STORMWATER POLLUTION PREVENTION PLAN

for

TOWN OF PLATTSBURGH
BATTLEFIELD MEMORIAL GATEWAY PARK
SITE DEVELOPMENT – PHASE 1

ELAN NO. 20-015.8

PREPARED FOR:

Town of Plattsburgh
151 Banker Road
Plattsburgh, New York 12901

PREPARED BY:

Elan Planning, Landscape Architecture and Engineering, DPC
18 Division Street, Suite 304
Saratoga Springs, New York 12866

February 2023

SWPPP PREPARER CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 29.45 of the Penal Law."

Name

Title

Company

Signature **Date**

TABLE OF CONTENTS

APPENDICES

1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared to comply with the New York State Department of Environmental Conservation (NYSDEC) Phase II Stormwater Regulations, and the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-20-001, herein referred to as the "General Permit." It has been prepared in accordance with the New York State Stormwater Management Design Manual (SMDM), dated January 2015.

The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary before, during and following completion of construction.

The SWPPP (and Project) have been designed in accordance with Chapter 9 – Redevelopment Conditions of the SMDM.

1.1 PROJECT OVERVIEW

The Town of Plattsburgh Battlefield Memorial Gateway Park Site Development Phase 1 Project (herein referred to as "The Project") includes site improvements to a previously developed parcel located within the Town. The Project site is located on the north side of Sunset Drive in the Town of Plattsburgh, Clinton County, New York. A site location map has been provided in Section 3.1.

Site construction associated with the Project includes reconstruction and repairs to a portion of the existing access road (Sunset Drive), construction of a new vehicle parking lot, installation of new pedestrian plaza area and walking paths, site lighting, and stormwater management improvements.

Permit eligibility for the Project is met in two ways:

- Those portions of the project which include only construction of linear bike/walking paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover meet the conditions of Appendix B, Table 1 of the General Permit which requires preparation of a SWPPP that only includes erosion and sediment controls.
- The balance of the Project applies to the Chapter 9 – Redevelopment criteria of the SMDM, requiring a SWPPP including post-construction stormwater management controls.

Stormwater management requirements for the project will be met by a series of new green infrastructure practices (GIPs) and stormwater management practices (SMPs) to address water quality and quantity requirements in accordance with the General Permit and SMDM. Existing hydrology on the site will be maintained to the maximum extent practicable. The project will disturb approximately 2.10± acres.

2.0 PERMIT OVERVIEW AND SWPPP RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved, to ensure compliance with the General Permit, is provided in subsequent sections. A complete listing of all definitions, responsibilities, and obligations can be found in the General Permit, provided in Appendix F.

A summary of the companies and individuals associated with this SWPPP are provided in Section 2.1, below.

2.1 SWPPP PARTICIPANTS

Owner/Operator:	**Town of Plattsburgh**
	Trevor Cole 151 Banker Road Plattsburgh, NY 12901 (p) 518-562-6863 (e) trevorc@townofplattsburgh.org
SWPPP Preparer:	**Elan Planning, Landscape Architecture and Engineering, DPC**
	Jere Tatich 18 Division Street, Suite 304 Saratoga Springs, NY 12866 (p) 518-306-3702 (e) jtatich@elanpd.com
Contractor:	
Qualified Inspector:	

2.2 PERMIT OVERVIEW

The objective of this SWPPP is to comply with the requirements of the General Permit. As a condition of authorization to discharge stormwater, the **Contractor** (and subcontractors performing any activity that involves soil disturbances), will be required to comply with the terms and conditions of this SWPPP. It is the responsibility of the **Owner/Operator** and **Contractor** to be aware and understand all of the requirements set forth in this SWPPP and the General Permit.

As required by the conditions described in the General Permit, the SWPPP must be kept current, and shall be amended as necessary to reflect any changes in the design, construction, operation, or maintenance associated with the Project.

To obtain permit coverage, the **Owner/Operator** must:

- Develop a SWPPP in accordance with the requirements of the General Permit;
- Submit a completed Notice of Intent (NOI) to NYSDEC, and;
- Comply with the requirements outlined in Section 2.5 of this SWPPP.

Fees associated with coverage under the General Permit are generally issued in the fall of each year, and are as follows:

- Initial, one time payment of $110 per acre of disturbed soil;
- Initial, one time payment of $675 per acre of additional impervious area, and;
- Annual, recurring payment of $110 for the duration of permit coverage.

For Project's meeting NYSDEC's technical standards, coverage begins five (5) business days after the submission of an electronic NOI form to NYSDEC or ten (10) business days after a paper NOI form is received by NYSDEC.

2.3 CHANGE OF OWNER/OPERATOR

If property ownership changes or if there is a change in operational control over the construction plans and specifications of this Project, the *Original* **Owner/Operator** must notify the *New* **Owner/Operator**, in writing, of the requirement to obtain permit coverage by submitting a NOI to NYSDEC. Once the *New* **Owner/Operator** obtains permit coverage, the *Original* **Owner/Operator** shall then submit a completed NOT with the name and permit identification number of the *New* **Owner/Operator** to NYSDEC. If the *Original* **Owner/Operator** maintains ownership of a portion of the construction activity and will disturb soil, they must maintain their coverage under the permit.

Permit coverage for the *New* **Owner/Operator** will be effective as of the date NYSDEC receives a complete NOI, provided the *Original* **Owner/Operator** was not subject to a sixty (60) business day authorization period that has not expired as of the date NYSDEC receives the NOI from the *New* **Owner/Operator.**

2.4 SWPPP REVIEW AND UPDATE

The SWPPP copy kept on-site shall be kept current and made available for review by regulatory agencies (federal, state or local), engineers and subcontractors. Should the SWPPP need to be revised, the **Owner/Operator** and **Contractor** shall make the required modifications within fourteen (14) days and notify all applicable regulatory agencies in writing.

If modifications are required to post-construction stormwater management controls, the **Owner/Operator** must notify the MS4 (if applicable) in writing of any planned amendments or modifications to the post-construction stormwater management practices. Unless otherwise notified by the City, the **Owner/Operator** shall have the SWPPP amendments or modifications reviewed and accepted by the City prior to commencing construction.

Any modifications to the SWPPP shall be summarized and included within Appendix A.

2.5 OWNER'S/OPERATOR'S RESPONSIBILITIES

PRIOR TO CONSTRUCTION

1. Ensure that the provisions of this SWPPP are implemented from the commencement of construction activity and continue until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to NYSDEC.

2. Maintain in a secure location on-site, accessible during normal business hours to an individual performing a compliance inspection, the following materials: a complete copy of this SWPPP, a copy of the General Permit, NOI, NOI Acknowledgment Letter, and any inspection reports. These materials shall be available on-site until all disturbed areas have achieved final stabilization, and the NOT has been submitted to NYSDEC.

3. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for implementing the provisions described in this SWPPP. Have each of these contractors and subcontractors identify at least one "Trained Contractor," that will be responsible for the implementation of the SWPPP. Ensure that the **Contractor** has at least one "Trained Contractor" on-site on a daily basis when soil disturbance activities are being performed.

4. Require the **Contractor** to fully implement the SWPPP from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted.

5. Provide a construction Site Log Book to be used for retaining all inspection reports generated throughout construction.

6. Sign or have an authorized corporate officer sign the Owner/Operator Certification Form located in Appendix B.

7. Sign or have an authorized corporate officer sign the completed NOI. A copy of the completed NOI is included in Appendix E.

8. Submit the signed NOI to the following:

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

9. Pay the required initial and annual permit fees upon receipt from NYSDEC.

10. Forward a copy of the NOI Acknowledgement Letter received from NYSDEC to the **SWPPP Preparer** for project records, and to the **Contractor** for display at the project site.

DURING CONSTRUCTION

11. Retain the services of a **Qualified Inspector** to conduct regular site inspections for general compliance with the SWPPP and General Permit. Site inspections shall occur in accordance with Section 7.0 of this SWPPP.

12. Require the implementation of the Post-Construction Stormwater Facility Maintenance procedures outlined in Section 8.0 of this SWPPP.

13. NYSDEC may notify the **Owner/Operator** at any time that the SWPPP does not meet one or more of the minimum requirements of the General 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 NYSDEC, the **Owner/Operator** shall make the required changes to the SWPPP and submit written notification to NYSDEC that the changes have been made.

14. The **Owner/Operator** must keep the SWPPP current at all times. At a minimum, the **Owner/Operator** shall update or amend the SWPPP:

    a. whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the project site;
    b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants, and;
    c. to address issues or deficiencies identified during an inspection by the **Qualified Inspector** or a regulatory authority.

AFTER CONSTRUCTION

15. Upon achieving final site stabilization, and after having the **Qualified Inspector** perform a final site inspection, submit a completed NOT to NYSDEC after ensuring the following:

    a. If the Project includes post-construction stormwater management practices, ensure one of the following:
        i. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, the **Owner/Operator** has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

    After satisfying the above, complete and submit an NOT to the following:

    NOTICE OF TERMINATION
    NYSDEC, Bureau of Water Permits
    625 Broadway, 4th Floor
    Albany, New York 12233-3505

16. The **Owner/Operator** shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, and any inspection reports for a period of at least five (5) years from the date that the site achieves final stabilization.

2.6 SWPPP PREPARER'S RESPONSIBILITIES

PRIOR TO CONSTRUCTION

1. Prepare the SWPPP using good engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.

2. Prepare the NOI (included in Appendix E), sign the "SWPPP Preparer Certification" section of the NOI, and forward to **Owner/Operator** for signature.

DURING CONSTRUCTION

3. Update the SWPPP each time there is a significant modification to the design or construction of the Project.

AFTER CONSTRUCTION

4. Upon Project completion, achieving final stabilization, and after the final site inspection has been performed, prepare the NOT (included in Appendix E), and forward to the:

    a. **Qualified Inspector** (who must sign the NOT Certifications VI (Final Stabilization) and VII (Post-construction Stormwater Management Practices), and;

b. **Owner/Operator** for signature on Certification VIII (Owner/Operator Certification).

2.7 CONTRACTOR'S RESPONSIBILITIES

PRIOR TO CONSTRUCTION

1. Certify that the SWPPP has been read and understood, by signing the Contractor's Certification Form contained within Appendix B.

2. Identify at least one individual who will serve as the "Trained Contractor" and be responsible for implementation of this SWPPP. Ensure that at least one "Trained Contractor" is on-site on a daily basis when soil disturbance activities are being performed.

3. Provide the names and addresses of all subcontractors working on the project site who will be involved with construction activities that will result in soil disturbance activities. These subcontractors shall be required to:

    a. identify at least one individual who will serve as a "Trained Contractor" and be on-site on a daily basis when soil disturbance activities are being performed, and;
    b. certify that the SWPPP has been read and understood by signing a copy of the Contractor's Certification form contained within Appendix B.

DURING CONSTRUCTION

4. Fully implement the requirements outlined within and referenced by this SWPPP.

5. Conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating conditions at all times in accordance with Section 7.0 of this SWPPP. Inspections shall be performed to ensure compliance with the requirements set forth in the most recent revision of the NYS Standards and Specifications for Erosion and Sediment Control. Retain written documentation of all inspections and repair/maintenance activities performed. This information must be retained as part of the Site Log Book.

6. Notify the **SWPPP Preparer** if the **Contractor** plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if **Contractor** plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site. The **Contractor** shall submit appropriate documentation to the **SWPPP Preparer** so that the SWPPP can be modified accordingly.

7. Begin implementing corrective actions within one (1) business day of receipt of notification by the **Qualified Inspector** that deficiencies exist with the pollution

prevention measures employed at the site. Corrective actions shall be completed within a reasonable time frame.

2.8 QUALIFIED INSPECTOR'S RESPONSIBILITIES

A **Qualified Inspector**, as defined in Appendix A of the General Permit, shall conduct regular site inspections between the time this SWPPP is implemented and final site stabilization. The **Qualified Inspector's** responsibilities are presented below. For additional information, refer to Section 7.0.

DURING CONSTRUCTION

1. Conduct regular site inspections for general compliance with the SWPPP and General Permit.

2. At a minimum, the **Qualified Inspector** shall inspect all erosion and sediment control practices 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, and all points of discharge to natural surface waterbodies and from the construction site.

