WQv provided is 0.254 ac-ft. Therefore, the system is successful in providing WQv requirements. Stormtech units design, maintenance, and construction information to be provided by contractor for engineering review prior to installation.

7.0 – PROPOSED STORMWATER DRAINAGE FACILITIES

All on site drainage facilities are designed to transmit flows from a 25-year storm event

to downstream stormwater Best Management Practices. The location, size, and type of all existing and proposed pipes are provided on the contract drawings. The calculations and basis for analysis may be provided upon request.

8.0 – STORMWATER QUALITY VOLUME

Typically, the water quality volume (denoted as WQV) is designed to improve water quality, sized to capture and treat 90% of the average annual stormwater runoff volume. However, due to this site being in the Onondaga Lake TMDL Phosphorous Watershed, the WQv is defined as the volume from the 24-hour 1 year design storm. The following equation is used to estimate water quality storage volume WQ_V in acre feet of storage:

$$WQ_V = \frac{(P)(R_V)(A)}{12}$$

Where:

WQ_V = water quality volume (in acre-feet)
P = 90% Rainfall Event Number (Figure 4.1 – Appendix G)
R_V = 0.05 + 0.009(I), where I is the percent of impervious cover
A = site area in acres

It is assumed that by meeting the WQ_V requirements thru the employment practices outlined in Table 5.1 of the "New York State Stormwater Management Design Manual", a project will, by default, meet water quality objectives. Calculations of WQv and CPv can be found in Appendix G.

- PRDA-1a 100% New Impervious WQv volume = 0.124 ac-ft
  - TMDL 1-Year Storm Volume = 0.253 ac-ft
  - WQv Provided = 0.254 ac-ft

9.0 – PHOSPHORUS REMOVAL

Chapter 10 of the NYS Stormwater Design Manual outlines the requirements for treatment of phosphorus in Phosphorous TMDL watersheds. This project is within Onondaga Lake TMDL watershed. Therefore, this site is subject to the Chapter 10 requirements. As discussed in Section 8.0, Chapter 10 outlines requirements that the WQv of a TMDL site shall be equal to the post-development 1-yr storm volume. As outlined in Section 8.0, the proposed BMP measures are successful in exceeding the WQv requirements per the NYSDEC Stormwater Manual.

10.0 – RUNOFF REDUCTION VOLUME AND GREEN PRACTICES

Since standard infiltration practices are being employed on this site, 100% of the water quality volume may be taken as RRv. As a result, no additional RRv/Green Infrastructure practices are required for this site. The green practices encompassed on the site are shown in the table below:

Green Practices

PRACTICE	WATERSHEDS	TYPE OF REDUCTION
• Infiltration	Post Development DA-1	Source Control

Soil Restoration Requirements **

According to Section 5 of the NYS Stormwater Design Manual, soil restoration practices must be applied across the site in areas of soil disturbance. This is necessary to reclaim the origional properties and porosity of the soil before construction. The benefits of soil restoration include but are not limited to:

- Less stormwater runoff
- Increased porosity on redevelopment sites where impervious cover is converted to pervious
- Achieves performance standards on runoff reduction practices
- Healthier, asthetically pleasing landscapes
- Enhances direct groundwater recharge
- Promotes sucessful long term revegitation by restoring soil organic matter, permeability, drainage and water holding capacity for healthy root system development of trees, shrubs and deep-rooted ground covers, minimizing lawn chemical requirements, plant drowning during wet periods, and burnout durring dry periods

Table 5.3 Soil Restoration Requirements			
Type of Soil Disturbance	**Soil Restoration Requirement**		**Comments/Examples**
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A &B	HSG C&D	Protect area from any ongoing construction activities.
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A &B	HSG C & D	
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration **	
Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (de-compaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

*Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
** Per "Deep Ripping and De-compaction, DEC 2008".

** taken from the NYS Stormwater Management Manual (version 2010)

Many of the Runoff Reduction practices will require soil restoration measures applied in and around the practice inorder to reach the desired runoff reduction performance. Table 5.13 on page 5-22 of the NYS Stormwater Design Manual has been included below that higlights these requirements and provides guidance on when to implement soil restoration techniques. Also included is the NYS Stormwater Design Manual section on Practice implimentation, Maintenece and Inspection.

Soil Restoration Practice Implementation:

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

1. Apply 3 inches of compost over subsoil
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractormounted disc, or tiller, mixing, and circulating air and compost into subsoils

Figure 5. 16 Soil aerator implement

Figure 5. 17 Soil aerator implement

3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site
4. Apply topsoil to a depth of 6 inches
5. Vegetate as required by approved plan.

Figures 5.16 and 5.17 above show two attachments used for soil decompaction. Tilling (step 2 above) should not be performed within the drip line of any existing trees or over utility installations that are within 24 inches of the surface.

Soil Restoration Inspection:

At the end of the project an inspector should be able to push a 3/8” metal bar 12 inches into the soil just with body weight.

Compost Specifications

Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

Soil Restoration Maintenance:

The maintenance agreement with the town should identify where Soil Restoration has been applied (in addition to already being shown on the contract documents), where newly restored areas are/cannot be cleared, who the responsible parties are to ensure that routine vegetation improvements are made (i.e., thinning, invasive plant removal, etc.). Soil compost amendments within a filter strip or grass channel should be located in public right of way, or within a dedicated stormwater or drainage easement.

First Year Maintenance Operations Includes:

• Initial inspections for the first six months (once after each storm greater than half- inch)
• Reseeding to repair bare or eroding areas to assure grass stabilization
• Water once every three days for first month, and then provide a half inch of water per week during first year. Irrigation plan may be adjusted according to the rain event.
• Fertilization may be needed in the fall after the first growing season to increase plant vigor

Ongoing Maintenance:

Two points help ensure lasting results of decompaction:

1. Planting the appropriate ground cover with deep roots to maintain the soil structure
2. Keeping the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths. (Sometimes it may be necessary to de-thatch the turf every few years)

11.0 – POSSIBLE CONTAMINANTS FROM CONSTRUCTION ACTIVITIES

During construction contaminants from materials and equipment could enter the stormwater drainage system unintentionally. The contractor should store construction materials and equipment in the designated staging area and all possible contaminants should be stored to prevent damage.

This particular project will require construction equipment such as a backhoe, drum roller, dump trucks, a grader, and bull dozer. These vehicles use oil and petroleum products which if not treated carefully could enter the storm drainage system. Accidental spills should be reported to the Department of Environmental Conservation 24 hour spill response hotline at 1-800-457-7362. On site fueling of construction equipment shall be limited to a bermed/ diked area located within the project staging area. The table below provides a guide for quantities that should be reported. Should a spill incident occur, the employee or party responsible for the spill should contain the spill, start cleanup and report the spill to his/ her superiors. The spill should be reported to the appropriate governing agency should the spill exceed the reportable quantity or enter surface waters.

Examples of Reportable Quantities		
Material	*Media Released To*	*Reportable Quantity*
Engine oil, fuel, hydraulic and brake fluid	Land Water	25 gallons Visible Sheen
Antifreeze	Land	100 lbs (13 gal.)
Battery Acid	Land, Water	100 lbs.
Refrigerant	Air	1 lb.
Gasoline	Air, Land, Water	100 lbs.
Engine Degreasers	Air, Land, Water	100 lbs.

All construction waste material such as housing materials and utility installation materials shall be disposed of as required by law.

Wastewater from concrete washout areas is prohibited from discharging directly to any site areas not managed by an appropriate stormwater control measure. Also prohibited are washouts from stucco, paint, form release oils, curing compounds, and other construction materials. Soaps, solvents, fuels, oils, or other pollutants used in vehicle operations or maintenance shall also be controlled by an appropriate stormwater control measure. Staging areas are designated on the plans for storage of equipment and vehicles. Locations subject to the above contaminants outside the staging area shall require additional measures and should be reviewed with the SWPPP inspector and MS4 representative prior to commencement of activities that may result in contamination.

12.0 – EROSION CONTROL MEASURES

Structural erosion and sediment control measures are classified as either temporary or permanent, according to how they are used. Temporary structural measures shall be used during construction of the site to prevent off-site sedimentation. Permanent structural measures shall be utilized following construction and shall be implemented to convey surface water safely to the existing drainage ways present in the pre-development condition. The permanent structural measures shall remain in-place and continue to function after the completion of construction. General construction notes and maintenance plan for implementing the temporary and permanent stormwater and erosion control structures during and after construction have been developed for the project.

Erosion control measures shall be inspected twice weekly by a Licensed Professional Engineer or Erosion Control Specialist until the site is completely stabilized. Inspections and maintenance of erosion control structures shall be in accordance with the NYS Pollution Discharge Elimination System for Construction Activities GP-0-15-002 (SPDES) program. The owner shall file a Notice of Intent (NOI) with the NYS DEC prior

to commencement of further construction activities. The NOI shall be sent to:

NYSDEC- Notice of Intent
Bureau of Water Permits
625 Broadway
Albany, NY 12233-3505

Temporary Structural Measures

This subsection will describe the specific temporary control measures to be implemented to reduce and/or eliminate erosion and sedimentation during the construction phase of this project. Example details of the following erosion control measures are presented in Appendix I. As construction progresses more site areas may be opened after already constructed areas are permanently stabilized in accordance with the New York State Standards and Specifications for Erosion and Sediment Control.

Silt Fence

A temporary barrier of geotextile fabric (filter cloth) fence shall be used to intercept sediment-laden runoff along the borders of disturbed site areas during construction. A geotextile fabric fence shall also be placed around all permanent stormwater drainage structures, in the absence of straw bale dikes, (catch basins and manholes) to intercept sediment and protect the structure during construction. The geotextile filter fabric fence requires periodic maintenance and should be checked for tears or clogging with silt or debris. Silt can be removed from the woven filter cloth with a stiff brush if clogging occurs.

Stabilized Construction Entrance

A stabilized pad of aggregate underlain with filter cloth shall be positioned at points where traffic will be entering or leaving the construction site area onto public roads. This measure will reduce the tracking of soils onto public roads or streets.

Dust Control

Construction activities should be scheduled to minimize the amount of disturbed area at a single time. If vegetated areas can be left in tact to serve as a buffer zone these areas should be maintained where practical. During dry conditions, open soil areas may require hosing down with water to prevent excessive dust. Spray adhesives may be utilized as outlined in the NYS Standards and Specifications for Erosion and Sediment Control. Fences or vegetation may be required to minimize dust pollution to adjacent properties and should be incorporated into the site erosion control plan as required.

Drop Inlet Protection

A temporary, somewhat permeable barrier shall be installed around inlets in the form of a fence, berm, or excavation around an opening, trapping water and to prevent heavily sediment laden water from entering a storm drain system through inlets. The barrier should be inspected after each rain event and repairs shall be made as necessary. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the area around the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

Maintenance of Temporary and Permanent Control Structures

Temporary and Permanent Stormwater Facilities during Construction

Temporary stormwater and erosion control structures must be constructed in accordance with their design intent and maintained to prevent sediment-laden runoff from leaving the site during construction. In general, the temporary structures during construction should be inspected on a routine basis and maintained as follows:

- Temporary silt fences, straw bale dikes, and sediment interceptors shall be installed prior to earth disturbance to reduce runoff velocity and transportation of sediment. The stabilization structures shall be inspected weekly and after every rainfall; and the structures cleaned, repaired, or replaced as required. Temporary stabilization structures shall be removed when their contributory drainage area is stabilized.

- Temporary storm drain inlet protection shall be installed to prevent heavily sediment laden water from entering a storm drain through inlets. Inspections shall be bi-weekly and after major storms to insure that sediment is not being allowed into the storm system. The inlet protection shall be cleaned, repaired, and or replaced as required until the contributing drainage area is stabilized. When this occurs, the devices shall be removed and the area around the inlet shall be stabilized in the manner appropriate the site.

- All permanent drainage structures, installed as part of the site improvements, shall be inspected weekly and after every rainfall to insure structural integrity, detect vandalism and damage, and for cleaning. Permanent drainage structures shall be repaired or replaced, as required.

- All disturbed soil areas, upon final grading of topsoil, shall be seeded, and mulched. All seeded areas shall be inspected monthly and after every rainfall and the areas repaired and re-seeded, as required.

- Stabilized construction entrance shall be installed to control erosion at location where traffic will be entering or leaving the construction area. The temporary construction entrance shall be inspected periodically and after each rainfall; and

the entrance cleaned, repaired, or replaced, as required. The temporary construction entrance shall be removed when construction is completed and all disturbed areas are stabilized.

Permanent Stormwater Facilities after Construction

Permanent stormwater control structures must be constructed in accordance with their design intent and maintained on a routine basis to remain effective. This site has employed stormwater management facilities. Prior to submission of the Notice of Termination to NYSDEC the contractor shall provide as built drawings of all stormwater best management practices and facilities to allow verification of construction in compliance with this SWPPP and the contract drawings. **It is the responsibility of the owner to maintain these facilities as required by the NYS Stormwater Design Manual. Maintenance requirements and design information is included in Appendix J of this report.**

In general, the structures after construction should be inspected periodically and maintained as follows:

- Permanent stormwater drainage structures shall be inspected semi-annually and after every 0.5 inches of rainfall to insure structural integrity, detect vandalism and damage, and for cleaning. The structures shall be repaired or replaced, as required.
- Stormwater Quality unit(s) shall be inspected and maintained as per the manufacturers requirements by the party deemed responsible for site and stormwater maintenance for this facility.

- Permanent lawns and grassed areas shall be inspected and maintained on a regular basis, consistent with favorable plant growth, soil, and climatic conditions to insure soil protection and structural integrity of the site's plant cover. Maintenance involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire controls, weed, and pest control, re-seeding, and timely repairs, as required. Maintenance of vegetative areas shall also include removal of debris and protection from unintended uses or traffic.

- **Stormwater Best Management Practices used on this site; their design intents and inspection and maintenance punch list forms have been included in Appendix J.**

Site Stabilization

The Owner/Contractor shall initiate stabilization measures as soon as practicable in a portion of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased. This requirement does not apply in the

following instances:

a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as possible;
b. Where disturbed area is 5 acres or more, stabilization measures must be employed no more than 7 days after construction activities have temporarily or permanently ceased.

Site Assessment and Inspection

Initial Inspection

The Owner shall have a qualified professional conduct an assessment of the site prior to the commencement of construction. The qualified professional shall certify that the appropriate erosion and sediment controls described in this SWPPP and required by the permit have been adequately installed or implemented to ensure overall preparedness of the site for commencement of construction. The "qualified professional" shall meet the requirements of the SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-15-002.

Post Construction Inspection

The Owner shall have a qualified professional conduct an assessment of the site after construction is complete. The qualified professional shall be a Licensed Professional Engineer or possess the appropriate certifications for inspection. The qualified professional shall certify that the appropriate erosion and sediment controls and stormwater BMP's described in this SWPPP and required by the permit have been adequately installed or implemented to ensure overall preparedness of the site for commencement of construction. The "qualified professional" shall meet the requirements of the SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-15-002. If the site is located in an area governed by a traditional MS4, the MS4 must also make a final inspection and sign the Notice of Termination.

In addition, the owner must ensure that a properly qualified inspector is performing inspections of post construction stormwater practices as outlined in the NYS Stormwater Design Manual. The owner shall ensure that a binding maintenance agreement is in place for inspection and maintenance of all stormwater practices and ensure that the inspection and maintenance is performed by a qualified professional. The owner must then identify the responsible party for these inspections and maintenance on the Notice of Termination.

As-Builts

Prior to Submission of the Notice of Termination by a Licensed Professional Engineer and upon completion of the site, a surveyor or appropriate inspector shall be required to produce an Autocad or paper as-built map to the design engineer for verification that stormwater items and BMP's were installed as per the approved plans.

Stormwater BMP Inspection and maintenance punch list forms are provided behind the appropriate design intent page in Appendix J.

Inspections and Records during Construction

Inspection Frequency

After commencement of construction, site inspections shall be conducted by the qualified professional at least twice per week as this site is in a TMDL watershed. Two consecutive working days shall be given between site inspections per week. **Inspection Reports shall be emailed to the City of Syracuse Facilities Engineer Mirza Malkoc at mmalkoc@syr.gov within 24 hours of conducting inspection.** Prior to filing a Notice of Termination (NOT) or at the end of the permit term, the owner shall have the qualified professional perform a final site inspection.

Records during Inspection

A site map shall be maintained on site indicating the extent of all disturbed onsite areas and drainageways throughout the duration of construction. The site map shall contain all areas expected to undergo initial disturbance or significant site work within every 7-day period. The map shall indicate all areas of the site that have undergone temporary or permanent stabilization. All disturbed areas that have not undergone active site work during the previous 7-day inspection period shall be noted on the map. All sediment control measures shall be inspected and the degree of accumulation as a percentage of the sediment storage volume shall be recorded. Inspector must describe and inspect all points of discharge to natural surface water bodies located within, or immediately adjacent to property boundaries. Photographic record of inspections and any deficiencies shall be included in the inspection reports and photos of corrective action must be recorded upon compliance. Any maintenance required for installed erosion and sediment control structures shall be noted, and documentation of areas where adjustments are needed to those measures shall be provided. Any deficiencies identified with the implementation of the SWPPP shall be recorded. Erosion control measures shall be inspected weekly by a Licensed Professional Engineer or Erosion Control Specialist until the site is completely stabilized. Inspections and maintenance of erosion control structures shall be in accordance with the NYS Pollution Discharge Elimination System for Construction Activities GP-0-10-002 (SPDES) program. These inspection reports should be in compliance with the requirements set forth under part IV.C-4 of the general permit. A copy of the general permit is included in Appendix J.

Inspection Log Book

The Owner/ contractor shall maintain an inspection logbook which shall contain a record of all inspection reports. The site logbook shall be maintained on site and shall be made available to the permitting authority upon request. The Owner shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis.

Certifications

At the final site inspection the qualified professional shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods, and that all temporary erosion and sedimentation measures have been removed. Final certification requires completion of the Notice of Termination form. The Notice of Termination shall be signed by the qualified professional. The owner shall provide the qualified professional with as built drawings in AutoCAD format so that the qualified professional can verify that all stormwater practices have been installed in accordance with the approved plans, SWPPP and the General Permit. The owner shall certify that the requirements of the permit have been satisfied within 48 hours of actually meeting such requirements and sign the Notice of Termination.

RELIANCE

Engineer's Certification

The undersigned agrees that this SWPPP has been prepared in accordance with all applicable standards outlined in this report. The undersigned understands that the owner intends to use this SWPPP to support his application for a New York State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Runoff from Construction Activity, GP-0-10-002.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Prepared By: _____ Date: 8/5/24

Jordyn Maloney
RZ Engineering, PLLC
6320 Fly Road, Suite 201
East Syracuse, NY 13057
(315) 432.1089

Reviewed By: _____ Date: 8/5/24

Rudy L. Zona, P.E.
RZ Engineering, PLLC
6320 Fly Road, Suite 201
East Syracuse, NY 13057
(315) 432.1089

Owner's Certification

I certify that I have read and understand the requirements outlined in this SWPPP report. The undersigned agrees that I have employed the above professional to prepare this SWPPP and that the recommendations within this Report and accompanying documents support the requirements set forth by the New York State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Runoff from Construction Activity, GP-0-10-002. I certify that I intend to employ a contractor who will follow the recommendations of this SWPPP and any requirements set forth by the New York State SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-10-001.

Owner: _____

Owner's Representative: _____ Date: _____

Title: _____

Contractor's / Sub-Contractor's Certification

Contractor's/Sub-Contractor's Certification "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 Pollution 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 State of New York and could subject me to criminal, civil and/or administrative proceedings."

Contractor: _____

Contractor's Representative: _____ Date:_____

Title: _____

Signature: _____ Date:_____

Contractor's "trained contractor":_____Date:_____
(must have DEC 4 hr training, responsible for the daily implementation of SWPPP)
Contractor is responsible for SWPPP components identified:

SWPPP Inspections _____

_____

_____

Address: _____

_____

Phone: _____

Fax: _____

Sub-Contractor: _____

Sub-Contractor's Representative: _____ Date:_____

Title: _____

Signature: _____ Date:_____

Sub-Contractor's "trained contractor":_____Date:_____
(must have DEC 4 hr training, responsible for the daily implementation of SWPPP)
Sub-Contractor is responsible for SWPPP components identified:
_____
_____
_____
Address: _____

_____

Phone: _____

Fax: _____

Sub-Contractor: _____

Sub-Contractor's Representative: _____ Date:_____

Title: _____

Signature: _____ Date:_____

Sub-Contractor's "trained contractor":_____Date:_____
(must have DEC 4 hr training, responsible for the daily implementation of SWPPP)
Sub-Contractor is responsible for SWPPP components identified:
_____
_____
_____

Address: _____

_____

Phone: _____

Fax: _____

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
USGS MAP
SCALE 1:500

FIGURE 1

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
AERIAL MAP
SCALE 1:400

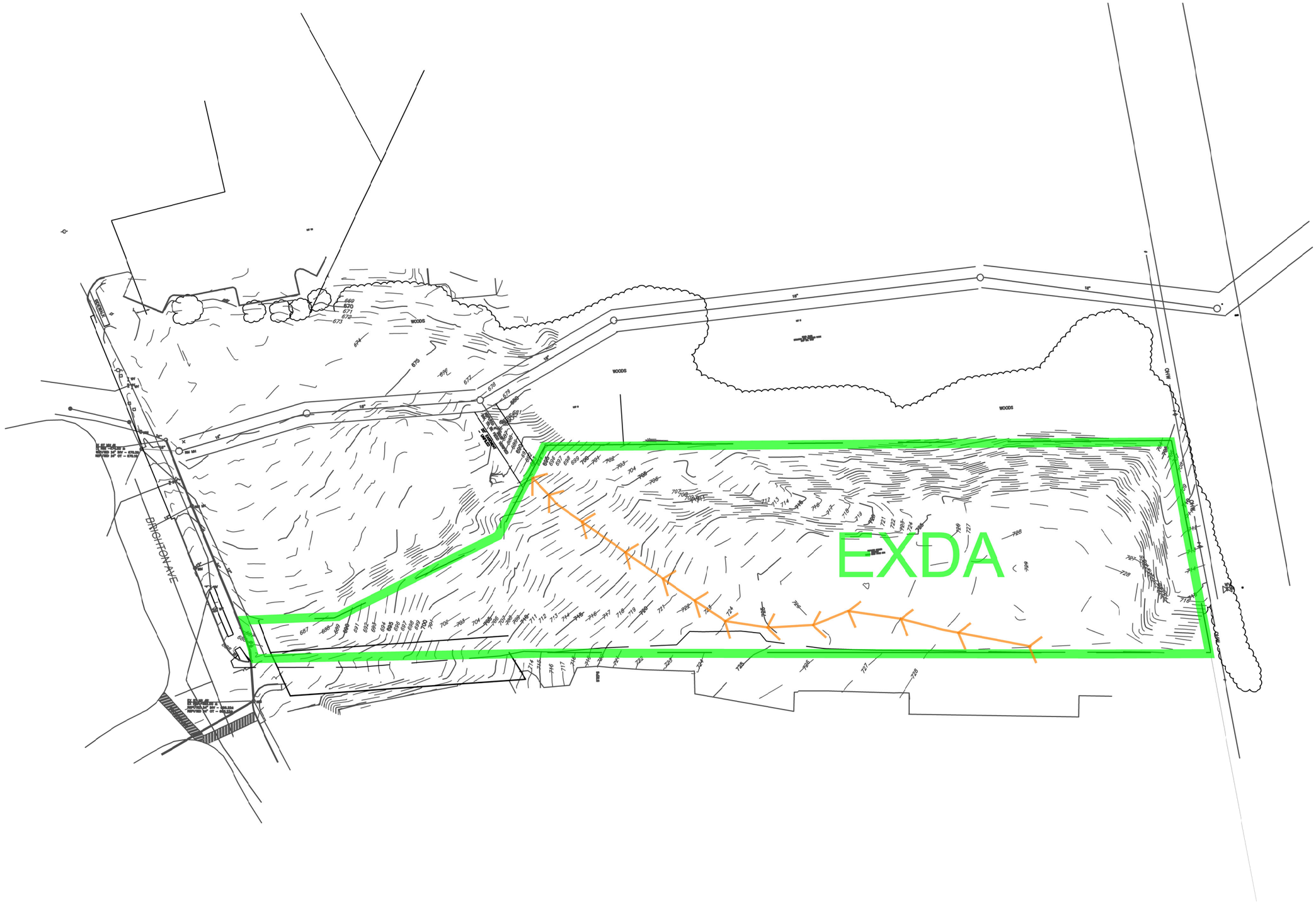
FIGURE 2

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
SOILS MAP
SCALE 1:120

FIGURE 3



BRIGHTON MEWS
City of Syracuse, Onondaga County, NY

FIGURE 4: EXISTING SITE WATERSHED

SCALE 1:40

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

PRDA

3 STORY 105,000 SF
STORAGE FACILITY

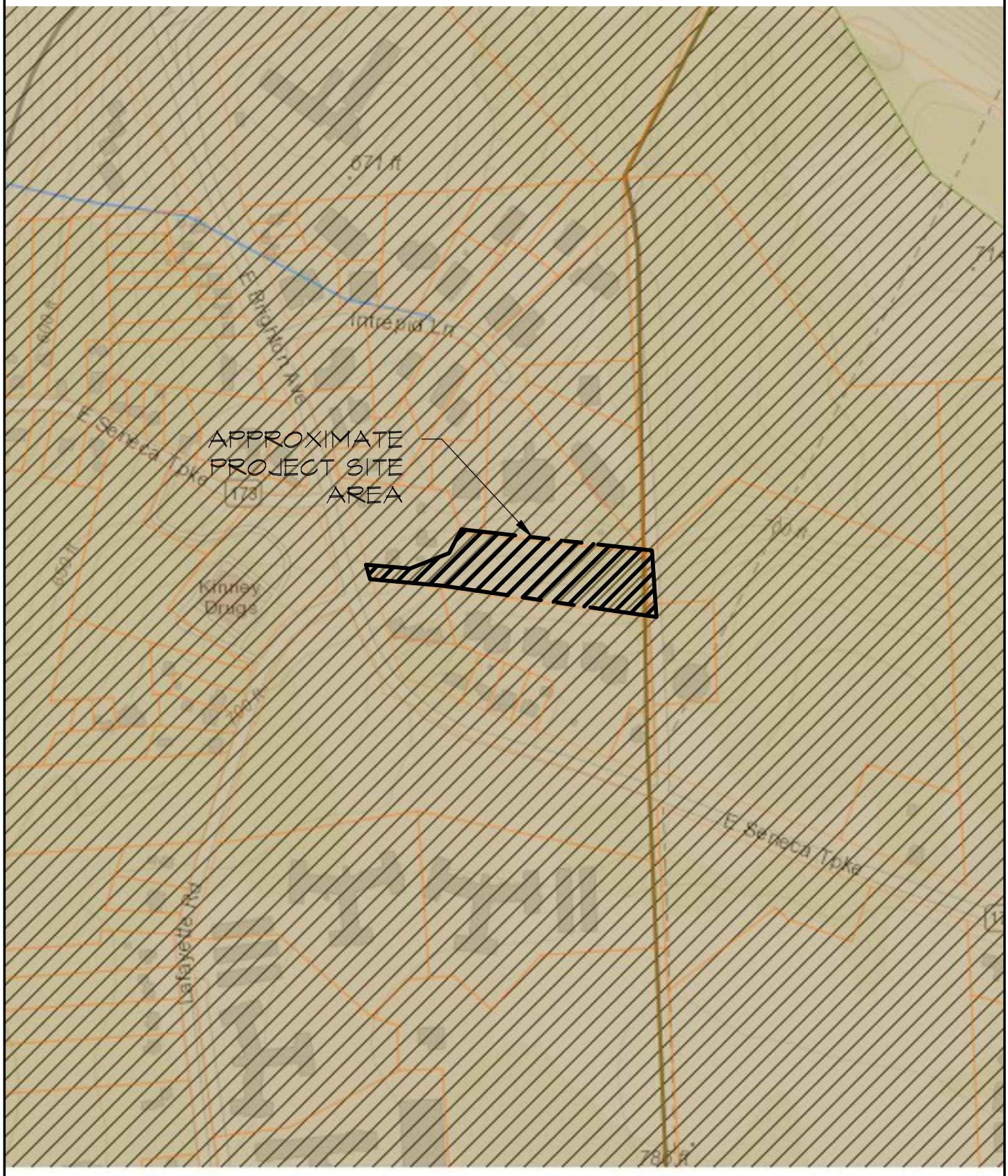
BASEMENT FFE - 714.42
FIRST FLOOR FFE - 725.08

