Appendix B
Stormwater Pollution Protection Plan

PRELIMINARY STORMWATER MANAGEMENT PLAN

Prepared for

AMS Yorktown
Active Adult Community
800 East Main Street
Town of Yorktown, NY

Prepared by:

Site Design Consultants
251F Underhill Avenue
Yorktown Heights, New York 10598
914-962-4488

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NYS Lic. No. 64431

January 22, 2024
Revised November 4, 2024

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AMS Yorktown
Active Adult Community
800 East Main Street
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1.0 Project Description

The subject property is located at 800 East Main Street in the Town of Yorktown, Westchester County, New York (see Figure 1.1 – Location Map and Figure 1-2 – Vicinity Map). The property totals 35.5 acres and is currently zoned OB, Research Laboratory Office. The site is currently occupied with two office buildings and associated parking, which will be partially removed as part of the proposed project. The site slopes east to west in a southerly direction. There are stormwater management practices in place for the original development which will be retrofit for the proposed project.

It is proposed to construct a new low rise residential apartment building with associated parking and 20 single family attached cottages in six clusters. The main access to the site will utilize the current roadway access point beginning at Old East main Street. The roadway will continue in its current circulation pattern with a new roadway constructed from it to the cottages. The cottages will each have an individual driveway to a garage entry. The existing buildings will be demolished and replaced with the new apartment building having a footprint of approximately 69,000 square feet. Most of the existing parking will remain with some reconstruction proposed on the north side of the new building. This will include a new entry drive for the main access to the building. The existing north parking lot will be eliminated and become a common recreation area with a pavilion and pickleball courts.

An additional design, referred to as the Revised Proposed Project, removes the 20 single family cottages from the plan and keeps the proposed apartment buildings referred to in this report. There are an additional 7 parking spaces in this design. The existing stormwater management system will be used to treat the impervious area on site. The design would be on top of the existing building pad and would not disturb any steep slopes.

The new development will require stormwater management in accordance with the New York State Department of Conservation Stormwater SPDES Permit GP-0-020-01 controlling pollutant export and volume control of the stormwater runoff generated from the project. All of the proposed impervious surfaces will be collected and piped to one of the stormwater management systems where Runoff Reduction, Water Quality Treatment, and Attenuation up to 100-year storm event will be managed.

As required by the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-20-001, Part I.F.8, a historic resource screening determination was conducted. This was done using the online tools at the NYS Office of Parks, Recreation and Historic Places (OPRHP) website. This screening determined that there are no areas with historic or archeological sensitivity near the site. Figure 1.3 – NYS OPRHP Historic Resource Map was created from the website showing sensitive areas in Yorktown.

2.2 Regulatory Obligation

2.2.1 USEPA/NYSDEC

The Federal Government's Clean Water Act (CWA), Section 402 states "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 State is a NPDES delegated State. The necessary permitting is administered through the State Pollutant Discharge Elimination System (SPDES) under the General Permit, GP-0-20-001, for Stormwater Discharges from Construction Activity. The Permit requires that any development meeting the disturbance thresholds listed in Tables 1 and 2 of Appendix B of the General Permit must prepare a SWPPP. Activities listed in Table 1 requires preparation of only an Erosion and Sediment Control Plan. Those listed in Table 2

would additionally require post-construction stormwater management practices. This project requires an E&SC and a SWPPP.

The proposed disturbance for this project is greater than one acre. As such, a Notice of Intent must be filed in accordance with the NYSDEC GP-0-20-001. The project is located in the Hunter Brook Basin which is a sub-watershed of the Croton River Basin which is an Enhanced Phosphorous Watershed (EPW). Therefore, this project requires the preparation of a full Stormwater Pollution Prevention Plan and must provide water quality treatment for the 1-year storm event in accordance to Chapter 10 of the NYS DEC SMDM.

The Plan identifies the potential sources of pollution, and a design prepared and implemented to reduce pollutant loadings. This project will be required to prepare the following to be in compliance:

- Notice of Intent registered with the NYS DEC;
- MS4 SWPPP Acceptance Form signed by an authorized representative of the Municipality;
- Prepare an Erosion and Sediment Control Plan;
- Design and implement a stormwater quality treatment system to capture and treat the stormwater runoff volume generated by the 1-year rainfall event.
- Design and implement a stormwater management system to capture and attenuate all storm events up to the 100-year storm.

3.0 Reducing Pollutant Impacts

3.1 Sources of Impact

For this project, the potential for contamination of stormwater occurs both during construction and after the completion of development. The goal to achieve reduced impacts involves containment and treatment of the various pollutants.

Each phase will require temporary sediment and erosion control measures. The greatest source of pollutants during these phases is the potential of soil erosion. The nature of the construction plan is to have exposed soils which can erode and potentially discharge to sensitive areas. During construction, existing vegetation is removed exposing soils. Also, stockpiling of soils takes place. These conditions, if not stabilized, are subject to erosion during rainfall events and wind conditions. Sediment discharged to the hydrologic ecosystem can reduce the function of water conveyance systems such as streams and piping, destroy vegetation and habitat affecting the function of the wetland, and reduce detention volume of open water bodies. This degradation potential can be irreversible and eliminate its function in the ecosystem.

The implementation of proper erosion control measures and sediment containment along with a planned construction sequence can minimize or eliminate these potential impacts. The selection and implementation of erosion and sediment practices are described in a later section of this Report.

The post-development state of this project not only will yield a potential for sediment discharges or Total Suspended Solids (TSS), but also other pollutants which can impact downstream water bodies. The contaminants of highest concern are Total Phosphorus (TP), Total Nitrogen (TN), and Biochemical Oxygen Demand (BOD). Modification of the surface conditions of the site, specifically increasing the impervious nature of the ground cover, increases the concentration and potential discharge of these pollutants. The development of the site reduces native vegetative cover, and therefore affects the land's natural ability to store, treat or infiltrate runoff. This includes impervious surfaces, such as roads, buildings, and also landscaped areas, specifically lawns. These increases in imperviousness allow for greater concentrations or pollutants to collect and be carried off by runoff. Some of the pollutants are deposited by atmospheric conditions. However, other sources are applied or discharged to the surface of the site. The landscape areas are subject to fertilizers, weed control, and pesticide products. This too is a large potential for pollutants which if discharged untreated could have long term impacts. A full listing of the potential pollutants which can be considered in stormwater

can be found in Table 2.1 of the New York State Stormwater Management Design Manual (NYS SMDM).

The concentrations are collected in stormwater runoff and rapidly discharge to the adjacent water bodies if not treated properly. The pollutants are collected and conveyed during the initial part of the storm event or the 90% rainfall. This is 90% of the average annual stormwater runoff volume. For this part of the State it is equivalent to approximately 1.4 inches. This is also commonly referred to as the "first flush." The requirement of the NYSDEC SPDES General Permit GP-0-20-001 requires that this volume of runoff is to be collected and treated by the means described in the NYS SMDM. The method to be used is the unified stormwater sizing criteria in which a water quality volume is determined, and a practice is selected which best fits the criteria provided. This is described further in Section 6.0.

3.2 Stormwater Management During Construction

The Erosion and Sediment Control Plan will be implemented during all phases of construction until the completion of the project. This will minimize or eliminate the potential short-term adverse impacts which may occur during construction. After completion, the erosion and sediment control will become a maintenance plan to ensure that permanent erosion and sediment controls continue to function and prevent the transport of sediments.

The Erosion and Sediment Control Plan includes the Sequence of Construction and designed measures to be installed, operated and maintained during all aspects of construction. The appropriate measures were selected and detailed in the Plan for implementation by the site contractor. The main objective of the Plan is to prevent erosion from occurring by stabilization of the construction site where possible. Sediment controls are to be used as a containment system to allow the removal of sediment from runoff to the greatest extent possible before leaving the work site. Control methods and standards utilized are provided in the NYSSESC.

Potential sources of destabilization of the site have been determined so that proper measures will be used. The locations and methods designed for erosion and sediment control measures change as the construction sequence progresses. The priority is to stabilize disturbed areas subject to erosion and use containment and/or filtering practices where sediment may concentrate. Some of the practices and methods that will be used for this project are:

- Minimization of open disturbance by use of stabilizers such as seed, mulch, and erosion blankets, stone, etc. Areas not subject to construction traffic for extended periods will be temporarily stabilized.
- The work areas will be contained. Down grade perimeters will be lined with barriers such as silt fence, diversions, berms, etc.
- Where possible, clean stormwater will be diverted away or around the work site to reduce the amount of runoff requiring treatment.
- Sediment traps will be constructed where heavy concentrations of runoff may accumulate.
- Dust control measures will be maintained on-site such as water trucks.
- Runoff will be prevented from gaining erosive velocities on long slopes. This can be achieved with seed and mulch, erosion control blankets, curb dams and multiple rows of silt fence.
- Existing drainage structures will be protected from sediment-laden runoff.
- Regular weekly inspections and reports (see Appendix K for report form) to be filed with the Operator and Town.

Additional methods of practices may be employed dependent on the situation. The NYSSESC consists of NYS DEC accepted and recommended practices. The design requirements of temporary and permanent erosion and sediment control practices of this Manual have been followed.

During construction, runoff will sheet flow towards the perimeter of the property. Along the perimeter, silt fencing shall be placed, which will intercept any sediment laden flows.

Additional stabilization measures such as erosion blankets and site stabilization will help regulate storm flows during construction.

Prior to completion of the project, all permanent structural features will be cleaned, restored, and re-vegetated as necessary. The erosion and sediment control phase of the project is complete when all work is done, and all areas are stabilized. The post-construction Stormwater Management Inspection and Maintenance Agreement (Schedule "B" in Appendix L) will describe the long-term inspection schedule, periodic maintenance requirements, and the responsible party.

3.3 Stormwater Management Post-Construction

The post-construction design of the project must be included in the Stormwater Pollution Prevention and Stormwater Management Plans to minimize or eliminate potential long-term adverse impacts which might be caused by surface runoff from the site. This will deal with the management of the stormwater upon completion and operation of the site. The plan will be an analysis of all potential impacts due to stormwater and the means of protecting adjoining water bodies.

The Management Plan begins with conceptual designs of the collection and conveyance system and the proposed treatment practices. The treatment practices are subject to different parameters and must be designed to best fit the site, including green infrastructure planning. Some of the limitations that may be encountered include soil types and properties, depth to groundwater or bedrock, distance to structures, and maintenance. A list of acceptable practices can be found in Chapters 3, 5, and 10 of the NYS Stormwater Design Manual (SMDM). Chapter 3 states "The Practices on this list are selected based on the following criteria:

1. Can capture and treat the full water quality volume (WQV)
2. Are capable of 80% TSS removal and 40% TP removal
3. Have acceptable longevity in the field
4. Have a pre-treatment mechanism."

Green Infrastructure Practices include:

I. Preservation of Natural Resources
II. Reduction of Impervious Cover
III. Runoff Reduction Techniques

The five broad groups of standard stormwater management practices are:

I. Stormwater Ponds
II. Stormwater Wetlands
III. Infiltration Practices
IV. Filtering Practices
V. Open-channel Practices

These practices "are presumed to meet water quality requirements set forth in this manual if designed in accordance with the sizing criteria presented in Chapter 4 and constructed in accordance with the performance criteria in Chapter 6."[1]

Green Infrastructure – Runoff Reduction

Chapter 3 of the NYS DEC introduces a planning process for site development which has "increased emphasis on a holistic approach" to urban stormwater runoff management. This is to be done by reducing pollutant-laden runoff by the use of green infrastructure which promotes replication of pre-development hydrology. This is done by designing selected practices which will allow for infiltration, ground water recharge, reuse, recycling and evaporation/evapotranspiration of surface runoff Water Quality Volumes from developed areas.

[1] Pg. 3-7 NYS Stormwater Management Design Manual Draft, May 2022.

The implementation of this planning process is defined in a five-step approach as follows:

1. Preservation of features and reduction of impervious surfaces.
2. Determination of the project's Water Quality Volume.
3. Incorporating green infrastructure and standard stormwater management practices that provide a Runoff Reduction Volume Capacity.
4. Use of standard stormwater management practices to treat Water Quality Volume not addressed by green infrastructure.
5. Design of storage facility for volume and peak rate volumes.

This methodology is provided in more detail in Chapter 3 of the SMDM as well as the Flow Chart at the end of Chapter 3 (see Figure 3.1).

This process is required for new and redevelopment projects. Chapter 4 Section 4.3 requires the calculation of Runoff Reduction Volume (RRv) and that 100% of post-development Water Quality Volume should be treated on-site using green infrastructure or standard SMP's. If this goal cannot be met, at a minimum, a specific reduction factor(s) based on the hydrologic soil group (HSG) can be applied but justification must be provided as to why the pre-construction condition cannot be met.

4.0 Site Characteristics

4.1 Soils

On-site soils were classified by using the USDA Natural Resources Conservation Service (NRCS) Websoil survey for Westchester County, NY, see Figure 4.1 – Soil Map.

The predominant soil types for this project are Charlton, a fine sandy loam and Charlton-Chatfield Complex. These soils are well drained soils typically found on hilltops and hillsides. The Hydrologic classifications range from "B to D". The erosion hazard level for these soils are slight to moderate with greater hazards on steep slopes. Independent soil tests were performed, and the results are located in the Appendix E of this Report.

- Charlton fine sandy loam, 3 to 8 percent slopes, (ChB): This soil is gently sloping, very deep, and well drained. This soil is commonly found on hilltops and hillsides. No major limitations are typically encountered with this soil type.

- Charlton fine sandy loam, 8 to 15 percent slopes, (ChC): This soil is gently sloping, very deep, and well drained. This soil is commonly found on hilltops and hillsides. No major limitations are typically encountered with this soil type.

- Charlton fine sandy loam, 15 to 25 percent slopes, (ChD): This soil is moderately steep, very deep, and well drained. It is often found on the sides of ridges and hills. Steep slope is a major problem limitation associated with this soil type. During construction, minimizing the removal of vegetation, mulching, and quickly establishing a plant cover can help to prevent and/or control erosion and sedimentation potentials.

- Charlton loam, 25 to 35 percent slopes, (ChE): This soil is moderate to steep sloped, very deep, and well drained. It is often found on the sides of ridges, hills and till plains. Steep slope is a major problem limitation associated with this soil type. During construction, minimizing the removal of vegetation, mulching, and quickly establishing a plant cover can help to prevent and/or control erosion and sedimentation potentials.

- Charlton-Chatfield complex, rolling, very rocky, 2 to 15 percent slopes, (CrC): This unit consists of the very deep and moderately deep, well drained and

somewhat excessively drained Chatfield soil and the well-drained Charlton soil. It is typically found on hilltops and hillsides that are underlain by highly folded bedrock. Slopes range from 2 to 15 percent. Rock outcrops can cover 2 to 10 percent of the surface. The main engineering limitations for these soils are the moderate depth to bedrock (40 to 60 inches), rock outcrops, and the irregular topography.

Deep Test Soil Logs and soil percolation test data are included in Appendix E of this Report. The locations of these deep soil tests are indicated on the Construction Drawings. On-site soil investigation and knowledge of the soil groups facilitated the selection of coefficient values used for the pre- and post-development pollutant load scenarios. Additionally, curve numbers were determined for use in the analysis.

4.2 Hydrology

Currently, the surface runoff pattern originates from the eastern centrally high part of the site sloping downward generally in south westerly direction. The surface runoff pattern is a combination of sheet flow and concentrated flow. Overall, the upgradient areas are wooded leading up to the developed areas of the site which is a combination of lawn and impervious surfaces. Most of the topography is slight to moderate slopes with some steeper areas. Surface runoff from most of the existing impervious areas including the buildings, parking, and upper roadways as well as adjoining areas is collected and transported to existing stormwater management basins where it receives water quality treatment and attenuation. Originally, the project was built prior to water quality requirements so the stormwater management was only subject to attenuation requirements. The second and third phases were constructed under water quality requirements, but not runoff reduction.

The proposed improvements will not significantly change the surface runoff patterns. The proposed improvements as shown will result in an increase in the imperviousness of the drainage areas. Therefore, there will be an increase in the volume of runoff as well as the pollutant loads generated by the site for a given rainfall event. This will be mitigated with stormwater management practices. The proposed development will create a new stormwater management facility and retrofit the existing stormwater basins to meet water quality and attenuation goals. There are three separate drainage areas being considered for the analysis of the stormwater runoff volumes. They are as follows.

DA#1 - This is the tributary area to cottage portion of the development. This drainage area collects the upgradient woodland and the cottage development improvements. All of the runoff from this area is collected and transported to a stormwater infiltration basin to the west side of the side. The stormwater basin will meet all of the required water quality and attenuation goals. The infiltration basin will be designed to provide pre-treatment prior to the infiltration of the full water quality volume and the attenuation of the higher intensity storm events.

DA#2 - This is the tributary area to the apartment section of the project. This drainage area collects the upgradient woodland, loop roadway, parking, apartment building and the associated improvements. All of the runoff from this area is collected and transported to the existing stormwater pocket wetland. This pocket wetland will be retrofit to meet all of the required water quality and attenuation goals. The pocket wetland will be designed to provide pre-treatment prior to the infiltration of the full water quality volume and the attenuation of the higher intensity storm events. Runoff reduction and water quality volumes must be managed for the new impervious areas created as part of the development. Areas where re-development (overlapping of new over existing impervious surfaces) must provide only 25% of the water quality volume generated.