3. Complete and certify inspection reports after each inspection for inclusion within the Site Log Book. Distribute inspection reports to the **Owner/Operator**, **SWPPP Preparer**, and **Contractor** (and all subcontractors involved with soil disturbance activities).

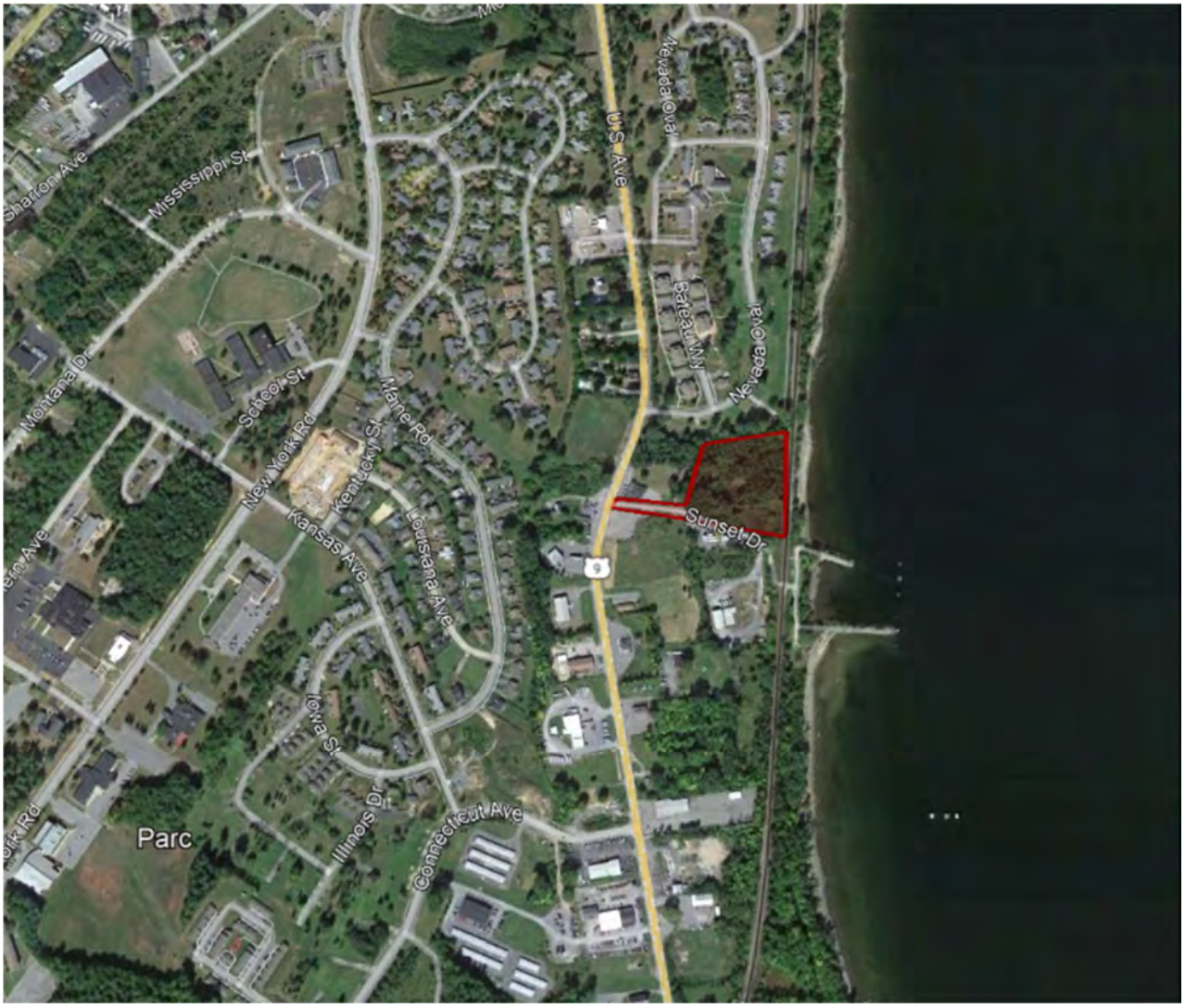
4. Notify the **Owner/Operator** and **Contractor** (or subcontractor) within one (1) business day of the completion of an inspection that identified any corrective actions that need to be taken.

5. Upon completion of construction, perform a final site inspection verifying all disturbed areas have achieved final stabilization, all temporary erosion and sediment control measures have been removed, and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Upon verifying all of the above, sign the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT.

3.0 SITE ASSESSMENT

3.1 LOCATION

The Project area is comprised of the Town parcel located along Sunset Drive and having frontage on NYS Route 9 to the west in the Town of Plattsburgh, Clinton County, New York. The site is located on the north side of Sunset Drive, as shown in red, below.



3.2 LAND USE AND TOPOGRAPHY

The project area is comprised of a vacant property that previously was historically used as fuel storage area, and an existing asphalt road (Sunset Drive).

Sunset Drive generally slopes from west to east at slopes ranging between 2% and 10%. The vacant northern portion of the property is self-contained, with a ridge line encompassing a low area that does not discharge runoff off-site.

3.3 SOIL DATA AND GROUNDWATER

Review of the Natural Resources Conservation Service (NRCS) Web Soil Survey indicated the Project area consists predominantly of Udorthents, wet substratum soil types, having Hydrologic Soil Group (HSG) ratings of "B" (drained condition). A copy of the soil survey has been provided in Appendix D.

The NRCS defines the HSG qualities as follows:

- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consisting mainly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately course textures. These soils have a moderate rate of water transmission.

On-site soil testing was performed to validate the results of the soil survey and to identify subsurface soil conditions for purposes of designing post-construction stormwater management practices. The testing included deep test holes (excavated by a back hoe) in accordance with the requirements of the SMDM.

The testing was performed September 21, 2022 in slightly rainy weather, and had varying results. TP-1 consisted of solid clay to a depth of 8'-0" which is assumed to not be naturally occurring, and instead installed as fill for prior land uses on the property. TP-2 consisted of various layers of differing material which is assumed to be the result of different filling operations over time.

The results of the soil testing are summarized below:

Test ID	Depth	Description
TP-1	0 – 8"	Topsoil, organics layer
	8" – 96"	Dense clay
TP-2	0 – 8"	Topsoil, organics layer
	8" – 30"	Loamy clay, some sand
	30" – 74"	Mottled clay
	74" – 84"	Light fine sand
	84" – 96"	Dense sandy clay

TP-2 appeared to consist of various layers of fill.

Based upon the soil testing, it was determined bioretention was an appropriate practice for the Project.

3.4 WATERSHED DESIGNATION

The project site is not located in a restricted watershed (requiring enhanced phosphorus removal) identified in Appendix C of the General Permit.

The site is located within an AA or AAS watershed per the NYSDEC Stormwater Interactive Mapper.

3.5 RECEIVING WATER BODIES

The portion of the site that discharges off-site generally drains in an easterly direction through existing drainage channels and storm piping and into Lake Champlain (Regulation: 830-5, Standard: A (T), Classification: A). A copy of this mapping is included in Appendix D.

According to Appendix E of the General Permit, the northern and middle portions of Lake Champlain are on the 303(d) (nutrients) list of impaired waterways.

3.6 AQUIFERS

The Project is not located over a US EPA designated Sole Source Aquifer (SSA).

The Project is located over a Principal Aquifer as listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

This project will be designed to ensure that there is no adverse effect on any active sources of water or to the quality of the ground water. A vertical separation of at least three (3) feet will be provided between the bottom of any stormwater practice and the field-measured Seasonally High Water Table (SHWT). Copies of NYS Aquifer mapping are provided in Appendix D.

3.7 WETLANDS

The potential for jurisdictional wetlands existing on or adjacent to the project area was investigated through online mapping resources and a site walk. Representatives of the Army Corps of Engineers (ACOE) delineated wetlands on the property as depicted on the Project's Site Plans. The Project was designed to avoid impacts to the wetlands.

3.7.1 Tidal Wetlands

There are no tidal wetlands located within the project area.

3.7.2 State Jurisdictional Wetlands (Article 24)

The NYSDEC freshwater wetland mapping for the project area was reviewed utilizing the online Environmental Resources Mapper (ERM) provided by the NYSDEC. The

ERM indicated no NYSDEC regulated wetlands or associated 100-foot protected buffers within the project area. A copy of this mapping is included in Appendix D.

3.7.3 Federal Jurisdictional Wetlands (Article 404)

National Wetland Inventory (NWI) mapping for the project area was reviewed utilizing the online Wetlands Mapper provided by the U.S. Department of Interior, Fish and Wildlife Service. The mapping indicated a federally protected wetland existed in the eastern low area of the project site. This location was consistent with the wetland areas flagged in the field by ACOE personnel. A copy of this mapping is included in Appendix D.

3.8 LISTED, ENDANGERED, OR THREATENED SPECIES

Screening for listed, endangered or threatened species and habitats was performed for the project area. No such species or habitats were identified.

3.9 CULTURAL AND HISTORIC RESOURCES

A determination request was sent to the New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP) to evaluate the Project's potential to impact cultural or historic resources. NYS OPRHP issued a "No Adverse Impact" letter for the Project indicating there will be no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places. A copy of this letter is included in Appendix D.

3.10 RAINFALL DATA

Rainfall data utilized in the stormwater calculations and hydrological modeling were interpolated from maps presented in Chapter 4 of the SMDM. The design storms used for the hydrological modeling were the 90%, 1-Year, 10-Year and 100-Year, 24-hour duration, SCS Type II events. According to the SMDM, the rainfall amounts associated with each design storm are presented in Table 3-1, below:

TABLE 3-1
RAINFALL QUANTITY

Storm Event	24-Hour Rainfall	Used For
	(in)	
90% Rainfall	1.00	Water Quality Volume (WQv)
1-Year	1.90	Channel Protection Volume (CPv)
10-Year	3.25	Overbank Flood (Qp)
100-Year	5.50	Extreme Flood (Qf)

4.0 CONSTRUCTION SEQUENCE

Construction of the Project (installing, constructing, repairing, inspecting and maintaining the proposed site improvements, stormwater management, and erosion and sediment control practices), shall be in accordance with this SWPPP and the Project Plans. The **Contractor** may only alter the sequence of construction, after having received prior approval form the **SWPPP Preparer**.

Estimated Beginning of Construction: Spring, 2023

Estimated End of Construction: Fall, 2023

In general, construction will commence in accordance with the following sequence of operations.

1. Begin Construction.

2. Install temporary sediment and erosion control measures, and stake out limits of disturbance.

3. Perform clearing, grubbing and removals.

4. Commence construction of proposed site improvements.

    a. Construct downstream stormwater management facilities and conveyance piping.

    b. Perform rough grading, and subsurface utility installation.

    c. Construct proposed buildings, pavements, and other permanent site improvements.

    d. Complete fine grading, top dressing, finishing of pavement surfaces, signage, striping, etc.

    e. Stabilize remaining disturbed areas with “final stabilization” measures.

    f. Remove temporary erosion and sediment control practices.

5. Perform final site inspection, and as-builts (as required).

6. End Construction.

The order (or sequence) in which the major activities are expected to begin is presented on the accompanying drawings, though each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain

adequate erosion and sediment control. If this is the case, the **Contractor** shall notify the **SWPPP Preparer** and **Qualified Inspector** overseeing the implementation of the SWPPP.

The **Contractor** will be responsible for implementing and maintaining the erosion and sediment control measures identified on the Plans. The **Contractor** may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the **Contractor**.

It is not anticipated that more than five acres of land would need to be disturbed at once for the development of this Project. If the **Contractor's** construction sequence requires the disturbance of more than five acres at any one time, written approval must be obtained from the City and/or NYSDEC prior to disturbing more than five acres at once. The Notice to Disturb Greater than Five (5) Acres of Soil form has been provided in Appendix G for use by the **Contractor**, if needed.

Refer to the accompanying plans for details and specifications regarding the construction sequencing schedule.