BRIGHTON MEWS
City of Syracuse, Onondaga County, NY

SCALE 1:40

FIGURE 5: PROPOSED SITE WATERSHED

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

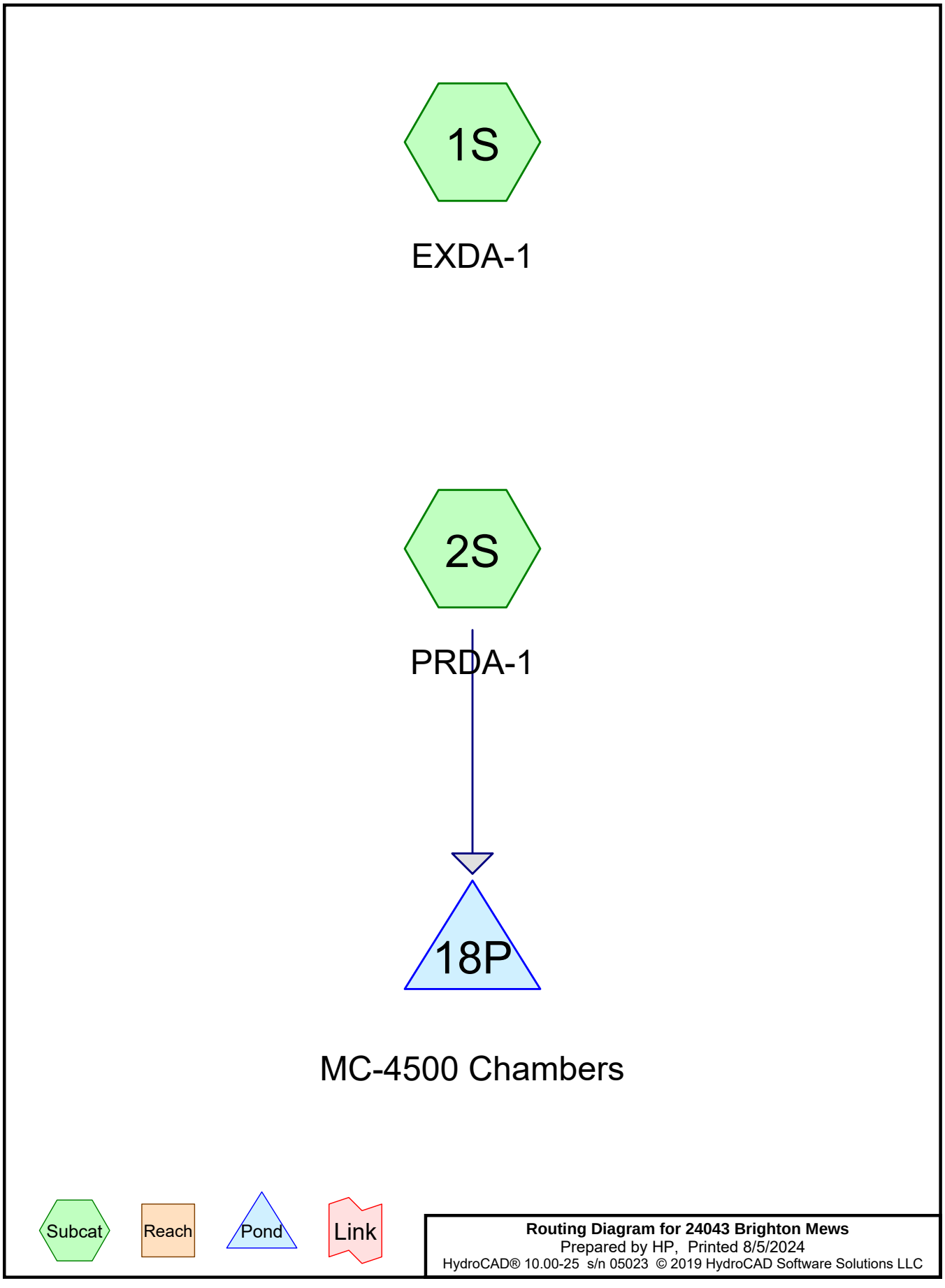


RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

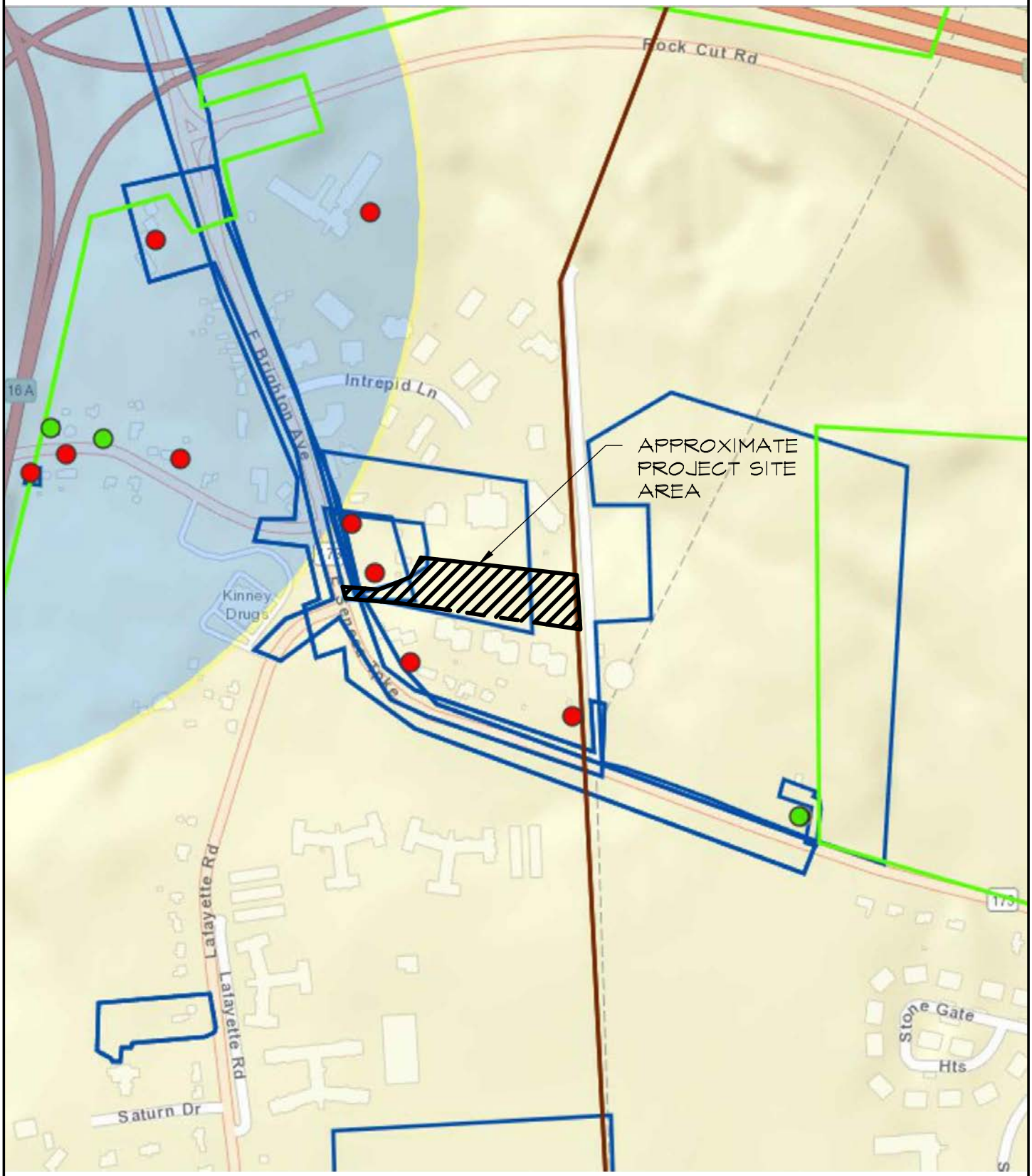
N

BRIGHTON MEWS
NYSDEC STORMWATER MAP
SCALE 1:400

FIGURE 6



Routing Diagram for 24043 Brighton Mews
Prepared by HP, Printed 8/5/2024

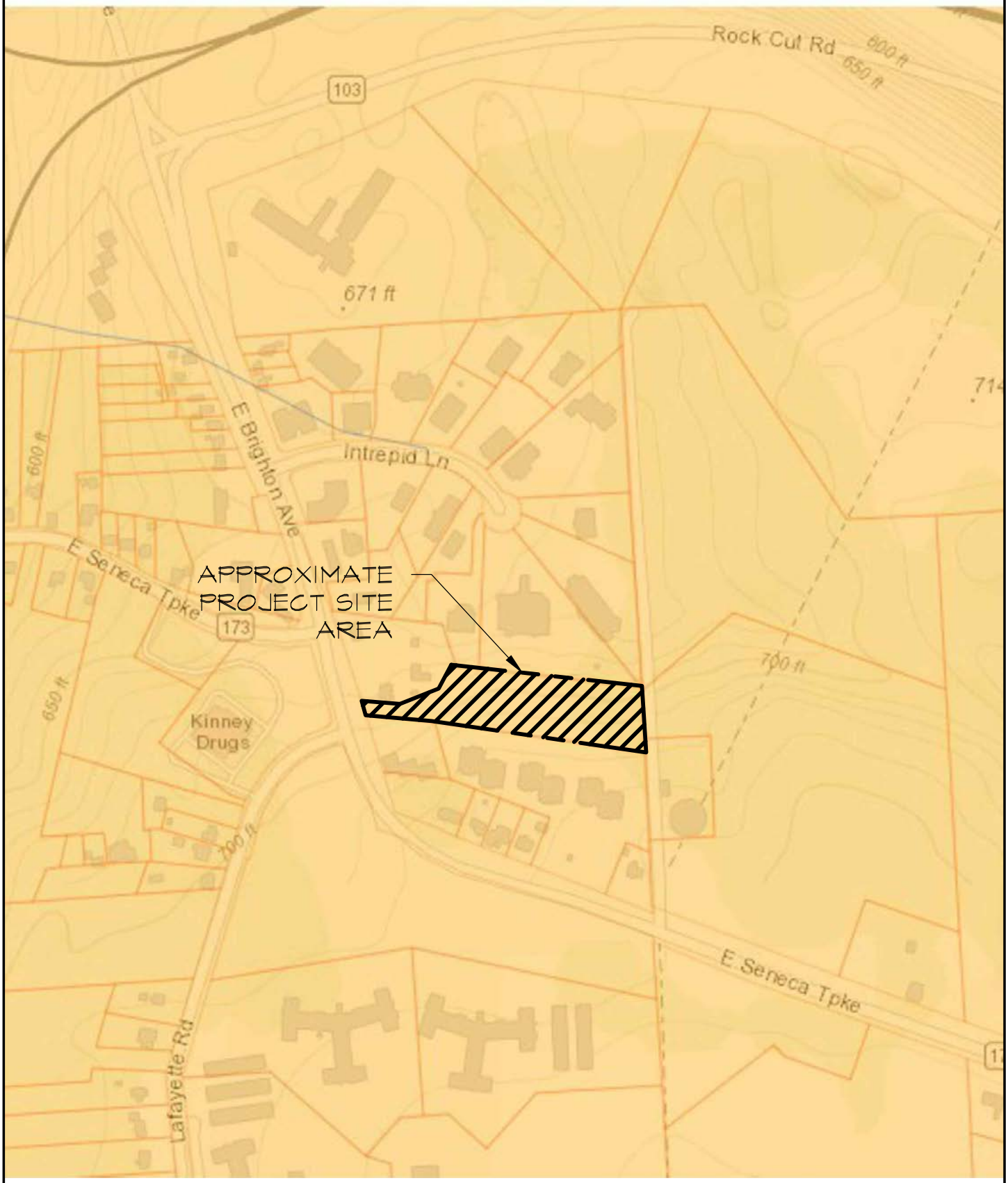


RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
SHPO MAP
SCALE 1:500

FIGURE 8



RZ Engineering, PLLC

STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION

6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
NYSDEC WETLANDS AND
ENDANGERED SPECIES MAP
SCALE 1:400

FIGURE 9

RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
FEDERAL WETLANDS MAP
SCALE 1:500

FIGURE 10

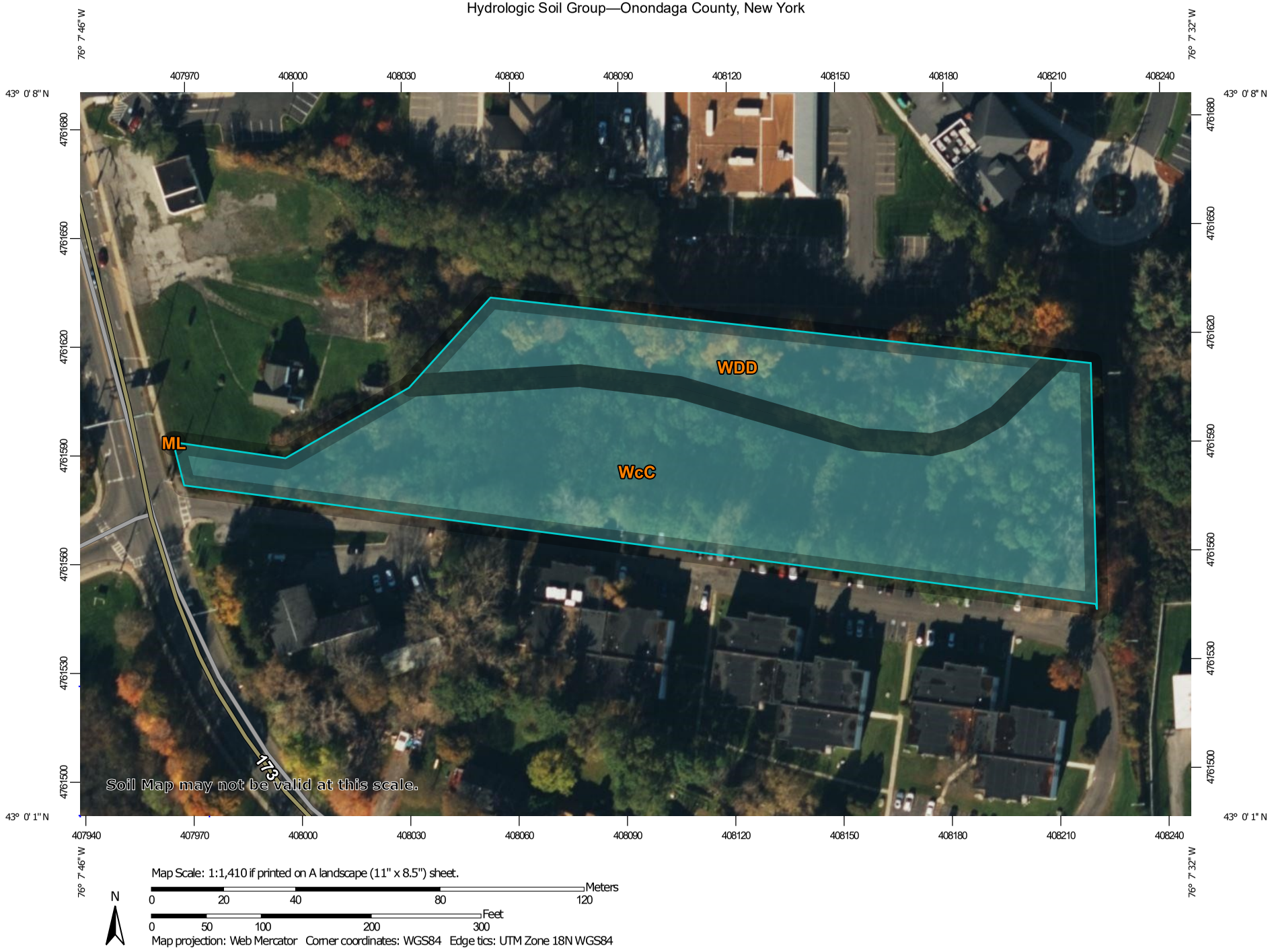
RZ Engineering, PLLC
STORMWATER SANITARY WATER ENVIRONMENTAL TRANSPORTATION
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

N

BRIGHTON MEWS
NATIONAL FLOOD INSURANCE MAP
SCALE 1:300

FIGURE 11

APPENDIX A



Map Scale: 1:1,410 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Onondaga County, New York
Survey Area Data: Version 18, Sep 5, 2023

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

Date(s) aerial images were photographed: Aug 3, 2021—Nov 7, 2021

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ML	Made land	A	0.0	0.0%
WcC	Wassaic silt loam, 8 to 15 percent slopes	C	2.3	72.5%
WDD	Wassaic-Benson silt loams, moderately steep	C	0.9	27.5%
Totals for Area of Interest			**3.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Kenney Geotechnical Engineering Services, PLLC
Office: 6901 Herman Rd., Syracuse, NY 13209
Mail: P.O. Box 117 Warners, N.Y. 13164
Phone: (315) 638-2706 Fax: (315) 638-1544

Kenney Geotechnical Services

January 11, 2016

Keplinger Freeman Associates.
<via email>

Attn.: Mr. Ed Keplinger RLA

Re.: Infiltration Testing Results
Brighton Mews
Brighton Ave.
Syracuse, New York

Dear Ed,

Kenney Geotechnical Engineering Services, PLLC is pleased to present the results of the subsurface investigation performed at the referenced site (Figure 1). The subsurface investigation consisted of seven infiltration tests. Testing locations are illustrated on Figure 2. The soil borings were performed with a track-mounted Geoprobe 7822DT drill rig. Infiltration testing was performed in accordance with NYSDEC guidelines.

Infiltration testing was performed by installing a temporary four-inch diameter PVC casing into a cleaned borehole. PVC casing was installed to the elevations requested on the boring location plan provided by Keplinger Freeman Associates. After sealing the borehole annulus, the test location was pre-soaked for twenty-four hours. Testing was performed the day following presoaking.

Stabilized infiltration readings are summarized in the attached logs and are also illustrated on the testing location plan. Please contact us if you have any questions.

Respectfully submitted,
KENNEY GEOTECHNICAL ENGINEERING SERVICES, PLLC

Prepared By:	**Reviewed By:**
Nathaniel Morehouse	**Christopher M. Kenney, P.E.**
Staff Engineer	**President**

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-1**		
TEST TYPE:	4" PVC CASING TO EL. 670.00 FEET					
SOIL CONDITIONS:	FILL: WELL GRADED SANDY GRAVEL					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	20	17	16	16		
STABILIZED (INCH/HR	**16**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-2**		
TEST TYPE:	4" PVC CASING TO EL. 672.00 FEET					
SOIL CONDITIONS:	FILL: WELL GRADED SANDY GRAVEL					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	15	18	15	15		
STABILIZED (INCH/HR	**15**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-3**		
TEST TYPE:	4" PVC CASING TO EL. 678.00 FEET					
SOIL CONDITIONS:	SANDY SILT WITH CLAY					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	2	5	5	5		
STABILIZED (INCH/HR	**5**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-4**		
TEST TYPE:	4" PVC CASING TO EL. 678.00 FEET					
SOIL CONDITIONS:	SILTY SAND					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	11	7	6	6		
STABILIZED (INCH/HR	**6**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-5**		
TEST TYPE:	4" PVC CASING TO EL. 676.00 FEET					
SOIL CONDITIONS:	POORLY GRADED SAND WITH SILT					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	16	14	12	12		
STABILIZED (INCH/HR	**12**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-6**		
TEST TYPE:	4" PVC CASING TO EL. 702.00 FEET					
SOIL CONDITIONS:	POORY GRADED SAND WITH SILT					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	14	9	9	9		
STABILIZED (INCH/HR	**9**					
NOTES:	TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

INFILTRATION TESTING LOG						
PROJECT:	**Brighton Mews**					
PRESOAK:	12/27/2016		WEATHER:	OVERCAST, 30 DEG.		
TEST:	12/28/2016		WEATHER:	OVERCAST, 30 DEG.		
PERSONNEL:	N. MOREHOUSE		LOCATION:	**IT-7**		
TEST TYPE:	4" PVC CASING TO EL. 713.5.00 FEET					
SOIL CONDITIONS:	SANDY GRAVEL WITH COBBLES					
RUN #	1	2	3	4	5	6
RATE (INCH/HOUR)	11	12	14	13		
STABILIZED (INCH/HR	**13**					
NOTES:	INFILTRATION TEST WAS INSTALLED TO ELEVATION 2 FEET ABOVE AUGER REFUSAL TEST RESULTS APPEAR VALID BASED ON SOIL GRADATION					

Google Earth

feet 1000
meters 300

LOCATION MAP

ZONING CHART - CITY OF SYRACUSE

TAX PARCELS INVOLVED:

LOT 2 OF 062.-02-011.0 2.93 ACRES (1001 EAST BRIGHTON AVE.)

ZONED: COMMERCIAL (CM)

YARD SETBACKS	REQUIRED	PROVIDED
FRONT SETBACK	NO MIN.	16.8'
SIDE YARD SETBACK	NO MIN.	41'
REAR YARD SETBACK	NO MIN.	82'

STALL SIZE: 18'-0" X 9'-0"
DRIVE AISLE: 24'-0" MIN. WIDTH

PERCOLATION TEST RESULTS

LOCATION NUMBER	TEST ELEVATION	SOIL TYPES	RATE OF INFILTRATION
IT-1	701.00 FT.	SAND WITH SILT	9" PER HOUR
IT-2	713.50 FT.	SANDY GRAVEL WITH COBBLES	13" PER HOUR

GENERAL NOTES

X-HCSD-JrSr-GEN NOTES

1. TOPOGRAPHIC AND BOUNDARY SURVEY PREPARED BY: PAUL JAMES OLSEWSKI P.L.S., PLLC OF CAMILLUS, NY ON APRIL 4, 2016.

OWNER AND ARCHITECT DO NOT CONFIRM THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. CONTRACTOR IS RESPONSIBLE FOR THOROUGH EXAMINATION AND VERIFICATION OF ALL EXISTING SURFACE AND SUBSURFACE CONDITIONS AFFECTING THE NATURE, SCOPE, COMPLEXITY AND COST OF THE CONTRACT WORK. ADDITIONAL INFORMATION ON EXISTING CONDITIONS HAS BEEN ADDED TO THE DRAWINGS BASED ON THE LANDSCAPE ARCHITECT'S OBSERVATIONS BUT IS NOT INTENDED TO AND DOES NOT ALTER THE SURVEY INFORMATION. REFER TO SURVEY NOTES FOR ADDITIONAL INFORMATION.

2. SAW CUT FOR PAVING REMOVALS. EXTEND REMOVAL LINES TO INCLUDE ANY ADJOINING BROKEN OR DETERIORATING PAVING. CAREFULLY REMOVE, STOCKPILE AND PROTECT ANY ITEMS NOTED FOR SALVAGE. ALL DEMOLITION RUBBLE, DEBRIS AND EXCESS SOILS TO BE PROMPTLY REMOVED FROM SITE. STRIP AND STOCKPILE SUFFICIENT EXISTING ORGANIC TOPSOILS FOR RESPREADING AS REQUIRED ON DISTURBED AND REGRADED AREAS TO BE ESTABLISHED AS LAWN AND FOR REPAIR OF DISTURBED EXISTING LAWNS TO REMAIN. STOCKPILE ALL MATERIALS IN APPROVED LOCATIONS WITHOUT INTERFERING WITH OTHER CONTRACTOR WORK, SCHOOL TRAFFIC OR DRAINAGE.

3. ALL FILL/BACKFILL OF EXCAVATIONS AND VOIDS RESULTING FROM REMOVALS AND RELATED WORK UNDER PROPOSED OR REPLACEMENT PAVING AREAS SHALL ONLY BE COARSE AGGREGATE FILL OR SUBBASE COURSE MATERIAL THOROUGHLY COMPACTED.

4. PROTECT ALL FACILITIES AND IMPROVEMENTS ON AND ADJOINING THE PROPERTY WHICH ARE NOT SPECIFICALLY IDENTIFIED FOR REMOVAL. VERIFY LOCATIONS AND DEPTHS OF ALL SUBSURFACE UTILITIES TO REMAIN PRIOR TO ANY ADJACENT REMOVAL AND EXCAVATION WORK.

5. ALL EXISTING FEATURES SHALL REMAIN UNLESS OTHERWISE NOTED. IF THE CONTRACTOR DAMAGES ANY OF THE EXISTING ON-SITE FACILITIES TO REMAIN (TREES, PAVEMENTS, UNDERGROUND UTILITIES, STRUCTURES, ETC.,) WHETHER SHOWN ON THE PLANS OR NOT, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE SUCH ITEMS AT HIS OWN EXPENSE AND ASSUME ALL RESPONSIBILITY FOR SUCH DAMAGE WITHOUT ANY ADDITIONAL COST TO THE OWNER. REPLACEMENT MATERIAL SHALL BE SAME QUALITY AND QUANTITY AS ORIGINAL.

6. THE CONTRACTOR SHALL CONFIRM EXISTING GRADES AND LOCATIONS OF ALL EXISTING FEATURES WITHIN THE CONTRACT LIMIT LINE. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND AT (315) 445-7980.

7. ADJUST RIMS OF UTILITY STRUCTURES TO REMAIN WITHIN AREAS OF GRADE CHANGES TO MEET PROPOSED LINES AND GRADES.

8. ALL NON-PAVED AREAS ARE TO BE LAWN UNLESS OTHERWISE NOTED.

9. CONTRACTOR SHALL BLEND NEW WORK SMOOTHLY AND EVENLY WITH EXISTING LINES AND GRADES.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR LAWN MAINTENANCE WITHIN THE CONTRACT LIMIT LINE. EXISTING LAWNS SHALL BE MOWED AS MUCH AS PRACTICAL TO KEEP AREA FROM LOOKING UNSIGHTLY. ALL TRASH AND DEBRIS SHALL BE PICKED UP AND DISPOSED OF PROPERLY.

LEGEND

X-.....

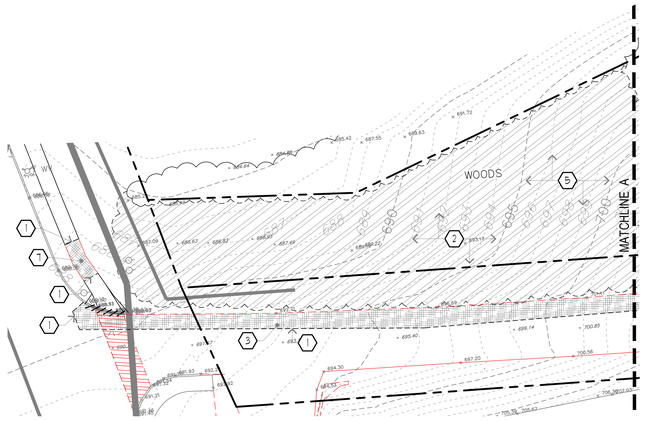
EXISTING	PROPOSED	DESCRIPTION
150		CONTOUR
+377.7		SPOT ELEVATION
	CT/CE	CURB TAPER/END
	TC/BC	TOP/BOTTOM OF CURB
	HP/LP	HIGH / LOW POINT
	TH	TEST PIT
		BORING (SEE SPECIFICATIONS FOR BORING INFO)
		FENCE
		UTILITY POLE
		WATER LINE
		FIRE HYDRANT
EX. ST	ST	STORM PIPE
	UD	UNDERDRAIN
EX. SAN		SANITARY PIPE
E/T		OVERHEAD ELECTRIC
E		UNDERGROUND ELECTRIC
T		TELEPHONE
	ST MH	STORM STRUCTURE
	DW	DRYWELL
	DI	INLET
CB	MH	CATCH BASIN/MANHOLE
	CO	CLEAN OUT
S	S	SANITARY MANHOLE
		ASPHALT PAVEMENT-PARKING
		CONCRETE PAVEMENT
		TRAFFIC SIGN
		LIGHT POLE (SEE ELECTRICAL PLANS FOR WIRING)
		CURBS
		CURB FLUSH (1" REVEAL UNLESS OTHERWISE NOTED)
	SF	SILT FENCE
		TREE
		SHRUB
	QUANTITY PLANT TYPE	PLANT KEY
		VEGETATION

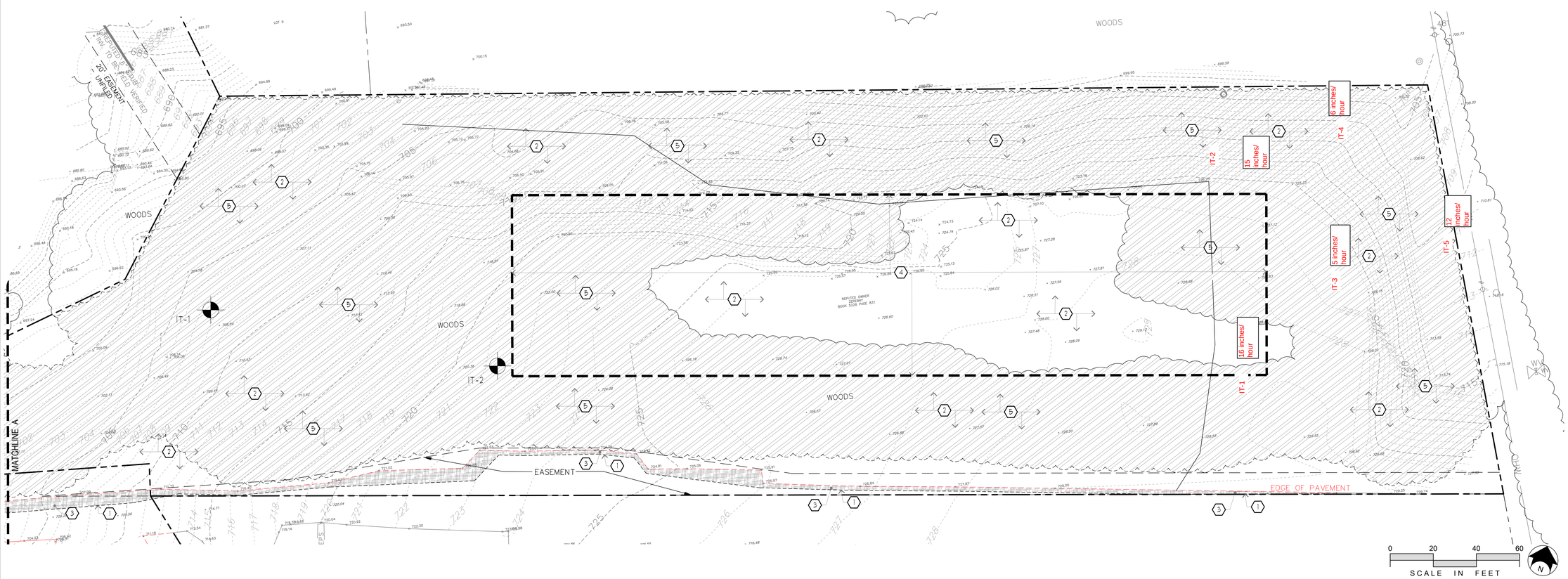
EXISTING CONDITIONS & REMOVAL/DEMOLITION NOTES

X-LI-SITE-PREEP-NOTES

CL CONTRACT LIMIT LINE

1. SAWCUT ASPHALT OR CONCRETE PAVEMENT. SAWCUT ASPHALT IN NEAT STRAIGHT LINE AND SAWCUT CONCRETE PAVEMENT AT NEAREST SCORE JOINT.
2. STRIP TOPSOIL AND STOCKPILE FOR REUSE. ALL EXCESS TOPSOIL SHALL BE REMOVED AND DISPOSED OF OFF SITE.
3. REMOVE ASPHALT PAVEMENT INCLUDING BASE MATERIAL AND DISPOSE OF OFF SITE.
4. PROPOSED BUILDING OUTLINE, SEE LAYOUT PLAN L3.1
5. REMOVE AND LEGALLY DISPOSE OF EXISTING VEGETATION IN IT'S ENTIRETY INCLUDING ROOTS AND STUMPS.
6. NOTE OMITTED.
7. EXISTING SIDEWALK TO REMAIN. REMOVE AND REPLACE EXISTING SIDEWALK IN KIND AS REQUIRED FOR UTILITY CONNECTION.





KEPLINGER FREEMAN ASSOCIATES
LANDSCAPE ARCHITECTURE & LAND PLANNING
6320 FLY ROAD SUITE 201, EAST SYRACUSE, NEW YORK 13057
PHONE: (315) 445-7980 FAX: (315) 445-7981

STATE OF NEW YORK — RUDY L. ZONE — 079545 — LICENSED PROFESSIONAL ENGINEER
EXPIRES 7/31/25

RZ Engineering, PLLC
6320 FLY ROAD SUITE 109
EAST SYRACUSE, NY 13057
PH: 315.422.1089

BRIGHTON HILL
1001 EAST BRIGHTON AVE., SYRACUSE

CLIENT: BENCHMARK DEVELOPMENT

ISSUED AND REVISIONS NOTIFICATION			
No.	Rev	Description	Date
1	CRF	CPC SUBMISSION	5/6/24
2	JPR	GEN. REVISION UPDATE	6/7/24
3	JPR	WATER REVISIONS	6/10/24
4	CRF	REV. LAYOUT W/ SUP	6/19/24

REGISTERED LANDSCAPE ARCHITECT — EDWARD GILBERT KEPLINGER — 001632 — STATE OF NEW YORK
EXPIRES 5/31/24

Drawn By:	C.R.F.
Checked By:	E.G.K.
KFA Proj. No.:	43052
Date:	26 FEBRUARY, 2024
Scale:	AS NOTED

Title:

SITE PREPARATION PLAN

L1.1

Plotted By:
Date Plotted:
Drawing File:

APPENDIX B

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	No
State	New York
Location	
Longitude	76.130 degrees West
Latitude	43.002 degrees North
Elevation	0 feet
Date/Time	Wed, 11 Jan 2017 09:41:41 -0500

Updated rainfall values per City of Syracuse requirements: 1 yr = 2.20", 10 yr = 3.80", and 100 yr = 5.80"

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.88	1.00	**1yr**	0.76	0.97	1.12	1.40	1.69	2.02	2.25	**1yr**	1.79	2.16	2.58	3.12	3.62	**1yr**
2yr	0.33	0.51	0.63	0.85	1.05	1.20	**2yr**	0.91	1.18	1.32	1.65	1.98	2.36	2.66	**2yr**	2.09	2.55	2.99	3.59	4.15	**2yr**
5yr	0.40	0.61	0.76	1.04	1.32	1.49	**5yr**	1.14	1.45	1.64	2.03	2.45	2.90	3.29	**5yr**	2.57	3.16	3.66	4.33	4.93	**5yr**
10yr	0.46	0.71	0.87	1.22	1.58	1.74	**10yr**	1.36	1.70	1.94	2.38	2.88	3.39	3.86	**10yr**	3.00	3.71	4.27	4.99	5.63	**10yr**
25yr	0.56	0.85	1.06	1.52	1.99	2.16	**25yr**	1.72	2.11	2.41	2.93	3.58	4.17	4.79	**25yr**	3.69	4.60	5.24	6.02	6.71	**25yr**
50yr	0.65	0.99	1.23	1.77	2.38	2.54	**50yr**	2.06	2.48	2.85	3.44	4.21	4.87	5.63	**50yr**	4.31	5.42	6.12	6.94	7.66	**50yr**
100yr	0.76	1.15	1.44	2.08	2.85	2.99	**100yr**	2.46	2.92	3.37	4.03	4.96	5.70	6.63	**100yr**	5.04	6.38	7.15	8.00	8.75	**100yr**
200yr	0.89	1.33	1.69	2.44	3.41	3.52	**200yr**	2.94	3.44	3.99	4.72	5.84	6.66	7.82	**200yr**	5.90	7.52	8.35	9.23	9.99	**200yr**
500yr	1.09	1.62	2.09	3.04	4.32	4.38	**500yr**	3.73	4.28	4.98	5.83	7.25	8.21	9.72	**500yr**	7.26	9.34	10.27	11.15	11.92	**500yr**

Lower Confidence Limits

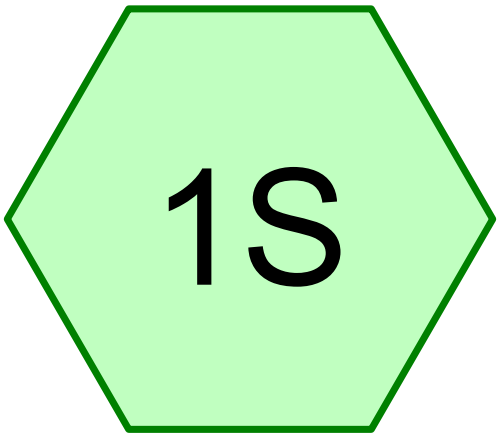
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.25	0.39	0.48	0.64	0.79	0.89	**1yr**	0.68	0.87	0.93	1.11	1.39	1.66	1.77	**1yr**	1.47	1.70	2.26	2.69	3.22	**1yr**
2yr	0.32	0.50	0.62	0.83	1.03	1.15	**2yr**	0.89	1.13	1.28	1.57	1.91	2.28	2.55	**2yr**	2.02	2.45	2.89	3.48	4.02	**2yr**
5yr	0.36	0.56	0.69	0.95	1.21	1.36	**5yr**	1.04	1.33	1.51	1.89	2.30	2.65	3.04	**5yr**	2.35	2.92	3.38	3.99	4.57	**5yr**
10yr	0.40	0.61	0.76	1.06	1.37	1.53	**10yr**	1.19	1.49	1.71	2.12	2.58	2.97	3.42	**10yr**	2.62	3.28	3.81	4.39	5.01	**10yr**
25yr	0.45	0.68	0.85	1.22	1.60	1.77	**25yr**	1.38	1.73	2.01	2.48	2.99	3.46	4.01	**25yr**	3.06	3.85	4.47	4.94	5.65	**25yr**
50yr	0.48	0.74	0.92	1.32	1.78	1.97	**50yr**	1.53	1.93	2.25	2.77	3.32	3.89	4.53	**50yr**	3.45	4.35	5.05	5.42	6.18	**50yr**
100yr	0.53	0.80	1.00	1.45	1.98	2.37	**100yr**	1.71	2.32	2.54	3.09	3.70	4.38	5.13	**100yr**	3.88	4.93	5.73	5.93	6.78	**100yr**
200yr	0.58	0.87	1.10	1.59	2.22	2.70	**200yr**	1.92	2.64	2.85	3.44	4.11	4.95	5.83	**200yr**	4.38	5.61	6.50	6.46	7.43	**200yr**
500yr	0.80	1.19	1.53	2.23	3.17	3.23	**500yr**	2.73	3.16	3.32	3.99	4.73	5.81	6.95	**500yr**	5.14	6.68	7.71	7.25	8.39	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.30	0.47	0.57	0.77	0.94	1.07	**1yr**	0.81	1.05	1.21	1.56	1.85	2.20	2.44	**1yr**	1.94	2.34	2.80	3.34	3.91	**1yr**
2yr	0.35	0.54	0.67	0.91	1.12	1.25	**2yr**	0.97	1.22	1.38	1.73	2.09	2.47	2.77	**2yr**	2.19	2.66	3.10	3.77	4.32	**2yr**
5yr	0.43	0.66	0.82	1.13	1.43	1.63	**5yr**	1.24	1.59	1.78	2.21	2.64	3.19	3.58	**5yr**	2.83	3.44	3.95	4.71	5.37	**5yr**
10yr	0.50	0.77	0.95	1.33	1.72	2.02	**10yr**	1.49	1.97	2.17	2.72	3.23	3.89	4.36	**10yr**	3.44	4.19	4.77	5.63	6.36	**10yr**
25yr	0.63	0.96	1.19	1.70	2.24	2.68	**25yr**	1.93	2.62	2.83	3.61	4.24	5.02	5.69	**25yr**	4.44	5.47	6.09	7.13	7.93	**25yr**
50yr	0.74	1.13	1.41	2.03	2.73	3.32	**50yr**	2.36	3.25	3.46	4.44	5.18	6.08	6.96	**50yr**	5.38	6.69	7.32	8.53	9.39	**50yr**
100yr	0.89	1.35	1.69	2.44	3.34	3.94	**100yr**	2.88	3.85	4.25	5.50	6.36	7.38	8.49	**100yr**	6.53	8.16	8.80	10.21	11.12	**100yr**
200yr	1.06	1.60	2.03	2.93	4.09	4.85	**200yr**	3.53	4.74	5.21	6.81	7.82	8.95	10.35	**200yr**	7.92	9.95	10.60	12.18	13.17	**200yr**
500yr	1.33	1.97	2.54	3.69	5.24	6.37	**500yr**	4.52	6.23	6.83	9.05	10.26	11.54	13.45	**500yr**	10.21	12.93	13.51	15.42	16.49	**500yr**

Powered by ACIS
Northeast Regional Climate Center

APPENDIX C



EXDA-1

Subcat Reach Pond Link

Routing Diagram for 24043 Brighton Mews
Prepared by Microsoft, Printed 8/2/2024

Summary for Subcatchment 1S: EXDA-1

Runoff = 7.34 cfs @ 12.28 hrs, Volume= 0.750 af, Depth= 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
2.805	76	Woods/grass comb., Fair, HSG C
2.805		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0160	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.36"
4.7	469	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	81	0.0494	1.56		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
32.9	650	Total			