DA#3 - This is the tributary area to a smaller existing stormwater basin at the southern end of the site which was originally constructed to provide treatment for a small area of the site. This will be enlarged to accommodate the new development.

In the planning, design and construction of the development, stormwater will be managed to minimize or eliminate potential off-site impacts. The proper implementation of temporary sediment and erosion control measures are used to achieve this goal. An Erosion and Sediment Control Plan has been established and will be implemented during all phases of construction until the completion of the project. The Erosion and Sediment Control Plan incorporates the sequence of construction and designed measures to be installed, operated and maintained during all aspects of each phase. The erosion and sediment controls are designed in accordance with the NYS Standards and Specifications for Erosion and Sediment Control.

5.0 Hydrologic Analysis

The method used to compute project runoff was the Soil Conservation Service TR-55. The basis for the analysis was the Type III, 24-hour storm, for the 1 year, 2-year, 10 year, 25 year, and 100-year storm event. The rainfall depth for the respective storm events are 2.78, 3.41, 5.13, 6.49, and 9.28. The runoff coefficient "CN" and Time of Concentration for existing and post-development conditions were computed using Standard TR-55 criteria.

5.1 Pre-Development Condition

There are three drainage areas considered in the analysis of the site. The western boundary is considered as the design line of E-1. The outlet structures of the existing drainage basins at the south of the site are the design points of the respective drainage areas. As stated, the high point of the property sheds east to west toward the design points. The contributing watersheds are shown on Figure 5.1 – Pre-Development Watershed Map.

The Drainage Basin sizes, curve numbers and travel times used in the analysis are summarized in the Table below:

Pre-Development Conditions Watershed Analysis Variables

Drainage Basin	Area (acres)	Curve Number CN	Travel Time, Tc (min)
E-1	9.43	79	9.48
E-2	6.61	92	11.89
E-3	5.22	86	173.21

5.2 Post-Development Condition

A hydrologic analysis has been done for the new development to determine the expected runoff depth for each storm event. The results of this analysis were used to calculate the stormwater management practices sizes required for each drainage area. The contributing watersheds are shown on Figure 5.2 – Post-Development Watershed Map.

Three drainage areas 1, 2, and 3 are being considered in the analysis and compared to their condition in the predeveloped condition. Drainage areas 1,2, and 3 extend beyond the development pad. The analysis point or design line for DA-1 is again the western boundary and for DA-2 and DA-3 is again the outlet structures of the existing basins. The existing basins will be kept and resized as required. The surface runoff from DA-1 will flow unhindered following the natural drainage patterns until it reaches the development area and is piped to an infiltration basin that will provide for Runoff Reduction volume, Water Quality Infiltrating the full 90% storm event, and attenuation up to the 100-year storm event. DA-2 and DA-3 will be directed to the stormwater management systems which consist of pocket wetlands basins that will provide for Runoff Reduction volume, Water Quality treatment, and attenuation up to the 100-year storm event. The hydrologic analysis assumes that full soil restoration as required in Chapter 5 (Table

5.3) of SMDM will be implemented. The areas of soil restoration will be shown on the E&SC Plan if required.

The Drainage Basin sizes, curve numbers and travel times used in the analysis are summarized in the Table below:

Post-Development Conditions Watershed Analysis Variables

Drainage Basin	Area (acres)	Curve Number CN	Travel Time, Tc (min)
P-DA-1	9.26	83	9.48
P-DA-2	6.69	92	11.88
P-DA-3	5.78	88	173.21

6.0 Unified Stormwater Sizing Criteria

6.1 Methodology

To satisfy the requirements of the NYS DEC General Permit and the Town of Yorktown a combination of Green Infrastructure Techniques and standard practices have been selected. These practices meet attenuation as well as stormwater quality goals. The guidelines and practices used in selecting and the sizing analyses are found in Chapters 4, 5, and 6 of the NYS DEC Stormwater Management Design Manual.

6.2 Water Quality Volume (WQv)

The Treatment volumes are determined as prescribed by the standard methods as outlined in the NYS DEC SMDM. This Water Quality Volume WQv requirement is normally based on the 90% rainfall event. This equates to 90% of the average rainfall for the specific region.

The 90%, 24-hour runoff volume required to be captured and treated has been further defined as the runoff volume from the contributing drainage areas for the proposed project. The volume proposed to be captured will be that volume generated by a 90%, 24-hour storm or greater. With the design provided, this entire volume will be captured and retained for an extended period of 24-hours for pollutants to settle out of the contained runoff. Excess stormwater above the water quality volume will be diverted to subsurface storage for the larger storm events. The volumes to be treated have been calculated as shown in the following table.

Water Quality Volume

Drainage Area	WQv based on 90% Rainfall Event	WQv based on 1-year Rainfall Event	WQv Provided	RRv Provided	Storm Year Treated
1	11,089 cf	Forebay	11,089 cf	11,089 cf	90%
2	23,105 cf	Forebay	23,105 cf	23,105 cf	90%
3	13,446 cf	Forebay	13,446 cf	13,446 cf	90%

6.3 Runoff Reduction (RRv)

Green infrastructure design as part of the planning process enables the reduction of runoff from a project. These practices in turn reduce the requirements of water quality treatment and flood protection. The selection of green infrastructure practices is developed using a five-step process detailed in Section 3 of the SMDM. A flow chart of this process is included as Figure 3.1 of this Report. The design of the practices can be found in Appendix H of this Report. The selection and justification of green practices can be found in Appendix G of this Report. Possible green infrastructure Practices to be implemented for this project include:

- Porous Pavement
- Stormwater Planters
- Infiltration
- Rainwater Harvesting
- Tree Planting

6.4 Stream Channel Protection Volume Requirements (CPv)

This requirement is for the protection of stream channels from receiving erosive velocities. This goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event that remains after runoff reduction is applied to the project. Trout waters may be exempted to only provide 12-hour detention. It is also not required if the discharge is to a pipe or hardened channel. The detention time is measured by the center of mass method or plug flow calculation method. Further criteria for the application of the Cpv can be found in Section 4.4 of the SMDM.

6.5 Overbank Flood Control (Qp)

The purpose of this sizing criteria for overbank flood control is to avoid an increase in the frequency and magnitude of out-of-bank flooding that may be the result of development. These are flow events where channel capacity is exceeded and spill over to flood plains. To meet the criteria, the proposed stormwater management system for the project must attenuate the 10-year, 24-hour storm event to pre-development peak discharge rate. Detailed criteria can be found in Section 4.5 of the SMDM.

6.6 Extreme Flood Control Criteria (Qf)

The purpose of the extreme flood analysis is to prevent flood damage from large storm events by maintaining predevelopment 100-year flood plain boundaries and protecting the integrity of stormwater management practices. The basis of the analysis is to maintain pre-

development peak rates of runoff for the 100-year, 24-hour storm event with proper stormwater management. Detailed criteria can be found in Section 4.6 of the SMDM.

A summary of peak discharge rates at each design point for the pre and post-developed storm events analyzed for each drainage basin is summarized in the tables below:

Design Point 1:

Storm Event (year)	Pre-Developed Peak Flow (cfs)	Post-Developed Peak Flow (cfs)	Net Change of Peak Flow (cfs)	Percent Reduction
1	5.81	2.28	-3.53	61%
2	7.94	4.09	-3.85	48%
10	15.86	11.8	-4.06	26%
25	22.78	18.81	-3.97	17%
100	36.52	31.81	-4.71	13%

Design Point 2:

Storm Event (year)	Pre-Developed Peak Flow (cfs)	Post-Developed Peak Flow (cfs)	Net Change of Peak Flow (cfs)	Percent Reduction
1	**3.09**	**2.24**	**-0.85**	**28%**
2	**4.27**	**3.30**	**-0.97**	**23%**
10	**8.15**	**7.12**	**-1.03**	**13%**
25	**11.98**	**10.66**	**-1.32**	**11%**
100	**18.58**	**18.82**	**0.24**	**-1%***

As can be seen by the results, peak discharge rates are decreased for all scenarios.
*Slight increases for some of the storm events are shown but they are relatively insignificant and can be attributed to rounding errors in the analysis and are well within acceptable ranges.

7.0 Stormwater Management Practices Selection, Justification and Design

The stormwater management practices selection process detailed in Chapters 3 and 7 of the NYS Stormwater Management Design Manual was followed to help select the practices chosen. These Chapters provide a series of matrices which allows logical selection of treatment practices based on several factors. The factors are as follows:

1. Land Use – Residential;
2. Physical Feasibility – location, slope, drainage area, groundwater table;

3. Watershed / Regional Factors – near Croton Reservoir;
4. Stormwater Management Capability – can meet all requirements;
5. Community and Environmental Factors – meets all requirements.

The matrices are provided in Appendix G of this Report. The matrices have been commented on or redacted to show elimination criteria through this stepped approach and eventual possible alternatives for treatment.

Thermal impacts are not a major concern on this project. The most likely location where a rise in the water temperature might occur is within the Pocket Wetland. This, however, will be mitigated by establishing trees and plantings which will provide shade. Further cooling would also take place when the stormwater passes through the subsurface stormwater management system prior to open discharge. Therefore, the stormwater collection and management will not contribute to the heating of stormwater where it will have a downstream thermal impact.

7.1 Infiltration Basin (I-2) NYS DEC SMDM:

1. Stormwater Infiltration Practices capture and temporarily store stormwater. The stormwater is then infiltrated into the existing soil strata over an extended period of time allowing recharge into the groundwater. The infiltration basin has been designed to detain the entire 1-year / 24 hour storm event runoff, prior to infiltration. The basin will route the entire 2-year to 100-year storm event maintaining peak flow discharges not exceeding the existing rate of discharge at the design point. Our drainage analysis takes into consideration the identified 15 inches per hour infiltration rate in the post development drainage analysis. The basin will be maintained per the stormwater maintenance agreement, (Appendix L) the development will be utilizing the infiltration basin as an extended detention basin for the storm events greater than the 1-year / 24 hour storm.

Required Elements:

Pre-Treatment Volume	
Required	Provided
If Fc for underlying soils is less than 2.0 in/hr minimum pre-treatment volume of 25% is required.	N/A
If Fc for underlying soil greater than 2.0 in/hour, minimum pretreatment volume of 50% is required	N/A
If Fc for underlying soil greater than 5.0 in/hour,100% of WQv must be pretreated	100% of the 1-year/24-hour storm event is captured and treated via a stone level spreader and a 30' vegetative filter strip.
Exit velocities from pretreatment volume shall be non-erosive (3.5 to 5.0 fps) during the 2-year storm event	Exit velocities are reduced at the discharge from the pre-treatment device by the installation of a Shoremax © outlet protection. The Shoremax © will reduce the velocity of the stormwater flow as it enters the infiltration basin and capture any large debris that is bypassed during larger year storm events.
Treatment Volume	

Required	Provided
Infiltration practice designed to exfiltrate entire WQv through floor of practice (side walls not included in sizing);	All criteria have been met. The surface infiltration system has been designed to exfiltrate the entire WQv and has been sized based solely on the surface area of the bottom.
Installation shall carefully follow the construction sequence.	All criteria have been met. The surface infiltration system has been designed to exfiltrate the entire WQv and has been sized based on the overall ponding volume within the infiltration basin, prior to any release.
The surface area of the infiltration practice shall be sized based on A = WQv/db A = surface area of basin (SF) db = depth of basin (ft)	All criteria have been met. The surface infiltration system has been designed to exfiltrate the entire WQv and has been sized based on the overall ponding volume within the infiltration basin.

Landscaping:

The infiltration basin bottom is proposed to be stabilized by the use of a 2-inch mulch layer and a seed mix. Please refer to the Landscape Plan for further details regarding the infiltration basin plantings.

Maintenance	
Required	Provided
Infiltration practice shall never serve as a temporary sediment trap during construction.	This Erosion and Sediment Control Plan includes separate locations for temporary sediment traps which do not coincide with the practice locations.
Direct access shall be provided to the practice for maintenance and rehabilitation.	Direct access via a 12-foot wide maintenance access drive to the basin and a 10-foot wide berm around the perimeter of the basin is provided.

See Routing Calculations in Appendix F and H for sizing calculations.

Infiltration Basin Seed Mix (mix of native facultative wetland and upland species):
22% Schizachyrium scoparium / Little Bluestem
15% Chasmanthium latifolium /River Oats
10% Elymus riparius / Riverbank Wildrye
6% Echinacea purpurea / Purple Coneflower
5% Carex squarrosa / Squarrose Sedge
5% Carex vulpinoidea / Fox Sedge
5% Liatris spicata / Marsh Blazing Star
5% Rudbeckia hirta / Blackeyed Susan
4% Senna hebecarpa / Wild Senna

3% Coreopsis lanceolata / Lanceleaf Coreopsis
2% Andropogon gerardii / Big Bluestem
2% Asclepias incarnata / Swamp Milkweed
2% Aster novae-angliae / New England Aster
2% Baptisia australis / Blue False Indigo
2% Eupatorium coelestinum / Mistflower
2% Monarda media / Purple Bergamot
2% Tradescantia ohiensis / Ohio Spiderwort
2% Verbena hastate / Blue Vervain
2% Zizia aurea / Golden Alexanders
2% Agrostis perennans / Autumn Bentgrass
1% Solidago juncea / Early Goldenrod

Seeding Rate: 20 lbs per acre

7.2 Stormwater Wetlands – (W-4) Pocket Wetland:

The pocket wetland is a practice that has a combination of a forebay, marsh areas, permanent pool and extended detention. It was chosen most suitable because of the five factors stated above. It will provide the additional water quality volume above that provided by the Rainwater Harvesting System needed to meet the treatment requirements. The area draining to includes the some of the townhouse buildings, driveways, and townhouse road. The location is at a low enough elevation where the improvements to the site are captured and treated. The drainage area is less than five acres. This location has a very manageable slope, therefore, the wetland layout works well with the topography. The groundwater table at this location was witnessed via a test hole at an elevation of 48" from the ground surface. Therefore, the permanent pool elevation was set to coincide with this level insure stability of the permanent pool. The phosphorus removal rating is good and therefore meets design goals.

Thermal impacts are not a concern because the location chosen for the pocket wetland is already well shaded. To further improve these conditions, additional plantings will be added to increase the shading on the pocket wetland.

Minimum Water Quality Volume (WQv): The required water volume as stated is 14,519 cf for a 1 year storm event. The volume provided is 24,444 cf, including permanent pool and 1 year storm volume therefore exceeding the minimum. Of this volume, 14,835 cf is below the permanent water elevation, 9,609 cf is transient storage. The Channel Protection Volume (CPv) is equal to the WQv volume, which is suggested to be detained for 24-hours. This cannot be provided. With a single 2" diameter orifice only approximately 2.75 hours is possible.

Inlet Protection and Pre-Treatment: A forebay has been provided at the inflow point of the pocket wetland. The forebay will be stabilized with a rip-rap outlet protection at the inlet points, and a rip rap weir at the outlet to prevent erosive conditions. The size of this is:

Required: **10% WQv = 14,519 cf x 10% = 1,451 cf**
Provided: **2,583 cf in forebay**

The forebay will be easily accessible for maintenance. A fixed vertical depth marker will be installed to measure depths of accumulated sediment.

Minimum Flow Path:

	Required	Provided

Minimum Length : Width Ratio	2:1	2:1
Minimum Surface Area : Drainage Area	1.0:100	5.9:100
Minimum Surface Area 6" or less – 35%	2,126 sf	3,607 sf
Minimum Surface Area 18" or less – 65%	3,949 sf	4,809 sf
Minimum 25% WQV in deepwater zones greater than 4' deep	3,630 cf	4,984 cf
Minimum 50% WQV in Permanent Pool	7,260 cf	7,407 cf
Forebay equal to 10% WQV	1,451 cf	1,722 cf
Minimum 10% WQV 4'-6' deep micropool at outlet	1,451 cf	1,816 cf

*Total surface area permanent pool –
DA of 175, 982 sf x 1% = 1,760 sf < 9,947 sf provided

Microtopography: The bed of the stormwater wetlands has internal flow path.

Landscaping Plan and Buffers/Setbacks: Landscaping has been provided for basin interior and buffers. A 25' wetland buffer is required as well as a 40' buffer to all structures. All setbacks are met.

Maintenance Access: the property owner will be responsible for maintenance of the stormwater practices and drainage collection. Therefore, access easements are not required. All stormwater improvements have clear and easy access to the property owner.

Non-clogging Low Flow Orifice: A low flow orifice has been provided in the form of a stepped weir. This will allow slow release of water levels above the permanent pool.

Rise in Embankment: Not required.

Pond Drain: Not required. There is a small amount of permanent water volume in the wetland. If any maintenance is required, the water can be pumped out of the outlet.

Adjustable Gate Valve: Not required.

Safety Features: The side slopes are designed to be less than the 3:1 maximum slope requirement. A safety bench is not required since the side slopes are 4:1.

Sizing Calculations: See water routing calculations in Appendix C

The selection of the treatment practice was based on evaluating the site to determine what would best fit the conditions providing maximum benefits. The goal was to select practices which would meet treatment and attenuation standards and minimize the disturbance footprint. The selection of Stormwater Practices was based on the surface and subsurface conditions of the site. In addition, the site design concept is to create a natural and environmentally sensitive setting. The high groundwater table made practices with an underdrain a necessity.

See Routing Calculations in Appendix F and H for sizing calculations.