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

Stormwater runoff from developing areas can result in off-site problems including erosion and water quality degradation due to sedimentation and other non-point source pollutants. These impacts are greatest during construction periods when soils are without any vegetative cover. The General Permit references the NYSDEC's New York State Standards for Erosion and Sediment Control (NYSSESC) as the required guidelines for design.

During construction, temporary erosion control measures (designed to minimize soil loss), and sediment control measures (intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties), shall comply with the NYSSESC and may include, but not be limited to, silt fencing, temporary seeding, temporary swales, check dams, erosion control fabric and catch basin inlet protection. These measures shall be implemented per the criteria presented in Project Plans and the NYSSESC. By reference, these guidelines will be made an integral part of the SWPPP prepared for the Project.

After construction, permanent erosion and sediment control measures to be implemented may include, but not be limited to, establishment of a ground cover in areas not scheduled to be paved, soil restoration, turf reinforcement, stabilized stormwater conveyances, and catch basins. Construction details and locations of these measures are shown on the Project site plans.

Temporary and permanent erosion and sediment control measures that shall be applied during construction generally include:

1. Establishing permanent, stabilized traffic corridors and avoiding "routes of convenience."
2. Minimizing soil erosion and sedimentation by stabilization of disturbed areas, and removal of sediments from construction site discharges.
3. Preservation of existing vegetation as much as possible.
4. Planning site preparation activities to minimize the magnitude and duration of soil disruption.

5.1 TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

The temporary erosion and sediment control measures described in the following sections are an integral component of this SWPPP.

5.1.1 Stabilized Construction Entrance

Prior to construction activities commencing at the site, a stabilized construction entrance shall be installed at all proposed vehicle traffic entrance and exit points. Construction traffic must only enter and exit the site by way of a stabilized

construction entrance. The intent is to trap dust and mud that may otherwise be tracked off-site by construction traffic.

Each entrance shall be maintained in a condition which will control tracking of sediment off-site. When necessary, the placement of additional aggregate atop the filter fabric shall be done to assure the minimum thickness is maintained. All sediments and soils spilled, dropped, or washed off-site onto public rights-of-way or private property must be removed immediately. Periodic inspection and any necessary maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

Water trucks shall be used as needed during construction to reduce dust generated on the site. Dust control must be provided by the **Contractor** to a degree that is acceptable to the **Owner/Operator**, and in compliance with the applicable local and state dust control requirements.

5.1.3 Temporary Soil Stockpile

Erodible materials, such as topsoil or soil, shall be temporarily stockpiled (if necessary) on-site during construction. Stockpiles shall be located in an area away from storm drainage, water bodies and/or drainage courses, and shall be properly protected from erosion by a surrounding silt fence barrier (or similar device) and a mulch layer (if it is a soil-based material).

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) shall be established along the down slope perimeter of all erodible pervious areas disturbed as a result of construction which lie up-gradient of watercourses, catch basins (stormwater inlets), or adjacent properties.

Silt fencing shall be installed in such a way to minimize clearing and grubbing impacts to the maximum extent practicable. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after significant storm events will be performed by site personnel. Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

Areas undergoing clearing or grading and any areas disturbed by construction activities where work has temporarily or permanently ceased, shall be stabilized with temporary vegetative cover within seven (7) days from the date the soil disturbance activity ceased. Temporary seed mixtures to be used are included in the Project Plans.

5.1.6 Stone Inlet Protection Barrier

Concrete blocks surrounded by wire mesh and crushed stone shall be placed around both existing catch basins and proposed catch basins once they have been installed, to keep sediment from entering the catch basins and storm sewer system.

During construction, crushed stone shall be replaced as necessary to ensure proper function of the structure.

5.1.7 Erosion Control Blanket

Erosion control blankets shall be installed on all disturbed or proposed slopes exceeding 3H:1V. Erosion control blankets provide temporary erosion protection, rapid vegetative establishment, and long-term erosion resistance to shear stresses associated with high runoff flow velocities associated with steep slopes.

5.1.8 Stone Check Dams

Stone check dams shall be installed within drainage swales to reduce the velocity of stormwater runoff, to promote settling of sediment, and to reduce sediment transport off-site.

Sediment accumulated behind stone check dams must be removed as needed to ensure runoff filtrates through the stone check dam, and prevents larger flows from transporting sediment over or around the dam.

Stones shall be replaced as needed to maintain the design cross section of the structures.

5.1.9 Temporary Sediment Trap

Temporary sediment traps, where required, shall be constructed to intercept sediment-laden runoff and reduce the amount of sediment leaving the disturbed areas and to protect drainage ways, properties, and rights-of-way.

Accumulated sediment shall be removed from the trap when it reaches 50 percent of the design capacity. Temporary sediment traps shall be designed to provide 3,600 cf. of storage per acre of tributary watershed.

5.1.10 Temporary Diversion Swales

Temporary diversion swales shall be used to divert off-site runoff around the construction site, divert runoff from stabilized areas around disturbed areas, and direct runoff from disturbed areas into sediment traps.

5.1.11 Dewatering Operations

Dewatering shall be used where mentioned on the Project Plans and as necessary based upon actual field conditions. It shall be used to intercept sediment-laden stormwater or pumped groundwater, and allowed adequate settling or filtration prior to being discharged off-site. Water from dewatering operations shall be treated to eliminate the discharge of sediment and other pollutants. Water resulting from dewatering operations shall be directed to temporary sediment traps, or dewatering devices. Temporary sediment traps and dewatering devices shall be provided, installed and maintained to effectively control sediment deposits.

5.2 PERMANENT EROSION AND SEDIMENT CONTROL MEASURES

The permanent erosion and sediment control measures described in the following sections are an integral component of this SWPPP.

5.2.1 Establishment of Permanent Vegetation

All areas having achieved final grade must be seeded and mulched within seven (7) days after completion of the major construction activity.

Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

Disturbed areas to be permanently vegetated must be seeded in accordance with the Project Plans. The type of seed, mulch, and maintenance measures described in the Project Plans shall be followed.

5.2.2 Soil Restoration

Soil Restoration is a required practice applied across areas of a development site where soils have been disturbed and will be vegetated in order to recover the original properties and porosity of the soil.

The Contractor shall implement soil restoration practices in accordance with NYSDEC requirements and Table 5.3, below.

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".

5.2.3 Rock Outlet Protection

Rock outlet protection shall be installed at the locations indicated and detailed on the Project Plans. The installation of rock outlet protection will reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving watercourse or water body.

Stones shall be replaced as needed to maintain the designed dimensions of the structures.

5.2.4 Permanent Turf Reinforcement

Permanent turf reinforcement mats (TRMs) provide long-term erosion protection and vegetation establishment assistance while permanently reinforcing vegetation. TRMs shall be installed where specified on the Project Plans and as required.

TRMs provide two key advantages:

- The unique 3-D pattern creates a thick matrix of voids that trap soil, seed and water in place for quicker, thicker vegetation growth.
- TRMs increase vegetation's natural erosion protection abilities by permanently anchoring mature plants to the soil for superior, longer-term erosion resistance.

5.3 CONSTRUCTION HOUSEKEEPING PRACTICES

During the construction phase, the **Contractor** must implement the following housekeeping practices:

5.3.1 Material Stockpiles

Material resulting from the clearing and grubbing operation shall be stockpiled up slope from adequate sedimentation controls.

5.3.2 Equipment Cleaning and Maintenance

The **Contractor** shall designate areas and procedures for equipment cleaning, maintenance, and repair. The **Contractor** and subcontractors shall utilize these specific locations for all equipment cleaning and maintenance. Provisions such as temporary perimeter berms or other suitable barriers must be in place preventing the discharge of any wash material.

5.3.3 Solvents and Detergents

The use of solvents and detergents for large-scale washing is prohibited (i.e., vehicles, equipment, buildings, pavement surfaces, etc.)

5.3.4 Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed for the site by the **Contractor**. The plan shall detail the steps needed to be followed in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Material Safety Data Sheets (MSDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling

and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

Manufacturer's recommended methods for materials handling shall be followed at all times. The Manufacturer's recommended methods for spill cleanup shall be posted in a prominent location, and site personnel shall be made aware of the procedures and locations of cleanup supplies. Any spill in excess or suspected to be in excess of two gallons must be reported to the NYSDEC Regional Spill Response Unit. Notification to the NYSDEC must be completed within two (2) hours of the discovery of the spill.

5.3.5 Concrete Wash Areas

All concrete truck wash out of surplus concrete or wash water shall occur only within specifically designated wash out areas. Such areas must be clearly marked with signage designating the "Concrete Wash Area," and be prepared in a way to prevent concrete wash water from flowing into drainage ways, inlets, receiving waters or off-site. Concrete Wash Areas should be located at minimum 100 feet from drainage ways, inlets and surface waters.

The hardened residue from the Concrete Wash Areas shall be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the wash area is to include removal of hardened concrete and wash water whenever it is 75% full. The facility shall only be used if it has sufficient volume to contain all the concrete waste resulting from washout and maintain a minimum freeboard of 12 inches.

It is the **Contractor's** responsibility to ensure all concrete wash areas are located in areas where the likelihood of contaminating stormwater is minimized. The **Contractor** shall maintain all concrete wash areas, and implement additional BMPs as necessary to ensure concrete wastes do not contribute to stormwater discharges.

5.3.6 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that minimizes the impacts of the construction materials effecting stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

5.4 OTHER POLLUTANT CONTROLS

Control of sediments has been described previously. Other aspects of this SWPPP are listed below:

5.4.1 Solid and Liquid Waste Disposal

No solid or liquid waste materials, including building materials, shall be discharged from the site with stormwater. All solid waste, including disposable materials incidental to any construction activities, must be collected and placed in containers. The containers shall be emptied periodically by a licensed trash disposal service and hauled away from the site.

Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.

5.4.2 Sanitary Facilities

Temporary sanitary facilities shall be provided by the **Contractor** throughout the construction phase. They must be utilized by all construction personnel and be serviced regularly. These facilities must comply with state and local sanitary or septic system regulations.

6.0 POST-CONSTRUCTION STORMWATER MANAGEMENT

6.1 METHODOLOGY

The Project has been designed in accordance with Chapter 9 (Redevelopment) of the NYSDEC Stormwater Management Design Manual (SMDM).

Hydrologic and hydraulic stormwater calculations were performed utilizing widely accepted engineering methodologies, including the United States Department of Agriculture (USDA) Soil Conservation Service's (SCS) Technical release 20 (TR-20), and the stormwater modeling computer program HydroCAD (version 10.00) produced by HydroCAD Software Solutions, LLC of New Hampshire.

The hydrologic and hydraulic stormwater analyses have been performed for the Project's watershed under two conditions: the existing watershed condition (prior to development of the Project) and the proposed watershed condition (after development of the Project). The analyses are performed by identifying common points of stormwater discharge from the site and delineating subcatchments and subwatersheds tributary to these points. These common points (herein referred to as "Design Points") serve as the basis for all pre- versus post-development runoff calculations. A stormwater model is then developed for both the existing and proposed conditions, and is used to review the effects development of the Project has on each Design Point. The stormwater management plan is complete when all applicable NYSDEC design criteria have been addressed at each Design Point.

6.2 EXISTING WATERSHED CONDITIONS

The site is comprised of impervious surfaces (asphalt pavements, concrete walks and pads, etc.), maintained lawn areas, overgrown woods, and a wetland area. The vicinity in which the majority of construction will take place is previously developed roadway, and portions of the wooded area.

Site soils consist primarily of soils having HSG ratings of "B." The overall size of the project's watershed has been determined as approximately 7.527 acres (of which 1.325 acres are impervious). Refer to drawing "W-1 Existing Conditions Watershed Map," located in Appendix I for more information.

Under the watershed's existing condition, all stormwater runoff from the project area is conveyed to one of two (2) locations (Design Points). A brief description of each Design Point is as follows:

- **Design Point-1 (DP-1)** represents the inlet into an existing storm culvert that passes below the railroad tracks to the east and releases runoff into Lake Champlain.

- **DP-2** represents an existing large depressed area within the wooded portion of the site. The depressed area is defined by a vegetated, earthen berm that encircles this area, and prevents surface runoff from discharging off-site.

Table 6-1 below provides a summary of the existing conditions subwatershed areas and peak discharge rates for the Project's watershed.