Summary for Subcatchment 1S: EXDA-1

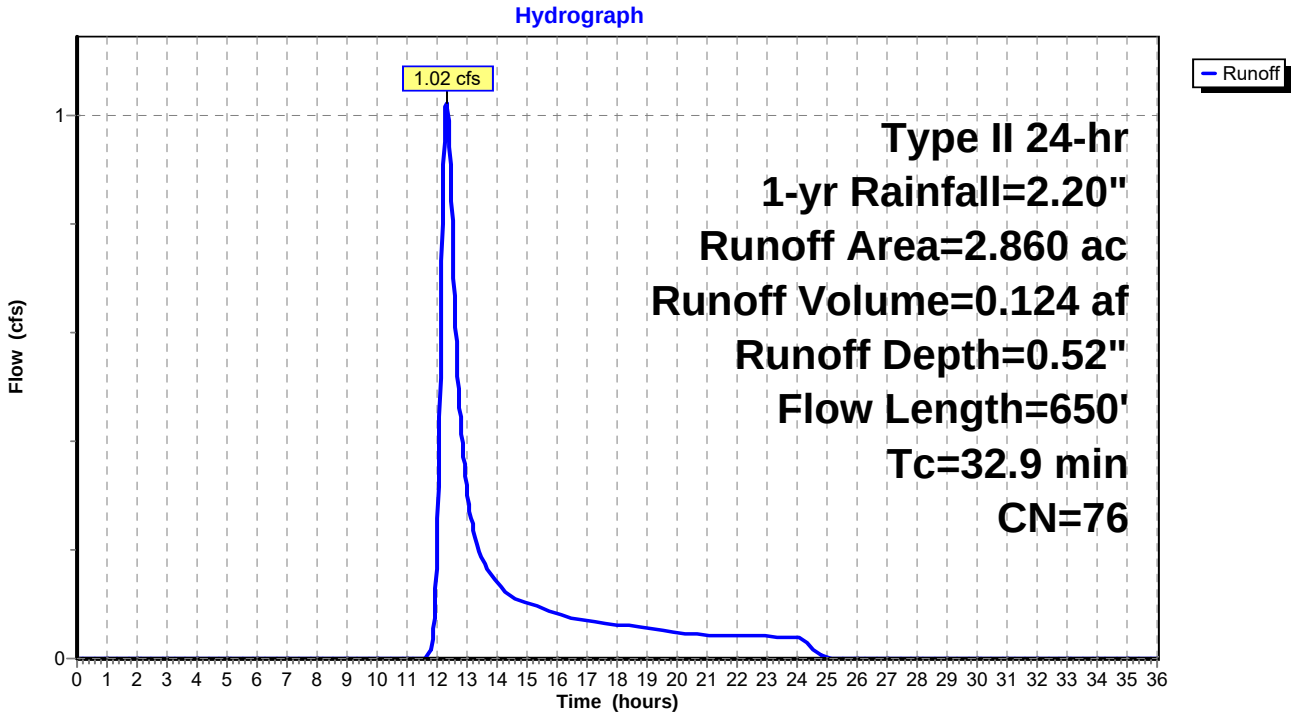
Runoff = 7.48 cfs @ 12.28 hrs, Volume= 0.765 af, Depth= 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type II 24-hr 100-yr Rainfall=5.80"

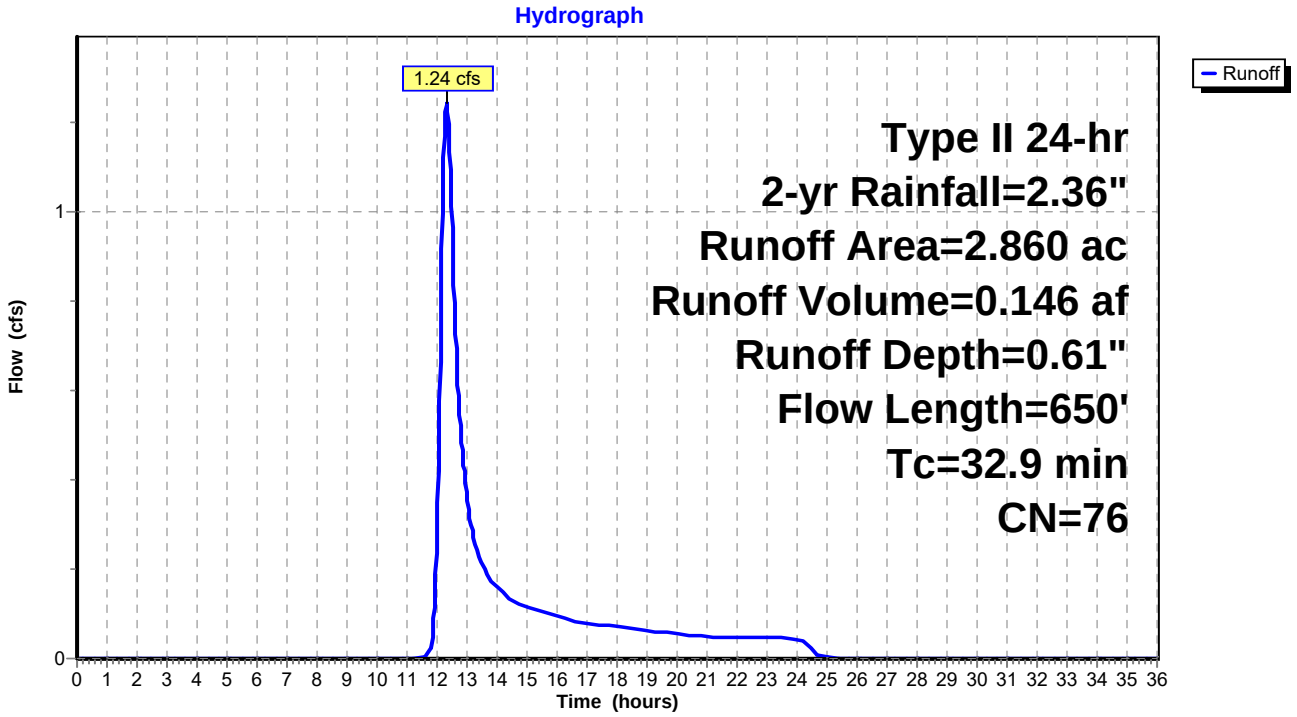
Area (ac)	CN	Description
2.805	76	Woods/grass comb., Fair, HSG C
0.055	98	Paved parking, HSG C
2.860	76	Weighted Average
2.805		98.08% Pervious Area
0.055		1.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0160	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.36"
4.7	469	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	81	0.0494	1.56		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
32.9	650	Total			

Subcatchment 1S: EXDA-1



Subcatchment 1S: EXDA-1



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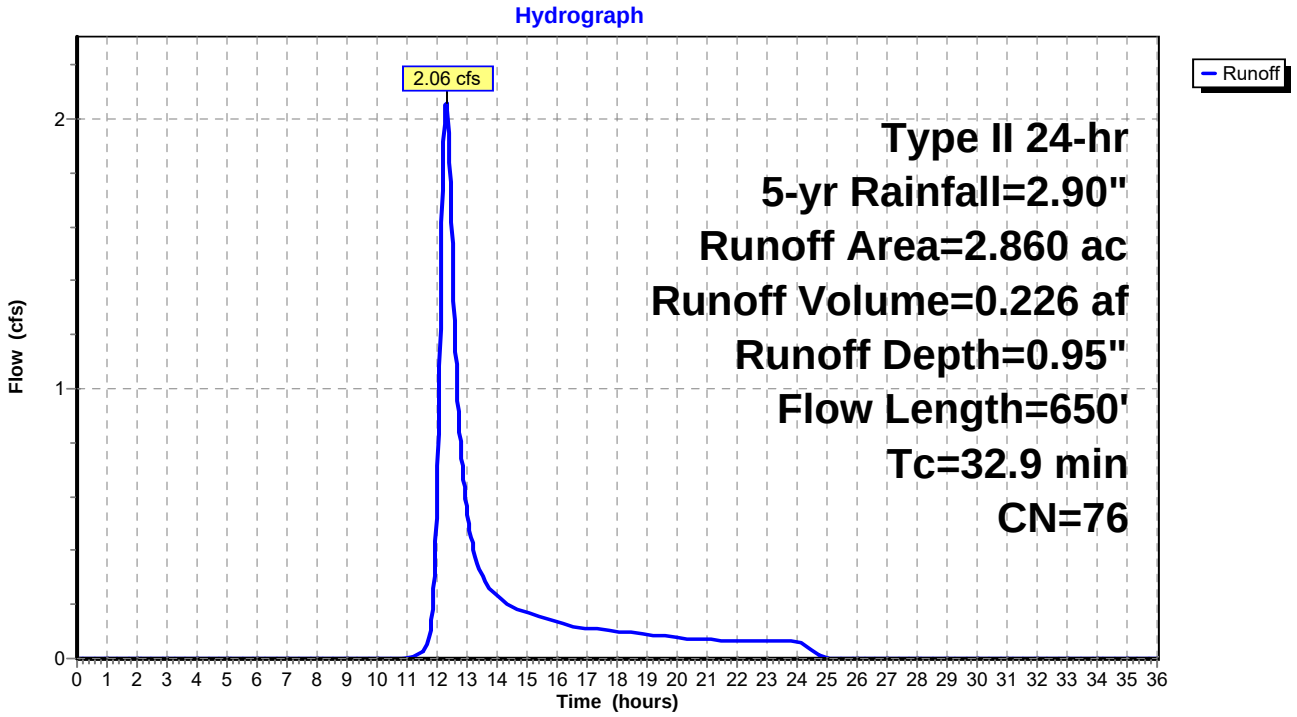
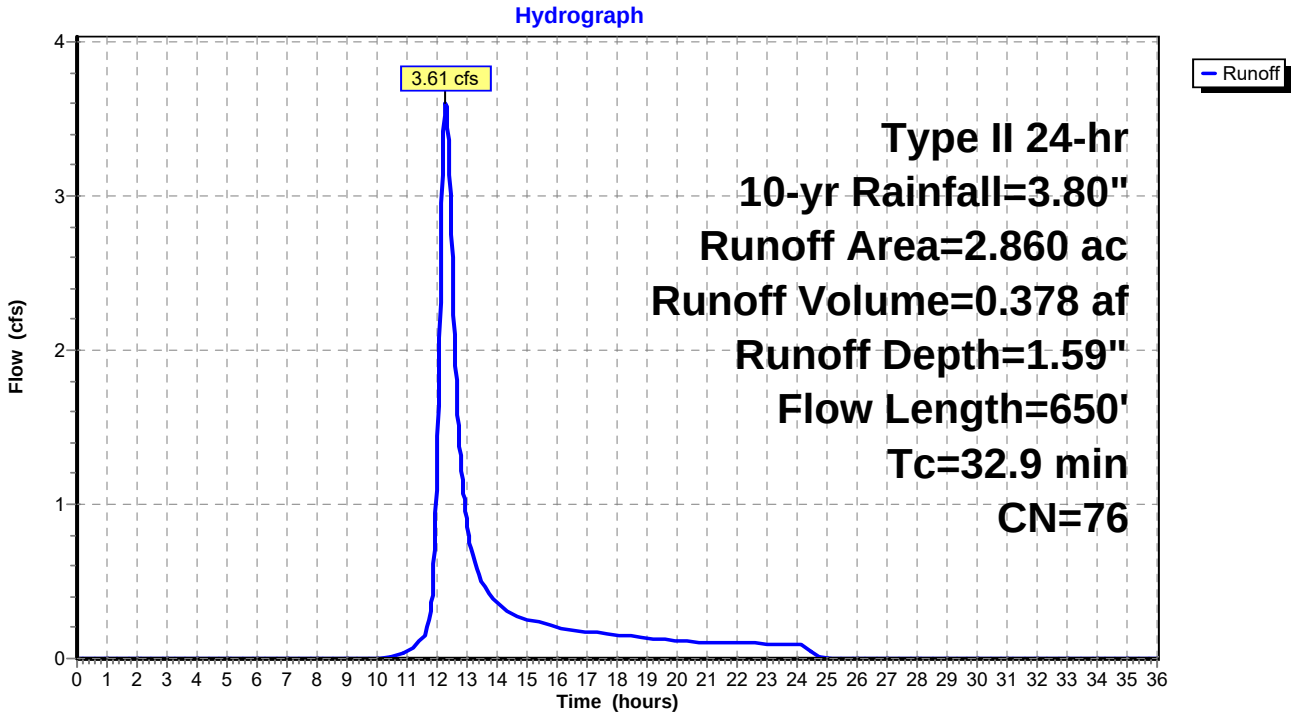


Subcatchment 1S: EXDA-1



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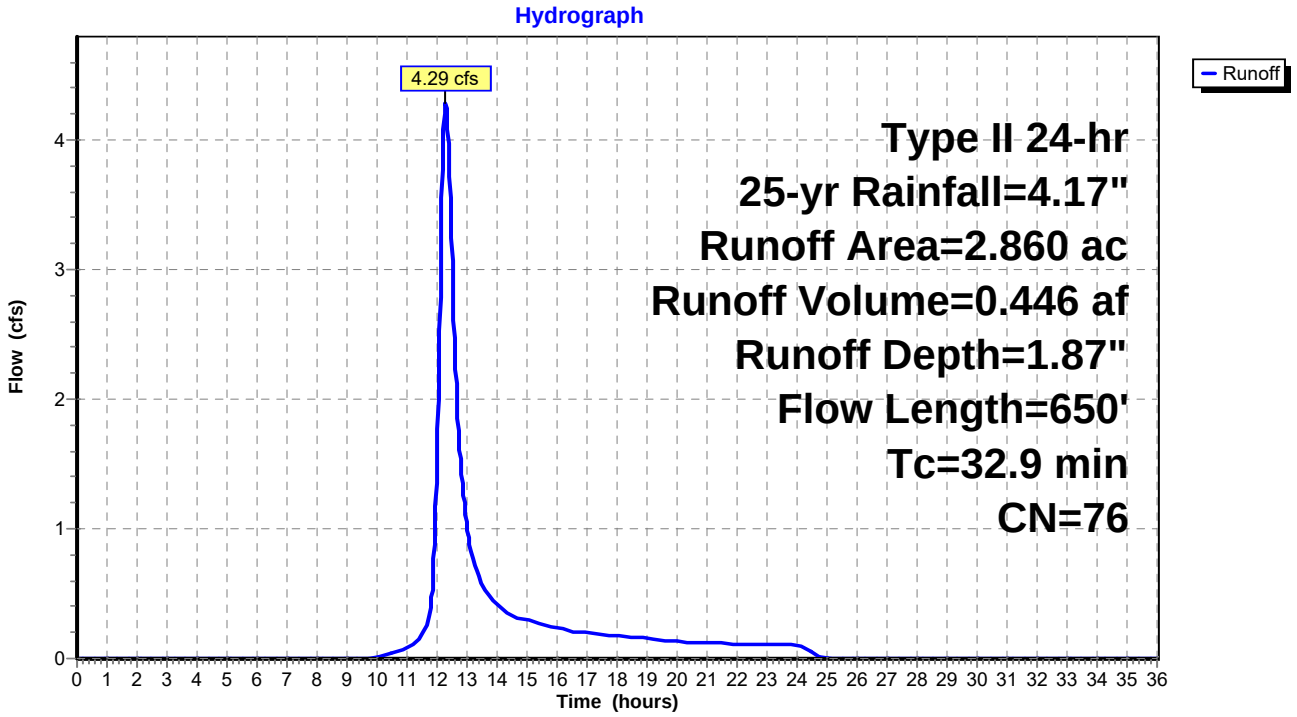

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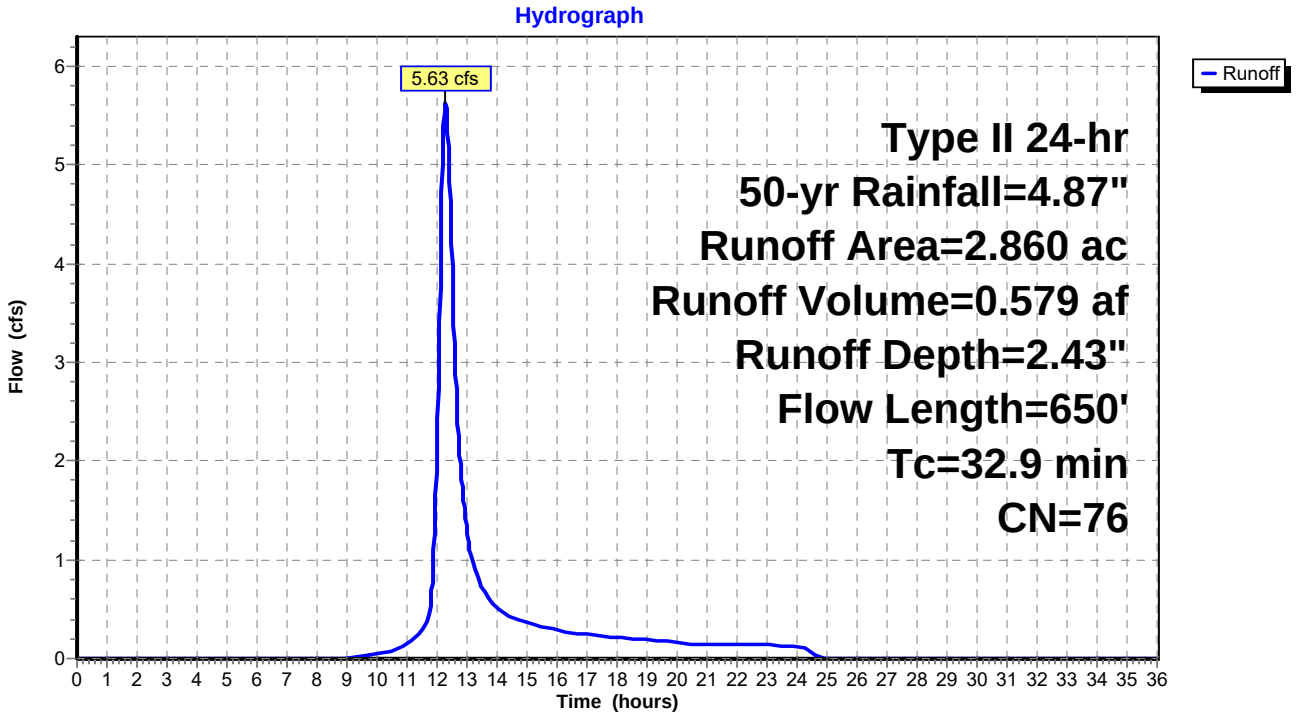

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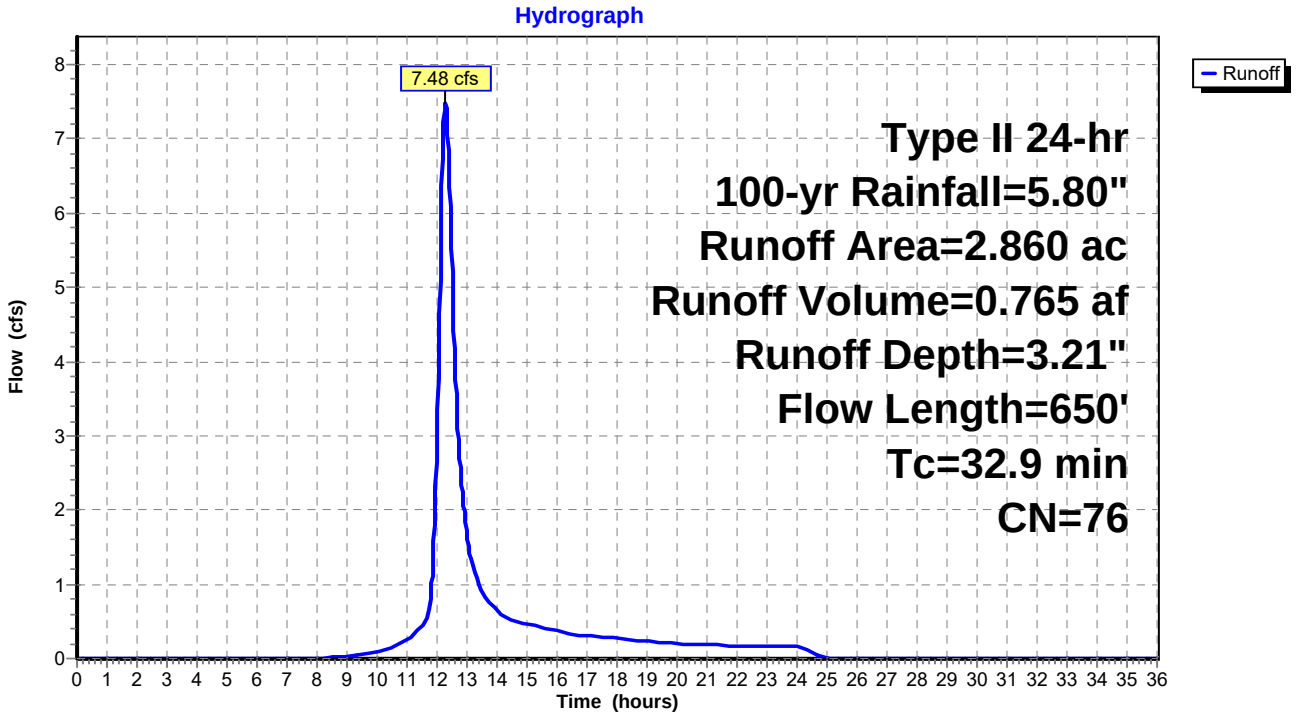
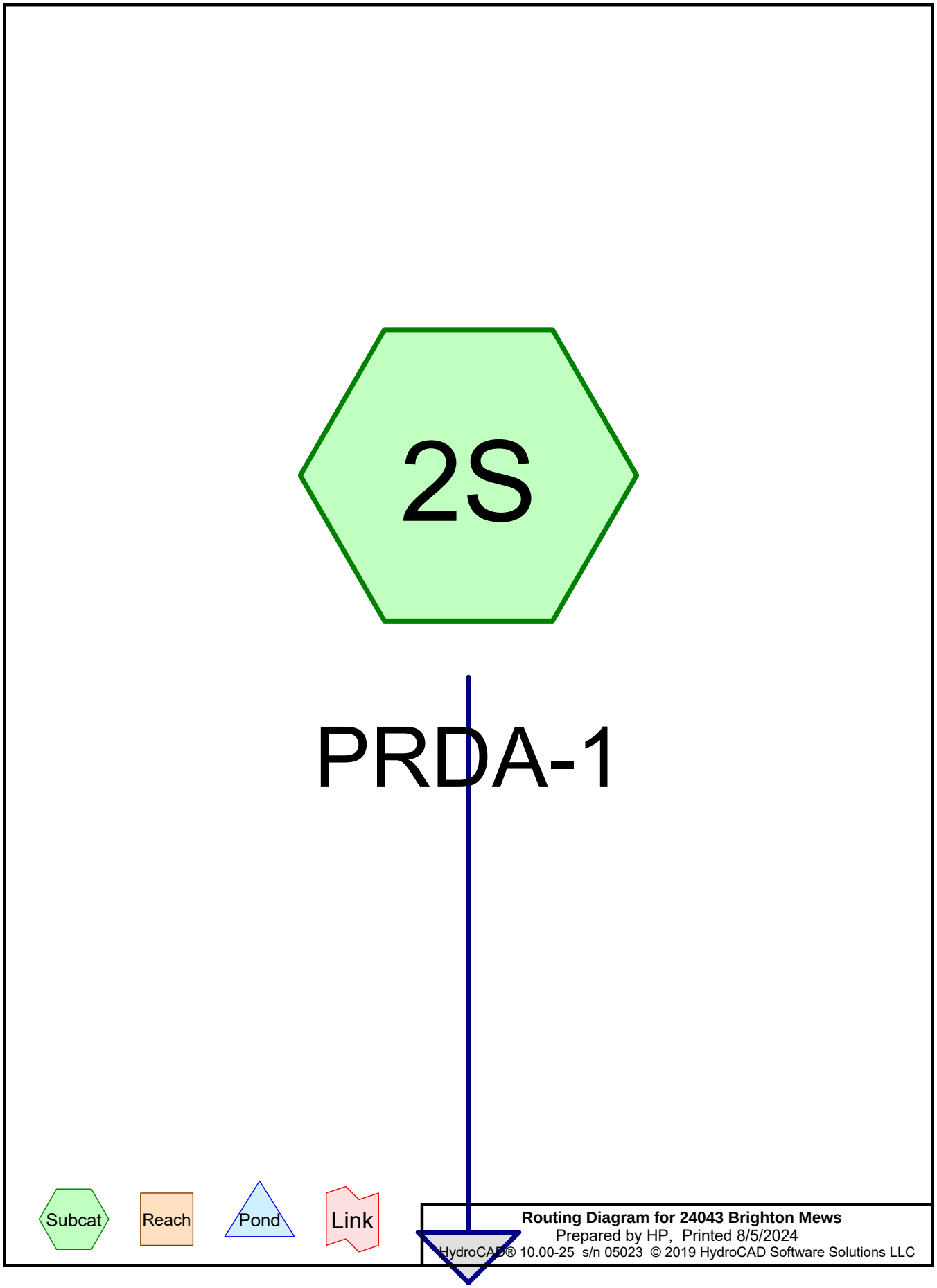


APPENDIX D


2S
PRDA-1
Subcat
Reach
Pond
Link
Routing Diagram for 24043 Brighton Mews
Prepared by HP, Printed 8/5/2024
HydroCAD® 10.00-25 s/n 05023 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 2S: PRDA-1

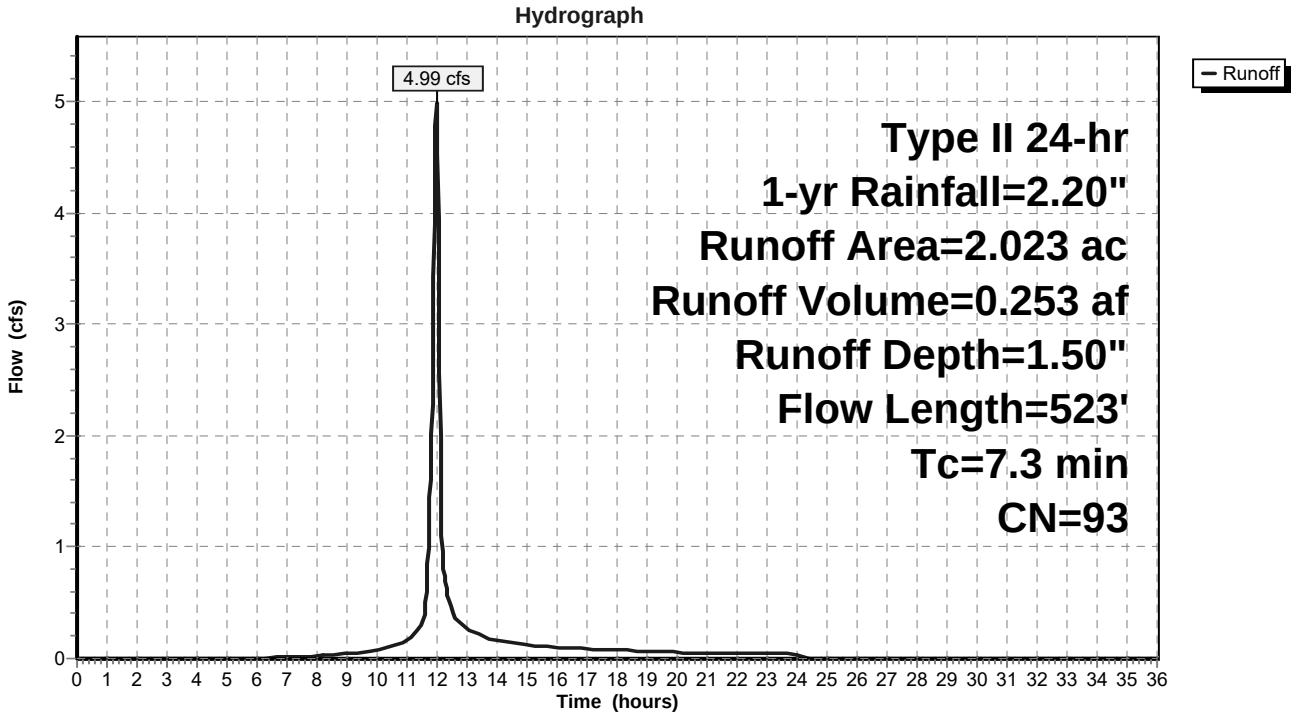
Runoff = 15.39 cfs @ 11.98 hrs, Volume= 0.840 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
1.543	98	Paved parking, HSG C
0.480	79	50-75% Grass cover, Fair, HSG C
2.023	93	Weighted Average
0.480		23.73% Pervious Area
1.543		76.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	70	0.2143	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.36"
0.4	30	0.0333	1.14		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.36"
0.2	42	0.0238	3.13		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.9	381	0.0262	3.29		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
7.3	523	Total			

Subcatchment 2S: PRDA-1



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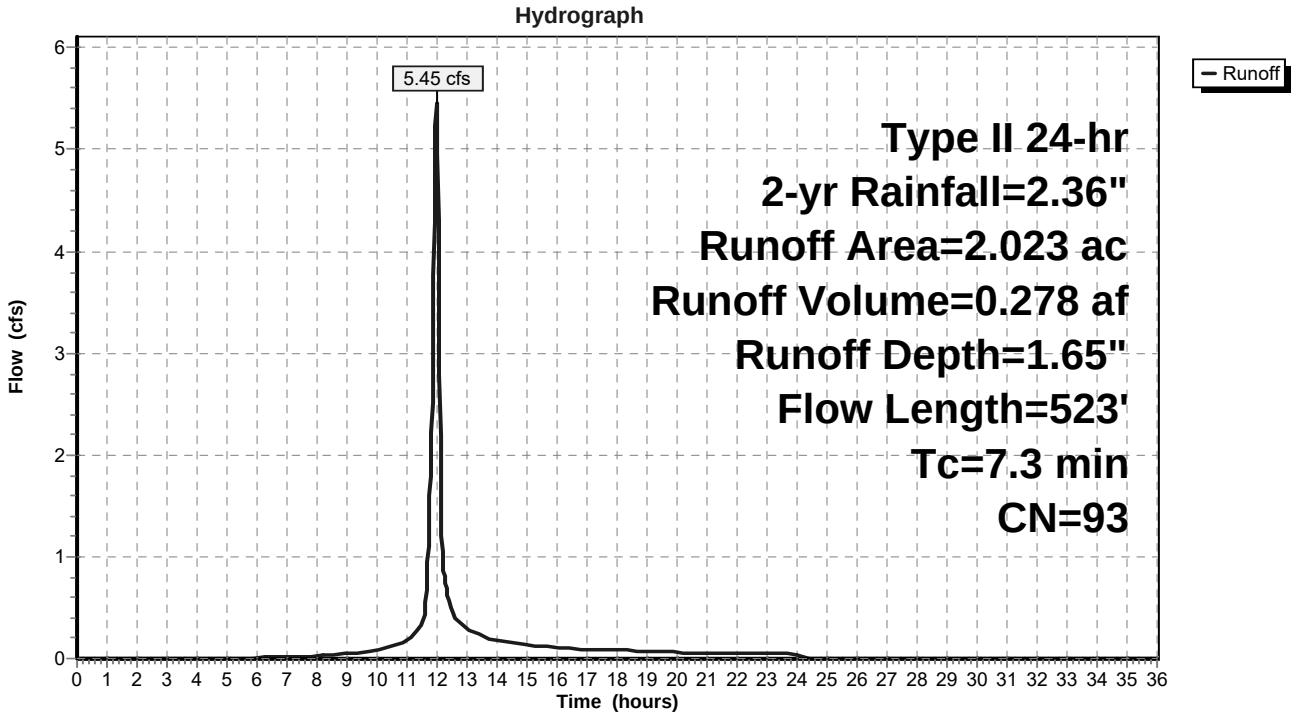

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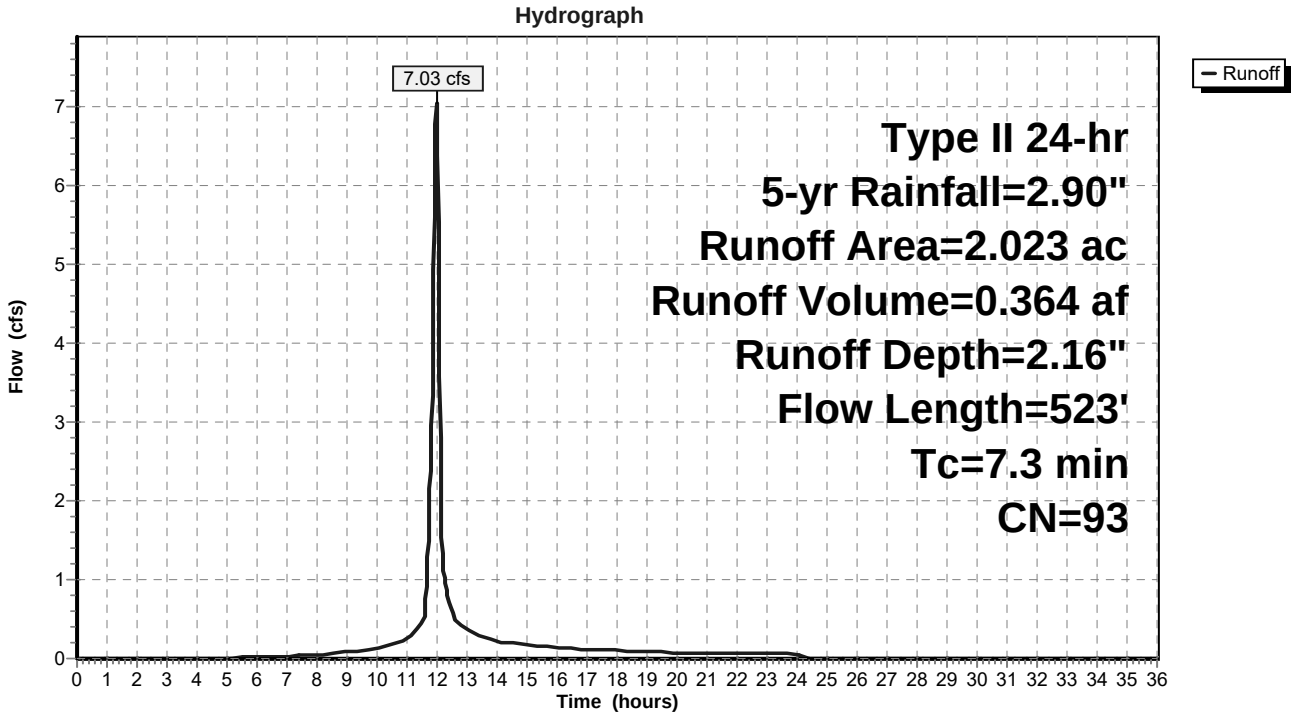