7.3 Rainwater Harvesting Subsurface Stormwater Management Storage (SSMS):

The SSMS for this project has been designed strictly as a means of storage for reuse of collected stormwater for irrigation purposes. The storage be supplied by roof runoff to insure less collection of sediment and other trash or debris from entering the system. This system will be fitted with a pump system to pressurize the irrigation system. The irrigation systems will use the water for landscape and lawn areas supplementing the use of the municipal water system.

The selection of the treatment practice was based on evaluating the site to determine what would best fit the conditions providing maximum benefits. The goal was to select practices which would meet treatment and attenuation standards and minimize the disturbance footprint. The selection of Stormwater Practices was based on the surface and subsurface conditions of the site. In addition, the site design concept is to create a natural and environmentally sensitive setting.

In General:

- Controls should be inspected periodically for the first few months after construction and on a semi-annual basis thereafter. They should also be inspected after major storm events (greater than 0.5 inches).
- All stormwater controls shall be inspected and cleaned of any debris or sediment.
- Any erosion shall be repaired and stabilized with seeding and mulch or stone.

Please note that additional notes regarding maintenance activities are contained on the project Construction Drawings and should be adhered to during and after construction.

The selection and justification of green practices can be found in Appendix G of this Report. The design of the practices can be found in Appendix H of this Report.

Stormwater Planters NYSDEC SMDM:

Stormwater planters are small landscaped stormwater treatment devices that can be placed above or below ground and can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water quality, similar to rain gardens and green roofs. Three versions of stormwater planters include contained planters, infiltration planters, and flow-through planters.

A contained planter is essentially a plotted plant placed above an impervious surface. Stormwater infiltrates through the soil media within the container, and overflows when the void space or infiltration capacity of the container is exceeded. An infiltration planter is a contained planter with a pervious bottom that allows stormwater to infiltrate through the soil media within the planter and pass into the underlying oil matrix. A flow-through planter is a contained planter with an under-drain system that conducts filtered stormwater to the storm drain system or downstream waterway.

All three types of stormwater planters include three common elements: planter “box” material (e.g., wood or concrete); growing medium consisting of organic soil media; and vegetation. Infiltration and flow-through planters may also include splash rock, filter fabric, gravel drainage layer, and perforated pipe.

Porous Pavement – NYSDEC SMDM:

The porous pavement will be utilized in the parking spaces. Pavers allow the rainfall to infiltrate through the surface and recharge into the groundwater. Some pollutant uptake is realized by passing through the underlying soils.

8.0 Erosion and Sediment Control

Erosion and sediment control practices were selected and designed in accordance with the NYSSESC. The practices proposed for this project are described below. Standard details and specifications are included in Appendix J as well as on the Construction Plans. Initial locations of each practice are shown on the Plans. As construction progresses, it may become necessary to repair, replace or relocate these practices as conditions warrant.

Stabilized Construction Entrance:

This has been specified for the entrance of the driveway. The installation will occur at the beginning of the project as described in the Suggested Construction Sequence. It will be maintained, so as to prevent the tracking of sediment off-site.

Silt / Sediment Fence and Haybales:

Silt fence and haybales have been specified to control and contain sediment from leaving areas under disturbance to undisturbed areas. The fence shall be installed as best as possible following the contours and will be spaced in accordance with the NYSSESC. The fence will be inspected daily, repaired, and sediment removed as necessary.

Soil Stockpile:

Areas are provided for temporary stockpiling of delivered soil material for the construction. These areas will be contained with sediment fence to prevent the movement of sediment. The stockpiles, if not active for more than seven (7) days, will be seeded and mulched. The stockpile areas were placed to best suit the proposed construction activity. The stockpile will be installed as described in the Construction Sequence.

Temporary and Permanent Vegetative Cover:

This stabilization measure may be temporary and in other cases permanent vegetative cover is used. The vegetative cover specifications are based on the NYSSESC Manual. On the Constructions Plans are notes, locations, and specifications as to the vegetative cover requirements. In the notes, there are specific situations and time constraints related to stabilization of disturbed areas. The specifications give seed and fertilizer mixes as well as placement. Any disturbed area expected to remain exposed for more than seven (7) days shall receive temporary vegetative cover.

Storm Drain Inlet Protection:

The inlet protection is specified to provide a permeable barrier around drainage inlets to reduce sediment content in runoff before entering the storm drain system.

Erosion Blankets:

Erosion blankets and seeding shall be used for the stabilization of slopes 3:1 or greater or as otherwise specified. The blankets shall be installed as per the Plans and Details, and the manufacturer's specifications. They shall be stapled or staked in place as per the manufacturer's specifications. The blankets may be installed at locations other than those shown on the Plans as directed by the Town Engineer, Project Engineer, or other persons inspecting the site under the direction of the aforementioned.

Soil Restoration:

Soil restoration is a required practice for construction projects where soil compaction occurs to soils which will be permanently vegetated. This compaction is typically a result of heavy vehicle traffic, cutting or filling, and areas which may receive heavy surcharges. This becomes more pronounced in soils with greater fines content specifically when wet. These actions can change soil properties which affect its ability to drain or absorb surface water and will also affect the survivability of vegetation. In order to maintain the integrity of the Stormwater Management Plan, these areas must receive soil restoration. See Figure 8.1 taken from the NYSSMDM for requirements.

This project has soils which fall in the hydrologic soil group HSG "C." Therefore, for most instances, soil restorations are required for the development areas subject to permanent vegetation. Soil restoration can be done by tilling or aerating the soil to a depth of 12-inches. In heavy traffic areas, 3-inches of compost shall be placed over the compacted areas prior to the tilling. After the restoration, a 3/8" metal bar should be able to be hand pushed into the soil. Areas within the drip-line of trees should not be tilled.

Rock Outlet Protection:

Rock outlet protection is specified at discharge points of pipes and channels to reduce depth, velocity, and the energy of water to avoid downstream erosion. The sizing criteria used is from the NYSSESC Manual.

Water Bars:

Water bars shall be used for diversion of surface runoff to limit the accumulation of erosive velocities of water. The water bars shall be installed as per the Plans and Details. The water bars may be installed at locations other than those shown on the Plans as directed by the Town Engineer, Project Engineer, or other persons inspecting the site under the direction of the aforementioned.

Temporary Sediment Basin:

The sediment basin's locations are the point of concentration of runoff and therefore the logical place to collect sediment. Within the Erosion Control Notes and Construction Sequence, there are specific requirements for the installation and maintenance during construction. Upon stabilization of the site, the sediment will be removed. The size of the sediment basin as per the NYSSESC Manual is based on 3600 cubic feet per acre of drainage area. The following tabulations are the sizes provided.

Sediment Trap	Drainage Area	Size Required	Size Provided
1	0.32 acres	1,152 cf	1,195 cf

Other Controls:

Waste Disposal:

Solid, sanitary and toxic waste must be disposed of in a proper manner in accordance with applicable local, state and federal regulations. It is prohibited to burn, bury or pour out onto ground or into the storm sewers any solvents, paints, stains, gasoline, diesel fuel, used motor oil, hydraulic fluid, anti-freeze, cement curing compounds, or other toxic or hazardous wastes. The Contractor shall be responsible for disposal of all waste off site.

Concrete Truck Washout:

Washing out of cement trucks should occur in a designated diked area where the washings can be collected and disposed of properly when they harden.

Dust Control:

Generation of dust shall be minimized by limiting the extent of exposed soils and re-establishing vegetative cover in these areas as soon as possible. Additional and/or temporary methods to minimize dust may include wetting, mulching, spray adhesives, stone covering and wind barriers.

Stabilization:

The Contractor shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (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 instance:

> *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 practicable.*

All areas not designated as buildings, roads, driveways, parking lots, walks, or aprons shall be established as lawn or vegetative areas. Permanent planting and vegetation shall be provided per approved Landscaping Plan.

9.0 Construction Sequence

A key objective of the SWPPP is to reduce erosion and sedimentation potentials for the project. As a means to accomplish this, a suggested construction sequence was developed to assist the developer with incorporating, into the project, various controls designed to reduce such potentials. The sequence considers the performance of development activities in a phased approach, in conjunction with the installation, construction and monitoring of erosion and sedimentation control devices prior to and during construction.

Appendix D contains the project specific Suggested Construction Sequence. Essentially, the sequence has been broken down into various activities designed to ensure that certain erosion/sedimentation controls are in place, prior to and during construction, in recognition of site development.

Prior to any construction activities, the Owner, Engineer and any Contactors to perform land-disturbing activities shall meet to review this SWPPP to insure a thorough understanding of

its contents and overall intent. Certifications to this effect shall be signed by the Owner and Contractor. Certifications are provided on the Construction Plans and in Appendix C.

The Responsible Party during and after Construction is as follows:

AMS Acquisitions
One Bridge Plaza North - Suite 840
Fort Lee, NJ 07024
Phone: (212) 695-7585

10.0 Inspection and Reporting

Unless notified by the NYSDEC, the Owner or Operator shall have a qualified inspector conduct site inspections in accordance with the Permit requirements; for a site with on-going soil disturbance activities, a qualified inspector shall conduct a site inspection at least once every seven (7) calendar days. If a project has received prior written approval by the NYSDEC for the disturbance of greater than five (5) acres of soils at any one time, the inspection frequency shall be increased to a minimum of two (2) per seven (7) calendar day period separated by two (2) calendar days for as long as the five (5) acre threshold is exceeded. The qualified inspector, as defined in SPEDES General Permit guidelines, shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

1. Date and time of inspection.

2. Name and title of person(s) performing inspection.

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

4. 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.

5. 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.

6. Identification of all erosion and sediment control practices that need repair or maintenance.

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

8. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection.

9. 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.

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

11. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing correction actions. 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.

Within one business day of the completion of an inspection, the qualified inspector shall notify the Owner or Operator and appropriate Contractor (or Subcontractor) of any corrective actions that need to be taken. The Contractor (or Subcontractor) shall begin implementing the corrective action within one business day of this notification and shall complete the corrective actions in a reasonable time frame. All inspection reports shall be signed by the qualified inspector. A sample inspection report is included in Appendix K.

The Owner or Operator shall maintain a record of all inspection reports in a site log book until all disturbed areas have achieved final stabilization and the N.O.T. has been submitted to the DEC. The site log book shall be maintained on site and be made available to the permitting authority upon request.

Prior to filing of the Notice of Termination or the end of permit term, the Owner or Operator shall have the qualified professional perform a final site inspection. The qualified professional shall be provided with a certified final asbuilt survey. The survey shall locate and provide detailed information for the permanent stormwater facilities. The information provided shall include and not be limited to the following: rim and invert elevations of all structures, outlets, weirs, etc.; pipe material and sizes; basin dimensions, elevations and topography; and any other pertinent information specific to the stormwater practice constructed.

Upon final review of the asbuilt survey and completed site improvements, 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 sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

The qualified professional shall then complete the Notice of Termination (NOT) to be signed by the Owner. The NOT with the required supporting documentation shall be submitted to the MS4 for signature of approval which will then be forwarded to the NYS DEC.

11.0 Installation and Maintenance of Stormwater Management Practices

11.1 During Construction

The Contractor shall be responsible for the installation and maintenance of all temporary erosion control measures. The Contractor shall also be responsible for the installation of permanent control measures. The Operator shall be responsible for the maintenance of all permanent control measures.

All temporary erosion control measures installed on the project site shall be observed and maintained to ensure that they are operating as intended as follows:

1. Temporary measures will be inspected by the trained Contractor daily. Any necessary repairs, replacements, or upgrades will be made immediately.

2. Accumulated sediments will be removed as required to keep the measures functional. In the case of silt fencing and haybales (if applicable), remove deposits where accumulations reach half the height of the fence or bale. In the case of sediment basins, remove deposits whenever their capacity has been reduced by fifty percent (50%) from the design capacity.

3. All erosion of the silt fence will be repaired immediately with compacted backfill materials.

4. Disturbed areas, stockpile areas, areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system or downstream.

5. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

6. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

7. The permanent storm drainage system shall be inspected and cleaned of all sediment prior to completion of project.

11.2 After Construction

The long-term operation and maintenance of the stormwater management system will be the responsibility of the Owner. A legally binding document will be signed detailing the responsible parties and required actions.

A sample of the Stormwater Management Inspection and Maintenance Agreement is included, as Schedule “B” in Appendix L.

The following is the proposed Inspection and Maintenance Schedule:

Control to be Inspected	Inspection Frequency	Maintenance Threshold Criteria	Maintenance Procedure
Drain Inlets	Quarterly	3"+ accumulated sediment	Remove debris and sediment annually.
Infiltration Basin	Bi-Annually	3”+ accumulated sediment	Remove debris and sediment.
Level Spreader	Bi-Annually	3”+ accumulated sediment	Remove debris and sediment.
Pocket Wetland	Bi-Annually	3"+ accumulated sediment	Remove debris and sediment.
Stormwater Planter	Bi-annually	1"+ accumulated sediment, Ponding for more than 48 hours	Remove debris and sediment; weed and replace plants and mulch as needed.
Tree Planting	Quarterly	Ponding for more than 48 hours	Remove accumulated sediment and

			debris; weed and replace dead trees with new ones and mulch as needed.
Cistern	Annually	3"+ accumulated sediment	Remove debris and sediment annually.
Permeable Paver/Porous Concrete	Quarterly	Paving does not dewater between storms	Clean area of debris and sediment; vacuum sweep area.

Recommended Maintenance Access:

Drain Inlets:

Access through grate structure and remove debris and sediment with hand tools or vacuum truck.

In General:

- Controls should be inspected periodically for the first few months after construction and on a semi-annual basis thereafter. They should also be inspected after major storm events (greater than 0.5 inches).
- All stormwater controls shall be inspected and cleaned of any debris or sediment.
- Any erosion shall be repaired and stabilized with seeding and mulch or stone.
- Maintenance and access shall comply with all local, State and Federal safety codes and guidelines. Please note that additional notes regarding maintenance activities are contained on the project Construction Drawings and should be adhered to during and after construction.

12.0 Owner / Contractor Responsibilities

12.1 Owner / Operator Certification Statement

The _____ is the Owner/Operator of the project for the purpose of this Permit (see Appendix A). The Owner must sign a copy of the Owner's Certification Statement before construction commences (see Appendix C).

12.2 Contractor Certification Statement

The Owner is responsible for ensuring all Contractors and Subcontractors associated with site work construction activities identified within this SWPPP agree to implement applicable provisions of the SWPPP and sign a copy of the Contractor Certification Statement (see Appendix C) before construction commences.

In addition, the Owner/Operator is responsible to make sure that all Contractors and Subcontractors shall identify at least one person representing the Company at the site will be responsible for implementation of the SWPPP. This person will be known as the Trained Contractor and will have the required 4-hour Certification. This Certification is available through the NYS DEC. The listing of courses can be found at the NYS DEC Website.

12.3 Retention of Records

The Owner shall retain a copy of the most current SWPPP at the construction site from the date construction is initiated at the site until the date of construction at the site is completed and the N.O.T. has been filed.

Once work is completed, the Owner shall submit to the NYSDEC a Notice of Termination (see Appendix A).

The Owner shall retain copies of the N.O.I, N.O.T., Acknowledgement Letter, MS4 SWPPP Acceptance Form, SWPPP and all reports required by the General Permit for a period of five (5) years from the date that the site achieves final stabilization unless the NYSDEC specifies another time period in writing.

13.0 Conclusion

The Stormwater Management Plan has been established for this project in accordance with the requirements of NYS DEC GP-0-20-001 and the Town Code of Yorktown. This Plan will effectively control stormwater generated by this project during and after construction. The management of the stormwater is based on controlling increases in peak runoff as well as water quality. The design of the water quality component not only will treat runoff due to the project, but also that which is currently not treated. Overall, it would improve even the existing conditions.

The final design of the project will detail the proposed practices and will establish the method with which they will be constructed. The detail will include layout, grading, plantings, outlet structures, and any other component as required for the design based on the Erosion and Sediment Control established in this Report. These will be part of the project Construction Drawings. The Sequence of Construction and required maintenance will also be set forth as part of the final construction plan. The full Construction Plan shall be considered part of the Stormwater Management Plan or Stormwater Pollution Prevention Plan.

The effectiveness of the stormwater practices selected in design will be insured by implementing a maintenance plan. The maintenance plan details specific activities, safeguards and provisions to be monitored and performed by specified frequencies. By adhering to the maintenance plan, optimum performance of the stormwater practices can be expected.

Based on the results of the analysis and recommended maintenance practices for the collection and treatment system, the proposed stormwater control designs will provide maximum control efficiency, high effectiveness for removal of pollutants of concern, and the best attainable post-development pollutant loading scenario.

In conclusion, the Stormwater Management Plan will not create negative downstream impacts as a result of this project.

Joseph C. Riina, P.E.