TABLE 6-1
EXISTING CONDITIONS
SUBWATERSHED AREAS AND PEAK DISCHARGE RATES

Design Point	DP-1	DP-2	TOTAL
Sub. Area (ac)	3.405	4.122	**7.527**
Sub. Impervious Area (ac)	1.170	0.155	**1.325**
1-Year Peak Rate (cfs)	3.07	0.00	**3.07**
10-Year Peak Rate (cfs)	6.02	0.00	**6.02**
100-Year Peak Rate (cfs)	14.29	0.00	**14.29**

Refer to Appendix I for more information on the existing conditions watershed modeling.

6.3 PROPOSED WATERSHED CONDITIONS

Under the watershed's Proposed Condition, all stormwater from the Project will continue to discharge to the same Design Points as in the Existing Condition. The total watershed size has slightly increased (7.539 acres), and the total impervious area has also increased to 1.798 acres (an increase of 0.473 acres). Refer to drawing "W-2 Proposed Conditions Watershed Map" contained in Appendix J for more information.

The increase in impervious area within the Project's watershed results in an overall increase in peak discharge rates and volumes. To meet the requirements of the NYSDEC (see Section 6.4), green infrastructure practices (GIPs) and standard stormwater practices (SMPs) have been incorporated into the stormwater management design to mitigate the quality and quantity of stormwater runoff discharged from the site.

The nature of soil disturbance activities occurring within each subwatershed was reviewed for compliance with the SMDM and General Permit. A summary of the site work proposed within each Design Point (and associated subwatershed), and the strategy for permit compliance, is provided below:

- **Design Point-1 (DP-1):** Stormwater generated from the existing reconstructed surfaces and newly constructed impervious surfaces will be treated and attenuated by a Hydrodynamic Separator and a Bioretention Facility.
- **DP-2:** Site work associated with DP-2 is minimal, consisting of walking paths meeting the criteria for linear bike/walking paths defined in Appendix B, Table 1 of the General Permit which requires preparation of a SWPPP that includes erosion and sediment controls, only.

Table 6-2 below provides a summary of the proposed conditions subwatershed areas and peak discharge rates for the Project's watershed.

TABLE 6-2
PROPOSED CONDITIONS
SUBWATERSHED AREAS AND PEAK DISCHARGE RATES

Design Point	DP-1	DP-2	TOTAL
Sub. Area (ac)	3.435	4.104	**7.539**
Sub. Impervious Area (ac)	1.436	0.262	**1.698**
1-Year Peak Rate (cfs)	2.80	0.00	**2.80**
10-Year Peak Rate (cfs)	5.63	0.00	**5.63**
100-Year Peak Rate (cfs)	12.66	0.00	**12.66**

Table 6-3 below provides a summary of the existing conditions versus proposed conditions peak discharge rates for all Design Points.

TABLE 6-3
EXISTING VS. PROPOSED PEAK DISCHARGE RATES

Design Storm	Existing	Proposed	Net
	(cfs)	(cfs)	(cfs)
1-Year	3.07	2.80	-0.27
10-Year	6.02	5.63	-0.39
100-Year	14.29	12.66	-1.63

Refer to Appendix J for more information on the Proposed Conditions watershed modeling, and stormwater conveyance calculations (based on the 100-Year storm).

6.4 NYSDEC DESIGN CRITERIA

The SMDM includes a five-step process that involves site planning and stormwater management practice selection. The five steps include;

1. Site Planning to preserve natural features and reduce imperious cover.
2. Calculation of the Water Quality Volume (WQv) for the Site.
3. Incorporation of green infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity.
4. Use of standard SMPs where applicable, to treat the portion of WQv not addressed by green infrastructure techniques and standard SMPs with RRv capacity.
5. Design of volume and peak rate control (where required).

The approach of the stormwater management plan was to address the stormwater requirements separately. The five steps were reduced to Site Planning to Preserve Natural Features, Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (CPv), and Overbank Flood (Qp) and Extreme Storm (Qf) Attenuation, as discussed in the following sections.

Appendix H of this SWPPP contains detailed calculations for determining and summarizing the required and provided volumes for Water Quality and Runoff Reduction. In general, the required design criteria (WQv, RRv, and CPv) were calculated for all areas where site disturbances or green infrastructure techniques are proposed.

6.4.1 Site Planning to Preserve Natural Resources

Within Chapter 3 of the SMDM, Table 3.1 Green Infrastructure Planning General Categories and Specific Practices includes a list of planning practices utilized in the planning and design of a project. There are two categories, Preservation of Natural Resources and Reduction of Imperious Cover.

SITE PLANNING TO PRESERVE NATURAL RESOURCES	
Preservation of Natural Resources	**Reduction of Impervious Cover**
Preservation of Undisturbed Areas	Roadway Reduction
Preservation of Buffers	Sidewalk Reduction
Reduction of Clearing and Grading	Driveway Reduction
Open Space Design	Cul-de-sac Reduction
Soil Restoration	Building Footprint Reduction
	Parking Reduction

At the start of the design process, the project site was analyzed, and natural resources and critical environmental areas were identified. Throughout the design, these areas identified were avoided and protected wherever practical. Where impacts to these features occurred, mitigating measures were proposed to reduce the effects of these impacts. A description of natural resources analyzed is provided below:

Jurisdictional Wetlands

- No wetlands will be impacted by the Project.

Waterways

- No waterways are impacted by the Project.

Buffers

- No buffers will be impacted by the Project.

Floodplains

- The Project is not within any floodplains.

Forest, vegetative cover

- Impacts to forested areas have been minimized.

Topography/Steep slopes

- Development has been located to minimize disturbance of any steep slopes.

Existing soils, including hydrologic soil groups and soil erodibility

- Soil characteristics were considered throughout the design, and the probability for erosion was reduced to the maximum extent practicable. See Section 3.3 for more information.

Drainage Patterns

- Existing drainage patterns were maintained to the maximum extent practicable. See Section 6.0 for more information.

Bedrock/Significant geological features

- Potential disturbances to bedrock and significant geological features have been avoided to the maximum extent practicable. See Section 3.3 for more information.

6.4.2 Required Water Quality Volume (WQv)

The Water Quality Volume (WQv) requirement is designed to improve the water quality of runoff from the project area by treating 90% of the average annual stormwater runoff volumes. The WQv is directly related to the amount of impervious cover created at the project area. The following equation is used to determine the water quality storage volume.

$$WQv = \frac{(P)(Rv)(A)}{12}$$

Where:

WQv	=	Water Quality Volume (acre/feet)
P	=	90% Rainfall Event
Rv	=	0.05 + 0.009(I) where I is impervious cover, in percent
A	=	Site area in acres

The required WQv was calculated for each subcatchment area experiencing land disturbance activities or tributary to a proposed Green Infrastructure Practice (GIP), Standard Practice with RRv Capacity (SMP w/ RRv), or Standard Practice (SMP). These WQv values have been summarized and provided in Table 6-4, below.

TABLE 6-4
WATER QUALITY VOLUME REQUIRED

Design Point	Required
	(ac-ft)
Total	**0.039**

6.4.3 Runoff Reduction and Treatment

Pursuant to Section 3.2 of the SMDM, meeting the Runoff Reduction (RRv) criteria is not required for Redevelopment Projects that meet the criteria in Chapter 9 of the SMDM. However, the required WQv must still be treated and/or reduced by proposed GIPs, SMPs w/ RRv, or SMPs.

The Project has been designed utilizing a series of stormwater practices to reduce and treat the required WQv. Refer to Table 6-5 below for a summary of the required versus provided WQv and RRv for the Project.

TABLE 6-5
SUMMARY OF RUNOFF REDUCTION VOLUME (RRv) AND WATER QUALITY VOLUME WQv) REQUIREMENTS

	WQv Required	Min. RRv Required	RRv Provided	WQv Provided	WQv + RRv Provided
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)
Total	**0.039**	**0.004**	**0.039**	**0.009**	**0.048**

The Project was unable to reduce the entire WQv due to existing soil conditions having poor permeability.

6.4.4 Channel Protection Volume (CPv)

Stream Channel Protection Volume (CPv) requirements are designed to protect stream channels from erosion. In New York State, this goal is accomplished by providing 24-hour (12-hour in trout waters) extended detention of the one-year, 24-hour storm event. The required CPv is calculated utilizing TR-55 (or TR-20) and Appendix B of the SMDM.

Pursuant to Section 9.2.1.A.II of the SMDM, the CPv criteria is not required for redevelopment projects when a hydrologic and hydraulic analysis shows there will be no increase in the peak discharge rate or velocity from the project site during the 1-Year storm event. Refer to Section 6.3 for a summary of the 1-Year storm peak discharge rates before and after development of the project.

6.4.5 Overbank Flood (Qp) and Extreme Flood (Qf) Attenuation

The primary purpose of the Overbank Flood (Qp) control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development. It requires storage and attenuation of the 10-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

The intent of the Extreme Flood (Qf) criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the pre-development 100-year floodplain, and (c) protect the physical integrity of stormwater management practices. It requires storage and attenuation of the 100-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

The Overbank Flood (Qp) and Extreme Flood (Qf) criteria are both being met through application of the proposed stormwater management practices. Refer to Section 6.3 for more information on achieving peak discharge rate attenuation.

6.5 POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) FACILITIES

6.5.1 PCSM Facilities Analysis

Runoff generated from the Project will be collected by a series of surface swales, drain inlets, catch basins, curbs, gutters, and storm sewer piping. The collected runoff will be conveyed to a series of post-construction stormwater management (PCSM) practices for water quality treatment, runoff reduction, and peak rate attenuation. The Project is proposing to treat and attenuate runoff generated from the disturbed portions of the Project, and any existing tributary areas. Runoff will be treated and attenuated via construction of a Standard Stormwater Practice with RRv Capacity (Bioretention).

The peak storage elevations and volumes of the PCSM facilities after development of the Project are presented in the attached HydroCAD calculations contained in Appendix J.

7.0 INSPECTIONS AND REPORTING

7.1 PRE-CONSTRUCTION INSPECTION

After the **Contractor** has installed all necessary erosion and sediment control measures, and prior to the commencement of construction, the **SWPPP Preparer** or **Qualified Inspector** shall conduct an assessment of the site and certify that the appropriate erosion and sediment control measures have been adequately installed and implemented.

7.2 CONSTRUCTION-PHASE INSPECTIONS

The purpose of site inspections is to ensure the best management practices identified in the SWPPP are being correctly implemented and performing effectively. Based on these inspections, it may be deemed necessary to modify the SWPPP in order to prevent pollutants from leaving the site via stormwater runoff.

The **Qualified Inspector** shall conduct site inspections throughout soil disturbance activities until the project has achieved final stabilization. Site inspections shall occur in accordance with the following frequency:

- One (1) inspection every seven (7) calendar days for sites with on-going soil disturbance activities;
- One (1) inspection every thirty (30) calendar days for sites that have been temporarily suspended (e.g. winter shutdown).

During each inspection, the **Qualified Inspector** must evaluate the overall performance of the erosion and sediment pollution control measures identified in this SWPPP. A sample inspection checklist with the minimum inspection requirements is provided in Appendix G of this SWPPP.

The **Contractor** shall have the "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 conditions at all times.

Written documentation of all inspections and repair/maintenance activities performed must be retained in the Site Log Book. All inspection reports must be completed, and include whether the site was in compliance with the SWPPP at the time of inspection, and specifically identify any incidents of non-compliance or corrected actions taken since the last inspection.

Within one (1) business day of the completion of an inspection, the **Qualified Inspector** or "Trained Contractor" shall notify the **Owner/Operator** and **Contractor** (or appropriate subcontractor) of any corrective actions that need to be taken. The **Contractor** (or appropriate subcontractor) shall begin implementing corrective actions within one (1)

business day of this notification and shall complete the corrective actions in a reasonable time frame.

It is the responsibility of the **Contractor** to assure the adequacy of site pollutant discharge controls. Should the "Trained Contractor" or **Qualified Inspector** determine that the measures provided at the site should be modified or new measures should be added, the SWPPP shall be updated accordingly. Any revisions to the SWPPP that are deemed necessary shall be documented utilizing the form included with Appendix A. Modifications to post construction stormwater facilities are not allowed during construction without all necessary approvals from the **Owner/Operator**, and/or NYSDEC Regional Office. Construction phase erosion and sediment control facilities may be modified as directed by a qualified professional.