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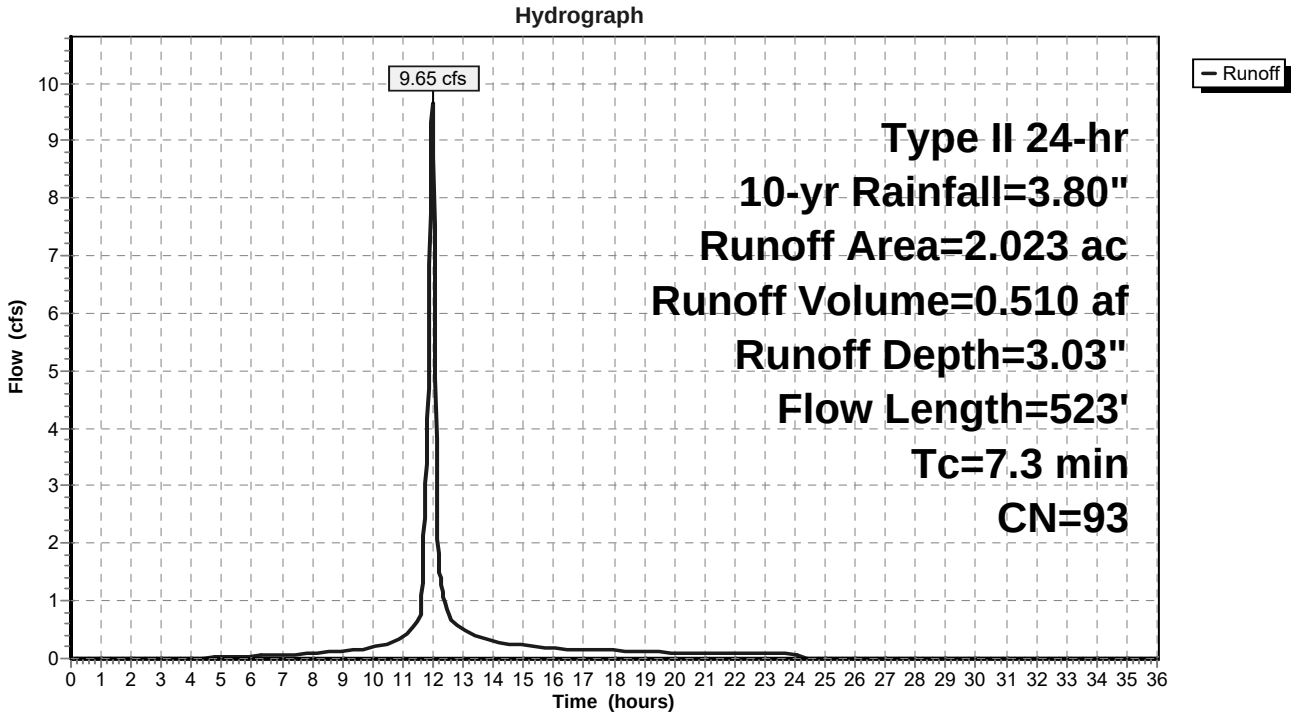

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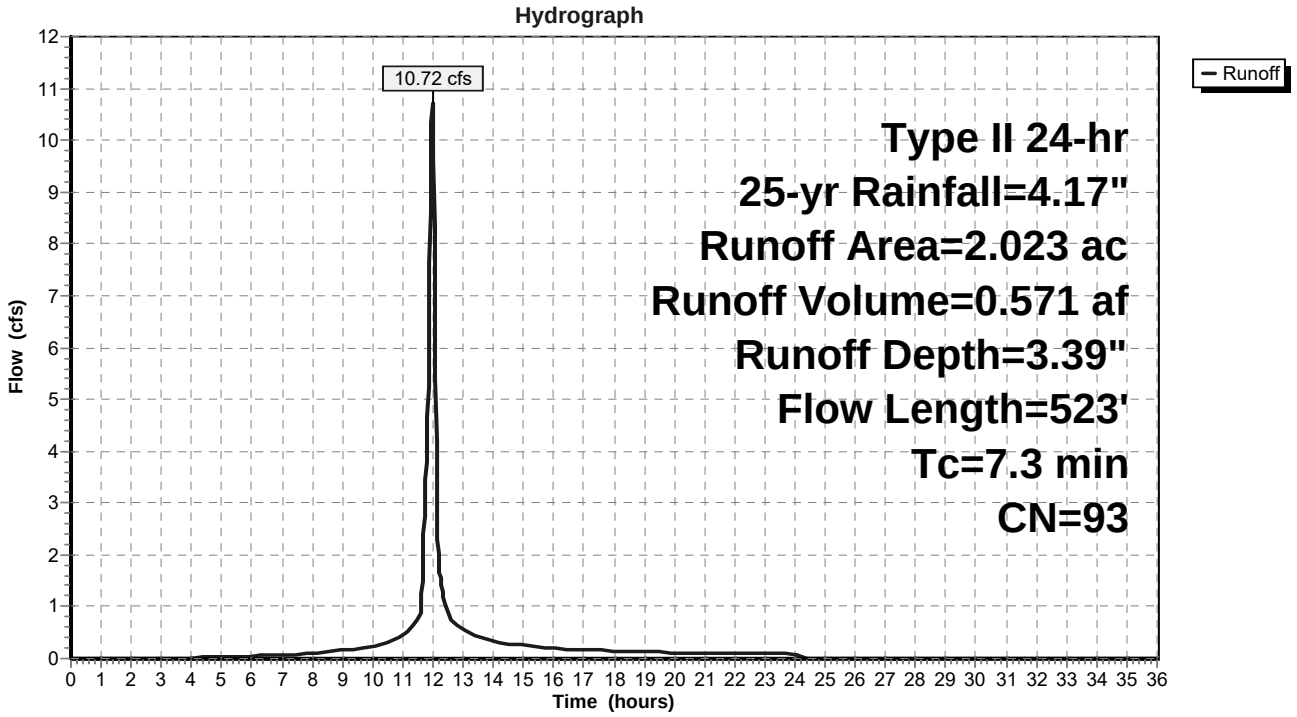

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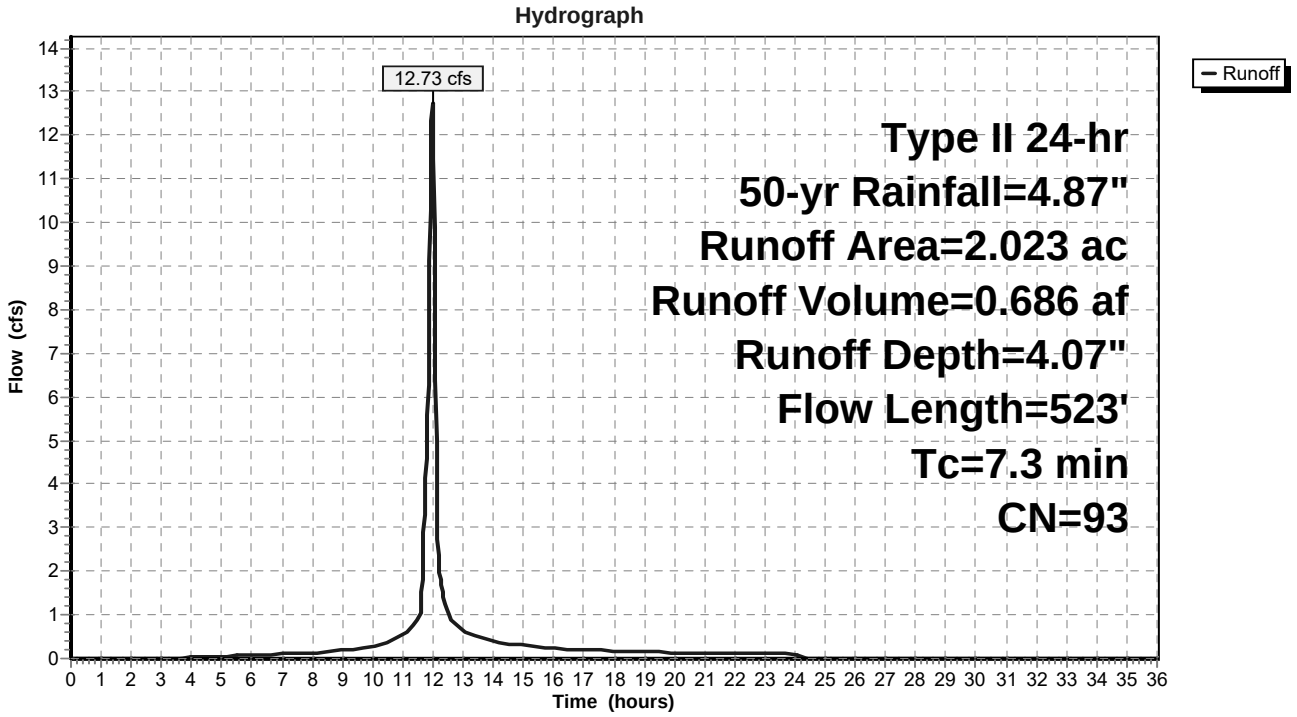
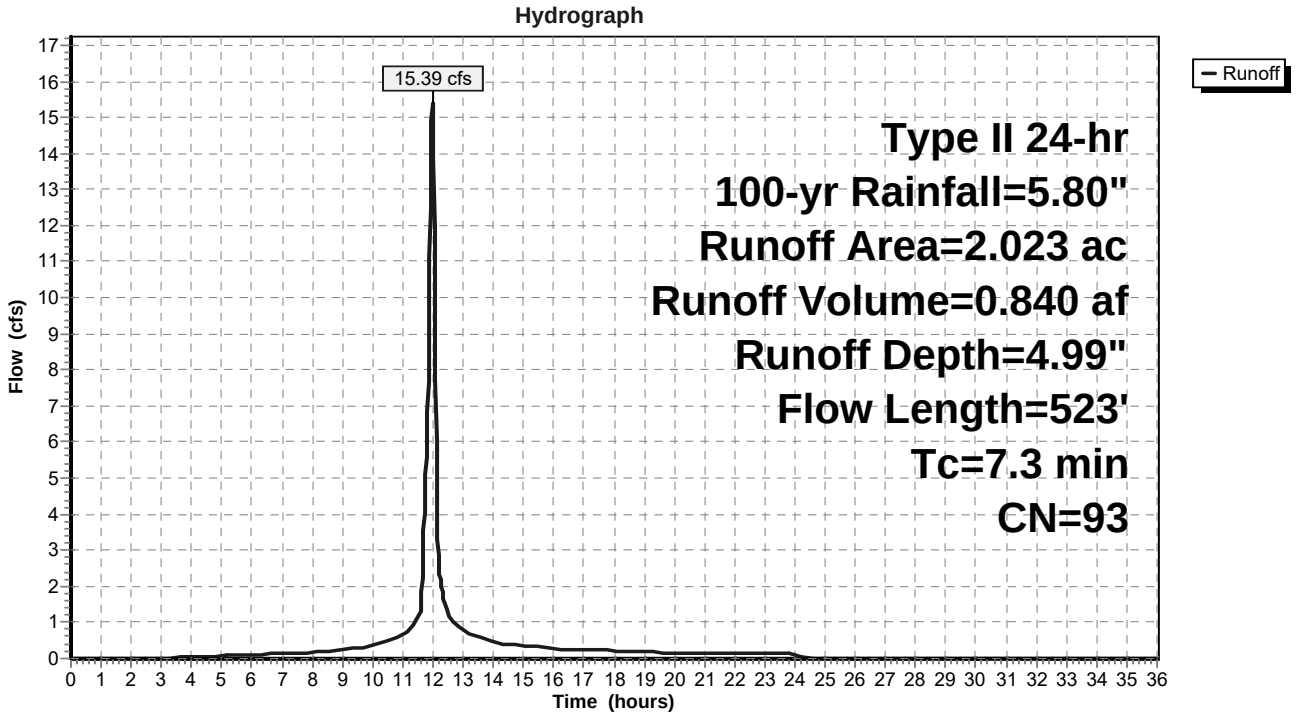
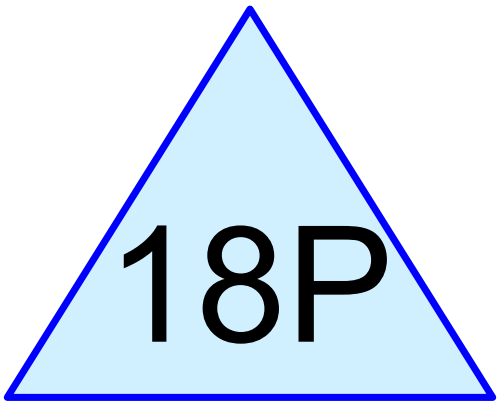


Subcatchment 2S: PRDA-1



APPENDIX E



MC-4500 Chambers

Subcat Reach Pond Link

Routing Diagram for 24043 Brighton Mews
Prepared by Microsoft, Printed 8/5/2024

Summary for Pond 18P: MC-4500 Chambers

Inflow Area = 2.023 ac, 76.27% Impervious, Inflow Depth = 4.99" for 100-yr event
Inflow = 15.39 cfs @ 11.98 hrs, Volume= 0.840 af
Outflow = 5.77 cfs @ 12.11 hrs, Volume= 0.840 af, Atten= 62%, Lag= 7.4 min
Discarded = 0.65 cfs @ 11.00 hrs, Volume= 0.711 af
Primary = 5.12 cfs @ 12.11 hrs, Volume= 0.130 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.02 hrs
Peak Elev= 708.39' @ 12.11 hrs Surf.Area= 0.072 ac Storage= 0.300 af

Plug-Flow detention time= 116.4 min calculated for 0.840 af (100% of inflow)
Center-of-Mass det. time= 116.4 min (888.0 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	702.00'	0.118 af	**37.58'W x 83.59'L x 6.75'H Field A** 0.487 af Overall - 0.192 af Embedded = 0.294 af x 40.0% Voids
#2A	702.75'	0.192 af	**ADS_StormTech MC-4500 +Cap** x 76 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 4 Rows of 19 Chambers Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.310 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	708.50'	**24.0" Vert. 24" Rim** C= 0.600
#2	Primary	702.00'	**15.0" Vert. 15" Outlet out** C= 0.600
#3	Device 2	707.27'	**Weir wall X 0.00, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 0.50 Width (feet) 2.00 2.00
#4	Discarded	702.00'	**9.000 in/hr Exfiltration over Surface area**
#5	Device 2	706.96'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 0.33 0.33 0.83 Width (feet) 0.33 0.33 2.00 2.00

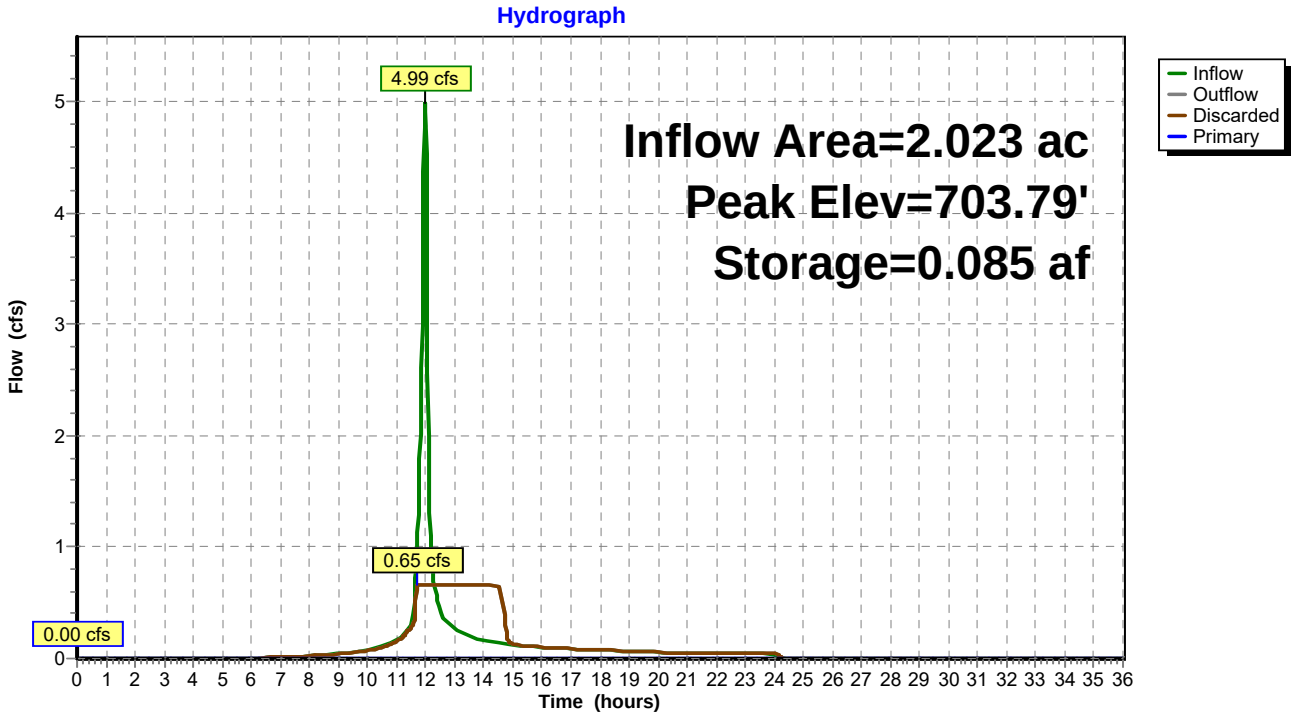
Discarded OutFlow Max=0.65 cfs @ 11.00 hrs HW=702.09' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.65 cfs)

Primary OutFlow Max=5.09 cfs @ 12.11 hrs HW=708.38' (Free Discharge)
└**2=15" Outlet out** (Passes 5.09 cfs of 14.18 cfs potential flow)
  ├**1=24" Rim** (Controls 0.00 cfs)
  ├**3=Weir wall** (Controls 0.00 cfs)
  └**5=Custom Weir/Orifice** (Orifice Controls 5.09 cfs @ 4.59 fps)

Stage-Area-Storage for Pond 18P: MC-4500 Chambers

Elevation (feet)	Surface (acres)	Storage (acre-feet)
702.00	**0.072**	0.000
702.10	0.072	0.003
702.20	0.072	0.006
702.30	0.072	0.009
702.40	0.072	0.012
702.50	0.072	0.014
702.60	0.072	0.017
702.70	0.072	0.020
702.80	0.072	0.025
702.90	0.072	0.031
703.00	0.072	0.037
703.10	0.072	0.043
703.20	0.072	0.049
703.30	0.072	0.055
703.40	0.072	0.061
703.50	0.072	0.068
703.60	0.072	0.074
703.70	0.072	0.080
703.80	0.072	0.086
703.90	0.072	0.092
704.00	0.072	0.098
704.10	0.072	0.103
704.20	0.072	0.109
704.30	0.072	0.115
704.40	0.072	0.121
704.50	0.072	0.127
704.60	0.072	0.133
704.70	0.072	0.138
704.80	0.072	0.144
704.90	0.072	0.150
705.00	0.072	0.155
705.10	0.072	0.161
705.20	0.072	0.167
705.30	0.072	0.172
705.40	0.072	0.178
705.50	0.072	0.183
705.60	0.072	0.188
705.70	0.072	0.194
705.80	0.072	0.199
705.90	0.072	0.204
706.00	0.072	0.209
706.10	0.072	0.214
706.20	0.072	0.219
706.30	0.072	0.224
706.40	0.072	0.229
706.50	0.072	0.234
706.60	0.072	0.238
706.70	0.072	0.243
706.80	0.072	0.247
706.90	0.072	0.252
707.00	0.072	0.256
707.10	0.072	0.260
707.20	0.072	0.264
707.30	0.072	0.267
707.40	0.072	0.271
707.50	0.072	0.274
707.60	0.072	0.277
707.70	0.072	0.280
707.80	0.072	0.283
707.90	0.072	0.286
708.00	0.072	0.289
708.10	0.072	0.291
708.20	0.072	0.294
708.30	0.072	0.297
708.40	0.072	0.300
708.50	0.072	0.303
708.60	0.072	0.306
708.70	0.072	**0.309**
708.80	0.072	**0.310**
708.90	0.072	0.310
709.00	0.072	0.310
709.10	0.072	0.310
709.20	0.072	0.310
709.30	0.072	0.310
709.40	0.072	0.310
709.50	0.072	0.310
709.60	0.072	0.310
709.70	0.072	0.310
709.80	0.072	0.310
709.90	0.072	0.310
710.00	0.072	0.310
710.10	0.072	0.310
710.20	0.072	0.310
710.30	0.072	0.310
710.40	0.072	0.310
710.50	0.072	0.310

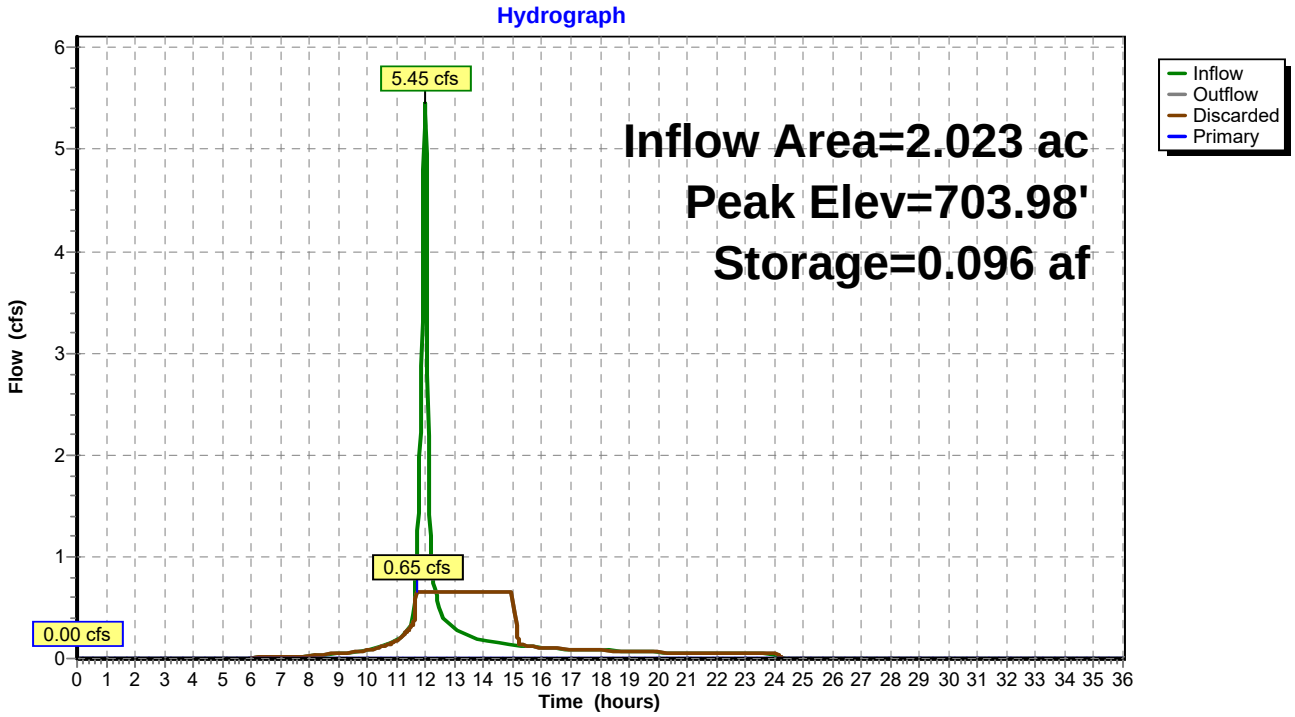
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
706.90	0.65	0.65	0.00
707.00	0.66	0.65	0.01
707.10	0.71	0.65	0.06
707.20	0.78	0.65	0.13
707.30	0.87	0.65	0.22
707.40	1.17	0.65	0.51
707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
707.90	4.01	0.65	3.35
708.00	4.44	0.65	3.79
708.10	4.83	0.65	4.17
708.20	5.18	0.65	4.52
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**

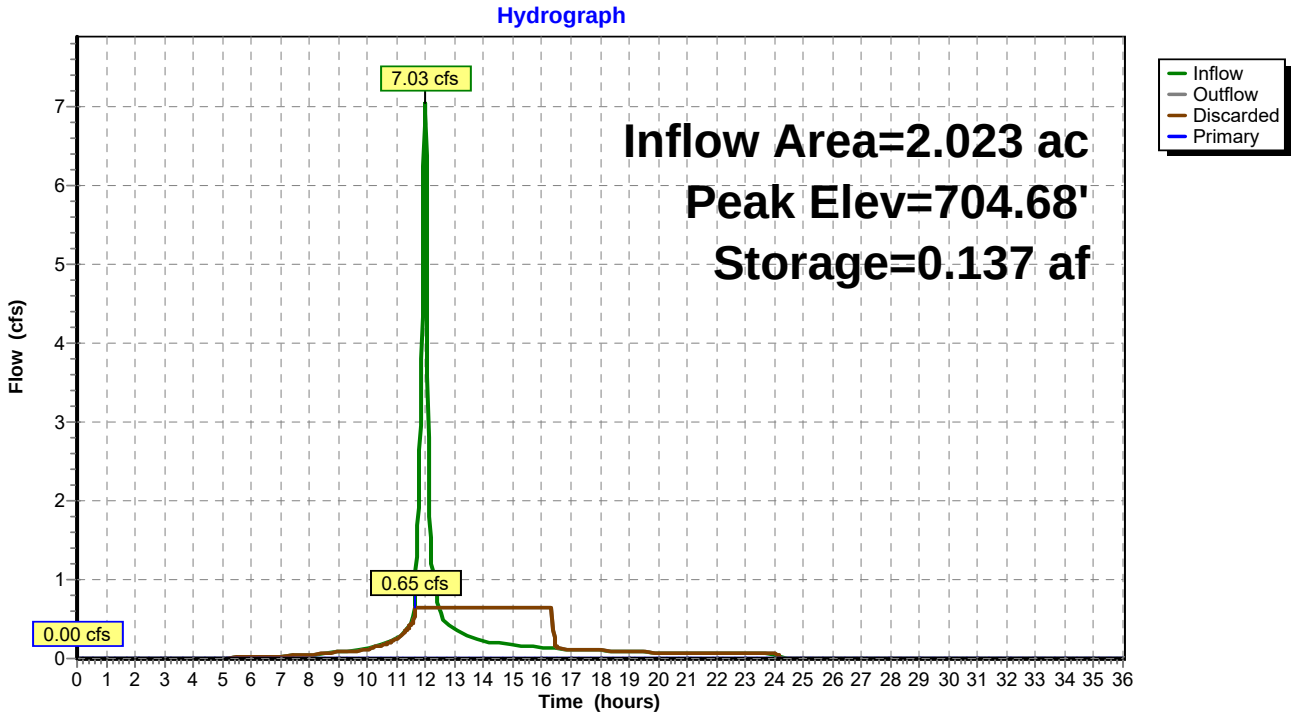
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
706.90	0.65	0.65	0.00
707.00	0.66	0.65	0.01
707.10	0.71	0.65	0.06
707.20	0.78	0.65	0.13
707.30	0.87	0.65	0.22
707.40	1.17	0.65	0.51
707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
707.90	4.01	0.65	3.35
708.00	4.44	0.65	3.79
708.10	4.83	0.65	4.17
708.20	5.18	0.65	4.52
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**

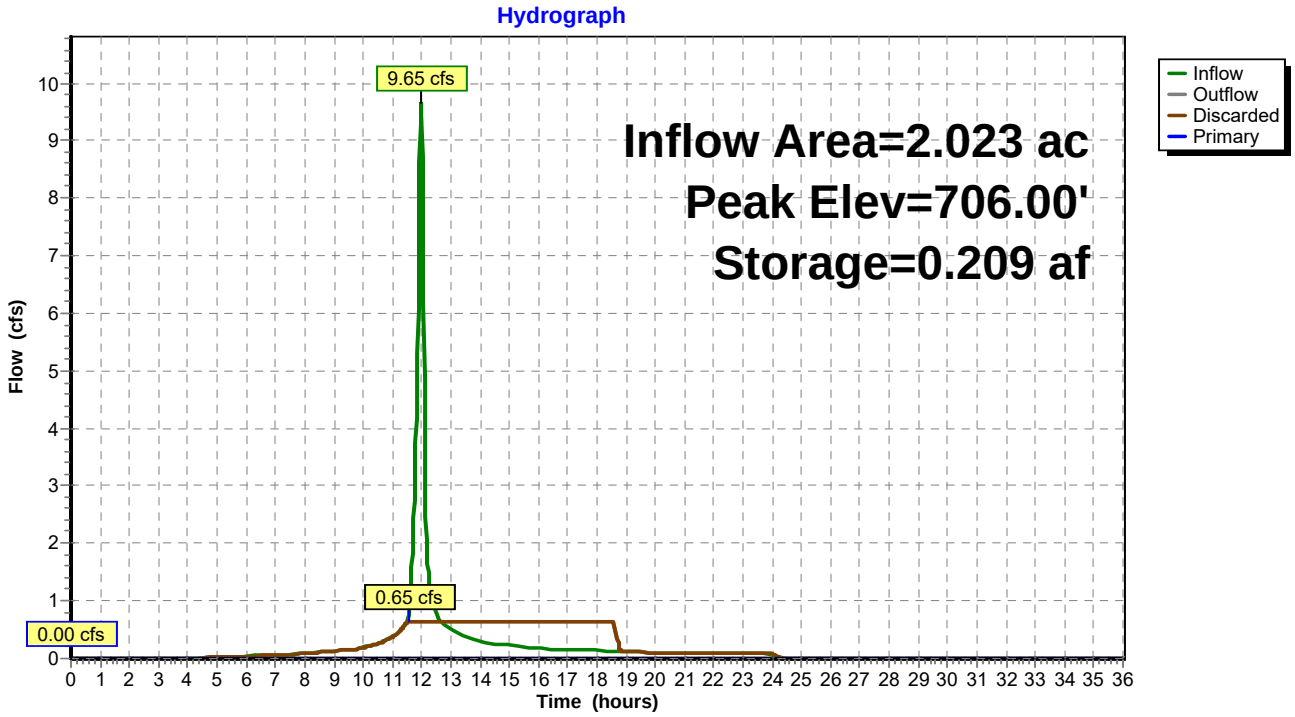
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
706.90	0.65	0.65	0.00
707.00	0.66	0.65	0.01
707.10	0.71	0.65	0.06
707.20	0.78	0.65	0.13
707.30	0.87	0.65	0.22
707.40	1.17	0.65	0.51
707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
707.90	4.01	0.65	3.35
708.00	4.44	0.65	3.79
708.10	4.83	0.65	4.17
708.20	5.18	0.65	4.52
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**

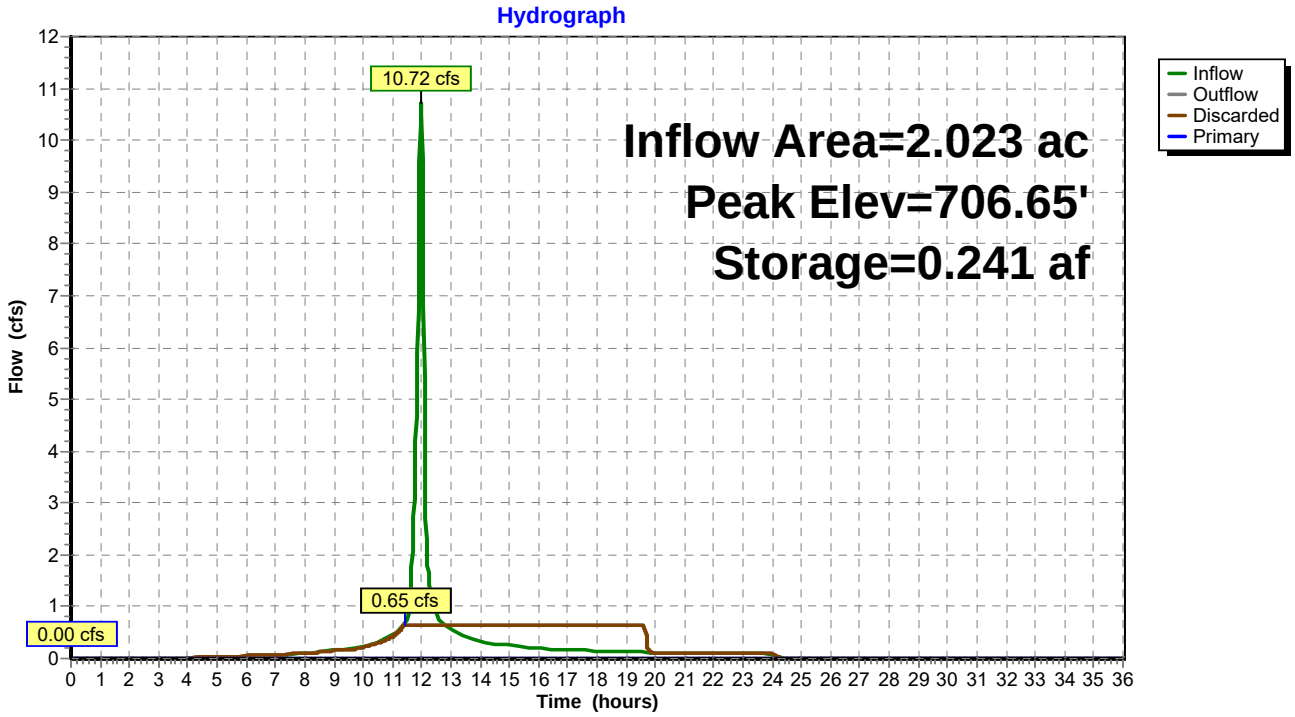
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
706.90	0.65	0.65	0.00
707.00	0.66	0.65	0.01
707.10	0.71	0.65	0.06
707.20	0.78	0.65	0.13
707.30	0.87	0.65	0.22
707.40	1.17	0.65	0.51
707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
707.90	4.01	0.65	3.35
708.00	4.44	0.65	3.79
708.10	4.83	0.65	4.17
708.20	5.18	0.65	4.52
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**