1/22/2024

FIGURES

FIGURES

NOTE:

1. Map Source: Westchester County GIS

FIG 1.1 LOCATION MAP

PREPARED FOR

AMS Yorktown Active Adult Community

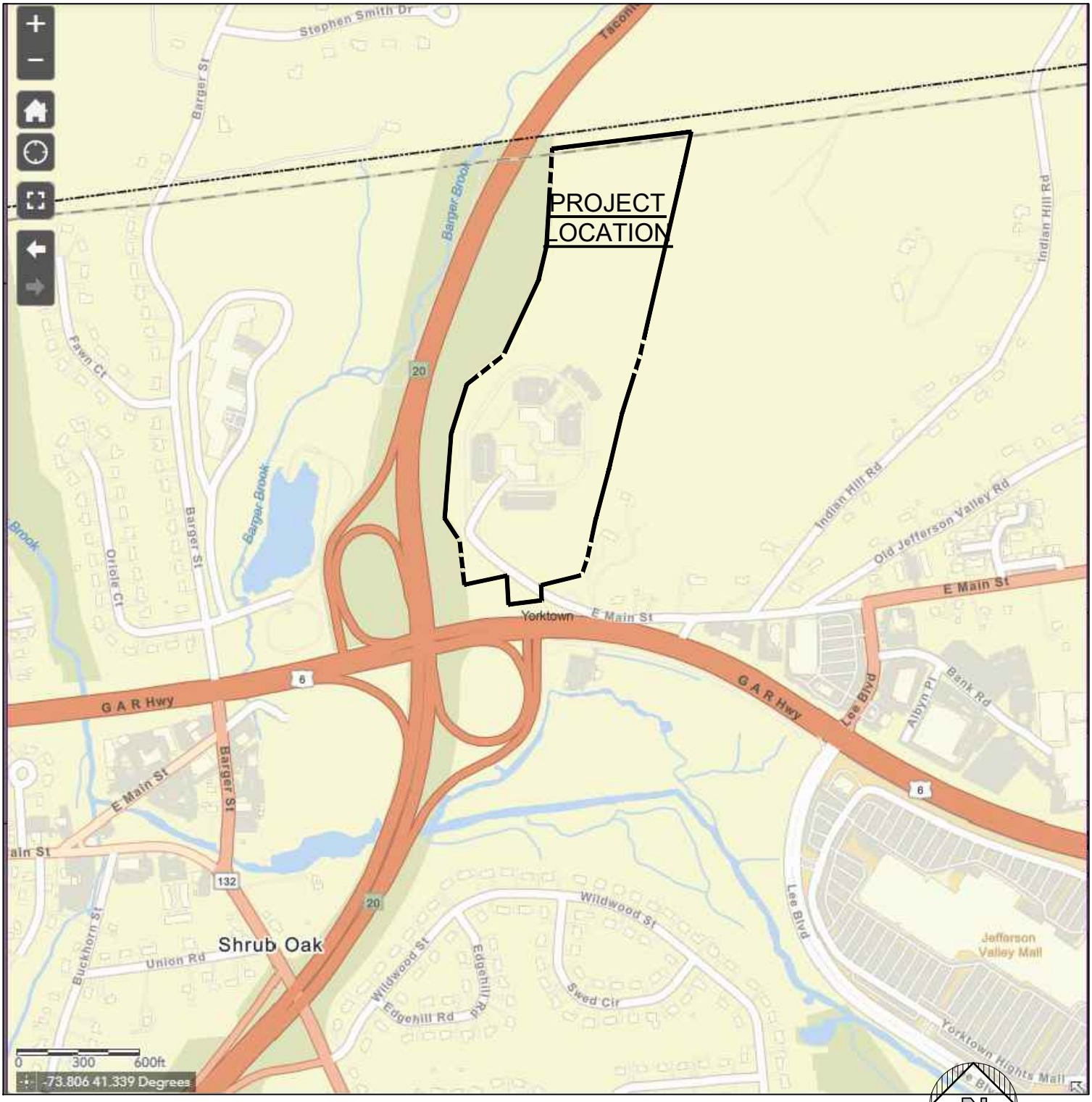
Town of Yorktown — Westchester County, New York

Site Design Consultants

Civil Engineers • Land Planners

251 F Underhill Avenue Yorktown Heights, NY 10598
(914) 962-4488 - Fax (914) 962-7386
www.sitedesignconsultants.com

NOT TO SCALE
DATE: 1/05/2023



NOTE:
1. Map Source: Westchester County GIS

FIG 1.2 - VICINITY MAP

PREPARED FOR

AMS Yorktown Active Adult Community

Town of Yorktown — Westchester County, New York

Site Design Consultants

Civil Engineers • Land Planners

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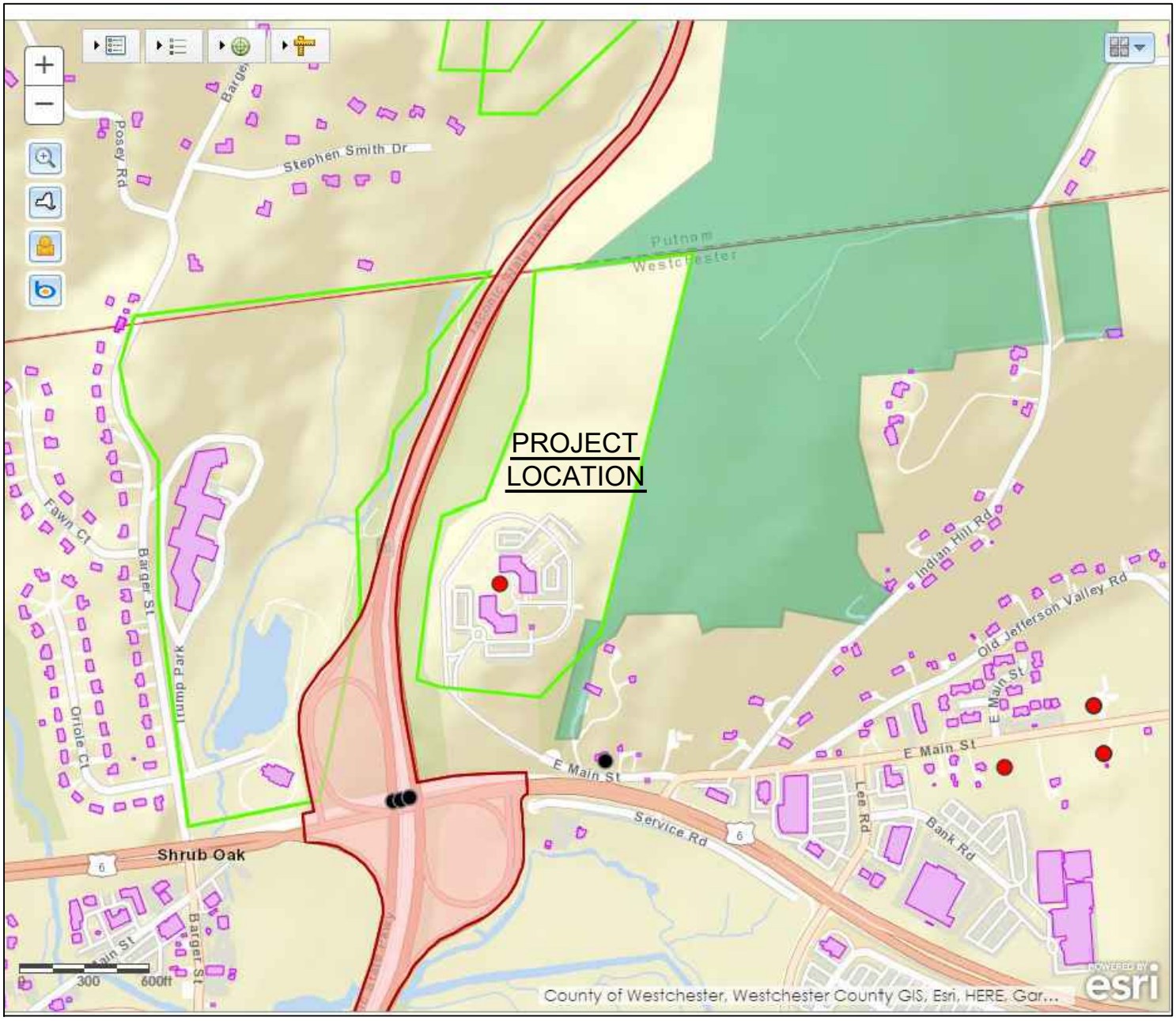

NOTE:
1. Map Source: NYS Historic Preservation Office, GIS Public Access.

FIG 1.3 - HISTORIC MAP

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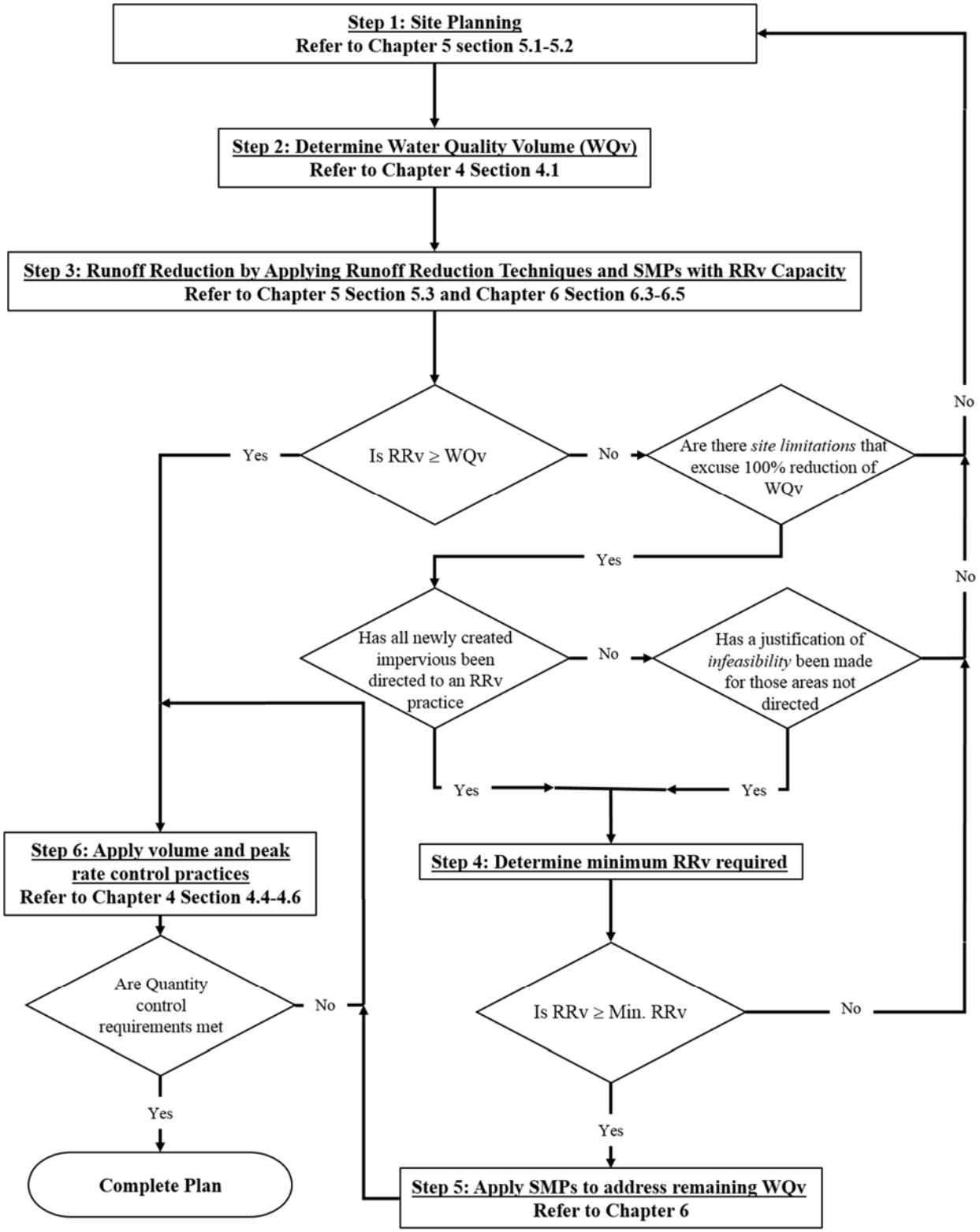
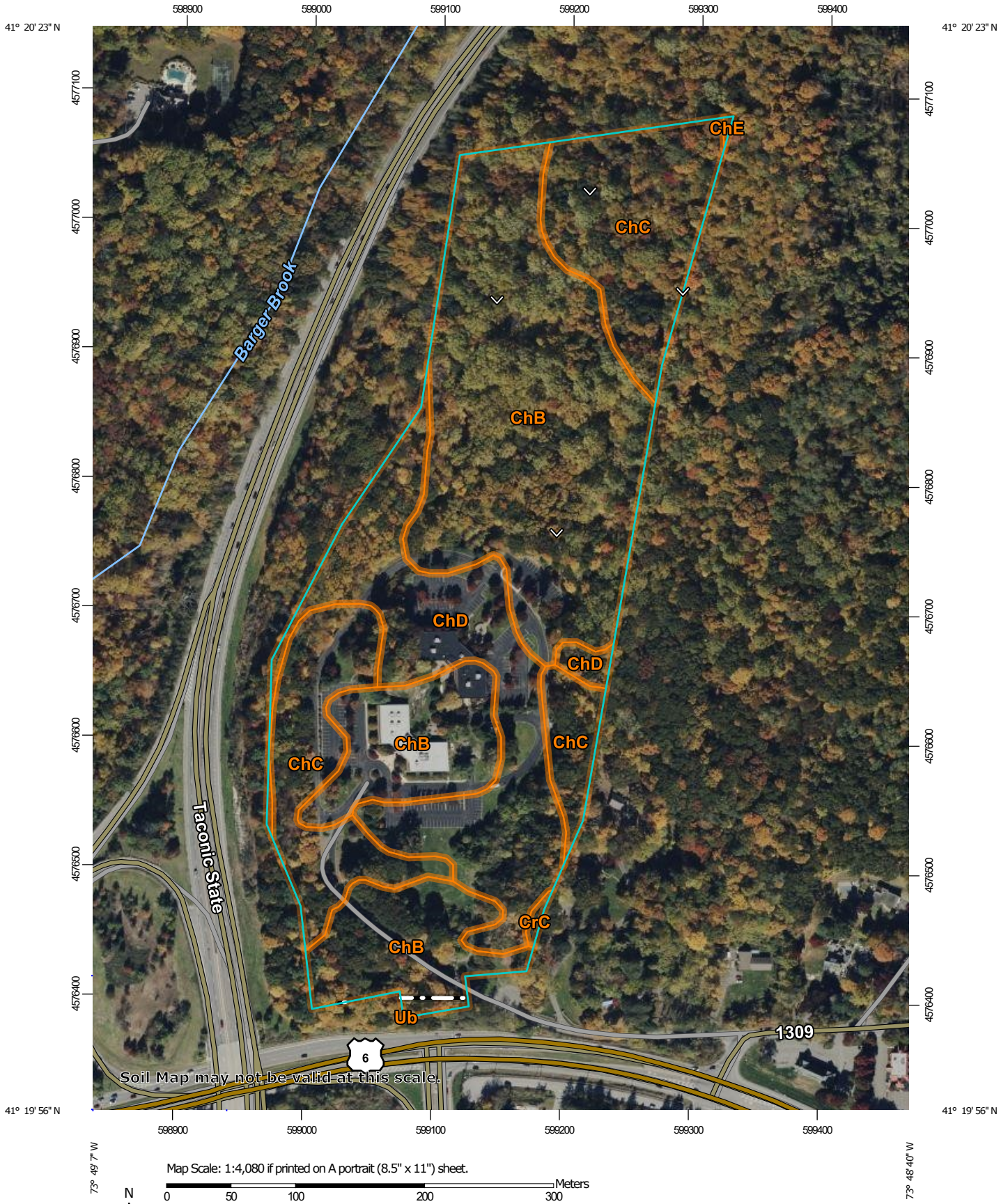
NOT TO SCALE
DATE: 1/05/2023

Figure 3.1: Stormwater Site Planning and Practice Selection Flow Chart





Map Scale: 1:4,080 if printed on A portrait (8.5" x 11") sheet.