7.3 TEMPORARY SUSPENSION OF CONSTRUCTION

During the construction phase, the **Contractor** or **Owner/Operator** may elect to temporarily suspend soil disturbance activities at a stage of partial project completion or during the winter months. During this time, inspections may be temporarily discontinued or reduced in frequency. Prior to reducing the frequency of site inspections, the Notice to Reduce Frequency of SPDES Site Inspections form (located in Appendix G) shall be completed and submitted to the MS4 or NYSDEC. Only after receiving written approval shall the site inspection frequency be reduced.

7.3.1 Partial Project Completion

For constructions sites where soil disturbance activities have been shut down with partial project completion, 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 "Trained Contractor" and **Qualified Inspector** inspections may stop. Prior to the shutdown, the **Owner/Operator** must notify the MS4 or NYSDEC regional office, in writing, documenting the intent to suspend inspections.

7.3.2 Winter Shutdown

During periods of winter shutdown, the "Trained Contractor" inspections may be stopped, and the **Qualified Inspector** inspections may be conducted at a minimum of once every thirty (30) calendar days. Prior to modifying the inspection schedule, all disturbed areas must first achieve temporary stabilization in accordance with the Project Plans, and to the satisfaction of the **Qualified Inspector**. If, during winter shutdown temporary stabilization measures become disturbed or are rendered ineffective, the **Contractor** must make those necessary revisions to the erosion and sediment control measures to the satisfaction of the **Qualified Inspector**.

Once soil disturbance activities resume, or the site is no longer temporarily stabilized, the regular inspection schedules must be followed.

7.4 REPORTING REQUIREMENTS

7.4.1 Inspection and Maintenance Reports

Inspections and maintenance reports shall be prepared in accordance with the schedule outlined in this SWPPP and in accordance with the General Permit. The reports shall be prepared to identify and document the status and effectiveness of the erosion and sediment control measures. A sample inspection form is provided in Appendix G.

Specifically, each inspection shall record the following information, at a minimum:

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 the inspection.

4. A description of the condition of the runoff at all points of discharge from the construction site, including any discharges of sediment.

5. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas, including any discharges of sediment to the surface waterbody.

6. Identification of all erosion and sediment control practices that need repair or maintenance, were not installed properly or are not functioning as designed and need to be reinstalled or repaired.

7. 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.

8. 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.

9. 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 practice(s).

10. Identification and status of all corrective actions that were required by previous inspections.

11. Digital photographs, with date stamp, which show the condition of all practices that have been identified as needing corrective action or have undergone corrective action. Photographs must be attached to the associated inspection report.

7.4.2 Site Log Book

The **Owner/Operator** shall retain a copy of the SWPPP at the construction site from the start of construction until final stabilization.

During construction, the **Owner/Operator** shall maintain a record of all SWPPP inspection reports prepared at the site in the Site Log Book. The Site Log Book shall be maintained on-site and made available to the permitting authority.

7.4.3 Post-Construction Records and Archiving

Following construction, the **Owner/Operator** shall retain a copy of the SWPPP, NOI, NOI Acknowledgement Letter, MS4 SWPPP Acceptance from, complete Site Log Book, and other records of data used to obtain eligibility under the General Permit for a period of at least five (5) years from the date NYSDEC receives a completed NOT form. This period may be extended by NYSDEC, at its sole discretion, at any time upon written request.

8.0 POST-CONSTRUCTION STORMWATER FACILITY MAINTENANCE

The **Owner/Operator** is required to implement an Operations and Maintenance (O&M) Plan specifying the frequency for conducting inspections and maintenance of the post-construction stormwater management facilities. Inspections and maintenance shall occur annually, and after significant rain events (events > 1" rainfall). Inspections and maintenance of post-construction stormwater management practices shall be performed in accordance with the requirements of the General Permit and be recorded.

8.1 BIORETENTION

- Outlet mechanisms (drainage structures, spillways, weirs, etc.) should be inspected, cleared of any blockages or accumulated debris, and repaired of any deficiencies from the final design.
- Outfalls and spillways shall be inspected to ensure they remain constructed in accordance with the final design and that erosive conditions do not exist.
- Inspect and replace any deceased vegetation.
- Ensure practice dewaters within 48-hours of a storm event. If not, inspect mulch and soil media, and replace as necessary.
- Repair any erosion as needed and re-vegetate.
- Inspect side slopes and inlet channels to ensure stable conditions.
- Remove excess sediment when necessary.

8.2 CATCH BASINS AND DRAIN INLETS

- Sediment removal with a vacuum truck should be done at least once a year, preferably after spring runoff and then in early fall, or when they are at 50% capacity, whichever comes first.
- Frames and grates and inlet and outlet pipes shall be cleaned of any debris (leaves, branches, garbage, etc.) blocking flow.

8.3 HYDRODYNAMIC SEPARATORS

- Inspect and maintain practice at least once per year. Follow all inspection, operation, and maintenance procedures as recommended by HDS manufacturer.

APPENDIX A

SWPPP AMENDMENTS

STORMWATER POLLUTION PREVENTION PLAN
SWPPPP AMENDMENT FORM

This form shall be used when amendments, revisions, updates or modifications to the current SWPPP are required to keep the construction site in conformance with the NYSDEC SPDES General Permit for Construction Activities, GP-0-20-001. Any modifications to the SWPPP as listed on this form must be approved by the Owner/Operator, and a copy maintained in the SWPPP file kept on-site.

REASON FOR AMENDMENT:

_____

_____

_____

_____

_____

_____

Amendments Requested by: ☐ MS4 ☐ NYSDEC ☐ Other:_____

DESCRIPTION OF AMENDMENTS(S):

_____

_____

_____

_____

_____

_____

_____

_____

CERTIFICATIONS:

Owner/Operator's Name: _____

Owner/Operator's Signature:_____ **Date:**_____

Contractor's Name:_____

Contractor's Signature:_____ **Date:**_____

Qualified Inspector's Name:_____

Qualified Inspector's Signature:_____ **Date:**_____

Date Submitted to MS4:_____ **Date Submitted to NYSDEC:**_____

APPENDIX B

OWNER/OPERATOR
AND
CONTRACTOR CERTIFICATIONS

STORMWATER POLLUTION PREVENTION PLAN
OWNER/OPERATOR'S CERTIFICATION

In accordance with the requirements of the NYSDEC SPDES General Permit for Construction Activities, GP-0-20-001, an authorized individual representing the Owner/Operator who will be responsible for enforcing the implementation of the SWPPP shall sign this certification. A copy of this certification must be maintained in the SWPPP file on-site.

CERTIFICATION:

(Pursuant to Part VII (H)(2)(c) of NYSDEC SPDES Permit GP-0-20-001)

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

OWNER/OPERATOR:

Company Name:_____

Company Address:_____

Telephone No.:_____ Email:_____

Name of Signatory:_____ Title of Signatory:_____

Signature:_____ **Date:**_____

Signatory Requirements: All NOIs, NOTs, SWPPPS, reports, certifications or information required by this permit or submitted pursuant to this permit, shall be signed as follows:

1. For a corporation: by a (1) president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person authorized to and who performs similar policy or decision-making functions for the corporation; or (2) 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 endure 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;

2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

STORMWATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION

In accordance with the requirements of the NYSDEC SPDES General Permit for Construction Activities, GP-0-20-001, an authorized individual of any Contractor or Subcontractor performing an activity that involves soil disturbance activities shall provide a signed copy of this prior to performing any of the work. These certifications must be maintained in the SWPPP file on-site.

CERTIFICATION:

(Pursuant to Part III(A)(6) of NYSDEC SPDES Permit GP-0-20-001)

"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 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 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."

CONTRACTOR IMPLEMENTING THE SWPPP:

Company Name:_____

Company Address:_____

Telephone No.:_____ Email:_____

Name of Signatory:_____ Title of Signatory:_____

Signature:_____ **Date:**_____

Contractor's Responsibility(s):_____

TRAINED CONTRACTOR[1] RESPONSIBLE FOR IMPLEMENTATION:

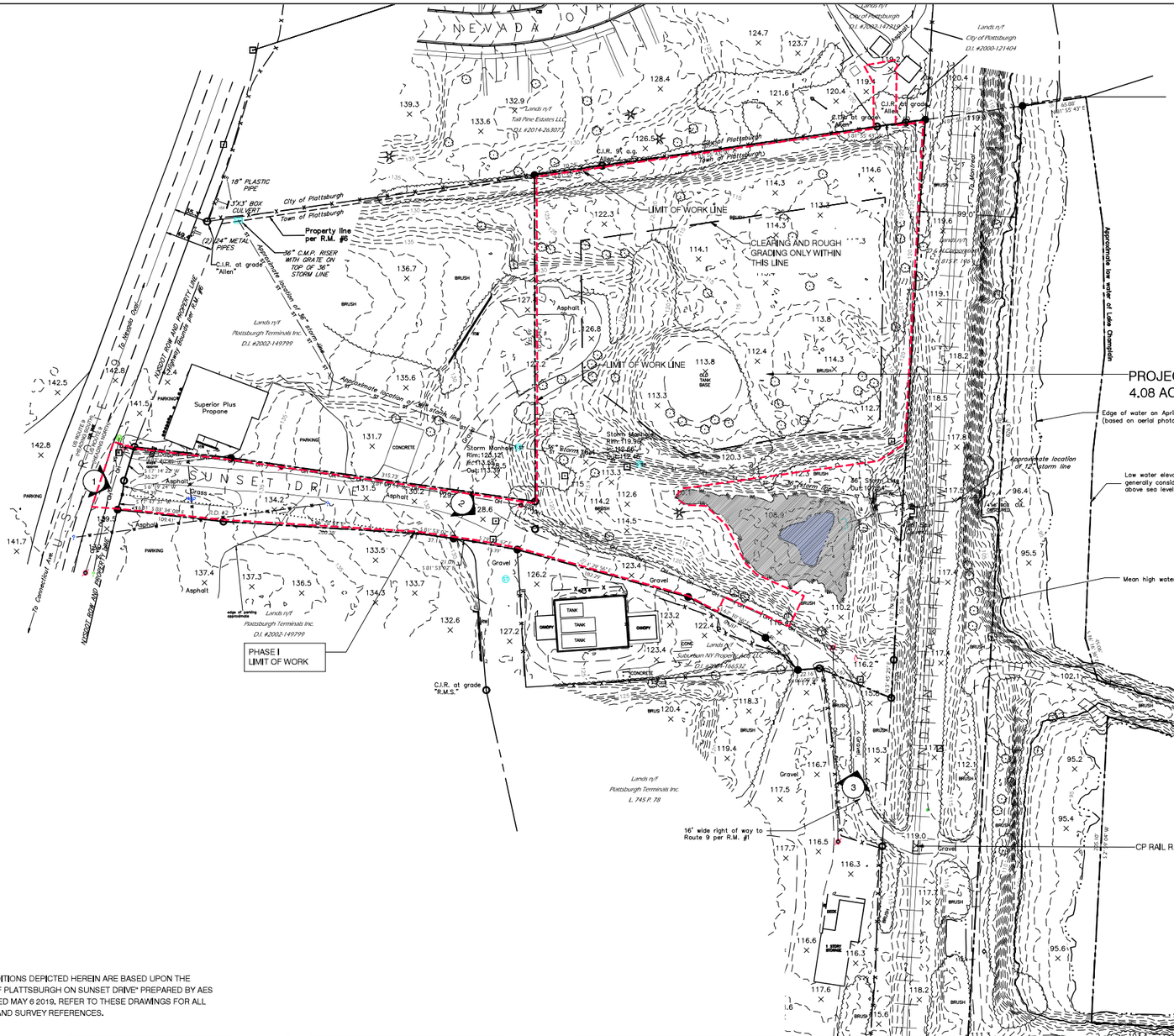
Name:_____ Title:_____

Signature:_____ **Date:**_____

1. In accordance with the General Permit, a Trained Contractor means an employee from the contracting (construction) company, identified above, 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 above, that meets the Qualified Inspector qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The trained contractor is responsible for the day-to-day implementation of the SWPPP.