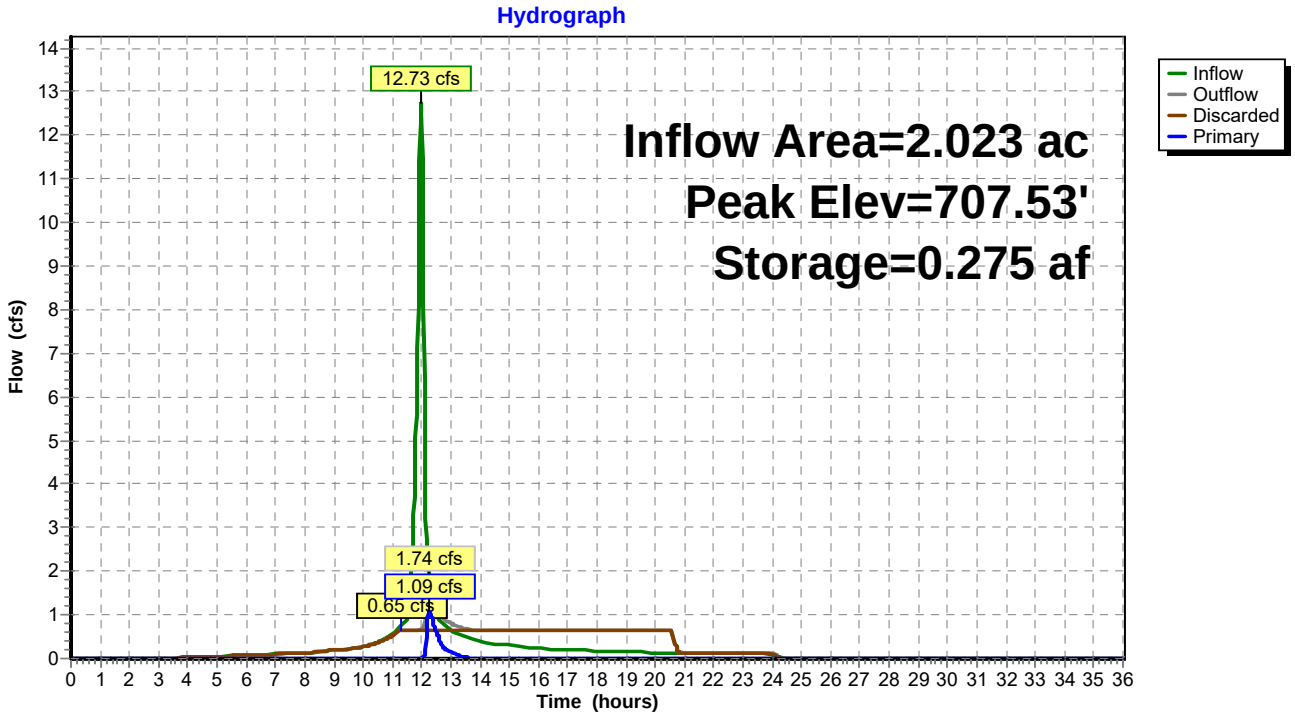
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
706.90	0.65	0.65	0.00
707.00	0.66	0.65	0.01
707.10	0.71	0.65	0.06
707.20	0.78	0.65	0.13
707.30	0.87	0.65	0.22
707.40	1.17	0.65	0.51
707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
707.90	4.01	0.65	3.35
708.00	4.44	0.65	3.79
708.10	4.83	0.65	4.17
708.20	5.18	0.65	4.52
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**

Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
702.00	0.00	**0.00**	0.00
702.10	0.65	**0.65**	0.00
702.20	0.65	0.65	0.00
702.30	0.65	0.65	0.00
702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
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703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
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704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
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705.60	0.65	0.65	0.00
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706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
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708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
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709.70	16.07	0.65	15.41
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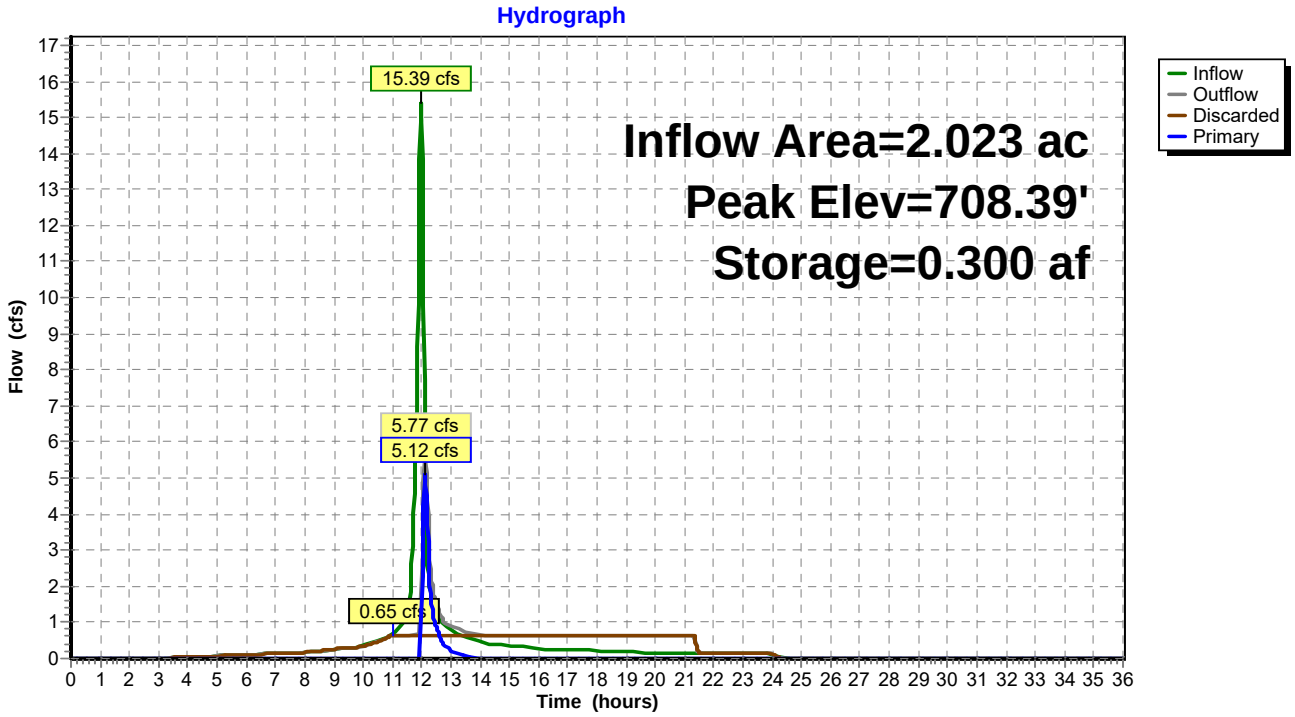
Pond 18P: MC-4500 Chambers



Stage-Discharge for Pond 18P: MC-4500 Chambers

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
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702.10	0.65	**0.65**	0.00
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702.40	0.65	0.65	0.00
702.50	0.65	0.65	0.00
702.60	0.65	0.65	0.00
702.70	0.65	0.65	0.00
702.80	0.65	0.65	0.00
702.90	0.65	0.65	0.00
703.00	0.65	0.65	0.00
703.10	0.65	0.65	0.00
703.20	0.65	0.65	0.00
703.30	0.65	0.65	0.00
703.40	0.65	0.65	0.00
703.50	0.65	0.65	0.00
703.60	0.65	0.65	0.00
703.70	0.65	0.65	0.00
703.80	0.65	0.65	0.00
703.90	0.65	0.65	0.00
704.00	0.65	0.65	0.00
704.10	0.65	0.65	0.00
704.20	0.65	0.65	0.00
704.30	0.65	0.65	0.00
704.40	0.65	0.65	0.00
704.50	0.65	0.65	0.00
704.60	0.65	0.65	0.00
704.70	0.65	0.65	0.00
704.80	0.65	0.65	0.00
704.90	0.65	0.65	0.00
705.00	0.65	0.65	0.00
705.10	0.65	0.65	0.00
705.20	0.65	0.65	0.00
705.30	0.65	0.65	0.00
705.40	0.65	0.65	0.00
705.50	0.65	0.65	0.00
705.60	0.65	0.65	0.00
705.70	0.65	0.65	0.00
705.80	0.65	0.65	0.00
705.90	0.65	0.65	0.00
706.00	0.65	0.65	0.00
706.10	0.65	0.65	0.00
706.20	0.65	0.65	0.00
706.30	0.65	0.65	0.00
706.40	0.65	0.65	0.00
706.50	0.65	0.65	0.00
706.60	0.65	0.65	0.00
706.70	0.65	0.65	0.00
706.80	0.65	0.65	0.00
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707.00	0.66	0.65	0.01
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707.20	0.78	0.65	0.13
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707.50	1.61	0.65	0.96
707.60	2.15	0.65	1.50
707.70	2.78	0.65	2.12
707.80	3.47	0.65	2.82
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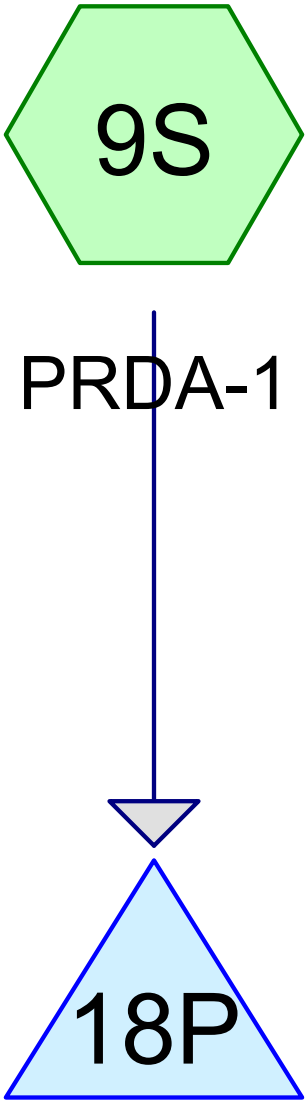
708.30	5.50	0.65	4.84
708.40	5.80	0.65	5.14
708.50	6.08	0.65	5.43
708.60	6.41	0.65	5.76
708.70	6.86	0.65	6.20
708.80	7.40	0.65	6.75
708.90	8.05	0.65	7.40
709.00	8.79	0.65	8.14
709.10	9.63	0.65	8.97
709.20	10.54	0.65	9.89
709.30	11.53	0.65	10.87
709.40	12.58	0.65	11.93
709.50	13.70	0.65	13.05
709.60	14.86	0.65	14.21
709.70	16.07	0.65	15.41
709.80	16.48	0.65	15.83
709.90	16.59	0.65	15.94
710.00	16.70	0.65	16.05
710.10	16.81	0.65	16.16
710.20	16.92	0.65	16.26
710.30	17.02	0.65	16.37
710.40	17.13	0.65	16.48
710.50	**17.24**	0.65	**16.58**



MC-4500 Chambers

Subcat Reach Pond Link

Routing Diagram for 24043-Brighton Mews-30min
Prepared by Microsoft, Printed 8/5/2024

Summary for Subcatchment 9S: PRDA-1

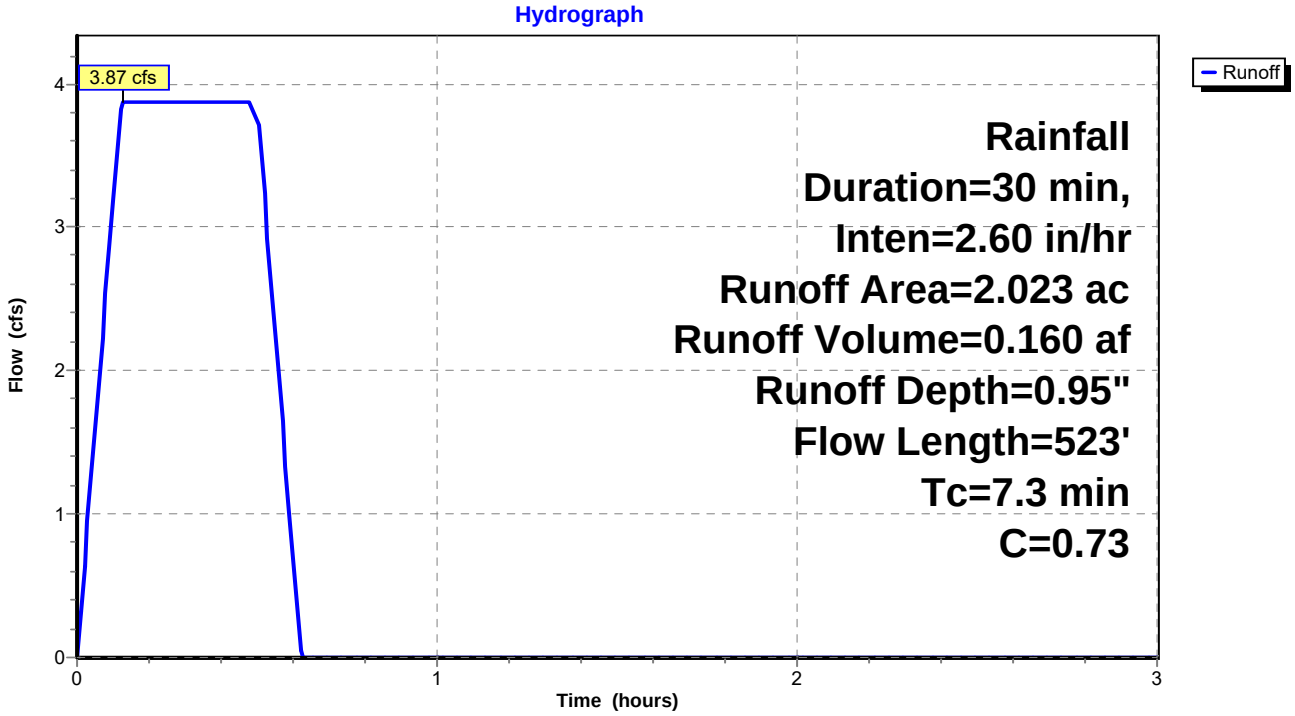
Runoff = 3.87 cfs @ 0.13 hrs, Volume= 0.160 af, Depth= 0.95"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Rainfall Duration=30 min, Inten=2.60 in/hr

Area (ac)	C	Description
1.543	0.90	Paved parking, HSG C
0.480	0.20	50-75% Grass cover, Fair, HSG C
2.023	0.73	Weighted Average
2.023		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	70	0.2143	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.36"
0.4	30	0.0333	1.14		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.36"
0.2	42	0.0238	3.13		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.9	381	0.0262	3.29		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
7.3	523	Total			

Subcatchment 9S: PRDA-1



Summary for Pond 18P: MC-4500 Chambers

Inflow Area = 2.023 ac, 0.00% Impervious, Inflow Depth = 0.95"
Inflow = 3.87 cfs @ 0.13 hrs, Volume= 0.160 af
Outflow = 0.65 cfs @ 0.06 hrs, Volume= 0.159 af, Atten= 83%, Lag= 0.0 min
Discarded = 0.65 cfs @ 0.06 hrs, Volume= 0.159 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 704.53' @ 0.60 hrs Surf.Area= 0.072 ac Storage= 0.129 af

Plug-Flow detention time= 71.5 min calculated for 0.159 af (99% of inflow)
Center-of-Mass det. time= 71.7 min (90.3 - 18.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	702.00'	0.118 af	**37.58'W x 83.59'L x 6.75'H Field A** 0.487 af Overall - 0.192 af Embedded = 0.294 af x 40.0% Voids
#2A	702.75'	0.192 af	**ADS_StormTech MC-4500 +Cap** x 76 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 4 Rows of 19 Chambers Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.310 af	Total Available Storage

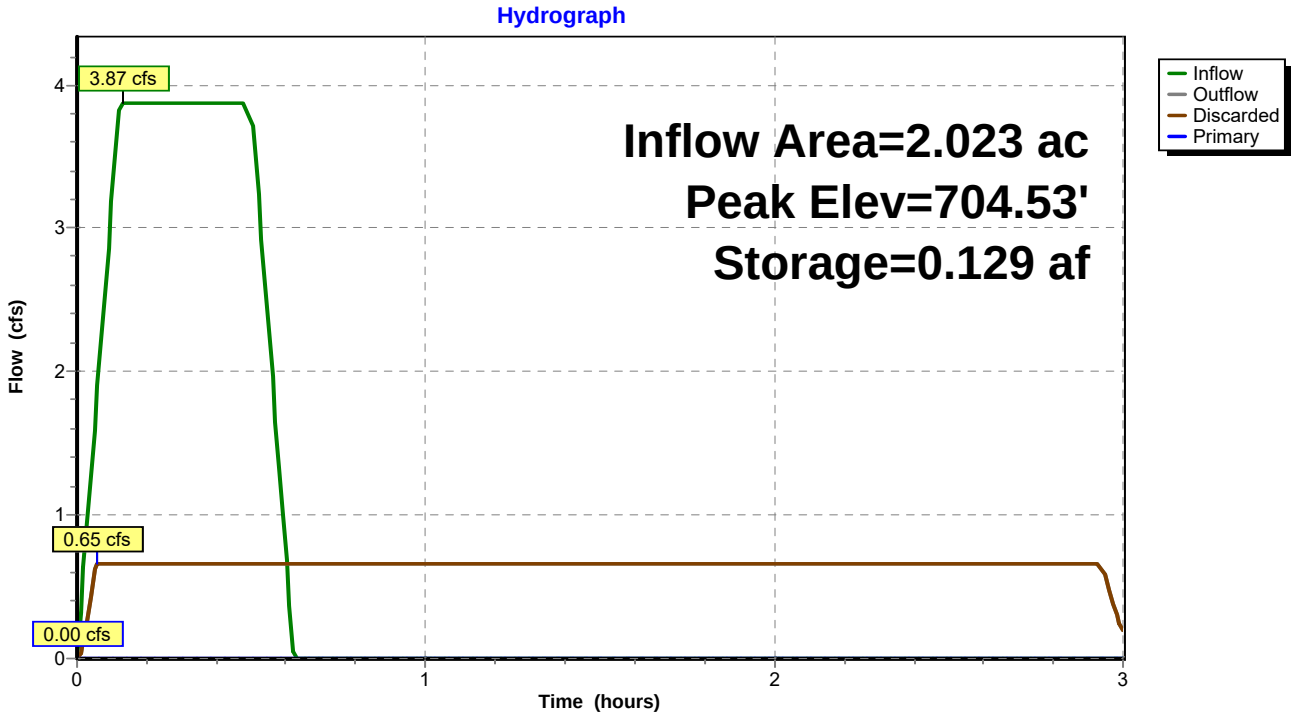
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	708.50'	**24.0" Vert. 24" Rim** C= 0.600
#2	Primary	702.00'	**15.0" Vert. 15" Outlet out** C= 0.600
#3	Device 2	707.27'	**Weir wall, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 0.50 Width (feet) 2.00 2.00
#4	Discarded	702.00'	**9.000 in/hr Exfiltration over Surface area**
#5	Device 2	706.81'	**4.0" Vert. Orifice/Grate** C= 0.600

Discarded OutFlow Max=0.65 cfs @ 0.06 hrs HW=702.11' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.65 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=702.00' (Free Discharge)
└**2=15" Outlet out** (Controls 0.00 cfs)
  ├**1=24" Rim** (Controls 0.00 cfs)
  ├**3=Weir wall** (Controls 0.00 cfs)
  └**5=Orifice/Grate** (Controls 0.00 cfs)

Pond 18P: MC-4500 Chambers



APPENDIX F

WATER & POLLUTION CONTROL FEDERATION (6) C-VALUES

storm, is common. The range of coefficients, classified with respect to the general character of the tributary area reported in use, is:

Description of Area	Runoff Coefficients
Business	
Downtown	0.70 to 0.95
Neighborhood	0.50 to 0.70
Residential	
Single-family	0.30 to 0.50
Multi-units, detached	0.40 to 0.60
Multi-units, attached	0.60 to 0.75
Residential (suburban)	0.25 to 0.40
Apartment	0.50 to 0.70
Industrial	
Light	0.50 to 0.80
Heavy	0.60 to 0.90
Parks, cemeteries	0.10 to 0.25
Playgrounds	0.20 to 0.35
Railroad yard	0.20 to 0.35
Unimproved	0.10 to 0.30

Downtown .95

Residential = 0.40

It often is desirable to develop a composite runoff coefficient based on the percentage of different types of surface in the drainage area. This procedure often is applied to typical "sample" blocks as a guide to selection of reasonable values of the coefficient for an entire area. Coefficients with respect to surface type currently in use are:

Character of Surface	Runoff Coefficients
Pavement	
Asphaltic and Concrete	0.70 to 0.95
Brick	0.70 to 0.85
Roofs	0.75 to 0.95
Lawns, sandy soil	
Flat, 2 percent	0.05 to 0.10
Average, 2 to 7 percent	0.10 to 0.15
Steep, 7 percent	0.15 to 0.20
Lawns, heavy soil	
Flat, 2 percent	0.13 to 0.17
Average, 2 to 7 percent	0.18 to 0.22
Steep, 7 percent	0.25 to 0.35

The coefficients in these two tabulations are applicable for storms of 5- to 10-yr frequencies. Less frequent, higher intensity storms will require the use of higher coefficients because infiltration and other losses have a proportionally smaller effect on runoff. The coefficients are based on the assumption that the design storm does not occur when the ground surface is frozen.

(c) Coefficients Varying with Time.—Figure 11 shows the variation of the runoff coefficient with respect to length of time of prior wetting,

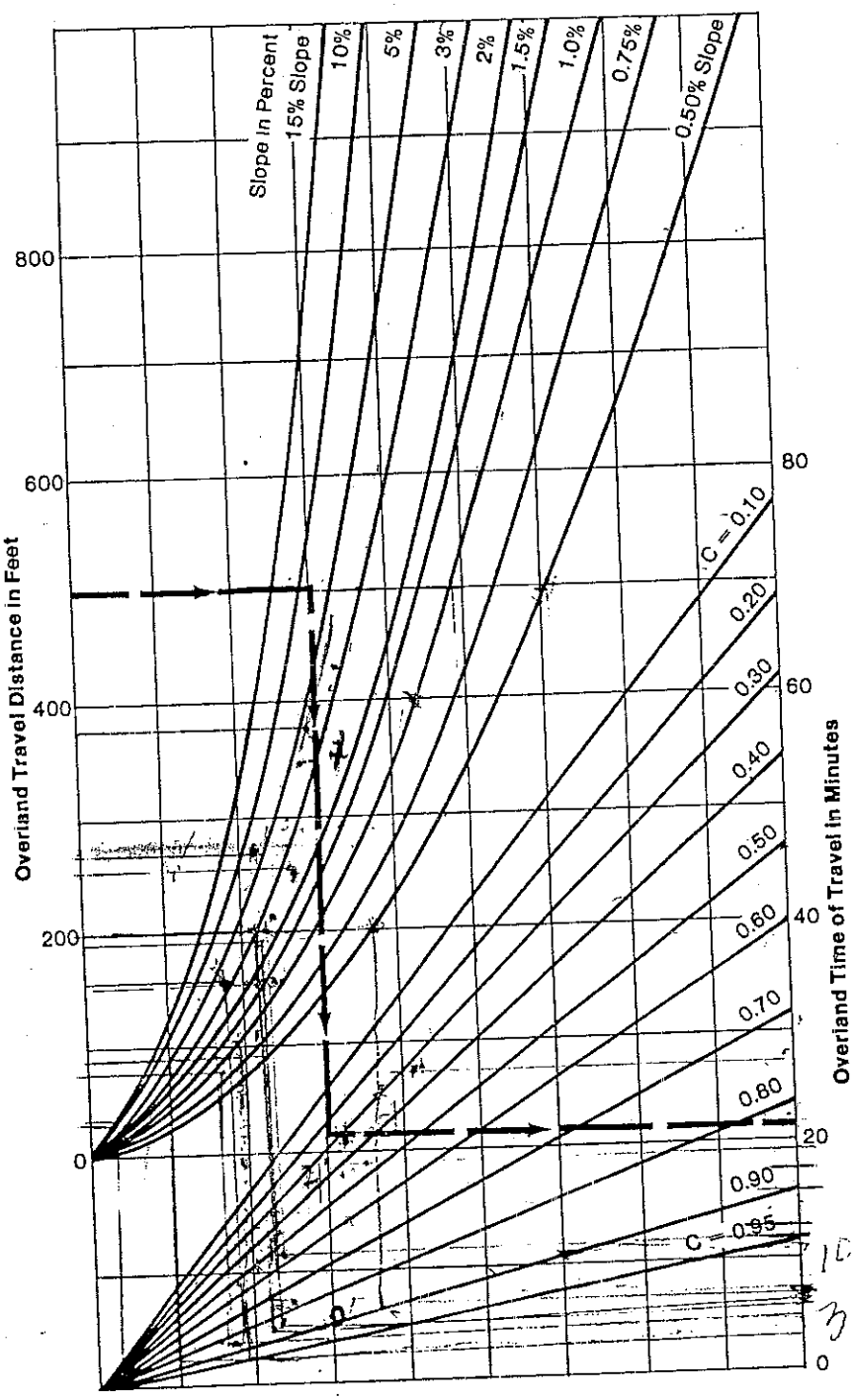
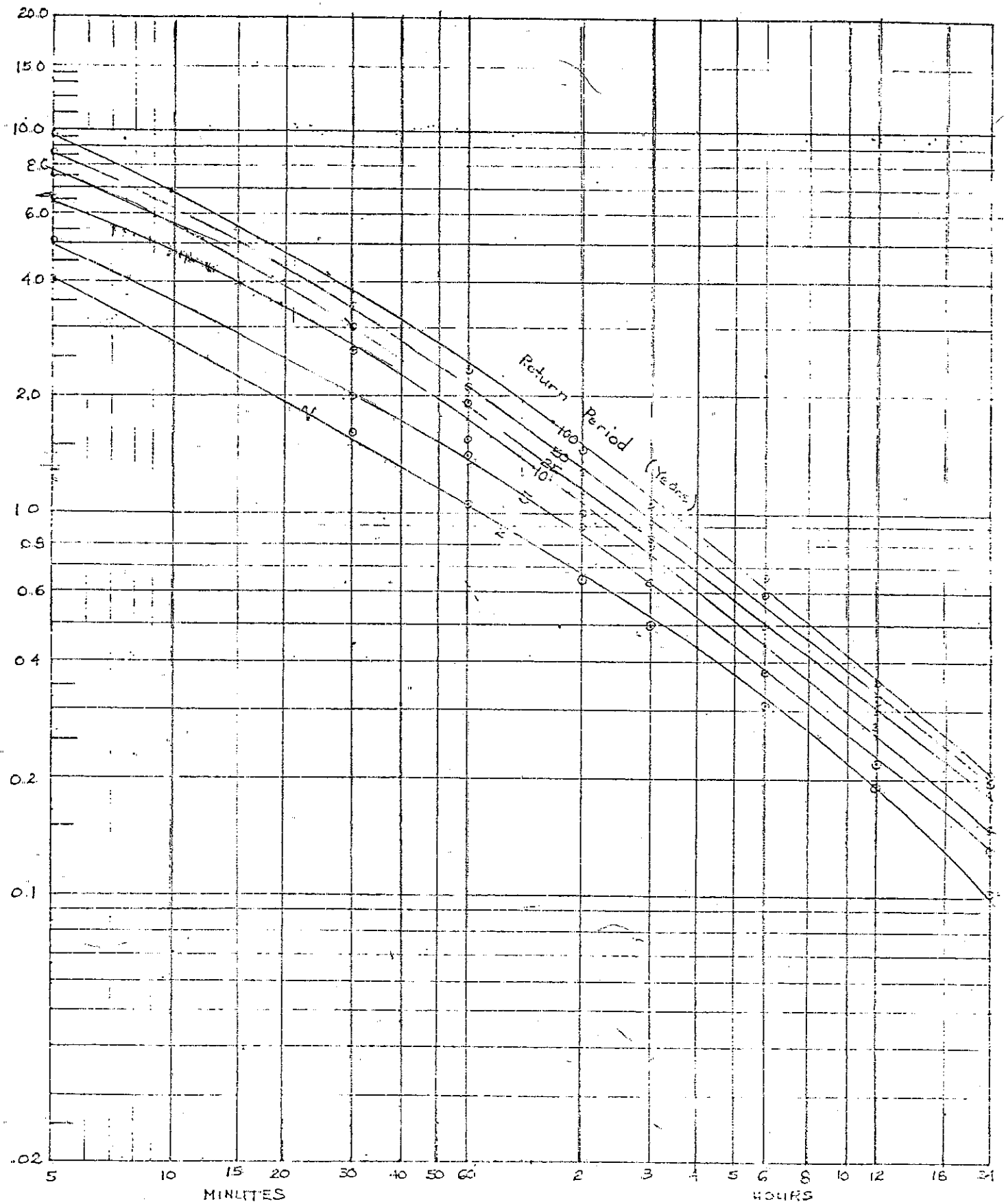


Figure 3-10 Overland time of flow graph

Syracuse, New York 1903-1970



Rainfall Intensity In ... s Per Hour

Duration

APPENDIX G

Project: **Brighton Mews** Date: **8/2/2024**

Water Quality Calculations

Owner: Project No.: **24046**

Location: **East Brighton Ave**

Drawings: **Grading and Site Plans** Estimated By: **JKM** **PRDA**

WQv = (P)(Rv)(A)/12

P= 90% Rainfall Number - Figure 4.1 = **1.00**

Rv= 0.05 + 0.009(I)

Where I = % Impervious

100% New Impervious = 1.543 Acres

Total Site Area = 2.023 Acres

% Impervious= 0.763

Therefore Rv =0.05 + 0.009(76.27 %)

Rv = **0.736**

A= Total Site Area = **2.02 Acres**

Therefore Water Quality Volume WQv =

WQv = [(P)(Rv)(A)]/12

= **0.124 acre feet**

or

= **5408.16 cubic feet**

TMDL Water Quality Volume =

0.253 acre feet

11020.68 cubic feet

RZ Engineering, PLLC

¦VWRUPZDWHU##VDQLWDU\##ZDWHU##HQYLURQPHQWDO###

Project: **Brighton Mews** Date: **8/2/2024**

Channel Protection Volume

City of Syracuse

Owner: Project No.: **24043**

Location: **East Brighton Ave**

Drawings: **Grading and Site Plans** Estimated By: **JKM** **PRDA-1**

Calculate Unit Peak Discharge (qu) using TR-55 & Type II Rainfall Distribution

Curve Number (CN) from Hyrdocadd analysis	93
Initial Abstraction (Ia)	0.15
Rainfall (P) - 1 year storm from Exhibit 10.1 NYS Guidelines for Urban Erosion & Sed Control	2.03
Ia/P	0.07
Tc from Hydrocadd analysis in hrs	0.12
Unit Peak Discharge (qu) from TR-55 Exhibit 4-II	900.00
Ratio of Outflow to Inflow (qo/qi) from qu and Figure 8.5)	0.020

Calculate Channel Protection Volume per Appendix B

$$V_s/V_r = 0.682 - 1.43*(q_o/qi) + 1.64*(qo/qi)^2 - 0.804*(qo/qi)^3$$

V_r = runoff volume 1 year post development(acre-feet) 0.25 acre-feet

V_s/V_r= 0.654050 (no units)

Therefore V_s = 0.165475 acre-feet

Cpv = **0.165 acre feet**

or

= **7208.07 cubic feet**

Calculate Runoff Rate for 24 hr. detention time

Channel Protection Volume =	0.165 acre feet
Time to release Vs =	24 hours
Projected release rate =	**0.08 cfs**

APPENDIX H

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____
(for DEC use only)

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)
Benchmark Development

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Charles

Owner/Operator Contact Person First Name
Michael

Owner/Operator Mailing Address
Po Box 432

City
Great Barrington

State
Ma

Zip
01280-____

Phone (Owner/Operator)
4134207744

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)

FED TAX ID
465540409 (not required for individuals)

Project Site Information

Project/Site Name
Brighton Hills Storage

Street Address (NOT P.O. BOX)
East Brighton Ave

Side of Street
○ **North** ○ **South** ● **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Syracuse

State: NY
Zip: 13205-
County: Onondaga
DEC Region: 7

Name of Nearest Cross Street
East Seneca Turnpike

Distance to Nearest Cross Street (Feet)
0

Project In Relation to Cross Street
○ **North** ○ **South** ● **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel
062.-02.11.0

Tax Map Numbers

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): 407985

Y Coordinates (Northing): 4776611662299

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 — Number of Lots
- ( ) 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

***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
2.82.8	2.82.8	0.00.0	1.51.5

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
%	%	100%	%

7. Is this a phased project? ( ) **Yes** (●) **No**

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

Start Date	End Date
10/01/2024	10/01/2025

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Onondaga Creek

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ● Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ● **Yes** ○ **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ● **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ● **No**
If Yes, what is the acreage to be disturbed?

.

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

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?

City of Syracuse

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**

SWPPP Preparer
RZ Engineering, PLLC

Contact Name (Last, Space, First)
Zona Rudy

Mailing Address
6320 Fly Road Suite 109

City
East Syracuse

State NY Zip 13057-

Phone 3154321089

Fax 1354457981

Email
rzona@rzengineering.com

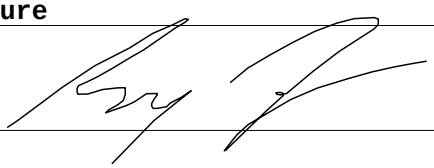
SWPPP Preparer Certification

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 Rudy **MI** L

Last Name Zona

Signature



Date 08/05/2024

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

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

Other

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

0.102414 **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)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
○ Disconnection of Rooftop Runoff (RR-4)		and/or	
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			
○ Rain Garden (RR-6)			
○ Stormwater Planter (RR-7)			
○ Rain Barrel/Cistern (RR-8)			
○ Porous Pavement (RR-9)			
○ Green Roof (RR-10)			
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			
○ Infiltration Basin (I-2)			
○ Dry Well (I-3)			
● Underground Infiltration System (I-4)			1.51433
○ Bioretention (F-5)			
○ Dry Swale (O-1)			
Standard SMPs			
○ Micropool Extended Detention (P-1)			
○ Wet Pond (P-2)			
○ Wet Extended Detention (P-3)			
○ Multiple Pond System (P-4)			
○ Pocket Pond (P-5)			
○ Surface Sand Filter (F-1)			
○ Underground Sand Filter (F-2)			
○ Perimeter Sand Filter (F-3)			
○ Organic Filter (F-4)			
○ Shallow Wetland (W-1)			
○ Extended Detention Wetland (W-2)			
○ Pond/Wetland System (W-3)			
○ Pocket Wetland (W-4)			
○ Wet Swale (O-2)			

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ Hydrodynamic	
○ Wet Vault	
○ Media Filter	
○ Other	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

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

Total RRv provided

0.102 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

● **Yes** ○ **No**

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

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
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

0.106565 **acre-feet**

CPv Provided

0.106565 **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

3.831611 **CFS**

Post-development

0.000000 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

7.478480 **CFS**

Post-development

5.152120 **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

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● **Yes** ○ **No**

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

Benchmark Development

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 [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][ ].[ ]

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

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. [N][Y][R][ ][ ][ ][ ][ ][ ]

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 **MI**

Print Last Name

Owner/Operator Signature

Date / /

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Benchmark Delvopment
2. Contact Person:	Michael Charles
3. Street Address:	P.O. Box 432
4. City/State/Zip:	Great Barrington, MA
II. Project Site Information	
5. Project/Site Name:	Brighton Hill Storage
6. Street Address:	East Brighton Ave
7. City/State/Zip:	Syracuse, NY 13205
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4:	
12. MS4 SPDES Permit Identification Number: NYR20A _____	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

(NYS DEC - MS4 SWPPP Acceptance Form - January 2010)

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).
Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

SITE PLAN/SKETCH

_____	_____
Inspector (print name)	**Date of Inspection**
_____	_____
Qualified Professional (print name)	**Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA
[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions
Yes No NA
[ ] [ ] [ ] Is construction site litter and debris appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing
Yes No NA
[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering
Yes No NA
[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader
Yes No NA
[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales
Yes No NA
[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

Runoff Control Practices (continued)

4. Stone Check Dam
Yes No NA
[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection
Yes No NA
[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles
Yes No NA
[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation
Yes No NA
[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance
Yes No NA
[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence
Yes No NA
[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

ATTACHMENT 1

Construction Stormwater Compliance Inspection Report

Project Name and Location:	Date:	Page 1 of 2
	Permit # (if any): **NYR**	
Municipality: County:	Entry Time:	Exit Time:
On-site Representative(s) and contact information:	Weather Conditions:	
Name and Address of SPDES Permittee/Title/Phone/Fax Numbers: Contacted: Yes ☐ No ☐		

INSPECTION CHECKLIST

SPDES Authority

	Yes	No	N/A		Law, rule or permit citation
1.	☐	☐	☐	Is a copy of the NOI posted at the construction site for public viewing?	
2.	☐	☐	☐	Is an up-to-date copy of the signed SWPPP retained at the construction site?	
3.	☐	☐	☐	Is a copy of the SPDES General Permit retained at the construction site?	