N

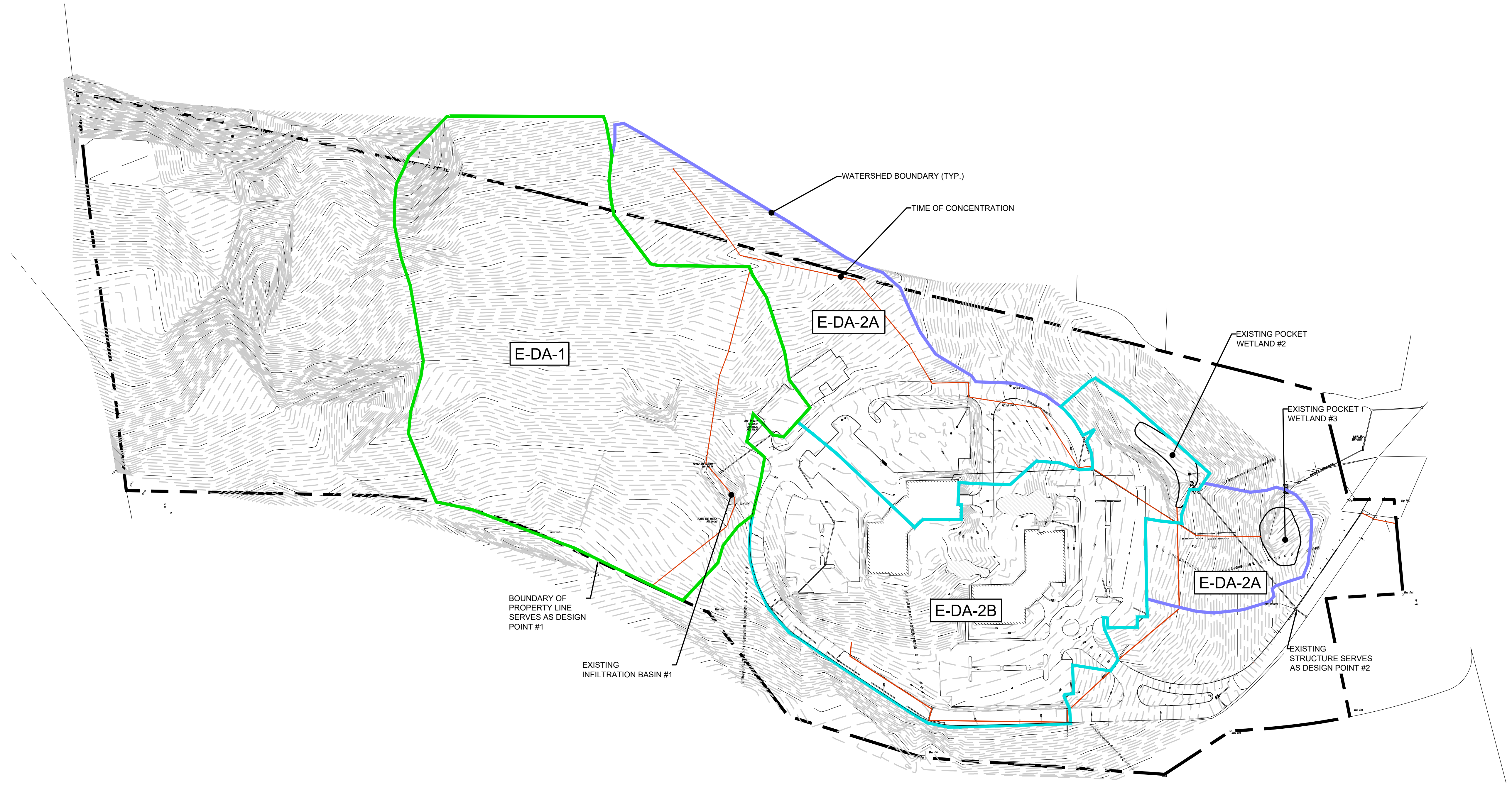
Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	18.1	51.2%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	9.3	26.2%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	7.9	22.3%
ChE	Charlton loam, 25 to 35 percent slopes	0.0	0.1%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	0.1	0.2%
Ub	Udorthents, smoothed	0.0	0.0%
Totals for Area of Interest		**35.4**	**100.0%**



NOTE:

1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY DYNAMIC SURVEY, LLC, DATED 02/15/22, LAST REVISED 10/11/23. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

0 100 200 400
SCALE: 1"=200'-0"

SAFE-DIG
Before You Dig, Drill or Blast!

PROJECT # 23-18

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:		
No.	Date	Comments:

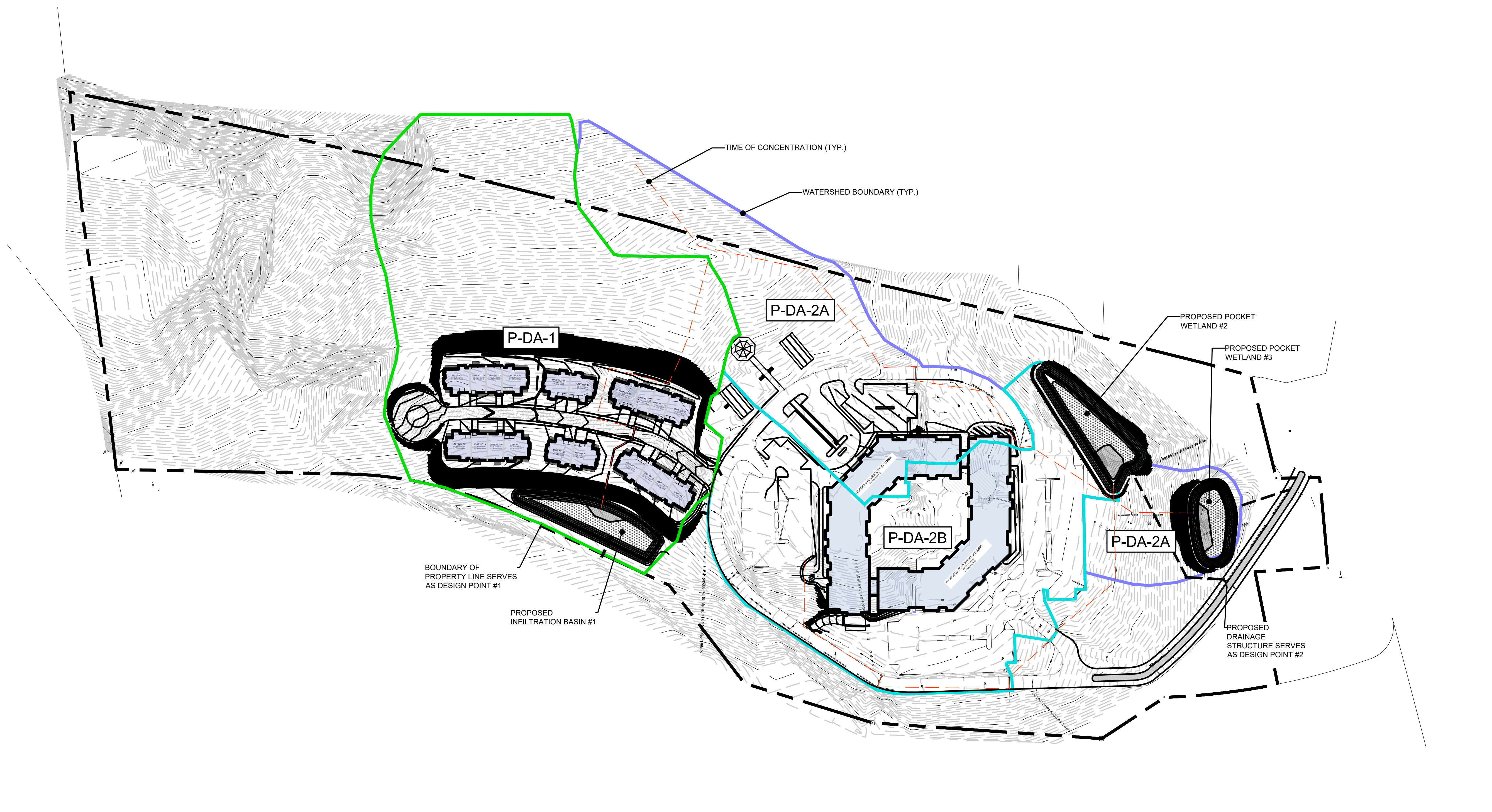
Revisions:		
No.	Date	Comments:

SCALE: 1" = 200'
DRAWN BY: MA
DATE: 02/29/24

PRE-DEVELOPMENT WATERSHED MAP ALTERNATIVE LAYOUT

CONCEPT PLAN
PREPARED FOR
AMS YORKTOWN ACTIVE ADULT COMMUNITY
800 EAST MAIN STREET
Town of Yorktown Westchester County, NY

Sheet WS-2



NOTE:

1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY DYNAMIC SURVEY, LLC, DATED 02/15/22, LAST REVISED 10/11/23. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

SAFE DIG
Before You Dig, Drill or Blast!

PROJECT # 23-18

Site Design Consultants
Civil Engineers ● Land Planners
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DATE: 02/29/24

POST-DEVELOPED WATERSHED MAP ALTERNATIVE LAYOUT

CONCEPT PLAN
PREPARED FOR
AMS YORKTOWN ACTIVE ADULT COMMUNITY
800 EAST MAIN STREET
Town of Yorktown
Westchester County, NY

Sheet WS-2

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”.

APPENDIX A

List of Required Approvals and Applications:

Town of Yorktown Site Plan Approval – approval pending

Town of Yorktown Building Permit – approval pending

New York State Department of Environmental Conservation
General Permit GP-0-20-001 "Notice of Intent"

New York State Department of Environmental Conservation
SWPPP MS4 Acceptance Form

New York State Department of Environmental Conservation
"Notice of Termination"

New York City Department of Environmental Protection

APPENDIX B

Regulatory Ordinances:

NYS DEC General Permit No. GP-0-20-001

Local Ordinance

NYC DEP

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

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 administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

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 ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* 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

Table of Contents

Part 1. 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 November 2016, 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, including both peak flowrates and total stormwater volume, 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 buffer*s 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;

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

   (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.

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, hazardous and toxic 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 *Discharges*.** 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 discharges 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 discharges 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 discharges 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

(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.

(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; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges 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:

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.D.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 are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

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 are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

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.D.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
(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. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not 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 Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

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 the 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.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control 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.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, 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. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

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.

C. 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), or the equivalent from another New York State agency, 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.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are <u>not</u> 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 <u>not</u> 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. 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.C. of this permit.

D. 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-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), 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 November 2016.

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 or consistent with Part VII.K..

5. 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*.

6. 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.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, 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-0-20-001.

F. Change of Owner or Operator

1. 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. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. 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.B.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.

3. 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. 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, including construction drawings:

    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*;

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

d. to document the final construction conditions.

5. The Department may notify the *owner or operator* at any time that the 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.D.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 November 2016. 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 November 2016, 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 November 2016;

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 November 2016. 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 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. 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

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),
- New York State Erosion and Sediment Control Certificate Program holder
- 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.D.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.B.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;

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.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

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.B.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.

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.F. 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.

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.

Part VI. REPORTING AND RETENTION 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.B.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. 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.

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 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 discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger 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.

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.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

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.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

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*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

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).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

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*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

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.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

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, New York State Erosion and Sediment Control Certificate Program holder 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 authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

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,
- 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 stabilizes 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 designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

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 source*s. 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 source*s, 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, New York State Erosion and Sediment Control Certificate Program holder, 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.

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 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.

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
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) 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:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) 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 greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

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 home that disturbs five (5) or more acres of land
- 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 duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- 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 development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

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:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- 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
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction 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