APPENDIX C

REDUCED SCALE PLANS



NOTES:

1. THE SITE SURVEY AND EXISTING CONDITIONS DEPICTED HEREIN ARE BASED UPON THE SURVEY DRAWING ENTITLED "TOWN OF PLATTSBURGH ON SUNSET DRIVE" PREPARED BY AES NORTHEAST LAND SURVEY, PLLC, DATED MAY 6 2019. REFER TO THESE DRAWINGS FOR ALL EXISTING CONDITIONS INFORMATION AND SURVEY REFERENCES.

IMAGE 1: VIEW EAST ONTO ENTRANCE OF SUNSET DRIVE, FROM ROUTE 9.

IMAGE 2: END OF SUNSET DRIVE ASPHALT PAVEMENT & TRANSITION TO AGGREGATE PAVING

IMAGE 3: VIEW OF SUNSET DRIVE WEST OF RAIL ROAD.

SURVEY NOTES

1. THIS MAP IS A COMPOSITE COMPILATION FROM:
- TWO DATES OF PHOTOGRAPHY - DECEMBER 13, 2000 & APRIL 20, 2001
- DIGITAL ELEVATION MODEL DATA FROM NYS GIS CLEARINGHOUSE WEBSITE.
- DIGITAL ORTHO IMAGERY FROM NYS GIS CLEARINGHOUSE WEBSITE.

2. TOPOGRAPHY MOSTLY GENERATED FROM "CLINTON-ESSEX-LAKE CHAMPLAIN NEW YORK 2015 USGS LIDAR" DATA SET. (SEE LAYER VA-TOPO-LIDR)

3. PLANIMETRY COMPILED FROM 2000 & 2001 AERIAL PHOTOGRAPHY THEN COMPARED AND PARSED TO 2014 NYS DIGITAL ORTHOPHOTOGRAPHY. VEGETATION MOSTLY COMPILED FROM THE 2000 & 2001 PHOTOGRAPHY AND IS SUBJECT TO CHANGE OF THE LAST 18 TO 19 YEARS. SEE NOTES ON LAYER "EDIT-NOTE" REGARDING SOME OTHER PLANIMETRIC CHANGES.

4. HORIZONTAL DATUM IS THE NORTH AMERICAN DATUM OF 1927 (NAD 27).

5. VERTICAL DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

6. FILE AS DELIVERED DEPICTS PLANIMETRY, CONTOURS AND GROUND SPOT ELEVATIONS. 3D FEATURES USED TO CREATE DIGITAL TERRAIN MODEL ARE ON LAYERS; VA-TOPO-BDRY-EXTR, VA-TOPO-BKLN, VA-TOPO-LIDR, VA-TOPO-FEAT AND VA-ROAD-CNTR; CURRENTLY OFF AND FROZEN.

7. FILE DELIVERED MAY 23, 2019.

DRAWING SYMBOL KEY

3 PHOTO IMAGES 1-6

0 30' 60' 120'

Drawing Scale: 1" = 60'-0"

Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund

NYS DOS Contract No. C1006931

Professional Stamp

REGISTERED LANDSCAPE ARCHITECT JERE E. TATICH 001805 STATE OF NEW YORK

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

EXISTING CONDITIONS PLAN & LIMIT OF WORK

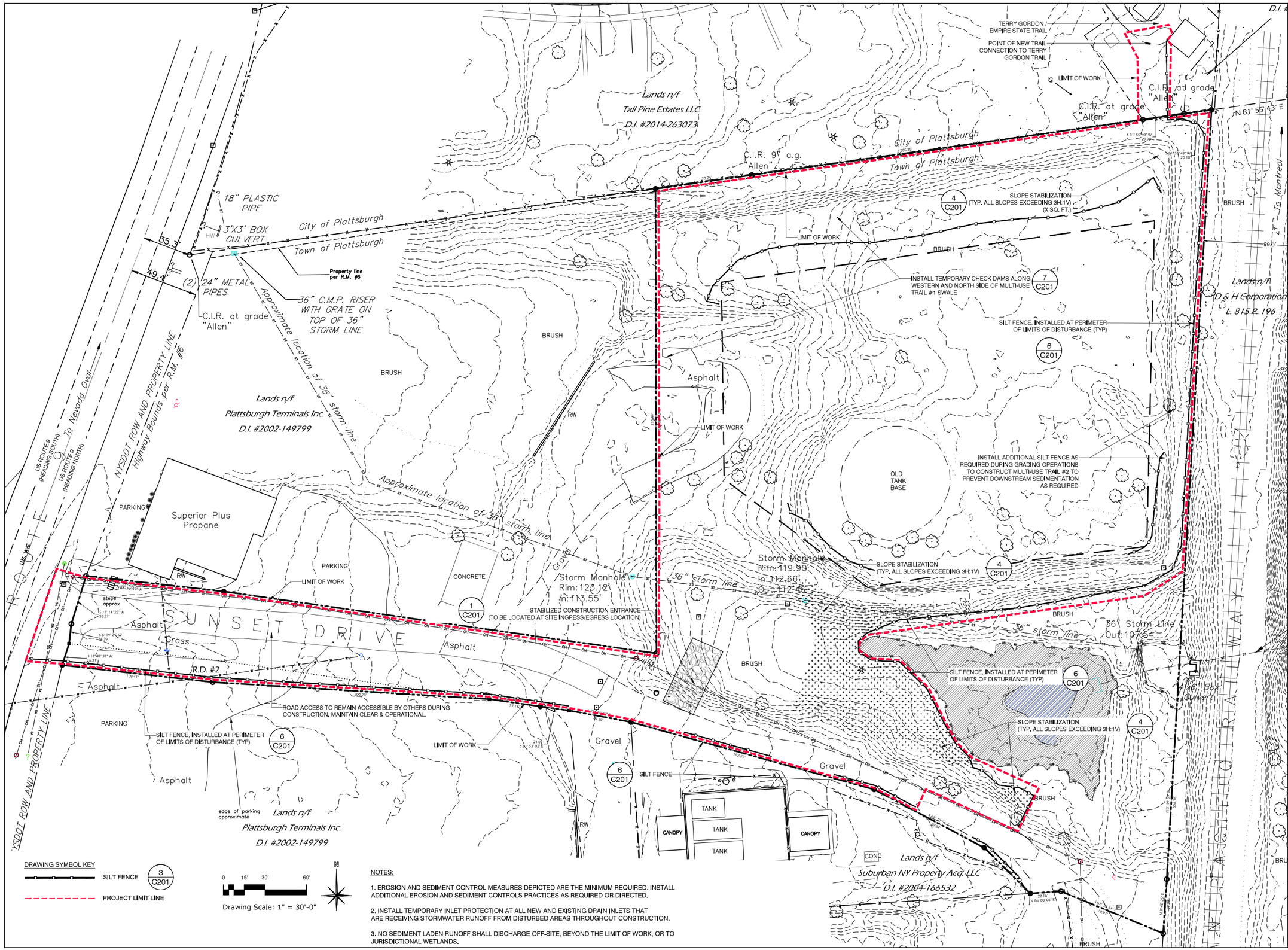
Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	, .
DATE	FEBRUARY 7, 2023
DRAWN BY:	- MEW
CHECKED BY:	- JET
FILE:	-
JOB. NO.:	- 20-015.8

DRAWING NO.:

C101

Revision No.



NOTES:

1. EROSION AND SEDIMENT CONTROL MEASURES DEPICTED ARE THE MINIMUM REQUIRED. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROLS PRACTICES AS REQUIRED OR DIRECTED.

2. INSTALL TEMPORARY INLET PROTECTION AT ALL NEW AND EXISTING DRAIN INLETS THAT ARE RECEIVING STORMWATER RUNOFF FROM DISTURBED AREAS THROUGHOUT CONSTRUCTION.

3. NO SEDIMENT LADEN RUNOFF SHALL DISCHARGE OFF-SITE, BEYOND THE LIMIT OF WORK, OR TO JURISDICTIONAL WETLANDS.

Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund.

NYS DOS Contract No. C1000931

Professional Stamp

REGISTERED LANDSCAPE ARCHITECT JERE TATICH 001802 STATE OF NEW YORK

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

EROSION & SEDIMENT CONTROL PLAN

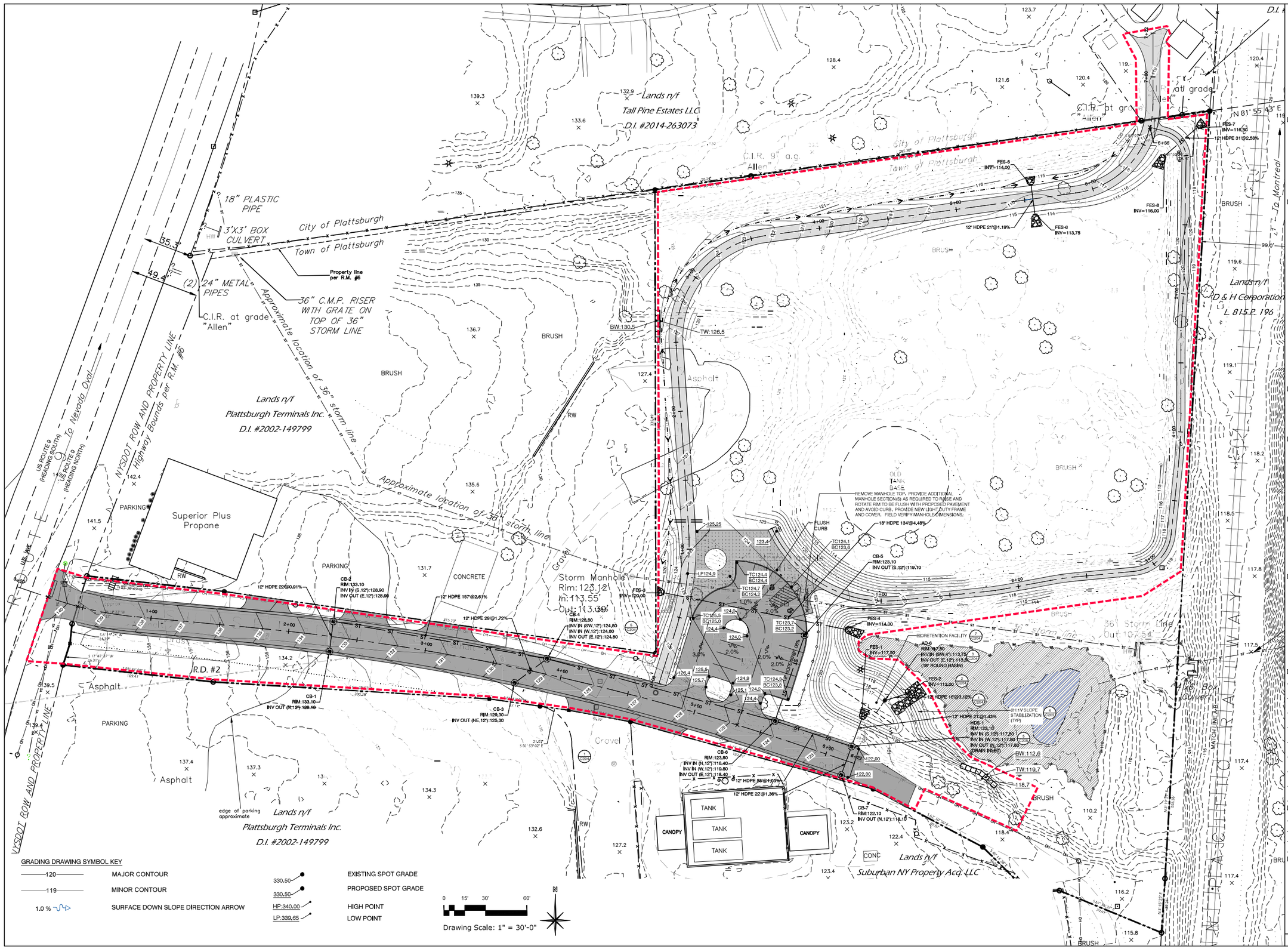
Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	- -
DATE	FEBRUARY 7, 2023
DRAWN BY:	- MEW
CHECKED BY:	- JET
FILE:	-
JOB. NO.:	- 20-015.8

DRAWING NO.:

C111

Revision No.



Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund.

NYS DOS Contract No. C1000951

Professional Stamp

REGISTERED LANDSCAPE ARCHITECT JERE TATICH STATE OF NEW YORK 001802

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work, Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

GRADING & DRAINAGE PLAN

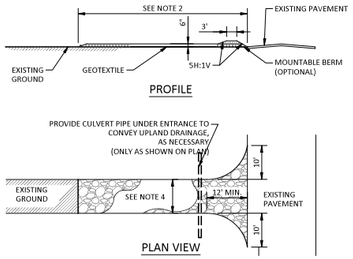
Drawing Log:

Rev. 05 DATE	-
Rev. 04 DATE	-
Rev. 03 DATE	-
Rev. 02 DATE	-
Rev. 01 DATE	-
Rev. 02 DATE	-
Rev. 01 DATE	-
DATE	FEBRUARY 7, 2023
DRAWN BY:	MEW
CHECKED BY:	JET
FILE:	-
JOB. NO.:	20-015.8

DRAWING NO.:

C141

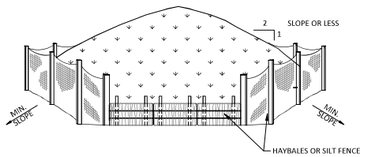
Revision No.



CONSTRUCTION ENTRANCE SPECIFICATIONS:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' 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) FEET IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. (GEOTEXTILE NOT REQUIRED ON SINGLE-FAMILY RESIDENCE LOTS.)
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN 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.

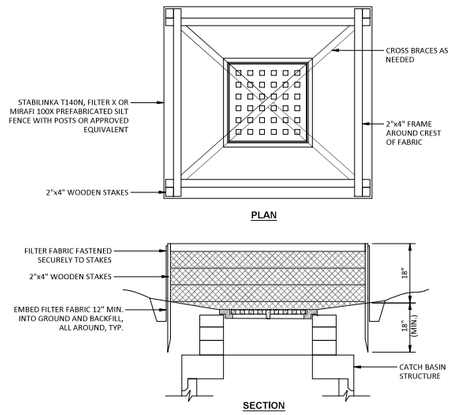
1 STABILIZED CONSTRUCTION ENTRANCE DETAIL
SCALE: N.T.S.



INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE AND HAYBALES.

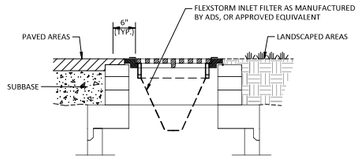
2 TEMPORARY SOIL STOCKPILE DETAIL
SCALE: N.T.S.



OUT OF PAVEMENT

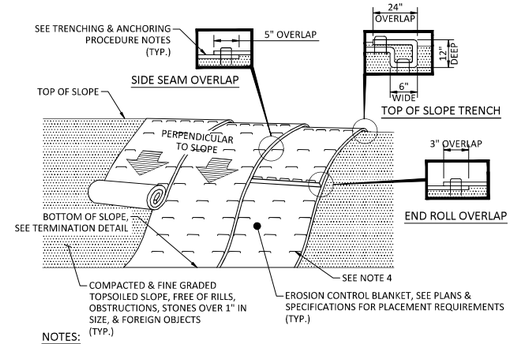
NOTES:

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85.
2. CUT FABRIC FROM CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED, OVERLAP TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x4" WOOD OR EQUIVALENT, WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE MINIMUM 18" DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2"x4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.
7. MAXIMUM DRAINAGE AREA IS 1 ACRE.
8. INLET PROTECTION SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN STABILIZED.
9. CLEAN AND DISPOSE OF ACCUMULATED SEDIMENTS AFTER EACH RAIN EVENT.
10. REMOVE AND REPLACE AOBE.



IN PAVEMENT

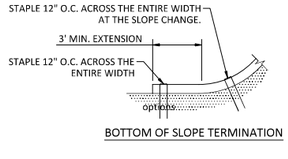
3 TEMPORARY INLET PROTECTION
SCALE: N.T.S.



NOTES:

1. PREPARE THE TOPSOIL (SEEDBED) FIRST BY RAKING, SHAPING, FINE GRADING, COMPACTING, SEEDING & FERTILIZING THE SLOPES.
2. USE THE TRENCHING & ANCHORING PROCEDURES DETAILED HEREIN TO SECURE ANY EXPOSED MATERIAL ENDS. SECURE ALL PRODUCT OVERLAPS. OVERLAP IN THE DIRECTION OF WATER FLOW, PERPENDICULAR TO THE SLOPE.
3. KEEP EROSION CONTROL BLANKET IN SOLID CONTACT WITH THE TOPSOIL.
4. USE THE REQUIRED NUMBER OF STAPLES/STAKES TO SECURELY FASTEN THE EROSION CONTROL BLANKET TO THE SLOPE. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES/STAKES LENGTHS GREATER THAN 6" MAYBE NECESSARY FOR PROPER SECURING. STAPLE PATTERNS & OVERLAPS ARE DEPENDENT ON SITE CONDITIONS & MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL CONSULT WITH MANUFACTURER FOR ACTUAL SITE SPECIFIC REQUIREMENTS.
5. PROVIDE EROSION CONTROL BLANKET ON ALL SLOPES GREATER THAN 3:1.

4 SLOPE STABILIZATION (EROSION CONTROL BLANKET INSTALLATION) DETAIL
SCALE: N.T.S.

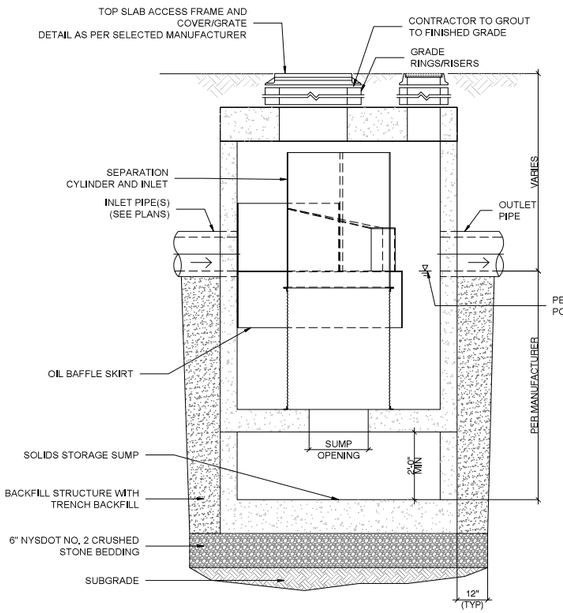


TRENCHING AND ANCHORING PROCEDURE NOTES:

SIDE SEAM OVERLAP:
THE EDGES OF PARALLEL BLANKETS SHALL BE STAPLED WITH A 5" OVERLAP.

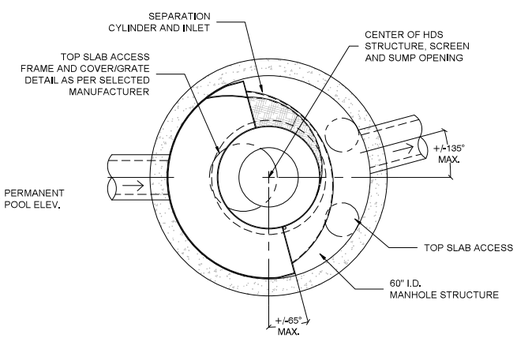
TOP OF SLOPE TRENCH:
BEGIN AT THE TOP OF SLOPE BY ANCHORING THE EROSION CONTROL BLANKET IN A 6"D x 6"W TRENCH WITH A 12" OVERLAP EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR WITH A ROW OF STAPLES/STAKES 12" O.C. IN THE BOTTOM OF THE TRENCH. BACKFILL & COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL & FOLD THE REMAINING 12" PORTION OF THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL. SECURE THE EROSION CONTROL BLANKET OVER THE COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED 12" O.C. ACROSS THE ENTIRE WIDTH.

END ROLL OVERLAP:
CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE SHALL BE PLACED END OVER END SHINGLE-STYLE) WITH A 3" OVERLAP. STAPLE THRU OVERLAPPED AREAS, 12" APART ACROSS THE ENTIRE WIDTH.



ELEVATION A-A
N.T.S.

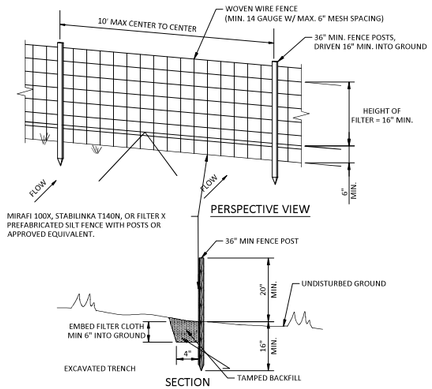
5 HYDRODYNAMIC SEPARATOR (HDS-1)
SCALE: N.T.S.



PLAN VIEW B-B
N.T.S.

NOTES:

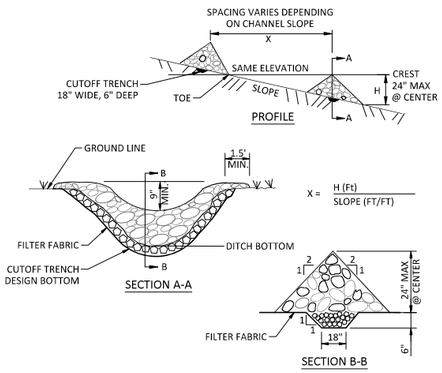
1. SEE SITE PLANS FOR LOCATION, QUANTITY, SIZE, MATERIAL, INVERT, AND ANGLE FOR ALL INLET AND OUTLET PIPES.
2. INSTALL HYDRODYNAMIC SEPARATOR IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
3. INSTALL WITH SOLID COVER OR INLET GRATE AS SHOWN ON PLAN. PROVIDE ADEQUATE GRADE RINGS OR GRADE ADJUSTMENT AS REQUIRED FOR INSTALLATIONS ADJACENT TO CURBS.



CONSTRUCTION SPECIFICATIONS:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12½ GAUGE, 6" MAX MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVE EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

6 SILT FENCE INSTALLATION DETAIL
SCALE: N.T.S.



CONSTRUCTION SPECIFICATIONS:

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

7 CHECK DAM INSTALLATION DETAIL
SCALE: N.T.S.

Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund

NYS DOS Contract No. C1000991

Professional Stamp

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

EROSION CONTROL DETAILS

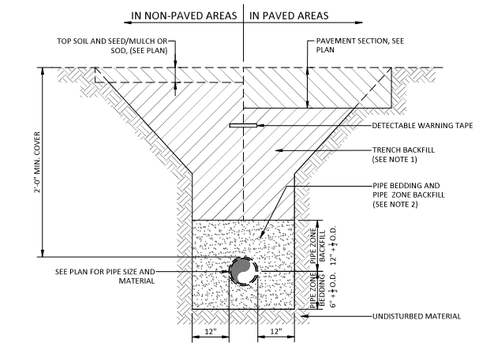
Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	- -
DATE	FEBRUARY 7, 2023
DRAWN BY:	- MEW
CHECKED BY:	- JET
FILE:	-
JOB. NO.:	- 20-015.8

DRAWING NO.:

C201

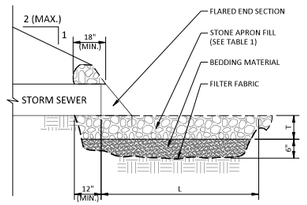
Revision No.



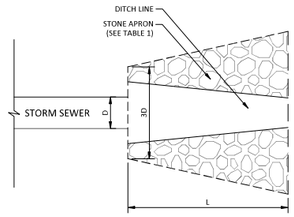
NOTES:

1. TRENCH BACKFILL IN NON-TRAFFIC, UNPAVED AREAS MAY UTILIZE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER.
2. PIPE BEDDING, PIPE ZONE BACKFILL, AND TRENCH BACKFILL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.
3. CONTINUOUS DETECTABLE MARKING TAPE SHALL BE INSTALLED DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

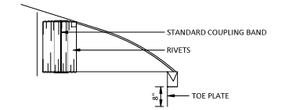
1 STORM SEWER PIPE TRENCH DETAIL
SCALE: N.T.S.