SWPPP Content

	Yes	No	N/A		Law, rule or permit citation
4.	☐	☐	☐	Does the SWPPP describe and identify the erosion & sediment control measures to be employed?	
5.	☐	☐	☐	Does the SWPPP provide a maintenance schedule for the erosion & sediment control measures?	
6.	☐	☐	☐	Does the SWPPP describe and identify the post-construction SW control measures to be employed?	
7.	☐	☐	☐	Does the SWPPP identify the contractor(s) and subcontractor(s) responsible for each measure?	
8.	☐	☐	☐	Does the SWPPP include all the necessary 'CONTRACTOR CERTIFICATION' statements?	
9.	☐	☐	☐	Is the SWPPP signed/certified by the permittee?	

Recordkeeping

	Yes	No	N/A		Law, rule or permit citation
10.	☐	☐	☐	Are inspections performed as required by the permit (every 7 days and after ½" rain event)?	
11.	☐	☐	☐	Are the site inspections performed by a qualified professional?	
12.	☐	☐	☐	Are all required reports properly signed/certified?	
13.	☐	☐	☐	Does the SWPPP include copies of the monthly/quarterly written summaries of compliance status?	

Visual Observations

	Yes	No	N/A		Law, rule or permit citation
14.	☐	☐	☐	Are all erosion and sediment control measures installed/constructed?	
15.	☐	☐	☐	Are all erosion and sediment control measures maintained properly?	
16.	☐	☐	☐	Have all disturbances of 5 acres or more been approved prior to the disturbance?	
17.	☐	☐	☐	Are stabilization measures initiated in inactive areas?	
18.	☐	☐	☐	Are permanent stormwater control measures implemented?	
19.	☐	☐	☐	Was there a discharge into the receiving water on the day of inspection?	
20.	☐	☐	☐	Are receiving waters free of there evidence of turbidity, sedimentation, or oil ? (If no , complete Page 2)	

Overall Inspection Rating: ❑ Satisfactory ❑ Marginal ❑ Unsatisfactory	
Name/Agency of Lead Inspector:	**Signature of Lead Inspector:**
Names/Agencies of Other Inspectors:	

Water Quality Observations

Describe the discharge(s) [source(s), impact on receiving water(s), etc.] ____

____

____

____

____

Describe the quality of the receiving water(s) both upstream and downstream of the discharge____

____

____

____

____

Describe any other water quality standards or permit violations ____

____

____

Additional Comments:____

____

____

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☐ Photographs attached

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

5. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. ☐ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP.
***Date final stabilization completed** (month/year): _____

9b. ☐ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. ☐ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? ☐ yes ☐ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? ☐ yes ☐ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? ☐ yes ☐ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

☐ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

☐ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

☐ For post-construction stormwater management practices that are privately owned, the deed of record has been modified to include a deed covenant that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

☐ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? ☐ yes ☐ no
(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. 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.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. 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.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. 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.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2010)

APPENDIX I

Erosion and Sedimentation Control Measures Maintenance Schedule

1. Temporary Construction Entrance: During Construction inspect periodically. Maintain entrance in a manner that will prevent tracking of sediment into public right of ways. Remove built up sediment deposits; and clean, repair, or replace temporary construction entrance as required.
2. Temporary Sediment Trap: During construction inspect weekly. Clean and restore traps to their original size when sediment has accumulated to one-half of the basin depth. Remove temporary sediment traps and stabilize areas when their contributory drainage area is stabilized.
3. Temporary Silt Fence: During construction inspect weekly. Remove built up sediment deposits; and clean, repair, or replace silt fence as required. Remove temporary silt fence when contributory drainage areas are stabilized.
4. Grass-Lined Drainage Channels: During construction inspect weekly to insure their stability and to locate points of scour, rodent-holes, breaches, and deposition of sediment or other obstructions. Clean, repair, and re-seed drainage channels as required. After construction inspect semi-annually and after every heavy rainfall.
5. Culvert: During construction inspect weekly to insure structural integrity, detect vandalism and damage, and for cleaning. Clean, repair, or replace culvert as required. After construction inspect semi-annually and after every heavy rainfall.
6. Stone Erosion Protection Aprons: During construction inspect weekly to insure structural integrity and to verify that stone is not by-passed, or developing excessive scour at the stone base or sediment build-up. Remove sediment accumulated within the riprap stone aprons at inlets and outlets of culverts and grassed waterways, or replace stone, as required, to allow the stormwater to drain through the stone to reduce erosive velocities and prevent large flows from carrying sediment over their tops. After construction inspect semi-annually and after every heavy rainfall.
7. Disturbed Soil Areas: Seed and mulch upon final grading of topsoil. During construction inspect weekly and repair and re-seed areas, as required. After construction inspect and maintain on regular basis permanent lawns and grassed areas consistent with favorable plant growth, soil, and climatic conditions to insure soil protection and structural integrity of the site's plant cover. Maintenance involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire controls, weed and pest control, re-seeding, and timely repairs, as required. Maintenance of vegetative areas shall also include removal of debris and protection from unintended uses or traffic.

STANDARD AND SPECIFICATIONS FOR TOPSOILING

Definition

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas.

Purpose

To provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

Conditions Where Practice Applies

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

Design Criteria

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.

2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established.

3. Refer to USDA Soil Conservation Service (presently Natural Resource Conservation Service) soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

Site Preparation

1. As needed, install erosion control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.

2. Complete rough grading and final grade, allowing for depth of topsoil to be added.

3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompacted to a minimum depth of 12 inches with a deep ripper or chisel plow prior to topsoiling.

4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

Topsoil Materials

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.

2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.

3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.

4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.

5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Application and Grading

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.

2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by “tracking” with suitable equipment.

3. Apply topsoil in the following amounts:

Site Conditions	Intended Use	Minimum Topsoil Depth
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

STANDARD AND SPECIFICATIONS FOR MULCHING

Definition

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface.

Purpose

The primary purpose is to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch is also used alone for temporary stabilization in non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/ acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

Table 3.7
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7”	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2”	9 cu. yds.	405 cu. yds.	3”	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/ yd. 60-90 lbs./roll	48” x 50 yds. or 48” x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	8” x 100” 2-sided plastic, 48” x 180” 1-sided plastic	—	—	Use without additional mulch. Excellent for seeding establishment. Tie down as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Compost	Up to 3” pieces, moderately to highly stable	3-9 cu. yds.	134-402 cu. yds.	1-3”	Coarser textured mulches may be more effective in reducing weed growth and wind erosion.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

Table 3.8
Mulch Anchoring Guide

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45^0 Fahrenheit are required.

STANDARD AND SPECIFICATIONS FOR STABILIZATION WITH SOD

Definition

Stabilizing silt producing areas by establishing long term stands of grass with sod.

Purpose

To stabilize the soil; reduce damage from sediment and runoff to downstream areas; enhance natural beauty.

Conditions Where Practice Applies

On exposed soils that have a potential for causing off site environmental damage where a quick vegetative cover is desired. Moisture, either applied or natural, is essential to success.

Design Criteria

1. Sod shall be bluegrass or a bluegrass/red fescue mixture or a perennial ryegrass for average sites. (CAUTION: Perennial ryegrass has limited cold tolerance and may winter kill.) Use turf type cultivars of tall fescue for shady, droughty, or otherwise more critical areas. For variety selection, contact Cornell Cooperative Extension Turf Specialist.

2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch. Measurement for thickness shall exclude top growth and thatch.

3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.

4. Sod shall be free of weeds and undesirable coarse weedy grasses. Wild native or pasture grass sod shall not be used unless specified.

5. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

6. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved by the contracting officer or his designated representative prior to its installation.

Site Preparation

Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test and the contracting officer agrees, fertilizer and lime materials may be applied in amounts shown in subsection 2 below. Slope land such as to provide good surface water drainage. Avoid depressions or pockets.

1. Prior to sodding, the surface shall be smoothed and cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.

2. **The soil should be tested to determine the amounts of amendments needed.** Where the soil is acid or composed of heavy clays, ground limestone shall be spread to raise the pH to 6.5. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 20 lbs. of 5-10-10 (or equivalent) and mix into the top 3 inches of soil with the required lime for every 1,000 square feet. Soil should be moist prior to sodding. Arrange for temporary storage of sod to keep it shaded and cool.

Sod Installation

1. For the operation of laying, tamping, and irrigating for any areas, sod shall be completed within eight hours. During periods of excessively high temperature, the soil shall be lightly moistened immediately prior to laying the sod.

2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to, and tightly wedged against, each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. On sloping areas where erosion may be a problem, sod shall be laid with the long edges parallel to the contour and with staggered joints.

3. Secure the sod by tamping and pegging, or other approved methods. As sodding is completed in any one section, the entire area shall be rolled or tamped to ensure solid contact of roots with the soil surface.

4. Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Keep sod moist for at least two weeks.

Sod Maintenance

1. In the absence of adequate rainfall, watering shall be performed daily, or as often as deemed necessary by the inspector, during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done in the morning. Avoid excessive watering during applications.

2. After the first week, sod shall be watered as necessary to maintain adequate moisture and ensure establishment.

3. The first mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified. Avoid heavy mowing equipment for several weeks to prevent rutting.

4. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply fertilizer three to four weeks after sodding, at a rate of 1 pound nitrogen/1,000 sq.ft. Use a complete fertilizer with a 2-1-1 ratio.

5. Weed Control: Target herbicides for weeds present. Consult current Cornell Pest Control Recommendations for Commercial Turfgrass Management or consult the local office of Cornell Cooperative Extension.

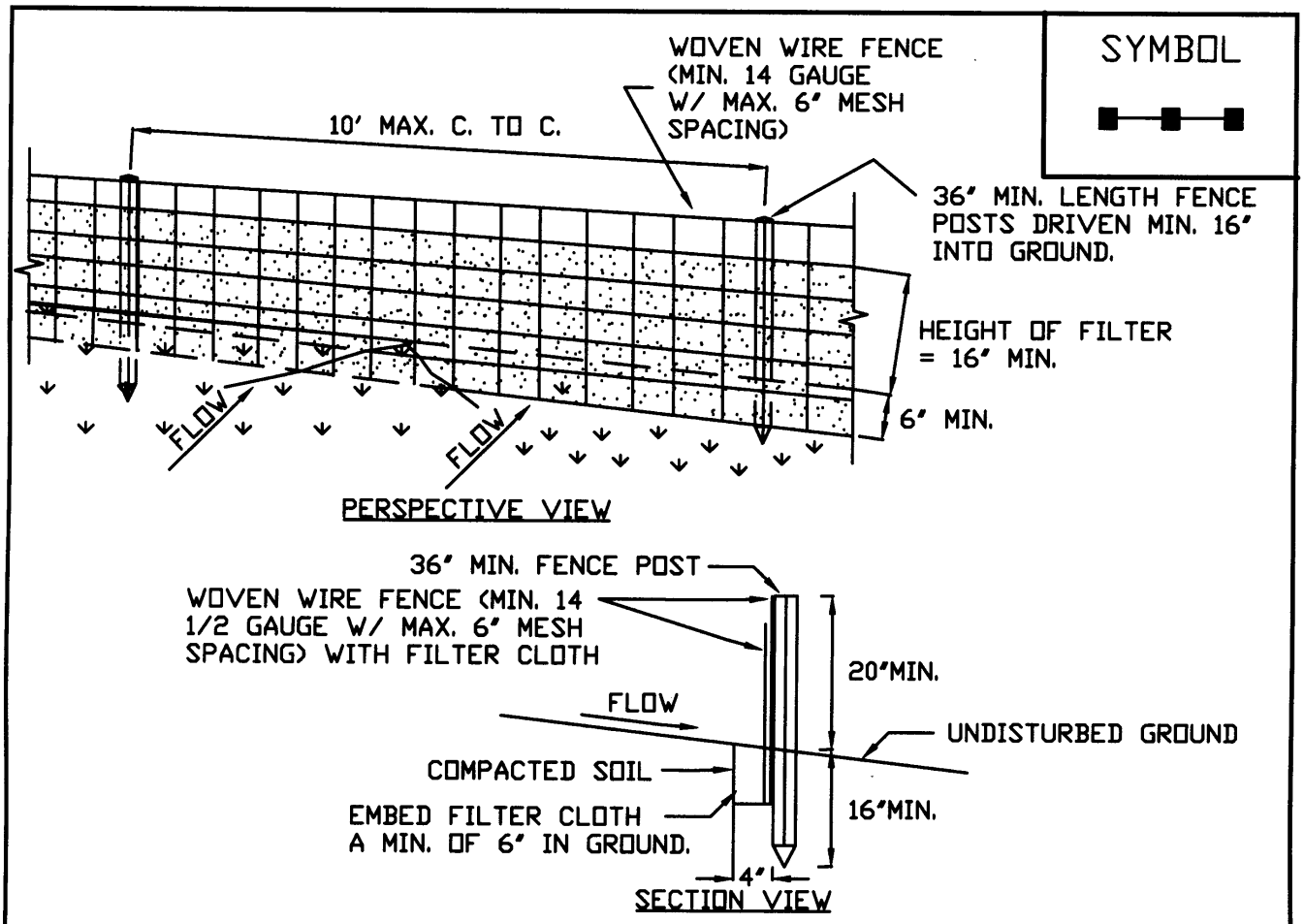
6. Disease Control: Consult the local office of the Cornell Cooperative Extension.

Additional References

1. Home Lawns, Establishment and Maintenance, CCE Information Bulletin 185, Revised November 1994. Cornell University, Ithaca, NY.

2. Installing a Sod Lawn. CCE Suffolk County, NY. Thomas Kowalsick February 1994, Revised January 1999. www.cce.cornell.edu/counties/suffolk/grownet

Figure 5A.8
Silt Fence

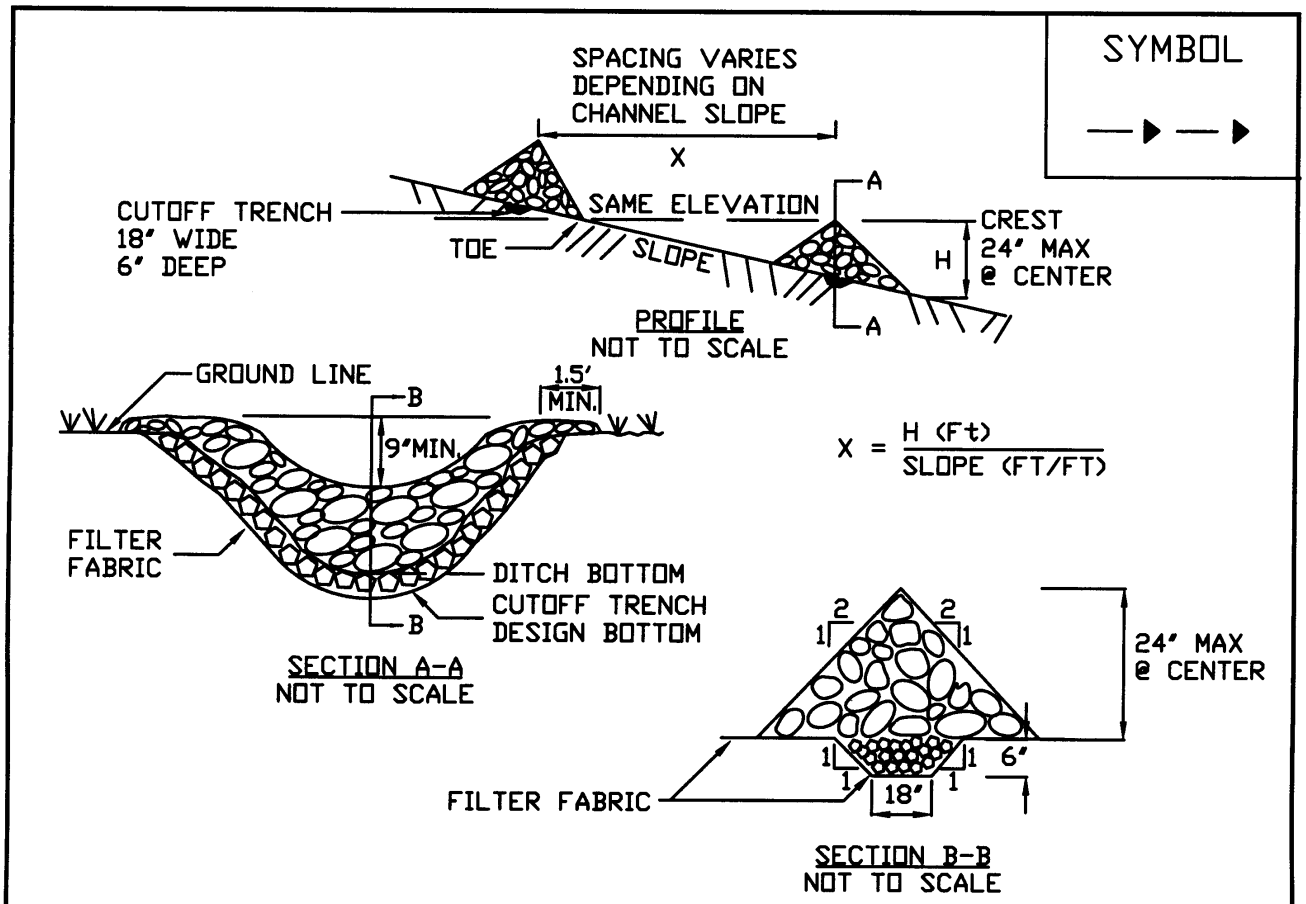


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

Figure 5A.9
Check Dam



CONSTRUCTION SPECIFICATIONS

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

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	CHECK DAM

Figure 5A.11
Excavated Drop Inlet Protection

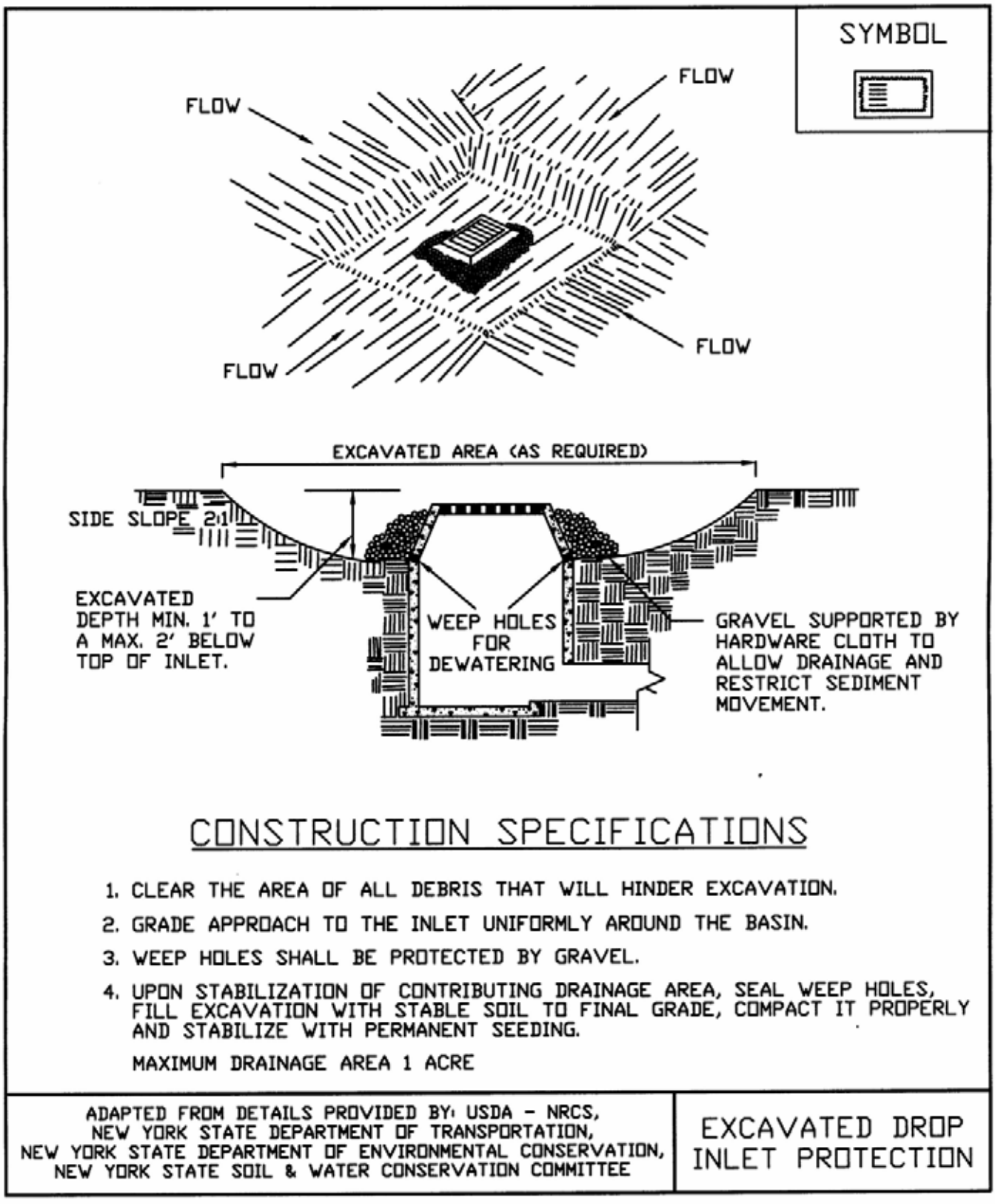
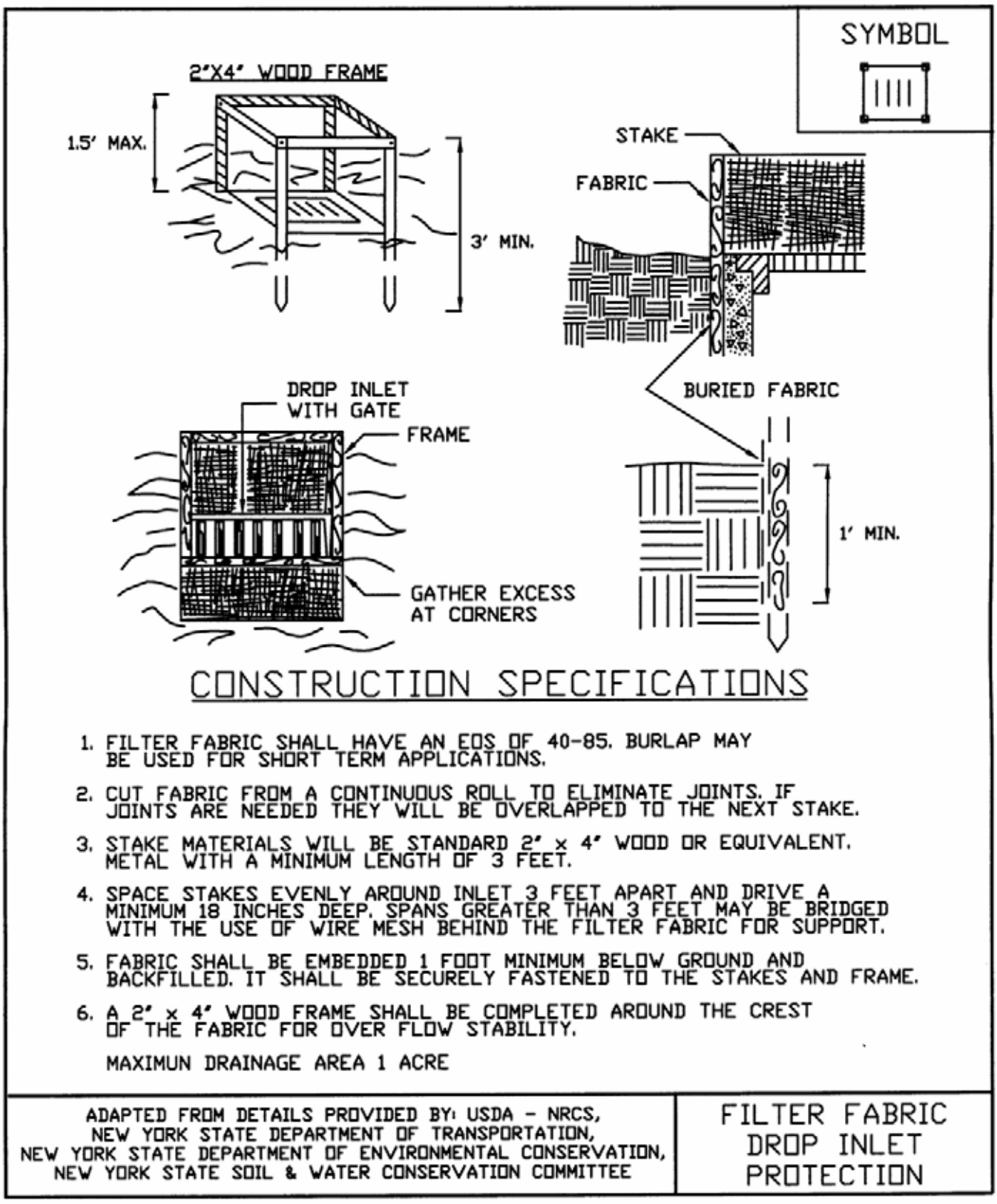


Figure 5A.12
Filter Fabric Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

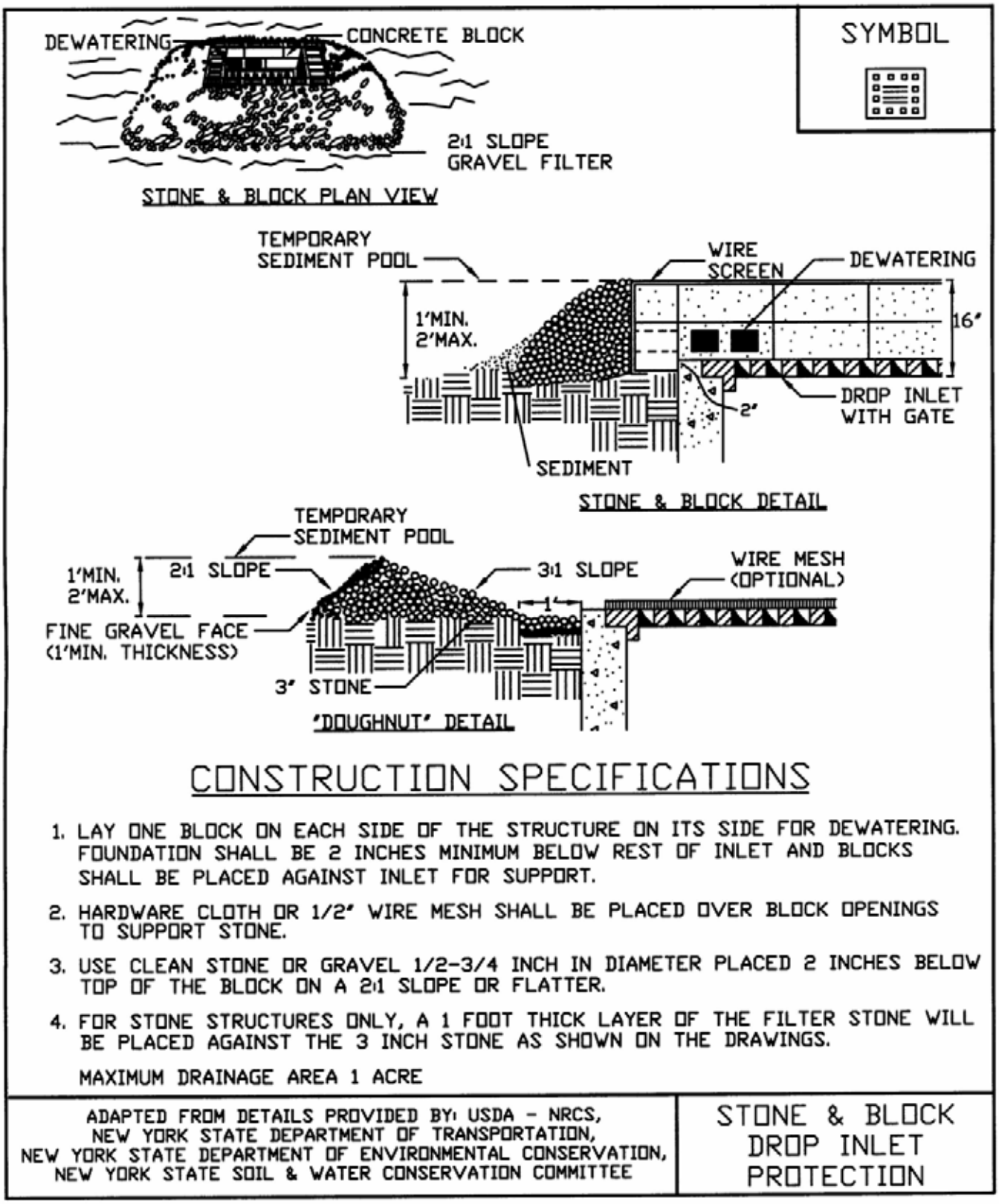
1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

FILTER FABRIC
DROP INLET
PROTECTION

Figure 5A.13
Stone & Block Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

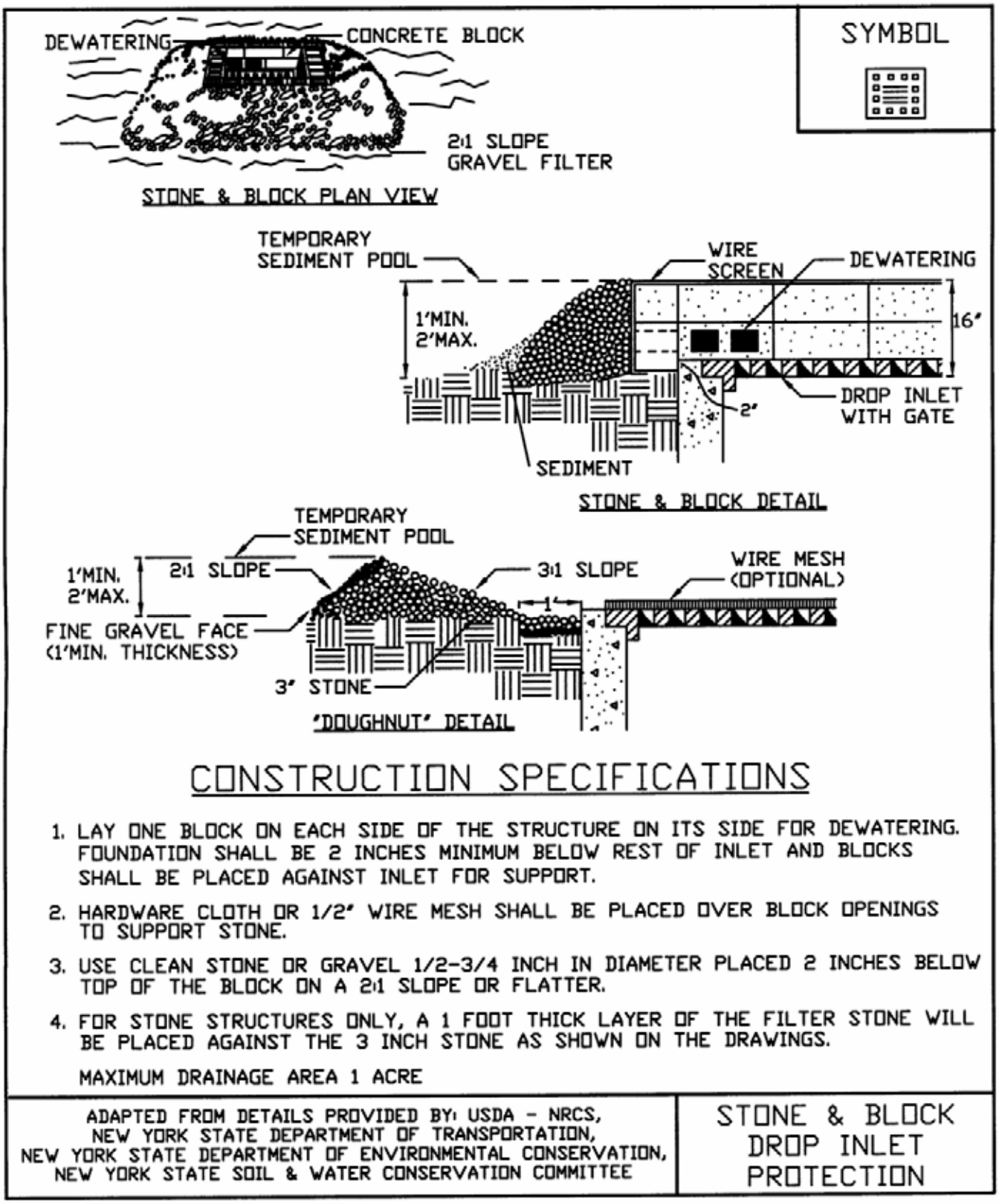
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STONE & BLOCK
DROP INLET
PROTECTION

Figure 5A.13
Stone & Block Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
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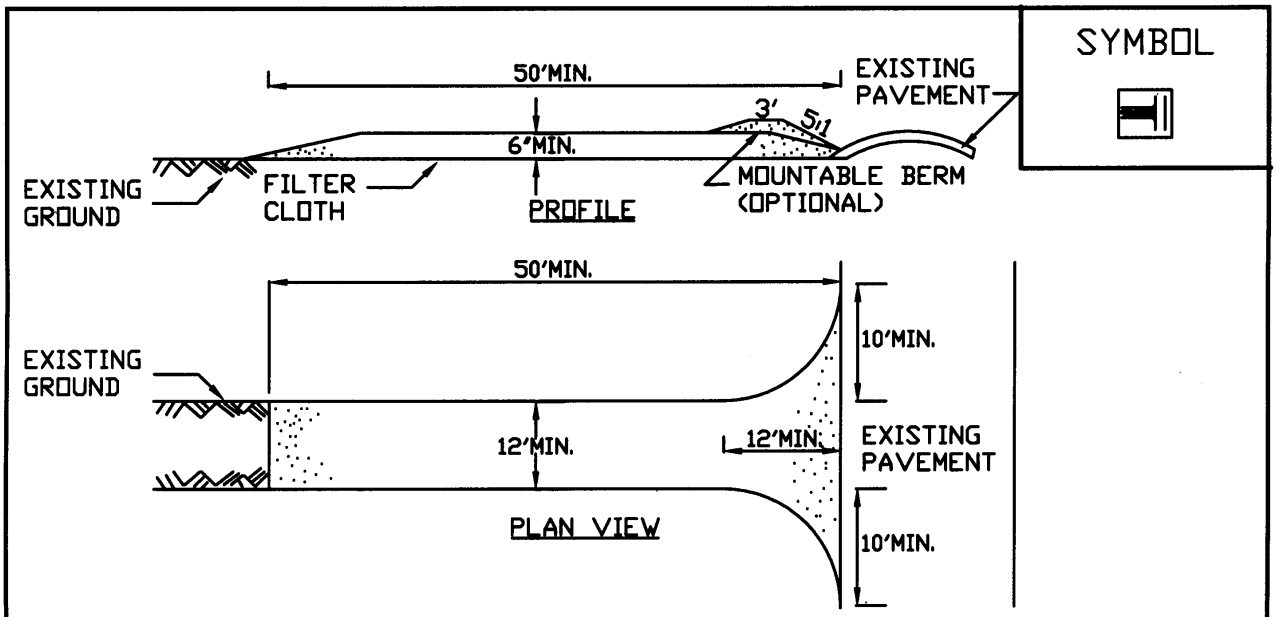
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STONE & BLOCK
DROP INLET
PROTECTION

Figure 5A.35
Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STABILIZED CONSTRUCTION ENTRANCE

STANDARD AND SPECIFICATIONS FOR DUST CONTROL

Definition

The control of dust resulting from land-disturbing activities.