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

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

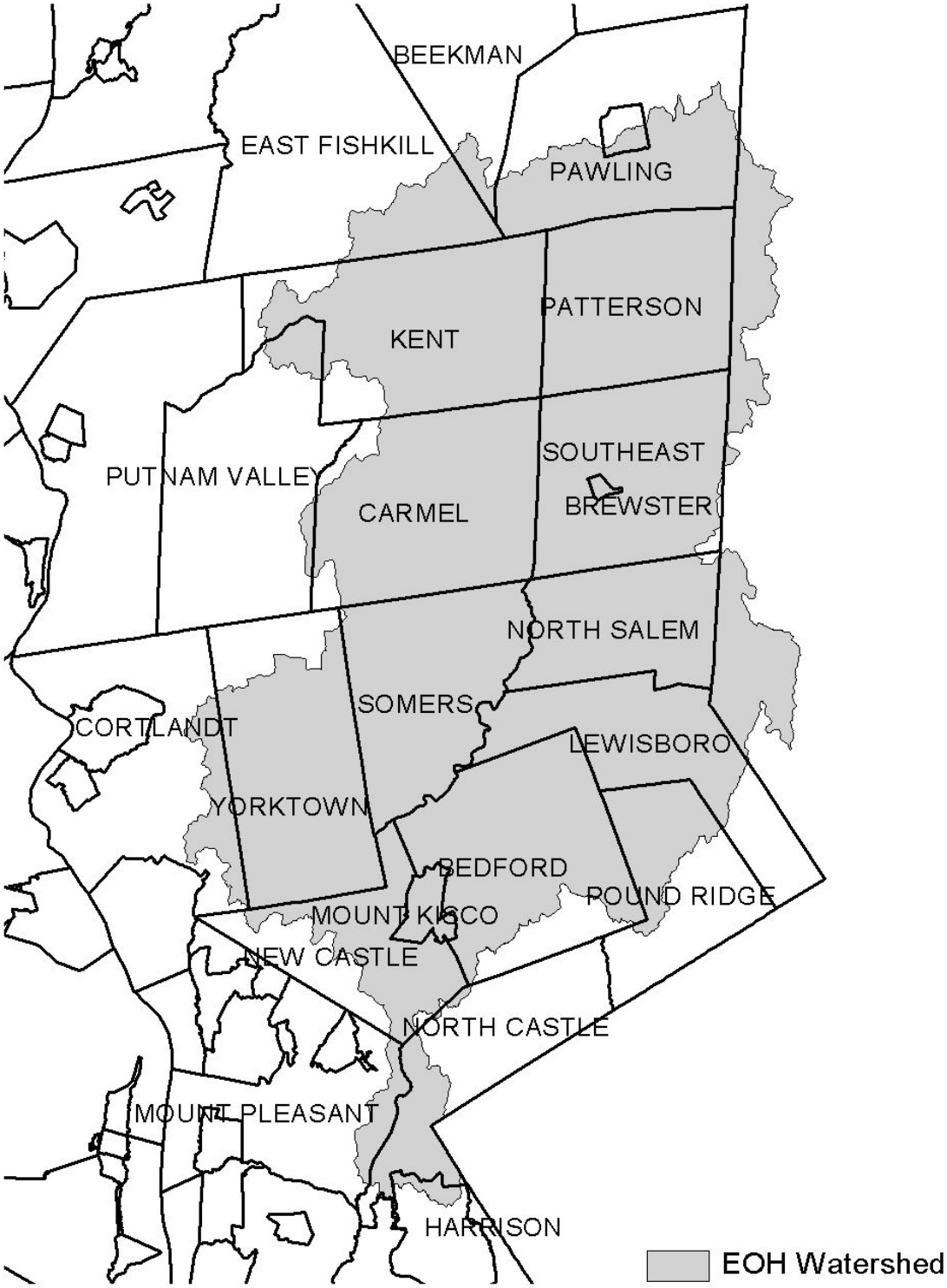


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

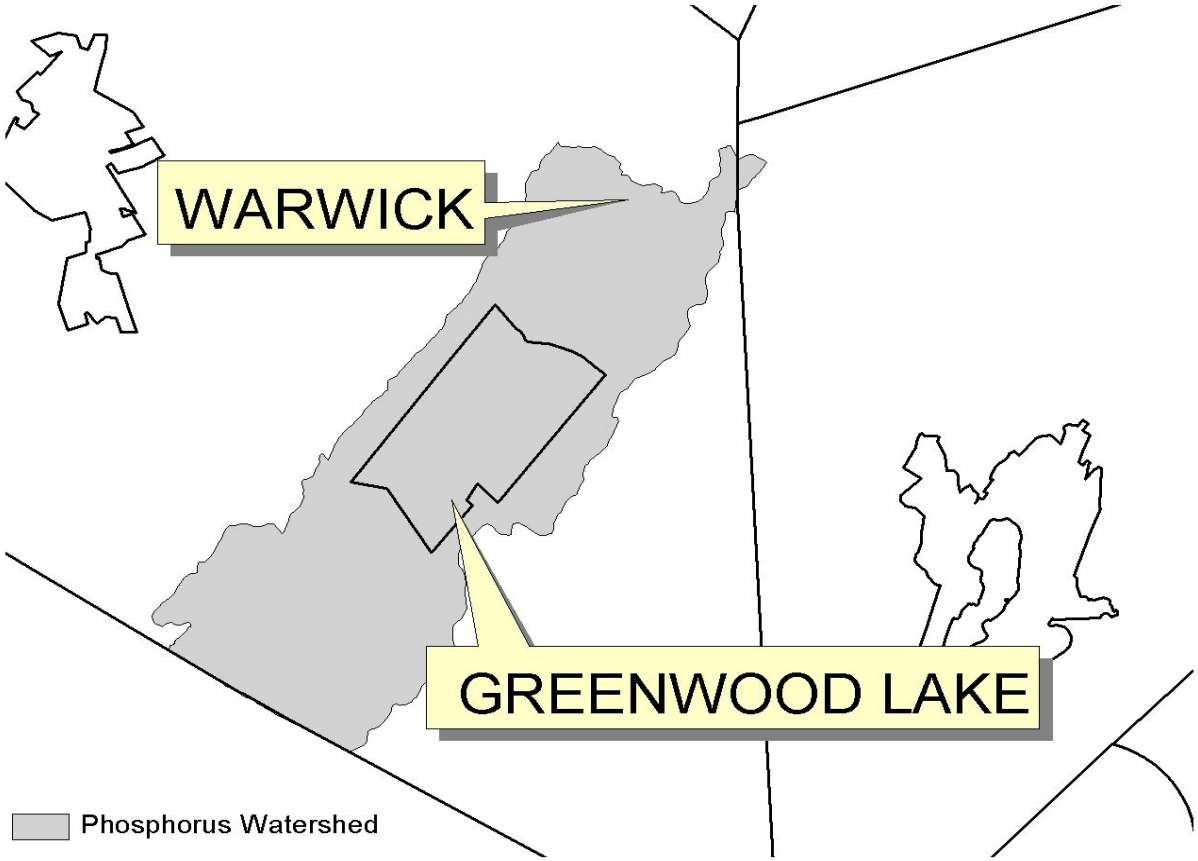


Figure 4 - Oscawana Lake Watershed

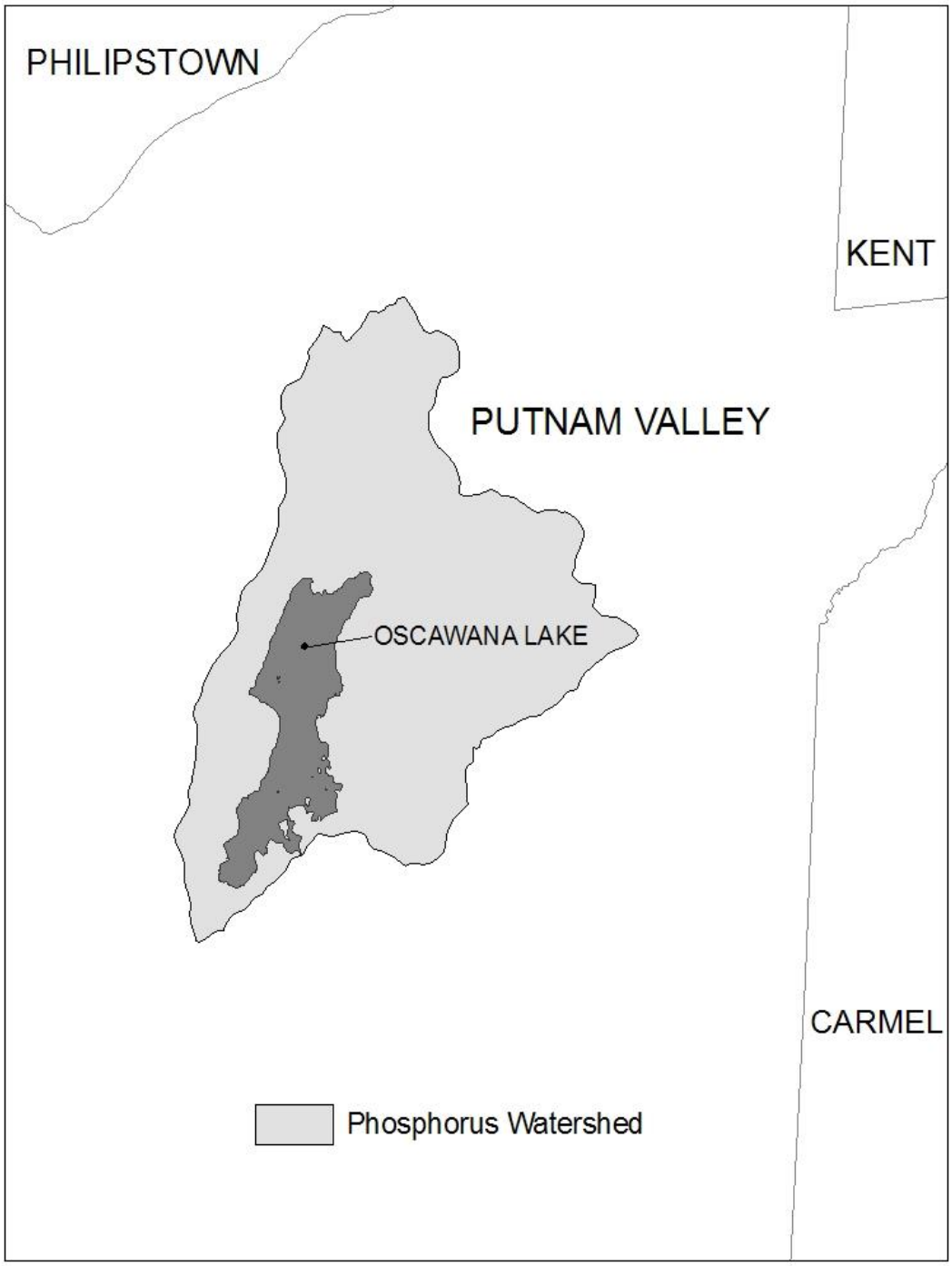
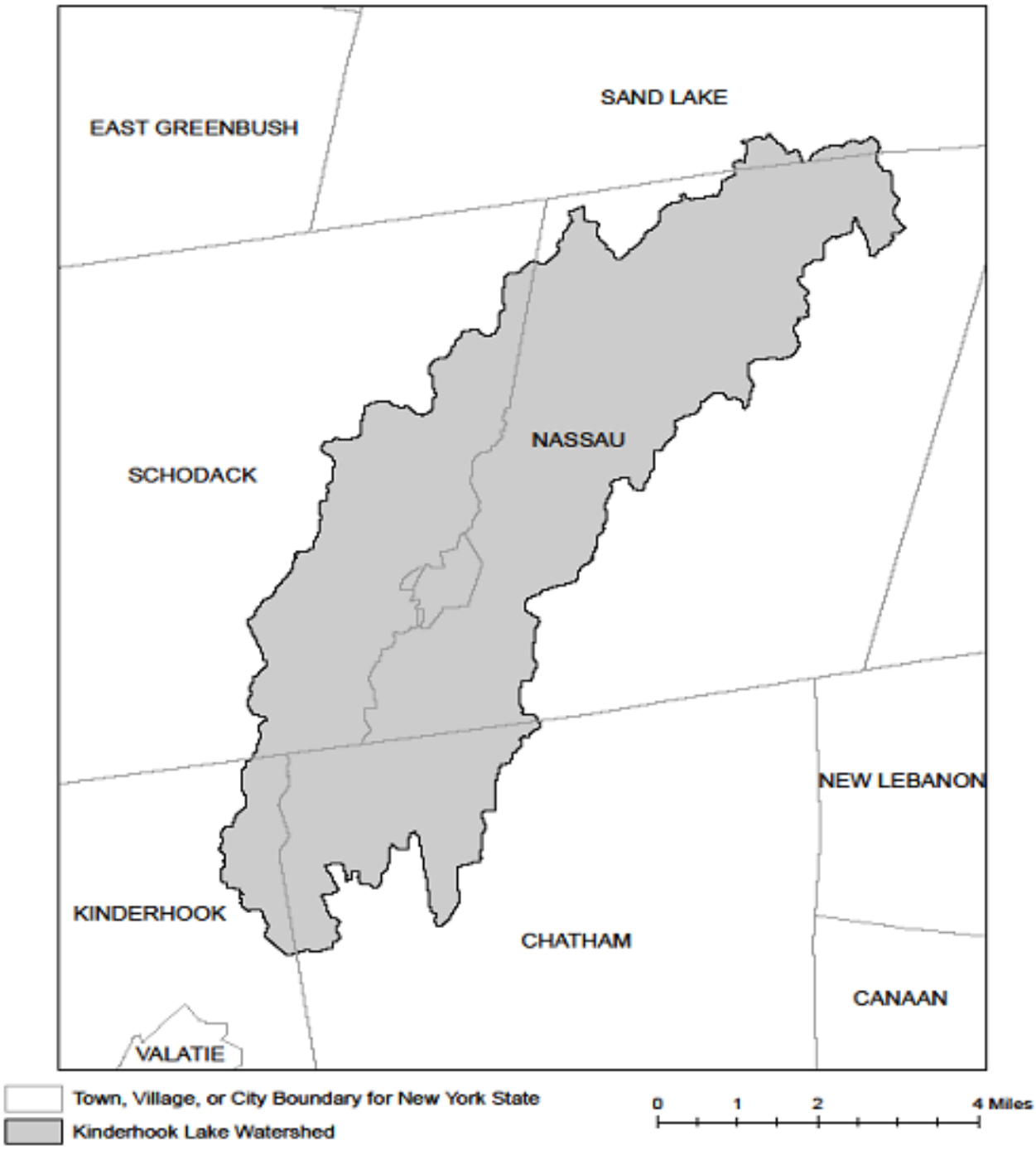


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

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

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *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	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

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 ROADAVON, 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 AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX C

Owner/Operator Certification

Contractor Certification

OWNER/OPERATOR CERTIFICATION

"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"

Name (please print) _____

Title _____

Date _____

Address _____

Phone _____

E-mail _____

Signature _____

Name of Trained Individual _____

CONTRACTOR CERTIFICATION

Contractor Certification Statement – All contractors and subcontractors identified in a SWPPP in accordance with Part III.A.6 (SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-20-001, January 2020) of this permit shall sign a copy of the following certification statement before undertaking any construction activity at the site identified in the SWPPP:

"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 O*wner or Operator* must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Individual Contractor:

Name and Title (please print) _____

Signature of Contractor _____

Name of Trained Individual _____

Company / Contracting Firm:

Name of Company _____

Address of Company _____

Telephone Number / Cell Number _____

Site Information:

Address of Site _____

_____

Today's Date: _____

APPENDIX D

Construction Sequence

Construction Sequence

Recommended Sequence of Construction

Use of erosion and sediment control structures and practices are important for maintaining site stability under runoff and during daily construction activities. The construction sequence should be staged with erosion and sediment controls, as follows, with all controls in place and implemented prior to respective infrastructure construction. As construction proceeds, the controls should be monitored, maintained and replaced as needed. Additional controls may be required as needed to address unforeseen situations.

Refer to the construction drawings for all plans and details which relate to the construction sequence. This sequence should be followed in conjunction with all plans, notes, and the stormwater pollution prevention plan. Prior to the commencement of work, the owner and general contractor shall read and understand the sequence for construction. The sequence shall be discussed at the time of the pre-construction meeting.

During construction of the project, the contractor is responsible to coordinate all required inspections with various agencies and the project engineer.

General Sequence: The general sequence applies to the start of all work for the project. The requirements in such shall be applied as appropriate and shall be assumed in place prior to the start of the work outlined in the sequence.

1. Prior to the beginning of any site work the major features of the construction must be field staked by a licensed surveyor. These include the building, limits of disturbance, utility lines, and stormwater practices.

2. Prior to the start of the project, an on-site pre-construction meeting will be held. this will be attended by the project owner, the operator responsible for complying with the approved construction drawings including the erosion and sediment control (E&SC) plan and details, the design engineer, the engineer responsible for E&SC monitoring during construction, town representatives from the engineering department and code enforcement. The Town shall be notified 48hrs prior to the preconstruction meeting.

3. Cut and clear trees within the work limits as necessary for the areas to be disturbed. Install tree protective measure at marked locations on E&SC plan.

4. Install all temporary erosion control measures as shown on the erosion and sediment control plan for the project's immediate disturbance areas. This shall include, but not limited to silt fence, stabilized construction entrances, construction fence, etc. Install the sediment traps in the location shown on the plans. This sequence must be followed to insure proper implementation of the erosion and sediment control plan (E&SC) and stormwater pollution prevention plan (SWPPP). Cordon off stormwater practices as shown on the E&SC plan to prevent compaction of underlying soils. During construction, runoff will sheet flow across the site to the perimeter where it will be pass through silt fencing.

5. Timbered trees and woodchips shall be temporarily stored in the stockpile and/or staging area if necessary, before being removed off-site. wood chips may be used for mulch to stabilize disturbed areas. Woodchip mulch shall be applied at a minimum rate of 500 lbs. per 1000 sf (2” thick minimum).

6. Remove existing vegetative cover, cut and clear trees, grub, remove stumps and other surface features in the limit of construction only. Any disturbance that results from tree

clearing and grubbing shall be immediately stabilized with woodchips mulch, hydro-mulch, or straw and seed. Timbered trees, wood chips, and stumps shall be removed off-site unless otherwise directed. As stated, woodchips may be stockpiled for use as stabilizing ground cover. Demolish and/or remove existing features, i.e.: fence, concrete slab, asphalt etc., and dispose of or stockpile as required by the owner. All construction debris shall be properly disposed of in accordance with all federal, state, and local requirements.

The following is the general order for construction of the project and may be modified after approved by the supervising engineer. This is meant to minimize the amount of open disturbance. Under no circumstances shall more than five (5) acres or greater be disturbed during the same period of time. In the event greater disturbance is necessary outside of the limit of disturbance shown on the erosion and sediment control plan, the contractor shall coordinate with the engineer of record, and municipality for an on-site meeting to discuss the alternative approach to the construction.

1. The surveyor shall stake-out the proposed driveway centerlines, limits of cut and buildings.

2. Implement the general sequence notes 1 through 6 where applicable prior to continuing.

3. Once the tree removal operation is complete, strip the topsoil within the work boundary and place excavated topsoil within the identified stockpile locations. Any soils so deemed by the design or monitoring engineer shall be stockpiled for future use as landscaped area topsoil. Contractor shall take every precaution feasible to reduce the amount of disturbed/exposed soils during construction.

4. Any disturbed area that will not be further disturbed within seven (7) days shall be immediately stabilized with woodchips, hydro-mulch, or straw and seed.

5. Prior to starting the work install all erosion and sediment controls including the installation of the stabilized construction. The construction entrance shall remain at this location until the paved entrance is installed.

6. The staging area shall be prepared for the location of site trailers, employee parking, equipment storage, and materials. This may be relocated within the stabilized work area during the construction process.

7. Initially or simultaneously with site construction begin with the removal of the existing site improvements. Removed material shall be properly disposed of.

8. Begin the site grading and excavation including the import of fill in accordance with the project specifications.

9. Bring the site to rough grade of the buildings, parking, and driveways within work limits and adjacent areas. Slopes in excess of 3H:1V shall not be left exposed and must be stabilized when complete. Cut material shall first be moved to the fill locations required to complete the access drive and staging area. The work shall then continue to bring the site up to final rough grades.

10. Stake-out the location of the building, utilities and utility structures. Begin installation of, subsurface infiltration.

11. Construct stormwater management practices. When the stormwater practices are installed, the upstream drainage structure shall be blocked so as to not allow sediment laden water from reaching the subsurface chambers.

12. Backfill as installation is complete and stabilize the area. If trenches are to be left open, place excavated material on the up-slope sides of the trench and protect and stabilize if it is to remain open for an extended period of seven (7) days or more.

13. Begin rough grading the building pads for the buildings. All compaction requirements shall be met within the fill sections. Upon completion of the grading, permanently or temporary hydro-mulch all embankments and install erosion control blankets as shown on the plans. During building and site construction, maintain and re-establish as required, erosion control and stabilization measures as required by the site plan and details. Areas which are to remain undisturbed for more than seven (7) days shall be stabilized with temporary seeding or mulch.

14. Install or check condition of all temporary erosion control measures as shown on the erosion and sediment control plan.

15. Begin preparation of the building site and excavation of the buildings.

16. Begin construction of the foundation. Upon completion and after proper curing time is achieved, backfill the foundation and bring site to rough grade. 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. Concrete trucks shall be washed out in the location shown on the plans.

17. At any point once the cut – fill operation is completed, the installation of the subsurface chambers can be done. After installation construction fencing should be put in place around chambers to prevent large construction vehicles from driving over the chambers.

18. Begin installation of proposed bypass and outlet structures. Install storm sewer piping, catch basins and manholes, working downstream to upstream. During the installation of catch basins, install inlet protection as per E&SC plan to assure that sediment laden water will not enter the storm system. Once the final grade above the system is achieved, put into place the final topsoil cover, seed mix, and erosion control blanket, or hydro-mulch. Refer to the landscape plan for the seed mix requirements.

Note: N**o stormwater is permitted to enter the infiltration system from the upstream conveyance system and shall be blocked until the completion and stabilization of all areas tributary to the basin. An area shall be considered to have achieved final stabilization when it has a minimum uniform 80% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.**

19. Proceed with the construction of the buildings. At any point during this begin installation of the utilities including the water and sewer connections, drainage and power utilities.

20. Install sub-base course material for driveway and parking area.

21. Stake out and install curbing as per plan. Once curbing is completed around catch basins, re-install inlet protection within catch basins. When curbing is complete, backfill with topsoil. Areas that are filled with topsoil are to be raked, seeded, and hay mulched.

22. Upon completion of the majority of the infrastructure, install pavement base and binder course to the thickness and elevation as per the construction plans.

23. Install hardscape such as patios, walks steps etc., and final vegetation including sod and landscaping. Refer to landscape plans for location and identification of ground cover and plantings. Clear site of debris and all unwanted materials. Disposal shall be in accordance with all federal, state, and local requirements.

24. During the final phase of building construction, finish grade, perform soil restoration requirements (see figure 8.1), topsoil, rake, and seed all areas as required. Where required or recommended, hydro-mulch or install erosion control blankets.

25. As work is at the completion stage install final asphalt surface.

26. Upon completion, the contractor shall be required to stabilize disturbed soils in the event the disturbed area will remain not worked for greater than seven (7) days, at the direction of the engineer of record or permitting entity inspector, and when significant precipitation is in the immediate forecast. All disturbed areas shall be temporarily stabilized with hydro-mulch or where appropriate woodchips. It is recommended that any grading that is at the finish stage will receive no further disturbance and that permanent stabilization such as topsoil, seed, mulching or blankets as per the plan be installed.

Final site stabilization and completion of new construction:

27. Upon completion of all work, the site shall be inspected by the supervising engineer and town inspector to determine completion of all work and permanent stabilization of the site.

28. Any areas deemed incomplete or not properly stabilized shall be done so to the satisfaction of the supervising engineer and town inspector.

29. Once the site is deemed adequately stable the temporary erosion and sediment control measures can be removed. At that time if deemed appropriate drainage structures upstream from the subsurface stormwater management systems shall be cleaned of sediment and debris. They can then be unblocked to allow for flow of collected surface runoff.

AMS Acquisitions
One Bridge Plaza North - Suite 840
Fort Lee, NJ 07024
Phone: (212) 695-7585

APPENDIX E

Soil Testing Data

SITE DESIGN CONSULTANTS - STORMWATER INFILTRATION TESTS

Job# 23-18
Date January 2024 Day _____ AM PM

Owner AMS Acquisitions Location Old E. Main St

General Observations Dry condtions

Who was Present:

Weather Cold Weather Previous Rain

Lot # _____ Approx. Temp. 31°

HOLE #		CLOCK TIME			PERCOLATION			
					Depth to Water From Ground Surface		Water Level in Inches	
Test Number	Run No.	Start	Stop	Elapse Time Hour	Start Inches	Stop Inches	Drop in Inches	Soil Rate in/hr. drop
I - 1	1	12:50	1:50	1	62.5	76.8	14.3	
	2	1:50	2:50	1	61.2	75.6	14.4	
	3	2:50	3:50	1	61.2	74.4	13.2	
	4	3:50	4:50	1	61.2	74.4	13.2	13.2
I - 2	1	1:01	1:47	46	51.6	75.6		
	2	1:47	2:37	50	51.6	75.6		
	3	2:38	3:28	50	51.6	75.6		
	4	3:29	4:21	52	51.6	75.6	24	24

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. TP - 1	HOLE NO. TP - 2	HOLE NO. TP - 3	HOLE NO. TP - 4
G.L.	Top Soil	Same as	Same as	Top Soil
	"			
6"		TP - 1	TP - 1	"
	M - F Br Sands			M - F Br Sands
12"	W/ Trace Loam			Gray C - M Sands
	"			
18"				And Gravel
	"			"
24"				
	"			M -F Br Sands
30"				And Gravel
	"			"
36"				
	"			"
42"				
	"			"
48"				
	"			"
54"				
	"			"
60"				
	"			"
66"				
	"			"
72"				
	"			"
78"				
	"			"
84"				
	"			"
96"	"			"

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED None

INDICATE LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED None

TESTS MADE BY _____ DATE January 2024

Sketch:

APPENDIX F

Hydrologic Analysis

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)
P-DA-1	Post-Development 1 Year	1	43,026.000	729.000	11.30
P-DA-1	Post-Development 2 Year	2	56,575.000	729.000	14.87
P-DA-1	Post-Development 10 Year	10	106,289.000	729.000	27.58
P-DA-1	Post-Development 25 Year	25	149,569.000	729.000	38.25
P-DA-1	Post-Development 100 Year	100	232,549.000	729.000	58.05
P-DA-2	Post-Development 1 Year	1	48,469.000	729.000	11.90
P-DA-2	Post-Development 2 Year	2	59,979.000	729.000	14.59
P-DA-2	Post-Development 10 Year	10	99,924.000	729.000	23.64
P-DA-2	Post-Development 25 Year	25	133,282.000	729.000	31.01
P-DA-2	Post-Development 100 Year	100	195,688.000	729.000	44.56
P-DA-3	Post-Development 1 Year	1	32,926.000	831.000	2.12
P-DA-3	Post-Development 2 Year	2	41,985.000	831.000	2.70
P-DA-3	Post-Development 10 Year	10	74,229.000	831.000	4.75
P-DA-3	Post-Development 25 Year	25	101,660.000	831.000	6.45
P-DA-3	Post-Development 100 Year	100	153,521.000	831.000	9.59
E-1A	Post-Development 1 Year	1	32,373.000	747.000	5.33
E-1A	Post-Development 2 Year	2	43,797.000	747.000	7.31
E-1A	Post-Development 10 Year	10	86,970.000	744.000	14.65
E-1A	Post-Development 25 Year	25	125,430.000	744.000	21.09
E-1A	Post-Development 100 Year	100	200,255.000	744.000	33.26
E-2	Post-Development 1 Year	1	47,889.000	729.000	11.76
E-2	Post-Development 2 Year	2	59,262.000	729.000	14.41
E-2	Post-Development 10 Year	10	98,729.000	729.000	23.36
E-2	Post-Development 25 Year	25	131,688.000	729.000	30.64

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)
E-2	Post-Development 100 Year	100	193,347.000	729.000	44.02
E-3	Post-Development 1 Year	1	27,853.000	831.000	1.79
E-3	Post-Development 2 Year	2	35,832.000	831.000	2.31
E-3	Post-Development 10 Year	10	64,478.000	831.000	4.14
E-3	Post-Development 25 Year	25	89,002.000	831.000	5.67
E-3	Post-Development 100 Year	100	135,545.000	831.000	8.51
E-1	Post-Development 1 Year	1	4,342.000	726.000	1.22
E-1	Post-Development 2 Year	2	5,613.000	726.000	1.57
E-1	Post-Development 10 Year	10	10,196.000	726.000	2.80
E-1	Post-Development 25 Year	25	14,134.000	726.000	3.82
E-1	Post-Development 100 Year	100	21,623.000	726.000	5.70

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)
PROP OUTFALL 1	Post-Development 1 Year	1	5,594.000	744.000	2.28
PROP OUTFALL 1	Post-Development 2 Year	2	11,104.000	744.000	4.09
PROP OUTFALL 1	Post-Development 10 Year	10	36,201.000	741.000	11.80
PROP OUTFALL 1	Post-Development 25 Year	25	61,150.000	738.000	18.81
PROP OUTFALL 1	Post-Development 100 Year	100	114,816.000	738.000	31.81
EX. OUTFALL 1	Post-Development 1 Year	1	36,630.000	747.000	5.81
EX. OUTFALL 1	Post-Development 2 Year	2	49,324.000	744.000	7.94
EX. OUTFALL 1	Post-Development 10 Year	10	97,076.000	744.000	15.86
EX. OUTFALL 1	Post-Development 25 Year	25	139,470.000	744.000	22.78
EX. OUTFALL 1	Post-Development 100 Year	100	221,779.000	741.000	36.52

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)
EX. OUTFALL 2	Post-Development 1 Year	1	52,271.000	834.000	3.09
EX. OUTFALL 2	Post-Development 2 Year	2	71,452.000	822.000	4.27
EX. OUTFALL 2	Post-Development 10 Year	10	138,991.000	765.000	8.15
EX. OUTFALL 2	Post-Development 25 Year	25	196,006.000	759.000	11.98
EX. OUTFALL 2	Post-Development 100 Year	100	303,344.000	756.000	18.58
PROP OUTFALL 2	Post-Development 1 Year	1	60,207.000	759.000	2.69
PROP OUTFALL 2	Post-Development 2 Year	2	70,974.000	891.000	3.30
PROP OUTFALL 2	Post-Development 10 Year	10	140,970.000	855.000	7.12
PROP OUTFALL 2	Post-Development 25 Year	25	210,057.000	756.000	11.04
PROP OUTFALL 2	Post-Development 100 Year	100	322,286.000	753.000	18.90

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
EXIST BASIN 1AD (IN)	Post-Development 1 Year	1	4,342.000	726.000	1.22	(N/A)	(N/A)
EXIST BASIN 1AD (OUT)	Post-Development 1 Year	1	4,257.000	729.000	1.13	546.75	354.000
EXIST BASIN 1AD (IN)	Post-Development 2 Year	2	5,613.000	726.000	1.57	(N/A)	(N/A)
EXIST BASIN 1AD (OUT)	Post-Development 2 Year	2	5,526.000	729.000	1.46	546.88	425.000
EXIST BASIN 1AD (IN)	Post-Development 10 Year	10	10,196.000	726.000	2.80	(N/A)	(N/A)
EXIST BASIN 1AD (OUT)	Post-Development 10 Year	10	10,106.000	729.000	2.56	547.27	684.000

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
EXIST BASIN 1AD (IN)	Post-Development 25 Year	25	14,134.000	726.000	3.82	(N/A)	(N/A)
EXIST BASIN 1AD (OUT)	Post-Development 25 Year	25	14,040.000	729.000	3.37	547.59	947.000
EXIST BASIN 1AD (IN)	Post-Development 100 Year	100	21,623.000	726.000	5.70	(N/A)	(N/A)
EXIST BASIN 1AD (OUT)	Post-Development 100 Year	100	21,523.000	732.000	4.37	548.25	1,702.000
EXIST BASIN 3BD (IN)	Post-Development 1 Year	1	27,853.000	831.000	1.79	(N/A)	(N/A)
EXIST BASIN 3BD (OUT)	Post-Development 1 Year	1	26,033.000	852.000	1.76	483.77	2,877.000
EXIST BASIN 3BD (IN)	Post-Development 2 Year	2	35,832.000	831.000	2.31	(N/A)	(N/A)
EXIST BASIN 3BD (OUT)	Post-Development 2 Year	2	33,991.000	849.000	2.26	483.94	3,245.000
EXIST BASIN 3BD (IN)	Post-Development 10 Year	10	64,478.000	831.000	4.14	(N/A)	(N/A)
EXIST BASIN 3BD (OUT)	Post-Development 10 Year	10	62,562.000	843.000	4.05	484.44	4,501.000
EXIST BASIN 3BD (IN)	Post-Development 25 Year	25	89,002.000	831.000	5.67	(N/A)	(N/A)
EXIST BASIN 3BD (OUT)	Post-Development 25 Year	25	87,026.000	843.000	5.55	484.80	5,561.000
EXIST BASIN 3BD (IN)	Post-Development 100 Year	100	135,545.000	831.000	8.51	(N/A)	(N/A)
EXIST BASIN 3BD (OUT)	Post-Development 100 Year	100	133,458.000	846.000	8.25	485.52	7,941.000
PW-1 (IN)	Post-Development 1 Year	1	48,469.000	729.000	11.90	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
PW-1 (OUT)	Post-Development 1 Year	1	37,251.000	759.000	2.69	515.30	25,028.000
PW-1 (IN)	Post-Development 2 Year	2	59,979.000	729.000	14.59	(N/A)	(N/A)
PW-1 (OUT)	Post-Development 2 Year	2	39,285.000	768.000	2.36	515.07	34,048.000
PW-1 (IN)	Post-Development 10 Year	10	99,924.000	729.000	23.64	(N/A)	(N/A)
PW-1 (OUT)	Post-Development 10 Year	10	77,982.000	753.000	6.63	516.44	51,425.000
PW-1 (IN)	Post-Development 25 Year	25	133,282.000	729.000	31.01	(N/A)	(N/A)
PW-1 (OUT)	Post-Development 25 Year	25	120,175.000	750.000	10.51	517.66	57,454.000
PW-1 (IN)	Post-Development 100 Year	100	195,688.000	729.000	44.56	(N/A)	(N/A)
PW-1 (OUT)	Post-Development 100 Year	100	181,298.000	750.000	16.82	518.80	76,829.000
PW-2 (IN)	Post-Development 1 Year	1	32,926.000	831.000	2.12	(N/A)	(N/A)
PW-2 (OUT)	Post-Development 1 Year	1	22,957.000	930.000	1.26	481.91	14,798.000
PW-2 (IN)	Post-Development 2 Year	2	41,985.000	831.000	2.70	(N/A)	(N/A)
PW-2 (OUT)	Post-Development 2 Year	2	31,690.000	906.000	1.90	482.14	16,601.000
PW-2 (IN)	Post-Development 10 Year	10	74,229.000	831.000	4.75	(N/A)	(N/A)
PW-2 (OUT)	Post-Development 10 Year	10	62,988.000	876.000	4.10	482.72	21,380.000

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
PW-2 (IN)	Post-Development 25 Year	25	101,660.000	831.000	6.45	(N/A)	(N/A)
PW-2 (OUT)	Post-Development 25 Year	25	89,882.000	864.000	5.87	483.07	24,469.000
PW-2 (IN)	Post-Development 100 Year	100	153,521.000	831.000	9.59	(N/A)	(N/A)
PW-2 (OUT)	Post-Development 100 Year	100	140,989.000	855.000	9.03	483.56	29,007.000
EXIST BASIN 3AD (IN)	Post-Development 1 Year	1	47,889.000	729.000	11.76	(N/A)	(N/A)
EXIST BASIN 3AD (OUT)	Post-Development 1 Year	1	26,238.000	771.000	1.70	517.42	27,899.000
EXIST BASIN 3AD (IN)	Post-Development 2 Year	2	59,262.000	729.000	14.41	(N/A)	(N/A)
EXIST BASIN 3AD (OUT)	Post-Development 2 Year	2	37,461.000	762.000	2.75	518.06	33,072.000
EXIST BASIN 3AD (IN)	Post-Development 10 Year	10	98,729.000	729.000	23.36	(N/A)	(N/A)
EXIST BASIN 3AD (OUT)	Post-Development 10 Year	10	76,429.000	753.000	6.57	519.95	51,118.000
EXIST BASIN 3AD (IN)	Post-Development 25 Year	25	131,688.000	729.000	30.64	(N/A)	(N/A)
EXIST BASIN 3AD (OUT)	Post-Development 25 Year	25	108,980.000	753.000	9.85	521.09	63,976.000
EXIST BASIN 3AD (IN)	Post-Development 100 Year	100	193,347.000	729.000	44.02	(N/A)	(N/A)
EXIST BASIN 3AD (OUT)	Post-Development 100 Year	100	169,886.000	750.000	15.34	522.71	85,064.000
INFIL BASIN (IN)	Post-Development 1 Year	1	43,026.000	729.000	11.30	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
INFIL BASIN (OUT)	Post-Development 1 Year	1	5,594.000	744.000	2.28	532.70	9,326.000
INFIL BASIN (IN)	Post-Development 2 Year	2	56,575.000	729.000	14.87	(N/A)	(N/A)
INFIL BASIN (OUT)	Post-Development 2 Year	2	11,104.000	744.000	4.09	533.02	12,569.000
INFIL BASIN (IN)	Post-Development 10 Year	10	106,289.000	729.000	27.58	(N/A)	(N/A)
INFIL BASIN (OUT)	Post-Development 10 Year	10	36,201.000	741.000	11.80	533.95	22,924.000
INFIL BASIN (IN)	Post-Development 25 Year	25	149,569.000	729.000	38.25	(N/A)	(N/A)
INFIL BASIN (OUT)	Post-Development 25 Year	25	61,150.000	738.000	18.81	534.61	31,275.000
INFIL BASIN (IN)	Post-Development 100 Year	100	232,549.000	729.000	58.05	(N/A)	(N/A)
INFIL BASIN (OUT)	Post-Development 100 Year	100	114,816.000	738.000	31.81	535.66	46,163.000

APPENDIX G

Stormwater Management Practices Design:

90% Water Quality Volume Calculations

Runoff Reduction Volume Calculations

AMS WATER QUALITY CALCULATIONS

Redevelopment WQv 90% Storm Event

DA:	Total Area(ac):	Impervious Area(ac):	Redevelopment Area(ac):	Tree Plantings	Filter Strip	Rainfall:	I(%)	Rv	WQv (ac-ft)	WQv (ft^3)	ReDev WQv (ac-ft)	Final WQv (ac-ft)	Final WQv (ft^3)
P-1	9.260	1.910	0	0	0	1.4	21%	0.24	0.255	11088.92	0.000	0.255	11088.92
P-2	6.690	4.680	0	0	0	1.4	70%	0.68	0.530	23105.31	0.000	0.530	23105.31
P-3	4.680	2.680	0	0	0	1.4	57%	0.57	0.309	13446.97	0.000	0.309	13446.97

DA:	Adj Hydrocad Results (ac-ft)	Adj Hydrocad Results (ft^3)	Min RRv	Filter Strip	Infiltration RRv Volume	Infiltrator WQv Volume	Cistern Volume	Pocket Wetland	RRv Total Provided	WQv Total Provided
P-1	0.255	11089	5533	0	9326	9326	0	0	85	0
P-2	0.530	23105	13555		0	0	14500	0	13586	8,940
P-3	0.309	13447	790		0	0	7057	14835	7057	14835
Totals	1.094	47641	0						20728	23,775

APPENDIX H

Hydraulic Storm Sewer Capacity Analysis

To Be Provided with Final Impact Statement

APPENDIX I

Standard and Specifications for Erosion and Sediment Control Measures

STANDARD AND SPECIFICATIONS FOR CONCRETE TRUCK WASHOUT

Definition & Scope

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

Conditions Where Practice Applies

Washout facilities shall be provided for every project where concrete will be poured or otherwise formed on the site. This facility will receive highly alkaline wash water from the cleaning of chutes, mixers, hoppers, vibrators, placing equipment, trowels, and screeds. Under no circumstances will wash water from these operations be allowed to infiltrate into the soil or enter surface waters.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per hopper of the concrete pump truck and/or discharging drum. The minimum size shall be 8 feet by 8 feet at the bottom and 2 feet deep. If excavated, the side slopes shall be 2 horizontal to 1 vertical.