Purpose

To prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the local permitting authority.

Construction Specifications

A. Non-driving Areas – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

B. Driving Areas – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access routes.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geotextiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

All Stormwater Pollution Prevention Plans must contain the NYS DEC issued “Conditions for Use” and “Application Instructions” for any polymers used on the site. This information can be obtained from the NYS DEC website.

Maintenance

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.

Figure 5B.14
Riprap Outlet Protection Detail (1)

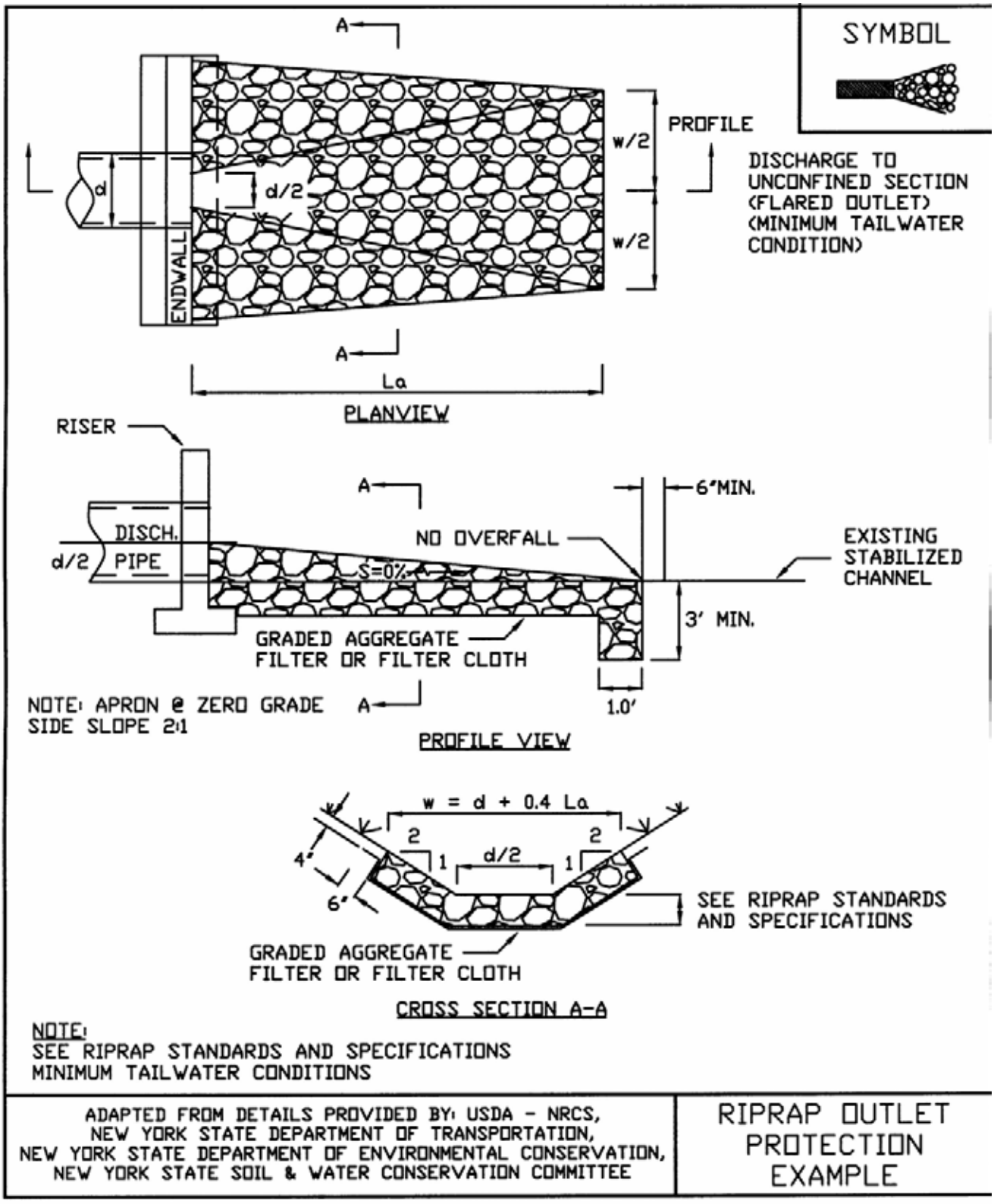
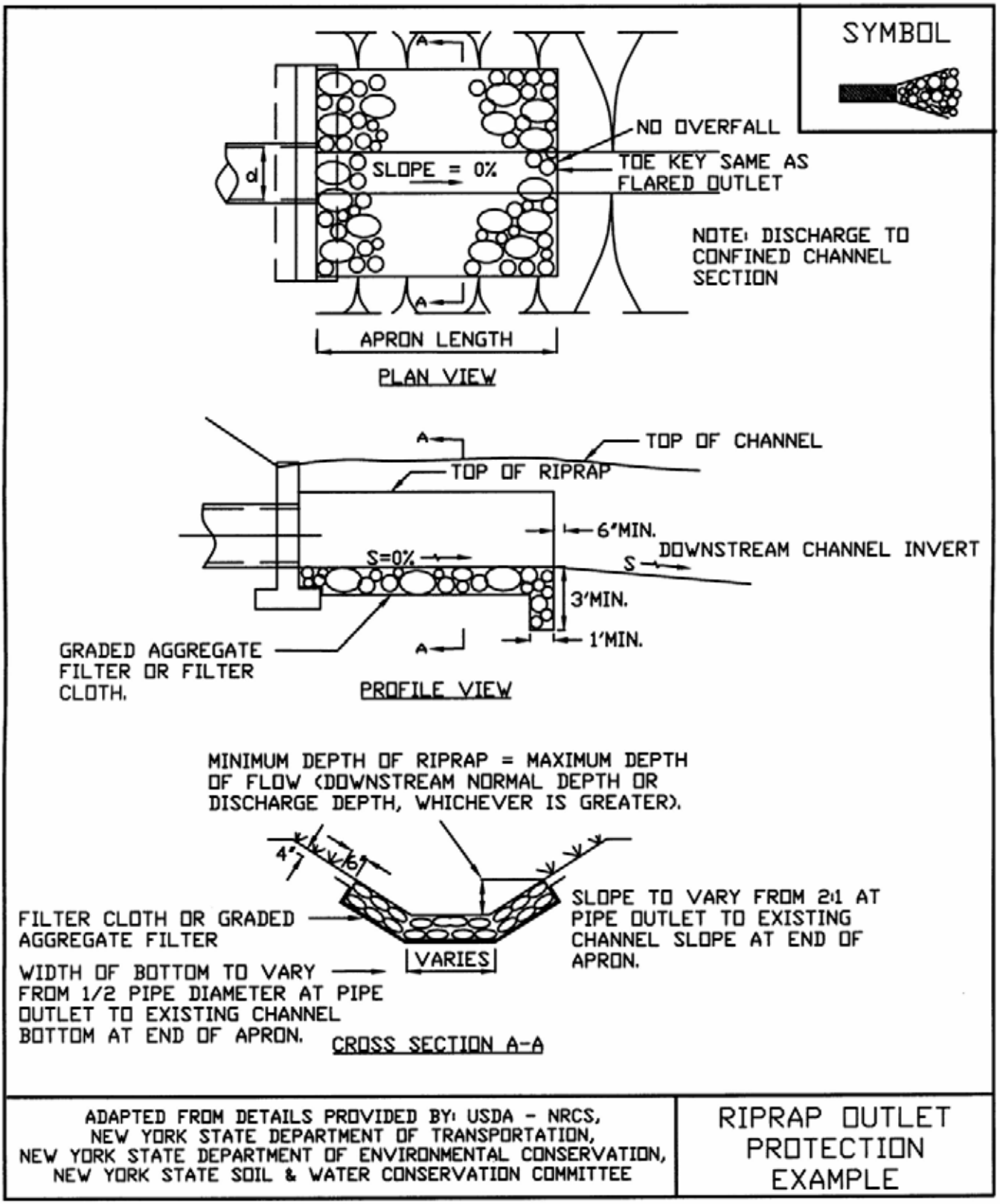


Figure 5B.15
Riprap Outlet Protection Detail (2)



STANDARD AND SPECIFICATIONS FOR LANDGRADING

Definition

Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose

The purpose of a landgrading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal, and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed.

The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets, or to stable water courses to ensure that surface runoff will not damage slopes or other graded areas; see standards and specifications for Grassed Waterway, Diversion, Grade Stabilization Structure.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. When slopes exceed 2:1, special design and stabilization consideration are required and shall be adequately shown on the plans. (Note: Where the slope is to be mowed, the slope should be no steeper than 3:1, although 4:1 is preferred because of safety factors related to mowing steep slopes.)

3. Reverse slope benches or diversion shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

   A. Benches shall be a minimum of six feet wide to provide for ease of maintenance.

   B. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

   C. The flow length within a bench shall not exceed 800 feet unless accompanied by appropriate design and computations; see Standard and Specifications for Diversion on page 5B.1

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of diversions, ditches and swales or conveyed downslope by the use of a designed structure, except where:

   A. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.

B. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainage ways, graded swales, downspouts, etc.

C. The face of the slope will be protected by special erosion control materials, sod, gravel, riprap, or other stabilization method.

5. Cut slopes occurring in ripable rock shall be serrated as shown in Figure 5B.23 on page 5B.51. The serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1 ½: 1. These steps will weather and act to hold moisture, lime, fertilizer, and seed thus producing a much quicker and longer-lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence, or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas, and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

10. All disturbed areas shall be stabilized structurally or vegetatively in compliance with the Standard and Specifications for Critical Area Treatment in Section 3.

Construction Specifications

See Figures 5B.23 and 5B.24 for details.

1. All graded or disturbed areas, including slopes, shall be protected during clearing and construction in accordance with the erosion and sediment control plan until they are adequately stabilized.

2. All erosion and sediment control practices and measures shall be constructed, applied and maintained in accordance with the sediment control plan and the "New York Standards and Specifications for Erosion and Sediment Control."

3. Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.

4. Areas to be filled shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material.

5. Areas that are to be topsoiled shall be scarified to a minimum depth of four inches prior to placement of topsoil.

6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence, or other related problems. Fill intended to support buildings, structures, and conduits, etc., shall be compacted in accordance with local requirements or codes.

7. All fill shall be placed and compacted in layers not to exceed 9 inches in thickness.

8. Except for approved landfills or nonstructural fills, fill material shall be free of frozen particles, brush, roots, sod, or other foreign objectionable materials that would interfere with, or prevent, construction of satisfactory fills.

9. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

10. Fill shall not be placed on saturated or frozen surfaces.

11. All benches shall be kept free of sediment during all phases of development.

12. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specification for Subsurface Drain on page 5B.44 or other approved methods.

13. All graded areas shall be permanently stabilized immediately following finished grading.

14. Stockpiles, borrow areas, and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

Figure 5B.23
Typical Section of Serrated Cut Slope

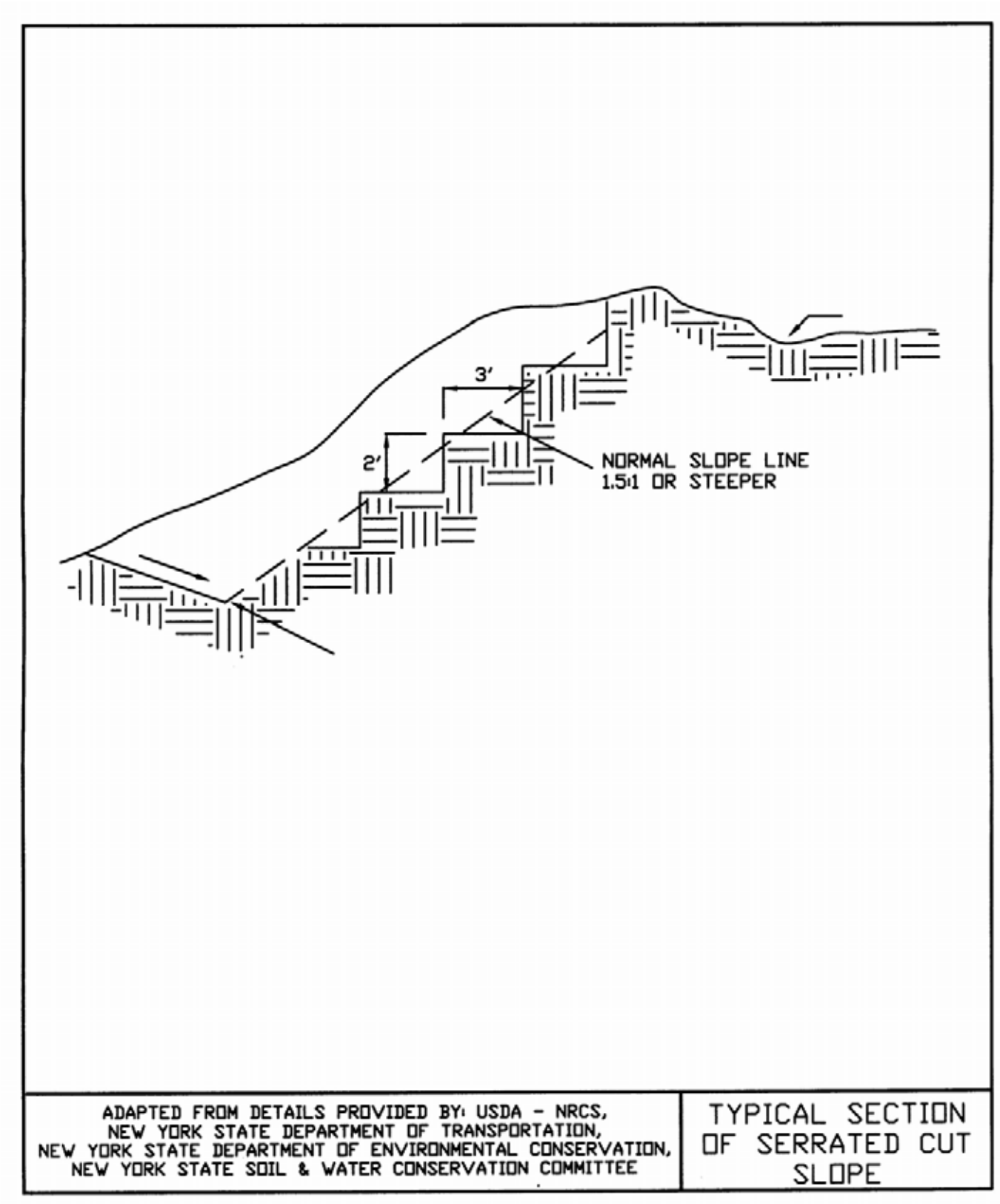


Figure 5B.24 (1)
Landgrading

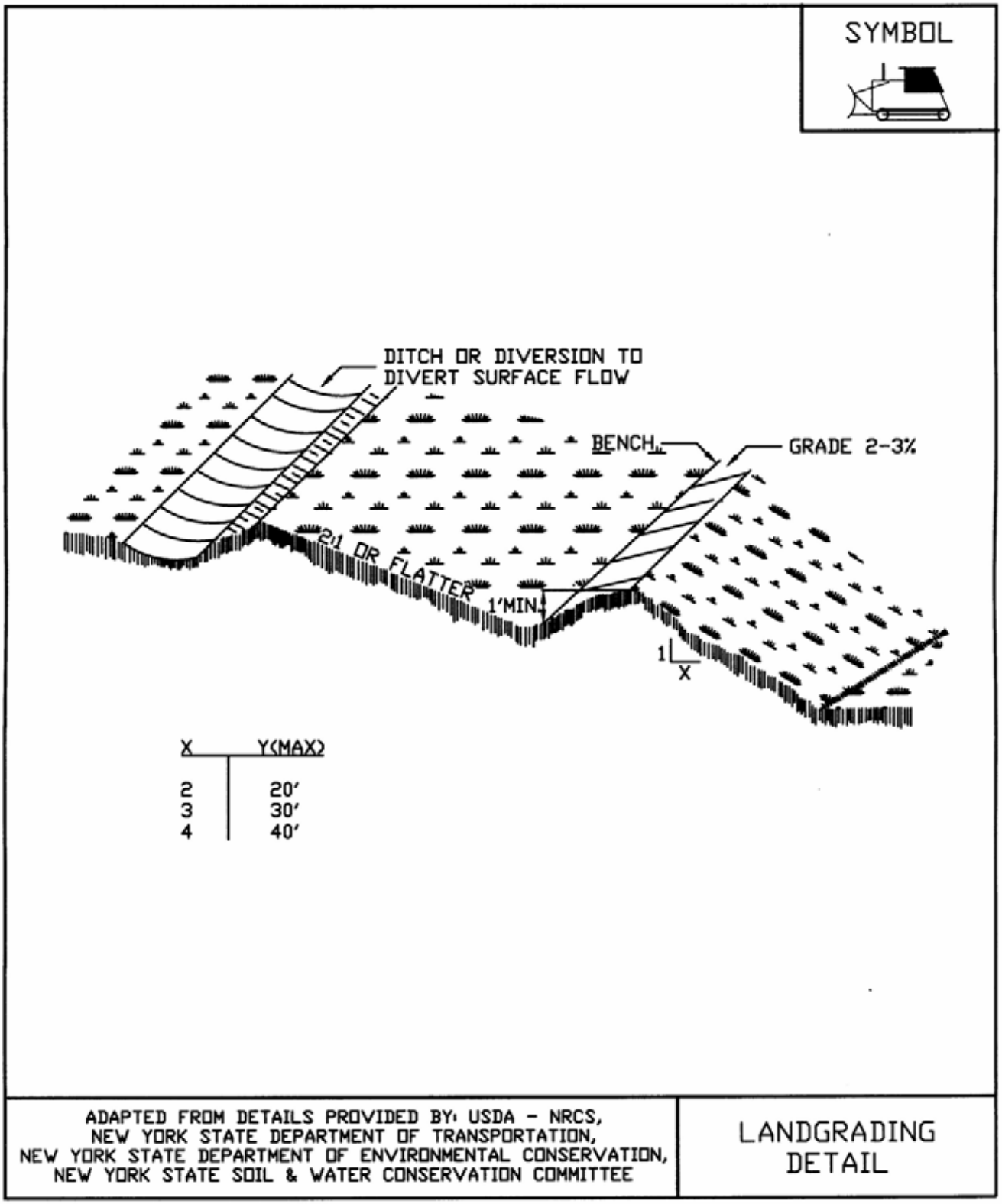


Figure 5B.24 (2)
Landgrading —Construction Specifications

CONSTRUCTION SPECIFICATIONS

1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
2. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN AND THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
7. ALL FILL TO BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
8. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
9. FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
10. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
11. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
12. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
13. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
14. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	LANDGRADING SPECIFICATIONS

APPENDIX J

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

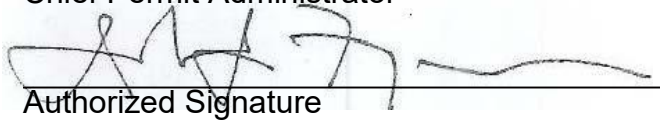
CONSTRUCTION ACTIVITY

Permit No. GP-0-15-002

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2015 Expiration Date: January 28, 2020

John J. Ferguson
Chief Permit Administrator



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Authorized Signature Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York's *State Pollutant Discharge Elimination System ("SPDES")* is a NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law ("ECL").*

This general permit ("permit") is issued pursuant to Article 17, Titles 7, 8 and Article 70 of the ECL. An *owner or operator* may obtain coverage under this permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this permit and the NOI for New York are available by calling (518) 402-8109 or at any New York State Department of Environmental Conservation ("the Department") regional office (see Appendix G).They are also available on the Department's website at:

http://www.dec.ny.gov/

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a point source and therefore, pursuant to Article 17-0505 of the ECL, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. They cannot wait until there is an actual *discharge* from the construction site to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITIES

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(Part I)

Part I. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the Stormwater Pollution Prevention Plan ("SWPPP") the reason(s) for the deviation or alternative design and provide information

which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s to *minimize* channel and streambank erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and

   (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover.

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharge*s from dewatering activities, including *discharge*s

from dewatering of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

(iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited *Discharge*s.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion

at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. ***Sizing Criteria* for *New Development***

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv

that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:

(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or

(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) Overbank Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or

(2) A downstream analysis reveals that overbank control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or

(2) A downstream analysis reveals that overbank control is not required.

b. ***Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watershed**

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or

standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:

(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or

(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that overbank control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that overbank control is not required.

c. ***Sizing Criteria* for *Redevelopment Activity***

(Part I.C.2.c.i)

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) Overbank Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(Part I.C.2.c.iv)

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

d. ***Sizing Criteria*** **for Combination of** ***Redevelopment Activity*** **and** ***New Development***

Construction projects that include both *New Development* and *Redevelopment Activity* shall provide post-construction stormwater management controls that meet the *sizing criteria* calculated as an aggregate of the *Sizing Criteria* in Part I.C.2.a. or b. of this permit for the *New Development* portion of the project and Part I.C.2.c of this permit for *Redevelopment Activity* portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or

if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater *discharges* may be authorized by this permit: *discharge*s from firefighting activities; fire hydrant flushings; waters to which cleansers or other components have not been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated *groundwater* or spring water; uncontaminated *discharge*s from construction site de-watering operations; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this permit, and who *discharge* as noted in this paragraph, and with the exception of flows from firefighting activities, these *discharge*s must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

(Part I.F)

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an endangered or threatened species unless the *owner or operator* has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.C.2 of this permit.

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which disturb one or more acres of land with no existing *impervious cover*; and

   c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture (“USDA”) Soil Survey for the County where the disturbance will occur.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which disturb two or more acres of land with no existing *impervious cover*; and

   c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the USDA Soil Survey for the County where the disturbance will occur.

(Part I.F.8)

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.C.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:
      (i) No Affect
      (ii) No Adverse Affect

(Part I.F.8.c.iii)

(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. OBTAINING PERMIT COVERAGE

A. Notice of Intent (NOI) Submittal

1. An *owner or operator* of a *construction activity* that is <u>not</u> subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the Department in order to be authorized to *discharge* under this permit. An *owner or operator* shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address.

NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department. An *owner or operator* shall use either the electronic (eNOI) or paper version of the NOI.

The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the address in Part II.A.1.

(Part II.A.2)

The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.E. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

B. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

   c. the final SWPPP has been prepared, and

   d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.B.2 above

(Part II.B.3)

will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

(ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

(iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. The Department may suspend or deny an *owner's or operator's* coverage

under this permit if the Department determines that the SWPPP does not meet the permit requirements. In accordance with statute, regulation, and the terms and conditions of this permit, the Department may deny coverage under this permit and require submittal of an application for an individual SPDES permit based on a review of the NOI or other information pursuant to Part II.

5. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.B. of this permit.

C. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-15-002), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, and all documentation necessary to demonstrate eligibility with this permit at the construction site until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

   a. The *owner or operator* shall

have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

5. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the *regulated, traditional land use control MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice

(Part II.D)

D. Permit Coverage for Discharges Authorized Under GP-0-10-001

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-10-001), an *owner or operator* of *a construction activity* with coverage under GP-0-10-001, as of the effective date of GP-0-15-002, shall be authorized to *discharge* in accordance with GP-0-15-002, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-15-002.

E. Change of *Owner or Operator*

2. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or operator* was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

(Part III)

III. Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP:

   a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

   b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority.

5. The Department may notify the *owner or operator* at any time that the

(Part III.A.5)

SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.C.4. of this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   > "I hereby certify under penalty of law 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 most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

   In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the

trained contractor responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

   a. Background information about the scope of the project, including the location, type and size of project;

   b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);

   c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

   d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other

activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the construction site; and

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005. Include the reason for the deviation or alternative design

and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

   b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

   c. A Stormwater Modeling and Analysis Report that includes:

      (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

      (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

      (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;

      (iv) Summary table, with supporting calculations, which demonstrates

(Part III.B.2.c.iv)

that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

(Part IV)

IV. Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

(Part IV.C)

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

   d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

   a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

   b. For construction sites where soil disturbance activities are on-going and

the *owner or operator* has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed*;* and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.A.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall

be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of *discharge* from the construction site.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of *discharge* from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;

(Part IV.C.4.i)

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

l. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.C.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

V. Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.A.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

(Part V.A.2)

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

   b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

   c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.E. of this permit.

   d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

(Part V.A.5)

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

   b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

   c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,

   d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

VI. Part VI. REPORTING AND RETENTION OF RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.A.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

(Part VII)

VII. Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

(Part VII.E)

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

   a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      (i) a president, secretary, treasurer, or vice-president of the

corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named

(Part VII.H.2.b)

individual or any individual occupying a named position) and,

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any *owner or operator* authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any *discharge*r authorized by a general permit to apply for an individual SPDES permit, it shall notify the *discharge*r in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from *owner or operator* receipt of the notification letter, whereby the authorization to

discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a construction site which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

(Part VII.N)

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with *construction activity* covered by this permit, the *owner or operator* of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

VIII. **APPENDIX A**

Definitions

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

***Construction Activity*(ies) -** means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a construction site by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a construction site to a separate storm sewer system and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or point source.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied

on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State
or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters,

ditches, man-made
channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State*;*

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a *combined sewer*; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

New Development – means any land disturbance that does meet the definition of Redevelopment Activity included in this appendix.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York..

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Stream bank restoration projects (does not include the placement of spoil material),
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), Overbank Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area with a Soil Slope Phase that is identified as an E or F, or

the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture ("USDA") Soil Survey for the County where the disturbance will occur.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part

621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

IX. APPENDIX B

Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other agricultural building, silo, stock yard or pen.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Bike paths and trails
- Sidewalk construction projects that are not part of a road/ highway construction or reconstruction project
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that *alter hydrology from pre to post development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of less than five acres and construction activities that include the construction or reconstruction of impervious area

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other agricultural building(e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project , wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

X. APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Standards Are Required

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

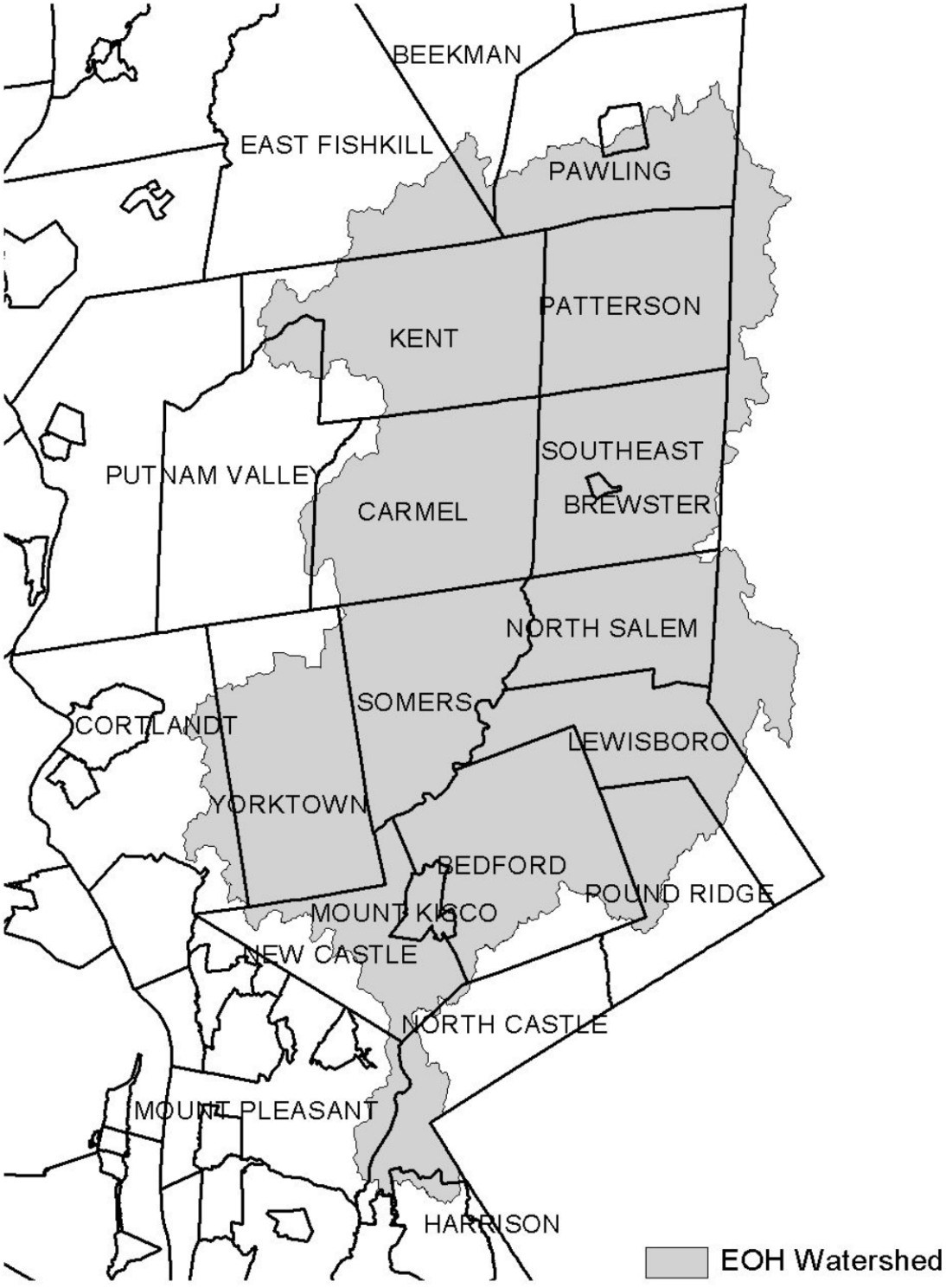


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

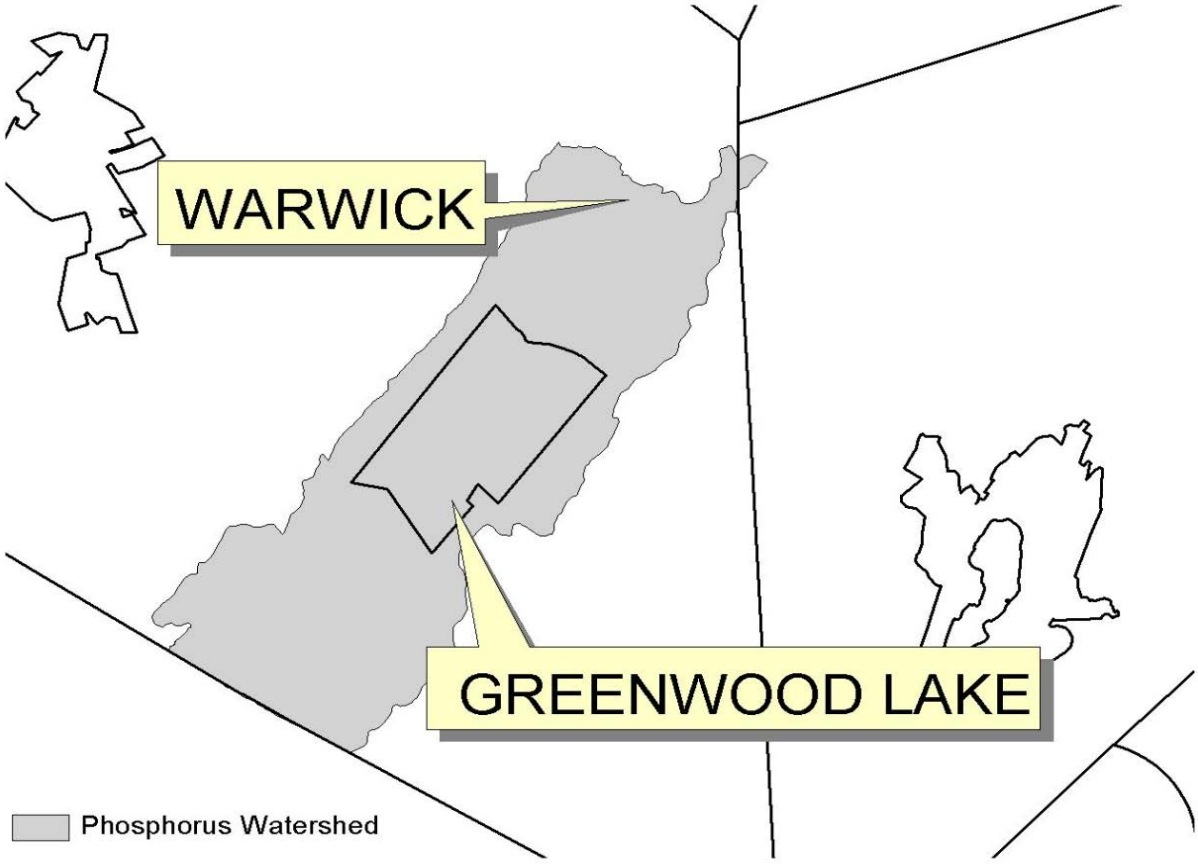


Figure 4 - Oscawana Lake Watershed

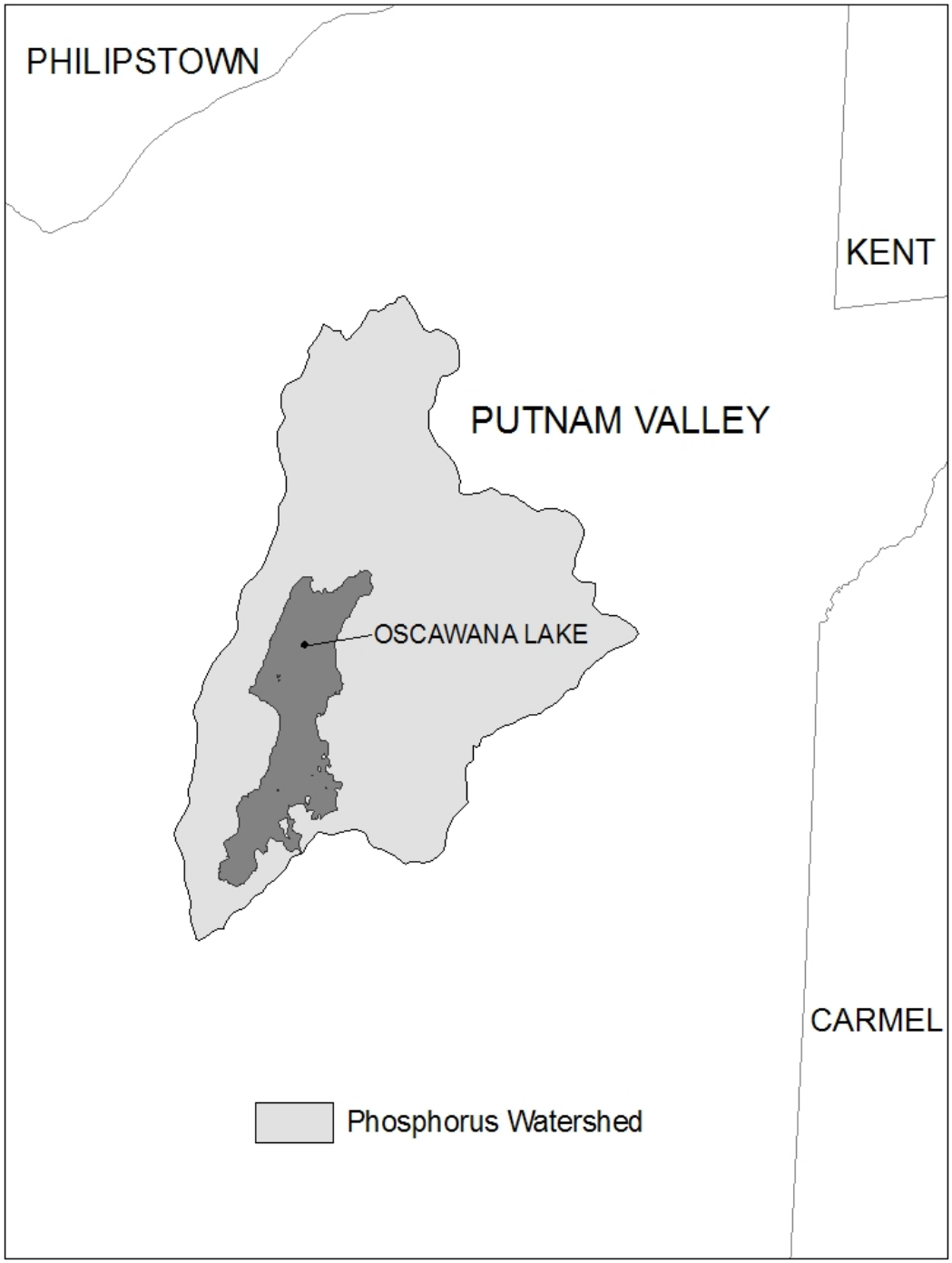
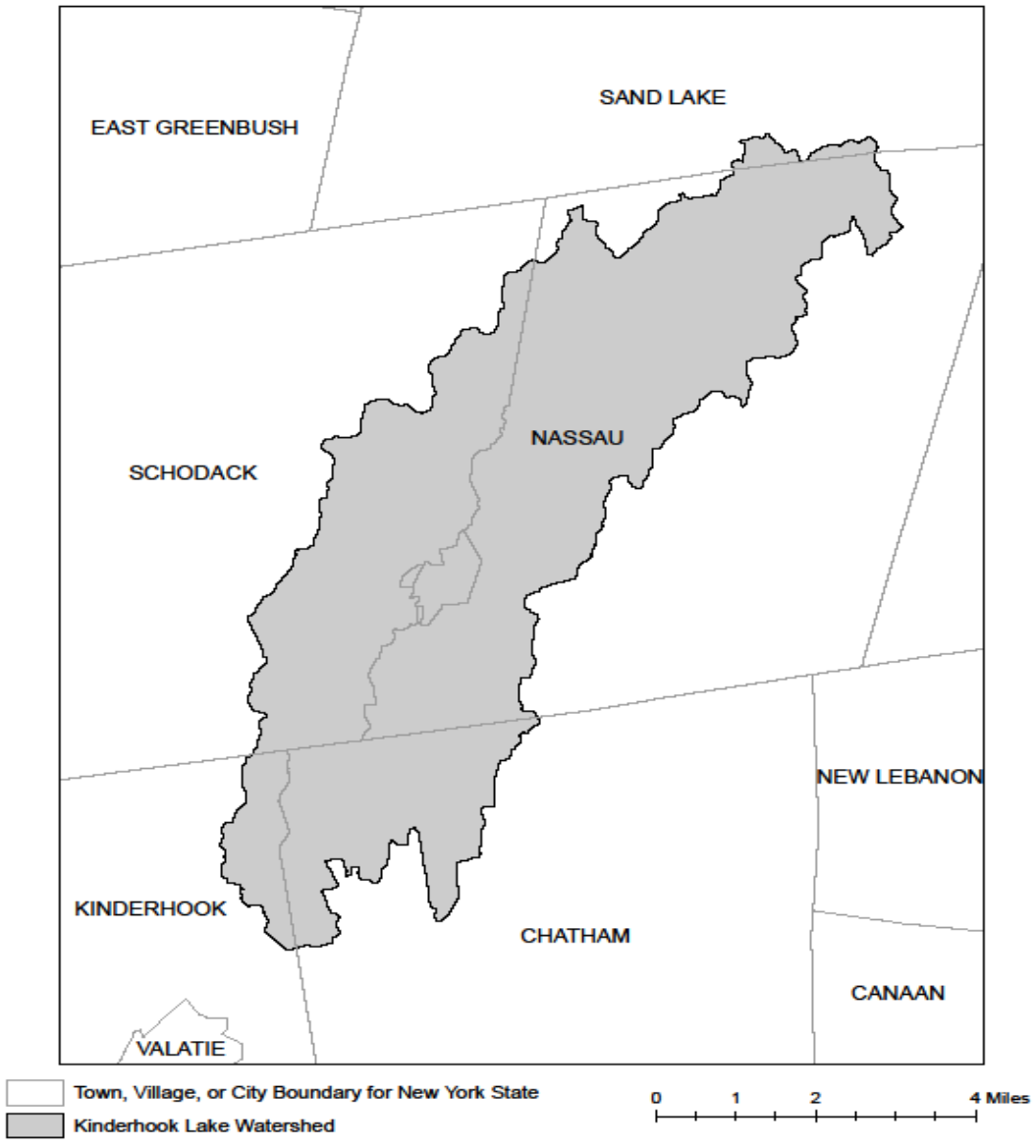


Figure 5: Kinderhook Lake Watershed



XI. APPENDIX D

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

XII. APPENDIX E

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond
Albany	Basic Creek Reservoir
Allegheny	Amity Lake, Saunders Pond
Bronx	Van Cortlandt Lake
Broome	Whitney Point Lake/Reservoir
Broome	Fly Pond, Deer Lake
Broome	Minor Tribs to Lower Susquehanna (north)
Cattaraugus	Allegheny River/Reservoir
Cattaraugus	Case Lake
Cattaraugus	Linlyco/Club Pond
Cayuga	Duck Lake
Chautauqua	Chautauqua Lake, North
Chautauqua	Chautauqua Lake, South
Chautauqua	Bear Lake
Chautauqua	Chadakoin River and tribs
Chautauqua	Lower Cassadaga Lake
Chautauqua	Middle Cassadaga Lake
Chautauqua	Findley Lake
Clinton	Great Chazy River, Lower, Main Stem
Columbia	Kinderhook Lake
Columbia	Robinson Pond
Dutchess	Hillside Lake
Dutchess	Wappinger Lakes
Dutchess	Fall Kill and tribs
Erie	Green Lake
Erie	Scajaquada Creek, Lower, and tribs
Erie	Scajaquada Creek, Middle, and tribs
Erie	Scajaquada Creek, Upper, and tribs
Erie	Rush Creek and tribs
Erie	Ellicott Creek, Lower, and tribs
Erie	Beeman Creek and tribs
Erie	Murder Creek, Lower, and tribs
Erie	South Branch Smoke Cr, Lower, and tribs
Erie	Little Sister Creek, Lower, and tribs
Essex	Lake George (primary county: Warren)
Genesee	Black Creek, Upper, and minor tribs
Genesee	Tonawanda Creek, Middle, Main Stem
Genesee	Oak Orchard Creek, Upper, and tribs
Genesee	Bowen Brook and tribs
Genesee	Bigelow Creek and tribs
Genesee	Black Creek, Middle, and minor tribs
Genesee	LeRoy Reservoir
Greene	Schoharie Reservoir
Greene	Sleepy Hollow Lake
Herkimer	Steele Creek tribs
Kings	Hendrix Creek
Lewis	Mill Creek/South Branch and tribs
Livingston	Conesus Lake
Livingston	Jaycox Creek and tribs
Livingston	Mill Creek and minor tribs
Livingston	Bradner Creek and tribs
Livingston	Christie Creek and tribs
Monroe	Lake Ontario Shoreline, Western
Monroe	Mill Creek/Blue Pond Outlet and tribs
Monroe	Rochester Embayment - East
Monroe	Rochester Embayment - West
Monroe	Unnamed Trib to Honeoye Creek
Monroe	Genesee River, Lower, Main Stem
Monroe	Genesee River, Middle, Main Stem
Monroe	Black Creek, Lower, and minor tribs
Monroe	Buck Pond
Monroe	Long Pond
Monroe	Cranberry Pond
Monroe	Mill Creek and tribs
Monroe	Shipbuilders Creek and tribs
Monroe	Minor tribs to Irondequoit Bay
Monroe	Thomas Creek/White Brook and tribs
Nassau	Glen Cove Creek, Lower, and tribs
Nassau	LI Tribs (fresh) to East Bay
Nassau	East Meadow Brook, Upper, and tribs
Nassau	Hempstead Bay
Nassau	Hempstead Lake
Nassau	Grant Park Pond
Nassau	Beaver Lake
Nassau	Camaans Pond
Nassau	Halls Pond
Nassau	LI Tidal Tribs to Hempstead Bay
Nassau	Massapequa Creek and tribs
Nassau	Reynolds Channel, east
Nassau	Reynolds Channel, west
Nassau	Silver Lake, Lofts Pond
Nassau	Woodmere Channel
Niagara	Hyde Park Lake
Niagara	Lake Ontario Shoreline, Western
Niagara	Bergholtz Creek and tribs
Oneida	Ballou, Nail Creeks
Onondaga	Ley Creek and tribs
Onondaga	Onondaga Creek, Lower and tribs

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Onondaga	Onondaga Creek, Middle and tribs	Suffolk	Great South Bay, West
Onondaga	Onondaga Creek, Upp, and minor tribs	Suffolk	Mill and Seven Ponds
Onondaga	Harbor Brook, Lower, and tribs	Suffolk	Moriches Bay, East
Onondaga	Ninemile Creek, Lower, and tribs	Suffolk	Moriches Bay, West
Onondaga	Minor tribs to Onondaga Lake	Suffolk	Quantuck Bay
Onondaga	Onondaga Creek, Lower, and tribs	Suffolk	Shinnecock Bay (and Inlet)
Ontario	Honeoye Lake	Sullivan	Bodine, Montgomery Lakes
Ontario	Hemlock Lake Outlet and minor tribs	Sullivan	Davies Lake
Ontario	Great Brook and minor tribs	Sullivan	Pleasure Lake
Orange	Monhagen Brook and tribs	Sullivan	Swan Lake
Orange	Orange Lake	Tompkins	Cayuga Lake, Southern End
Orleans	Lake Ontario Shoreline, Western	Tompkins	Owasco Inlet, Upper, and tribs
Oswego	Pleasant Lake	Ulster	Ashokan Reservoir
Oswego	Lake Neatahwanta	Ulster	Esopus Creek, Upper, and minor tribs
Putnam	Oscawana Lake		
Putnam	Palmer Lake	Ulster	Esopus Creek, Lower, Main Stem
Putnam	Lake Carmel	Ulster	Esopus Creek, Middle, and minor tribs
Queens	Jamaica Bay, Eastern, and tribs (Queens)		
Queens	Bergen Basin	Warren	Lake George
Queens	Shellbank Basin	Warren	Tribs to L.George, Village of L George
Rensselaer	Nassau Lake		
Rensselaer	Snyders Lake	Warren	Huddle/Finkle Brooks and tribs
Richmond	Grasmere, Arbutus and Wolfes Lakes	Warren	Indian Brook and tribs
Rockland	Congers Lake, Swartout Lake	Warren	Hague Brook and tribs
Rockland	Rockland Lake	Washington	Tribs to L.George, East Shr Lk George
Saratoga	Ballston Lake		
Saratoga	Round Lake	Washington	Cossayuna Lake
Saratoga	Dwaas Kill and tribs	Washington	Wood Cr/Champlain Canal, minor tribs
Saratoga	Tribs to Lake Lonely		
Saratoga	Lake Lonely	Wayne	Port Bay
Schenectady	Collins Lake	Wayne	Marbletown Creek and tribs
Schenectady	Duane Lake	Westchester	Lake Katonah
Schenectady	Mariaville Lake	Westchester	Lake Mohegan
Schoharie	Engleville Pond	Westchester	Lake Shenorock
Schoharie	Summit Lake	Westchester	Reservoir No.1 (Lake Isle)
Schuyler	Cayuta Lake	Westchester	Saw Mill River, Middle, and tribs
St. Lawrence	Fish Creek and minor tribs	Westchester	Silver Lake
St. Lawrence	Black Lake Outlet/Black Lake	Westchester	Teatown Lake
Steuben	Lake Salubria	Westchester	Truesdale Lake
Steuben	Smith Pond	Westchester	Wallace Pond
Suffolk	Millers Pond	Westchester	Peach Lake
Suffolk	Mattituck (Marratooka) Pond	Westchester	Mamaroneck River, Lower
Suffolk	Tidal tribs to West Moriches Bay	Westchester	Mamaroneck River, Upp, and tribs
Suffolk	Canaan Lake	Westchester	Sheldrake River and tribs
Suffolk	Lake Ronkonkoma	Westchester	Blind Brook, Lower
Suffolk	Beaverdam Creek and tribs	Westchester	Blind Brook, Upper, and tribs
Suffolk	Big/Little Fresh Ponds	Westchester	Lake Lincolndale
Suffolk	Fresh Pond	Westchester	Lake Meahaugh
Suffolk	Great South Bay, East	Wyoming	Java Lake
Suffolk	Great South Bay, Middle	Wyoming	Silver Lake

Note: The list above identifies those waters from the final New York State "2014 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy", dated January 2015, that are impaired by silt, sediment or nutrients.

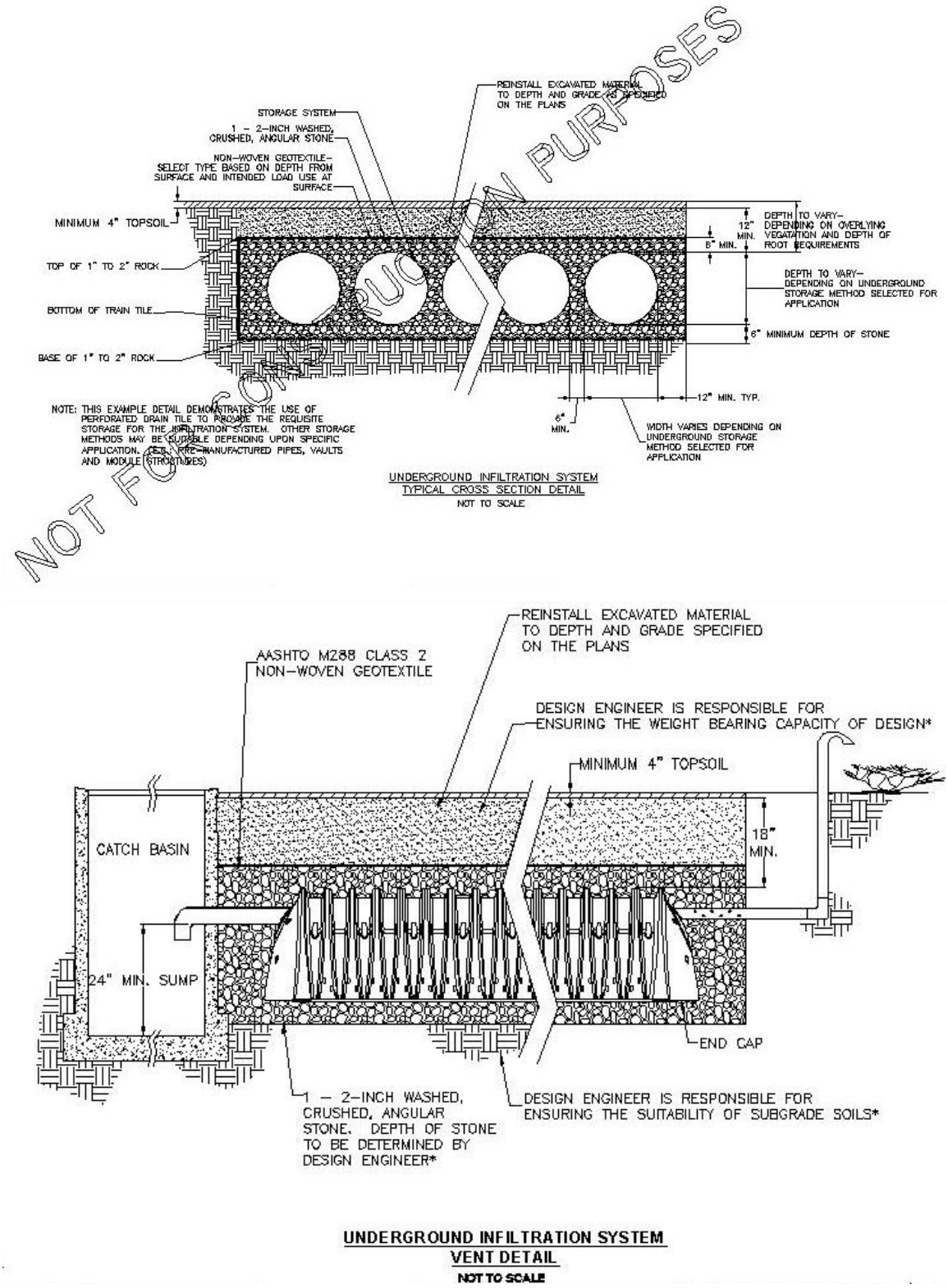
XIII. APPENDIX F

LIST OF NYS DEC REGIONAL OFFICES

Region	COVERING THE FOLLOWING COUNTIES:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS	DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, PO BOX 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX K

Figure 10.2 A generic display of underground infiltration systems (adapted from MN Stormwater Manual)



10.4.3.1. Feasibility

- Vertical and horizontal separation distances and setbacks are required from structures such as drinking water supplies, septic systems, foundations and pavements. The intent is for protection of human health, functional and structural integrity, prevention of seepage and frost-heave concerns respectively.

10.4.3.2. Conveyance

- Infiltration systems operate as an offline treatment system with bypass flowing to a stable downstream receptacle unless used as pretreatment to an online system.
- All infiltration systems shall be designed to fully de-water the entire WQ_v within 48 hours after a storm event.
- Exit velocities from pretreatment chambers shall be non erosive (3.5 to 5.0 fps during the two-year design storm) and less than 3 fps during the one-year design storm.

10.4.3.3. Treatment

Required Elements

- Water quality volume (WQ_v) is equivalent to the estimated 1-year, 24-hour post-construction runoff volume.
- Provide diversion for construction runoff and minimize construction traffic over infiltration area.
- Trench depth shall be less than 4 feet (I-2 and I-3). Infiltration basins (I-1) may be 2-to-12- feet deep.

Design Guidance

- Infiltration basin side slopes should be kept to a maximum 1:3 (V:H).
- Infiltration systems are not allowed on fill soil because they lack consistency and structural strength.
- Soil de-compaction is required for recovering infiltration capacity in disturbed areas. Information on de-compaction techniques is provided in a separate guidance document.
- Infiltration is not recommended in active karst formations without adequate geotechnical testing.
- To avoid designs that may conflict with the U.S. Environmental Protection Agency (EPA) Class V injection wells, defined as any bored, drilled or driven shaft or dug hole that is deeper than its widest surface dimension, or an improved sinkhole or a subsurface fluid-distribution system. Consult EPA's fact sheet on this issue for further information:

- http://www.epa.gov/safewater/uic/class5/types_stormwater.html
- http://yosemite.epa.gov/water/owrccatalog.nsf/1ffc8769fdecb48085256ad3006f39fa/87418a822b4ba98985256c9c005cb2bf!OpenDocument

- Underground Infiltration Systems - Several underground infiltration systems, including pre-manufactured pipes, vaults and modular structures, have been developed as alternatives to infiltration basins and trenches for space-limited sites and stormwater redevelopment applications. These systems are designed similar to infiltration basins or trenches, depending on site specific conditions, to capture, temporarily store and infiltrate the WQv within 48 hours. Underground infiltration systems are generally applicable to small development sites (typically less than 10 acres) and should be installed in areas that are easily accessible to maintenance. These systems should not be located in areas or below structures that cannot be excavated in the event that the system needs to be replaced (MN Design Manual, 2006).

10.4.3.4. Landscaping

Required Elements

- Design landscaping features in drainage area that minimize fertilizer application.
- Limit access of high-impact earth moving equipment, do not over-excavate, and use de-compaction practices to restore the soils original infiltration properties.

Design Guidance

- Infiltration trenches can be covered with permeable topsoil and planted with grass. Use deep-rooted plants such as prairie grass to increase the infiltration capacity of the underlying soils.

10.4.3.5. Maintenance

Required Elements

Maintenance responsibility for an infiltration system shall be vested with a responsible authority by means of a legally binding and enforceable instrument that is executed as a condition of plan approval. Remove sediment/gross solids from the infiltration surface annually, to ensure the maximum surface area for treatment.

- The vegetative cover needs to be regularly maintained. Grass cover may be mowed and bare areas should be reseeded
- Disc, aerate or scrape the basin bottom to restore original cross section and infiltration rate every one to five years.

APPENDIX L

Runoff Reduction Volume (RRv) Worksheets

Project

Name of project: Brighton Mews Date: 8/5/2024

Watershed: PRDA

Watershed Drainage Area, DA (acres):	HSG(s)	90% Rain, P (inches):
2.023	C	1.00

Planning

1. Plan to preserve, avoid, and minimize(underline all concepts utilized):

-Preserve undisturbed, natural buffer, and critical environment areas
-Employ open space, conservation, and clustering site design techniques
-Avoid developing in environmentallyu sensitive areas: floodplain, steep slopes,
habitat, ecosystems, bedrock, wetlands, shorelines, shallow groundwater, impervious soils, or unstable soils
-Minimize impervous surfaces: building footprints, parking, roads, sidewalks, and driveways
-Minimize clearing and grading

Water Quality Volume

2. Calculate water quality volume(WQv): WQv= P*A*Rv/12

DA= 2.023 acres Impervious Area*(AI) = 1.54 acres Rv= 0.736 Original WQv= 0.124154 ac-ft

*If soil restoration is not practices include construction compacted areas as impervious.

3. Minimum RRv requirements (when 100% WQv reduction cannot be achieved)

(Calculate minimum required Runoff Reduction Volume (RRv) using):

RRv = 90% rain(P) x .95 x S x AI/12

with S = .55 (A soils); .40(B soils); .30 (C soils); .20 (D soils); OR weighted HSG average in DA

Minimum required RRv =	P	S	AI
	1.00	0.3	1.54

Minimum RRv required= 0.036646 ac-ft

Area Reduction Practices

4. Incorporate area reduction practices (complete for all applicable practices): (area includes practice and contributing area)

Conservation of natural areas:	contributing AI=	0 ac	Area=	0 ac
Riparian buffers/filter strips:	contributing AI=	ac	Area=	ac
Tree Planting/tree preservation:	contributing AI=	0 ac	Area=	0 ac
Total area reduction:			Total Area Reduced=	0 ac
Total Impervious area with area reduction:			AI in Reduced Area=	0 ac

5. Subtract total area reduction from DA:

Remaining drainage area(#2 area-#4 area) Remaining Drainage Area= 2.023 ac

Remaining impervious area(#2 AI-#4 AI) Remaining AI= 1.543 ac

6. Recalculate WQv for site area remaining after area reductions:

Remaining DA= 2.023 Remaining AI= 1.543 ac Rv= 0.736 area reduced WQv= 0.124154 ac-ft

7. Runoff reduction volume (RRV) from #2: (#2 WQv- #6 WQv) = RRv= 0 ac-ft

8. **Incorporate rooftop area disconnection:**

Total disconnected rooftop area(now considered pervious for RV calculation(s)) Area= 0.80 ac

9. Recalculate WQv with RV modified for impervious disconnection:

DA(from #5)= 2.023 (remaining 0.74 ac) Rv= 0.37921404 Rv reduced WQV= 0.063929 ac-ft

10. Runoff reduction volume: #6 (area reduced WQv - #9 (Rv reduced WQv) = **RRv =** 0.060225 ac-ft

Source Control WQv Treatment Practices

(From attached worksheet)

11a. Subtotal DA tributary to Souce Control treatment practices=	2.023	(acres)
11b. Subtotal AI treated by Source Control practices AI=	1.534	(ac-ft)
11c. Subtotal Runoff Reduction Volume (RRv)=		Subtotal(Rv) RRv 0.123479 (ac-ft)

Total Runoff Reduction Volume (RRv)

12a. Total drainage area treated with area reduction and source control(#4+#11a) DA treated= 2.023 ac-ft

12b. Total Impervious Area treated with area reduction or source control RRv(AI #4+AI#8+AI#11b) Total treated AI = 2.34 ac-ft

13. Total RRV provided(#7+#10+#11c)=Total RRv= Total provided RRv= 0.1837 ac-ft

14. Is Provided RRv (#12b >= minimum WQv (#2)? Yes X No If yes, skip to #18

15. Is provided RRv(#12b) >= minimum RRv (#3)? Yes X No If no, provide additional RRv and recalculate , or provide justification

Standard WQv Treatment

16. **Provide treatment for any remaining untreated watershed DA with standard practices: *Minimum Rv for standard practices is .2**

Remaining untreated DA = Watershed (#2)	2.023	-	RRv DA(#12a)	2.02	acres	=	0.00 acres
Remaining impervious area = Total AI(#2)	1.54	-	treated AI(#12b)	2.34	acres	=	-0.79 acres

Ponds	DA Tributary	0	acres	AI treated	0.00	acres	WQv provided-=	0 ac-ft
Wetlands	DA Tributary	0	acres	AI treated	0.00	acres	WQv provided-=	0 ac-ft
Infiltration	DA Tributary	2.023	acres	AI treated	1.54	acres	WQv provided-=	12.86676 ac-ft
Filters	DA Tributary	0	acres	AI treated	0.00	acres	WQv provided-=	0 ac-ft
Open channels	DA Tributary	0	acres	AI treated	0.00	acres	WQv provided-=	ac-ft
Total	DA Tributary	2.023	acres	AI treated	1.54	acres	WQv provided-=	12.86676 ac-ft

Peak Flow Attenuation

18. Calculate peak runoff rates for pre-development site conditions: (method used =) TR-55 --> see SWPPP Report

DA= acres RCN= Tc= hours

Q1 cfs

Q10 cfs

Q25 cfs

Q100 cfs

If soil restoration practices are not employed, reduce Hydrologic soil group one leter for RCN computation.
If existing soil is D use RCN of 94 for non-restored soil.

20. Provide necessary stormwater storage volume detention for channel protection, overband and extreme storm runoff

to mitigate any increase in post-developed runoff from pre-developed conditions using:
(complete for all applicable practices)

Pond	CP volume=_____ ac-ft	OB volume=_____ ac-ft	ES Volume=_____ ac-ft
Wetlands	CP volume=_____ ac-ft	OB volume=_____ ac-ft	ES Volume=_____ ac-ft
Dry detention	CP volume=_____ ac-ft	OB volume=_____ ac-ft	ES Volume=_____ ac-ft
Underground storage	CP volume=_____ ac-ft	OB volume=_____ ac-ft	ES Volume=_____ ac-ft
Blue roofs	CP volume=_____ ac-ft	OB volume=_____ ac-ft	ES Volume=_____ ac-ft

11. **Source Control WQv Treatment Practices Worksheet** (complete for all applicable practices and soil types)

Standard Practices (used as source control)

*Infiltration(soils with k>.5"/hour only)							
DA tributary to practice:	2.023 acre(s)	AI = 1.534 acre(s)	RV= 0.7324518	WQv= 0.123479 ac-ft	100% WQv = 0.123479 ac-ft (C/D soils)		
*Bioretention					80% WQv = _____ ac-ft (A/B soils) OR		
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV=	WQv= _____ ac-ft	20% WQv = _____ ac-ft (C/D soils)		
*Dry Swale					40% WQv = 0 ac-ft (A/B soils) OR		
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV= _____	WQv= 0 ac-ft	20% WQv = 0 ac-ft (C/D soils)		

Green Infrastructure Practices

*Vegetated swale					40% WQv = 0 ac-ft (A/B soils) OR		
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV=	WQv= 0 ac-ft	20% WQv = 0 ac-ft (C/D soils)		
*Green Roof							
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV= _____	WQv= 0 ac-ft	100% WQv = 0 ac-ft		
*Rain Garden					100% WQv = 0 ac-ft (A/B soils) OR		
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV= _____	WQv= 0 ac-ft	40% WQv = 0 ac-ft (C/D soils)		
*Stormwater planters							
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV= _____	WQv= 0 ac-ft	100% WQv = 0 ac-ft		

*Cistern/ rain barrels							
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV= _____	WQv= 0 ac-ft	100% WQv = 0 ac-ft		
*Porous pavement(A/B/C soils only)							
DA tributary to practice:	_____ acre(s)	AI = _____ acre(s)	RV=	WQv= _____ ac-ft	100% WQv = 0 ac-ft (A/B/C soils)		

11a. Subtotal DA tributary to Source Control WQv treatment practices= 2.023 (acres)
11b. Subtotal AI treated by Source control practices AI= 1.534 (acres)
11c. Subtotal Runoff Reduction Volume (RRv): Subtotal (Rv) RRv= 0.123479 (ac-ft)

APPENDIX M

CRIS NYS Cultural Resource Information System

Welcor

HOME SUBMIT SEARCH COMMUNICATE

View a Consultatio

Project 16PR08755: Bri

Attachments

Attachment	Type
	Effect Fin

Consultation Project Details

Consultation: 16PR08755

Status: Closed

Project: Brighton Mews, LLC

Overview | Submissions (1) | USNs (2) | Surveys (0) | Agencies (1) | Contacts (1) | Photos (1) | Atts. (3) | Agmts. (0) | Q & A (0) | Corr. (1) | MCDs (1)

Consultation Project Overview

Project Information:

Project Number: 16PR08755
Project Name: Brighton Mews, LLC
Project Completion Date: 01/09/2017
Date Created: 12/27/2016
Project Status: Closed
Created By: Anthony Opalka
Closed By: Tim Lloyd
Comment:

Consultation Information:

Archaeology Concerns:
Building Concerns:
Agency Reference Number:
Finding: No Historic Properties Impacted
Finding Date: 01/09/2017
Finding Comment: FastTrack Finding
Specific Address:
Address: 1001 Brighton Ave
City: Syracuse
ZIP:
Has Buildings:
Ground Disturbance:
Previous Ground Disturbance:
Previous Ground Description:
Description: Commercial /residential development project
Location Description: Development of /- 3.6 acres

NEW YORK STATE OF OPPORTUNITY.

Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

January 09, 2017

Mr. Roger Creighton
Senior Property Advisor
Synapse
360 Erie Blvd East
Syracuse, NY 13202

Re: DEC
Brighton Mews, LLC
1001 Brighton Ave, Syracuse, NY
16PR08755

Dear Mr. Creighton:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA

Director, Division for Historic Preservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

May 24, 2017

Matthew Leach
Keplinger Freeman Associates
6320 Fly Road
East Syracuse, NY 13057

Re: Brighton Mews, 1001 E Brighton Avenue
County: Onondaga Town/City: City Of Syracuse

Dear Mr. Leach:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities directly on the project site.

Within two miles of the project site is a documented summer maternity roost of **Indiana bat** (*Myotis sodalis*, state and federally listed as Endangered). Indiana bats may travel 2.5 miles or more from documented locations. Within four miles of the project site is a documented winter hibernaculum of **Northern long-eared bat** (*Myotis septentrionalis*, state and federally listed as Threatened). Northern long-eared bats may travel five miles or more from documented locations. The main impact of concern for bats is the removal of potential roost trees. For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 7 Office at dep.r7@dec.ny.gov, 315-426-7438. For information about potential impacts of your project on this species, and how to avoid, minimize, or mitigate any impacts, contact the Region 7 Wildlife staff at 607-753-3095 ext. 247.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

For information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the Permits staff at the NYSDEC Region 7 Office as described above.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

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