Location: Locate the facility a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams and other surface waters. Prevent surface water from entering the structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be sized based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Dispose of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if this has been approved and accepted as part of the projects SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with each cleaning of the washout facility.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS

Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 2.1 on page 2.31 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile: The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

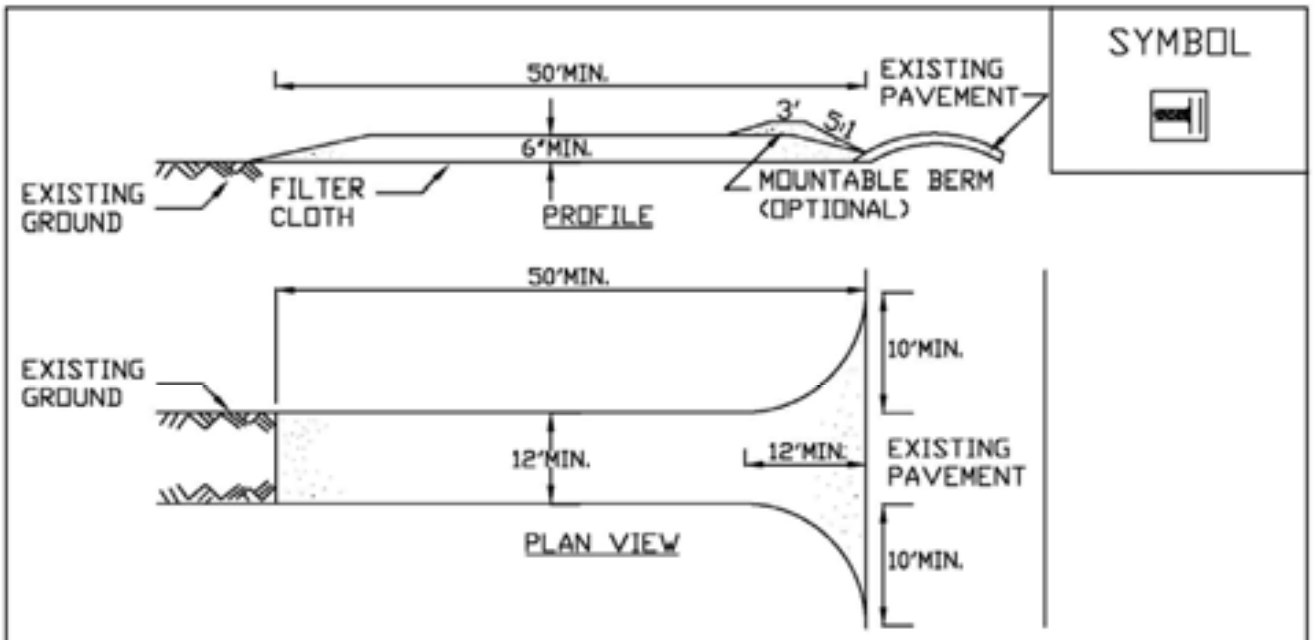
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 2.1
Stabilized Construction Access



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 ACCESS 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 TRACKED 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 ACCESS

STANDARD AND SPECIFICATIONS FOR CONCRETE TRUCK WASHOUT

Definition & Scope

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

Conditions Where Practice Applies

Washout facilities shall be provided for every project where concrete will be poured or otherwise formed on the site. This facility will receive highly alkaline wash water from the cleaning of chutes, mixers, hoppers, vibrators, placing equipment, trowels, and screeds. Under no circumstances will wash water from these operations be allowed to infiltrate into the soil or enter surface waters.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per hopper of the concrete pump truck and/or discharging drum. The minimum size shall be 8 feet by 8 feet at the bottom and 2 feet deep. If excavated, the side slopes shall be 2 horizontal to 1 vertical.

Location: Locate the facility a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams and other surface waters. Prevent surface water from entering the structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be sized based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Dispose of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if this has been approved and accepted as part of the projects SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with each cleaning of the washout facility.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

APPENDIX J

Sample Inspection Reports

Pre-Construction Site Assessment Checklist Page 1 of 2

Name of Permitted Facility:	Permit Identification #: NYR	Date of Authorization:
Location:	SDC Project No.:	
Name and Telephone Number of Owner/Operator:	Name and Telephone Number of Site Inspector:	
Today's date: Day: S M T W T F S AM or PM	Weather / Temp:	

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes	No	NA	Observations
			Has a Notice of Intent been filed with the NYS Department of Conservation?
			Is the SWPPP on-site? Where? _____
			Is the Plan current? What is the latest revision date? _____
			Is a copy of the NOI (with brief description) on-site? Where? _____
			Have all contractors involved with stormwater-related activities signed a contractor's certification?

2. Resource Protection:

Yes	No	NA	Observations
			Are construction limits clearly flagged or fenced?
			Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
			Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection:

Yes	No	NA	Observations
			Clean stormwater runoff has been diverted from areas to be disturbed.
			Bodies of water located either on-site, or in the vicinity of the site, have been identified or protected.
			Appropriate practices to protect on-site or downstream surface water are installed.
			Are clearing and grading operations divided into areas < 5 acres?

Pre-Construction Site Assessment Checklist Page 2 of 2

4. Stabilized Construction Entrance:

Yes	No	NA	Observations
			A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
			Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
			Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Perimeter Sediment Controls:

Yes	No	NA	Observations
			Silt fence material and installation comply with the standard drawing and specifications.
			Silt fences are installed at appropriate spacing intervals.
			Sediment/detention basin was installed as first hand disturbing activity.
			Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials:

Yes	No	NA	Observations
			The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
			The plan is contained in the SWPPP on page _____.
			Appropriate materials to control spills are on-site. Where?_____.

Note: Provide comments below as necessary:

_____
_____
_____
_____
_____
_____

Construction Duration Inspections: Page 1 of 6

Name of Permitted Facility:	Permit Identification #: NYR	Date of Authorization:
Location:	SDC Project No.:	
Name and Telephone Number of Owner/Operator:	Name and Telephone Number of Site Inspector:	
Today's date: Day: S M T W T F S AM or PM	Weather / Temp:	

Permit Reference: Part IV.C.2.a (page 17):

"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."

Directions: Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

(1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
(2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
(3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
(4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
(5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

Immediate report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

Construction Duration Inspections: Page 2 of 6

Identify location, nature of work, by contractor and subcontractors for each operation:

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.

Construction Duration Inspections: Page 3 of 6

Maintaining Water Quality

Yes	No	NA	Observations
			Is there an increase in turbidity causing a substantial contrast to natural conditions?
			Is there residue from oil and floating substances, visible oil film, or globules or grease?
			All disturbances are 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	Observations
			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	Observations
			Maximum diameter pipe 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 and prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering

Yes	No	NA	Observations
			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	Observations
			Installed per plan.
			Constructed on undisturbed soil, not on fill, receiving only clean, non-sediment laden flow.
			Flow sheets out of level spreader without erosion on downstream edge.

Construction Duration Inspections: Page 4 of 6

3. Interceptor Dikes and Swales

Yes	No	NA	Observations
			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.

4. Stone Check Dam

Yes	No	NA	Observations
			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	Observations
			Installed as per Plan
			Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes	No	NA	Observations
			Stockpiles are stabilized with vegetation and/or mulch.
			Sediment control is installed at the toe of the slope.

2. Revegetation

Yes	No	NA	Observations
			Temporary seedings and mulch have been applied to idle areas.
			Four inches minimum of topsoil has been applied under permanent seedings.

Sediment Control Practices

1. Stabilized Construction Entrance

Yes	No	NA	Observations
			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?

Construction Duration Inspections: Page 5 of 6

2. Silt Fence – Sediment accumulation is _____ % of design capacity.

Yes	No	NA	Observations
			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.

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices) – Sediment accumulation ____% of design capacity.

Yes	No	NA	Observations
			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 1 acre 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.

4. Temporary Sediment Trap – Sediment accumulation is _____% of design capacity.

Yes	No	NA	Observations
			Outlet structure is constructed per the approved plan or drawing.
			Geotextile fabric has been placed beneath rock fill.

5. Temporary Sediment Trap – Sediment accumulation is _____% of design capacity.

Yes	No	NA	Observations
			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.

Recommended maintenance or additional measures:

_____
_____
_____
_____
_____

Notes or Comments:

Construction Duration Inspections: Page 6 of 6

Modifications to the SWPPP
(To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this Permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification and Reason:

Stormwater Management Pond/Wetland Construction Inspection Checklist

Name of Permitted Facility:	Permit Identification #: NYR	Date of Authorization:
Location:	SDC Project No.:	
Name and Telephone Number of Owner/Operator:	Name and Telephone Number of Site Inspector:	
Today's date: Day: S M T W T F S AM or PM	Weather / Temp:	

Permit Reference: Part IV.C.2.a (page 17):

"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."

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
1. Pre-Construction / Materials and Equipment		
Pre-Construction Meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked.		
1. Material (including protective coating, if specified).		
2. Diameter.		
3. Dimensions of metal riser or pre-cast concrete outlet structure.		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans.		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 2 of 8

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
6. Number and dimensions of prefabricated anti-seep collars.		
7. Watertight connectors and gaskets.		
8. Outlet drain valve.		
Project benchmark near pond site.		
Equipment for temporary de-watering.		
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil and organic matter.		
3. Pipe Spillway Installation		
Method of installation details on plans.		
A. Bed Preparation		
Installation trench excavated with specified side slopes.		
Stable, uniform, dry subgrade of relatively impervious material. (If subgrade is wet, contractor shall have defined steps before proceeding with installation.)		
Invert at proper elevation and grade.		
B. Pipe Placement – Metal / Plastic		
1. Watertight connectors and gaskets properly installed.		
2. Anti-seep collars properly spaced and having watertight connections to pipe.		
3. Backfill placed and tamped by hand under “haunches” of pipe.		

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2-feet of cover over pipe is reached.		
Pipe Placement – Concrete Pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle.		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area.		
3. Excavation for lower half of anti-seep collars(s) with reinforcing steel set.		
4. Entire area where anti-seep collars(s) will come in contact with pipe coated with mastic or other approved waterproof sealant.		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix.		
6. Upper half of anti-seep collars(s) formed with reinforcing steel set.		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary).		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Purge if necessary.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 4 of 8

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
C. Backfilling		
Fill placed in maximum 8-inch lifts.		
Backfill taken minimum 2-feet above top of anti-seep collar elevation before traversing with heavy equipment.		
4. Riser / Outlet /Structure Installation		
Riser located within embankment.		
A. Metal riser		
1. Rise base excavated or formed on stable subgrade to design dimensions.		
2. Set on blocks to design elevations and plumbed.		
3. Reinforcing bars placed at right angles and projecting into sides of riser.		
4. Concrete poured as to fill inside of riser to invert of barrel.		
B. Pre-Cast Concrete Structure		
1. Dry and stable elevation.		
2. Riser base set to design elevation.		
3. If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely.		
4. Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 5 of 8

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
C. Poured Concrete Structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set.		
Structure formed to design dimensions, with reinforcing steel set as per Plan.		
Concrete of an approved mix and vibrated into place (protect from freezing while curing, if necessary).		
Forms stripped and inspected for “honeycomb” prior to backfilling; parge if necessary.		
5. Embankment Construction		
Fill Material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment.		
2. Constructed to design cross-section , side slopes and top width.		
3. Constructed to design elevation plus allowance for settlement.		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes.		
Inlet pipes have adequate outfall protection.		
Forebay(s).		
Pond benches.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 6 of 8

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
7. Earth Emergency Spillway Construction		
Spillway located in cur or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width.		
Entrance channel, crest, and exit channel constructed to design grades and elevations.		
8. Outlet Protection		
A. End Section		
Securely in place and properly backfilled.		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified.		
Endwall formed to design dimensions with reinforcing steel set as per Plan.		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary).		
Forms stripped and structure inspected for “honeycomb” prior to backfilling; parge if necessary.		
C. Riprap Apron / Channel		
Apron / Channel excavated to design cross-section with proper transition to existing ground.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 7 of 8

Construction Sequence	Satisfactory/ Unsatisfactory	Comments
Filter fabric in place.		
Stone sized as per Plan and uniformly placed at the thickness specified.		
9. Vegetative Stabilization		
Approved seed mixture or sod.		
Proper surface preparation and required soil amendments.		
Excelsior mat or other stabilization, as per Plan.		
10. Miscellaneous		
Drain for ponds having a permanent pool.		
Trash rack / anti-vortex device secured to outlet structure.		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required).		
Access road.		
Set aside for clean-out maintenance.		
11. Stormwater Wetlands		
Adequate water balance.		
Variety of depth zones present.		
Approved pondscaping plan in place. Reinforcement budget for additional plantings.		
Plants and materials ordered 6 months prior to construction.		
Construction planned to allow for adequate planting and establishment of plant community (April–June planting window).		
Wetland buffer area preserved to maximum extent possible.		

Post-Development Stormwater Management Practice
Construction Inspection Checklist
Page 8 of 8

Comments:

_____
_____
_____
_____
_____
_____
_____

Actions to be Taken:

_____
_____
_____
_____
_____
_____

APPENDIX K

Schedule "B"

STORMWATER CONTROL FACILITY
MAINTENANCE AGREEMENT WITH
THE TOWN OF YORKTOWN

THIS AGREEMENT, entered into this ____ day of January, 2017 , by and between the Town of Yorktown, New York ("Town"), a municipal corporation organized and existing under the laws of the State of New York with offices at 363 Underhill Avenue, Yorktown Heights, New York 10598 and XXXX ("Company"), a domestic limited liability company organized and existing under the laws of the State of New York with offices at XXXXXXX;

WHEREAS, that the Town and the Company (collectively "Parties"), for the consideration hereinafter named, agree as follows:

WHEREAS, the Town and the Company wish to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Town for the XXXXXXX located on XXXXXXXX and Section Block and Lot Number XXXX ("Project");

WHEREAS, the Town and the Company desire that the storm water control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components.

THEREFORE, the Town and the Company agree as follows:

1. This Agreement binds the Town and the Company, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this Agreement.

2. The Company shall maintain, clean, repair, replace and continue the stormwater

control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, dry wells, infiltrators, drop inlets, pipes, culverts, soil absorption devices and retention ponds.

3. The Company shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.

4. The Company shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The Professional Engineer shall prepare and submit to the Town Engineer within thirty (30) days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The Company shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Town.

6. The Company shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Town or in accordance with the recommendations of the Town Engineer.

7. This Agreement shall be recorded in the Office of the County Clerk, County of Westchester together with the deed for the common property and shall be included in the offering plan and/or prospectus in connection with the Project. The Company shall be responsible for payment of any fees in connection with the recording with the Office of the County Clerk.

8. If ever the Town determines that the Company has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Town or by the Town Engineer, the Town shall serve on the Company the notice to cure on thirty (30) days' notice. If the Company fails to comply with the notice to cure to the discretion of the Town Engineer, the Company hereby consents to the Town undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property. In the event that the Town is required to undertake such measures as a result of the Company failing to comply with the notice to cure, the Company shall be required to deposit with the Town an escrow amount determined by the Town

Engineer. Nothing in this Agreement prevents the Town from immediately undertaking such measures and steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures in the event of an emergency in the discretion of the Town Engineer and to affix the expenses thereof as a lien against the property.

9. Any and all notices required hereunder shall be addressed as follows, or to such other address as may hereafter be designated in writing by either party hereto:

To Town of Yorktown:

Town Clerk
Town Hall
363 Underhill Avenue
Yorktown, New York 10598

With a copy to:

Town Engineer
Town Hall
363 Underhill Avenue
Yorktown, New York 10598

Town Attorney
Town Hall
363 Underhill Avenue
Yorktown, New York 10598

To Company:
At the address first above written

9. The Company hereby agrees to indemnify and save harmless the Town, its officers, employees, elected officials, and agents from and against all liability, loss or damage the Town may suffer, arising directly or indirectly out of the contract between the Company and the Town. The Company further agrees to provide defense for and defend any claims or causes of action of any kind or character directly or indirectly arising out of this Agreement at its sole expense and agrees to bear all other costs and expenses relating thereto.

10. This Agreement constitutes the entire Agreement between the Parties in connection with the long term maintenance and continuation of stormwater control measures approved by the Town for the Project and supersedes any and all prior agreements, whether oral or written. If one or more of the provisions in this Agreement are deemed by a Court of competent jurisdiction to be void by law, then the remaining provisions will continue in full force and effect. This Agreement may not be amended or modified except by an instrument in writing signed by all Parties. There will be no presumption against any Party (or its counsel) on the ground that such Party (or its counsel) was responsible for preparing this Agreement or any part of it.

11. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to have been inserted herein. If any required contractual provision is not inserted, through mistake or otherwise, then upon the application of either party, this Contract shall be physically amended forthwith to make such insertion.

12. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to that State's choice of law rules. The Parties hereby submit to the exclusive jurisdiction of the Supreme Court of the State of New York, County of Westchester, in any action or proceeding arising out of or relating to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement:

TOWN OF YORKTOWN	COMPANY NAME
By:_____	By:_____
XXXXXXXX, Town Supervisor	XXXXXXXXX

STATE OF NEW YORK)

) ss.:

COUNTY OF WESTCHESTER)

On the 19th day of January in the year 2017, before me, the undersigned, personally appeared Michael J. Grace personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____

Notary Public

Commission Expires:_____

STATE OF NEW YORK)

) ss.:

COUNTY OF WESTCHESTER)

On the 19TH day of January in the year 2017 before me, the undersigned, personally appeared Neil DeLuca personally known to me or proved to me on the same basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in

his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____

Notary Public

Commission Expires:_____

APPROVED AS TO FORM

_____
XXXXX
Town Attorney

Exhibit 1

The following is the proposed Inspection and Maintenance Schedule:

Control to be Inspected	Inspection Frequency	Maintenance Threshold Criteria	Maintenance Procedure
Drain Inlets	Quarterly	3"+ accumulated sediment	Remove debris and sediment annually.
Infiltration Basin	Bi-Annually	3”+ accumulated sediment	Remove debris and sediment.
Level Spreader	Bi-Annually	3”+ accumulated sediment	Remove debris and sediment.
Pocket Wetland	Bi-Annually	3"+ accumulated sediment	Remove debris and sediment.
Stormwater Planter	Bi-annually	1"+ accumulated sediment, Ponding for more than 48 hours	Remove debris and sediment; weed and replace plants and mulch as needed.
Tree Planting	Quarterly	Ponding for more than 48 hours	Remove accumulated sediment and debris; weed and replace dead trees with new ones and mulch as needed.
Cistern	Annually	3"+ accumulated sediment	Remove debris and sediment annually.
Permeable Paver/Porous Concrete	Quarterly	Paving does not dewater between storms	Clean area of debris and sediment; vacuum sweep area.

APPENDIX M

Project Plans