APRON SECTION



APRON PLAN



FLARED END SECTION

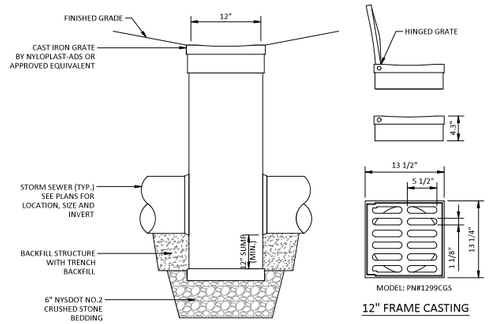
TABLE 1
STONE APRON SIZING REQUIREMENTS

CULVERT DIA., D (IN)	CULVERT SLOPE (%)	NYSDOT STANDARD STONE FILLING APRON MATERIAL	MINIMUM APRON THICKNESS, T (IN)	MINIMUM APRON LENGTH, L (FT)
12	< 8	LIGHT	18	10

NOTES:

1. END SECTION SHALL BE FURNISHED WITH A GAGE EQUAL TO OR LARGER THAN THE GAGE OF THE PIPE BEING ATTACHED TO.
2. SKIRT SECTION FOR 12" THRU 24" DIAMETER PIPE SHALL BE MADE IN ONE PIECE.
3. TOE PLATE TO BE PUNCHED TO MATCH HOLE IN SKIRT LIP, 3/8" GALVANIZED BOLTS TO BE FURNISHED. LENGTH OF TOE PLATE = W +10 FOR 12" DIAMETER PIPE.
4. STONE APRON FILL SHALL MEET NYSDOT STANDARD SPECIFICATIONS SECTION 620.
5. STONE APRON BEDDING MATERIAL SHALL MEET NYSDOT STANDARD SPECIFICATIONS SECTION 620.
6. APRON DIMENSIONS SHOWN IN TABLE-1 ARE THE MINIMUM REQUIRED. WHEN APRON DIMENSIONS SHOWN ON PLAN EXCEED THOSE IN TABLE 1, THE DIMENSIONS SHOWN ON PLAN SHALL RULE.

2 FLARED END SECTION AND STONE LINED APRON DETAIL
SCALE: N.T.S.



DRAIN BASIN

NOTES:

1. SIZE OF BASIN TO MATCH LARGEST CONNECTED STORM PIPE, UNLESS OTHERWISE INDICATED.
2. FRAMES AND COVERS/GRATES SHALL BE PEDESTRIAN/ADA RATED IN NON-TRAFFIC AREAS AND HS20-44 RATED IN TRAFFIC AREAS. FRAMES AND COVERS/GRATES SHALL BE SELECTED FROM MANUFACTURER'S STANDARD LIST MATCHING DRAIN BASIN DIMENSIONS.
3. FRAMES AND GRATES SHALL BE DUCTILE IRON A536 GRADE 70-50-05.
4. CASTINGS PAINT: BLACK

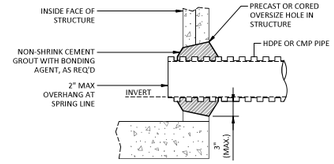
3 PVC DRAIN BASIN
SCALE: N.T.S.

MODEL: PN#1299CGS

12" FRAME CASTING

MODEL: PN#1899CGS

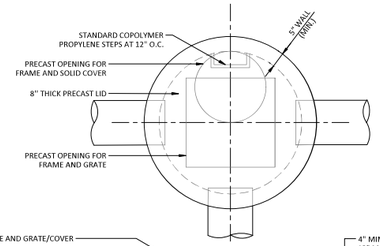
18" FRAME CASTING

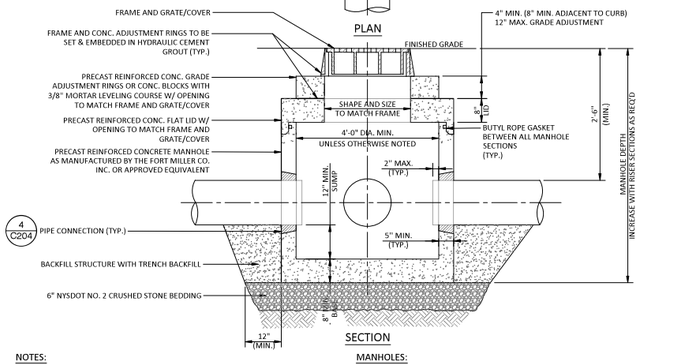


NOTES:

1. MAINTAIN MINIMUM SUMP FOR CONNECTIONS TO NEW STORM STRUCTURES.

CEMENT GROUT STORM PIPE CONNECTION TO DRAINAGE STRUCTURE
SCALE: N.T.S.





NOTES:

1. POLYPROPYLENE STEPS ARE REQUIRED WHEN TOP OF FRAME TO BOTTOM FLOOR EXCEEDS 4'-0". DEPTH FROM TOP OF FRAME TO FIRST STEP SHALL BE 24" MAX.
2. ALL PRECAST CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASTM C478.
3. PRECAST LID AND MANHOLE TO BE DESIGNED FOR AASHTO HS20-44 TRUCK LOADING AND 25% IMPACT.
4. CATCH BASINS INSTALLED AT CURBS SHALL HAVE FRAME/GRATE SET ADJACENT TO CURB LINE, WITH OPENINGS ORIENTED PERPENDICULAR TO FLOW. PROVIDE ADDITIONAL GRADE ADJUSTMENT AS REQUIRED TO INSTALL CURB.
5. ADD MANHOLE SECTIONS AS REQUIRED TO ATTAIN DIMENSIONS INDICATED ON PLAN.
6. MANHOLE FRAME AND COVER AND CATCH BASIN FRAME AND GRATE SHALL BE DESIGNED FOR AASHTO HS20-44 TRUCK LOADING AND 25% IMPACT.
7. PRECAST CONCRETE LID CLEAR OPENING MUST MATCH FRAME CLEAR OPENING DIMENSION.
8. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.

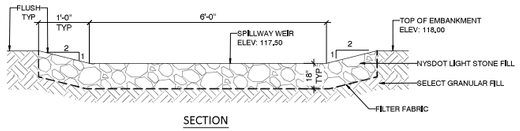
MANHOLES:

1. 30" DIAMETER MANHOLE FRAME AND COVER NO. R-2558 AS MANUFACTURED BY NEENAH FOUNDRY OR APPROVED EQUIVALENT. COVER MUST BE CLEARLY LABELED "STORM SEWER."
2. LOCATE MANHOLE COVER DIRECTLY OVER MANHOLE STEPS.
3. ECCENTRIC CONE TOP CAN BE USED FOR MANHOLES WITH DEPTH GREATER THAN 7'-0".

CATCH BASINS:

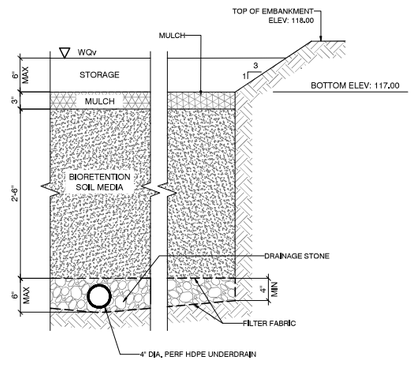
1. 24" SQUARE CATCH BASIN FRAME AND GRATE NO. V-5726 AS MANUFACTURED BY EJ GROUP, INC. OR APPROVED EQUIVALENT.
2. 30" SQUARE CATCH BASIN FRAME AND GRATE (WHERE SHOWN ON PLAN) NO. 00541911 / 00541931 AS MANUFACTURED BY EJ GROUP, INC. OR APPROVED EQUIVALENT.
3. FRAME AND GRATES LOCATED WITHIN PEDESTRIAN WALKING PATHS SHALL BE ADA COMPLIANT, NO. V-5726-80 AS MANUFACTURED BY EJ GROUP, INC. OR APPROVED EQUIVALENT.
4. OPENING FOR FRAME AND GRATE IN CENTER OF PRECAST LID UNLESS OTHERWISE INDICATED.

5 PRECAST CONCRETE CATCH BASIN/MANHOLE DETAIL
SCALE: N.T.S.



SECTION

6 BIORETENTION SPILLWAY WEIR
SCALE: N.T.S.



NOTES:

1. BIORETENTION SOIL MEDIA SPECIFICATION:

SOIL SHALL BE A SANDY LOAM CONSISTING OF THE FOLLOWING (BY VOLUME):

- SAND: 35% - 60%
- SILT: 30% - 55%
- CLAY: 10% - 25%
- ORGANIC MATTER: 1,5% - 4,0%
- pH RANGE: 5,2 TO 7,0

PERMEABILITY SHALL BE 1,0 INCHES PER HOUR (MINIMUM).

SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1 INCH IN DIAMETER

2. MULCH SHALL BE DOUBLE SHREDDED HARDWOOD MULCH, UNIFORM COLOR.
3. CONCEAL OVERFLOW STRUCTURE WITHIN PRACTICE SIDE SLOPES OR BY PLACING ADDITIONAL MULCH TO 1" BELOW RIM.
4. INSTALL MANUFACTURER'S STANDARD DOME GRATE TOP SIZED TO FIT OVERFLOW STRUCTURE.

BIORETENTION PLANTING LEGEND

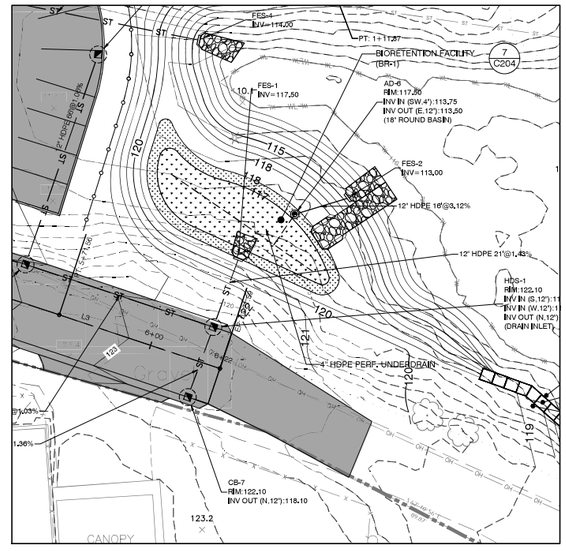
LOW ZONE

MIDDLE ZONE

BIORETENTION PLANTING SCHEDULE

ZONE	AREA (SF)	BOTANICAL NAME	COMMON NAME	ROOT	SPACING	RATIO	AREA (SF)	QUANTITY	REMARKS
LOW	875	PELTANDRA VIRGINICA	ARROW ARUM	2" PLUG	3'-0" O.C.	35%	306	34	RANDOMLY DISTRIBUTE THROUGHOUT AREA
		PONTEDERIA CORDATA	PICKERELWEED	2" PLUG	3'-0" O.C.	35%	306	34	RANDOMLY DISTRIBUTE THROUGHOUT AREA
		SAGITTARIA LATIFOLIA	DUCK POTATO	QUART POT	3'-0" O.C.	30%	262	29	RANDOMLY DISTRIBUTE THROUGHOUT AREA
MIDDLE	470	PYRUS ARBUTIFOLIA	RED CHOKE BERRY	1 GAL	8'-0" O.C.	50%	235	4	VARY AND BALANCE AROUND PERIMETER
		ROSA PALUSTRUS	SPECKLED ALDER	1 GAL	10'-0" O.C.	50%	235	3	VARY AND BALANCE AROUND PERIMETER

7 BIORETENTION TYPICAL SECTION
SCALE: N.T.S.



PLAN (1" = 20')

Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund

NYS DOS Contract No. C1000991

Professional Stamp

REGISTERED LANDSCAPE ARCHITECT JERE E. TATICH 001805 STATE OF NEW YORK

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

STORMWATER DETAILS

Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	- -
DATE	FEBRUARY 7, 2023
DRAWN BY:	- MEW
CHECKED BY:	- JET
FILE:	-
JOB. NO.:	- 20-015.8

DRAWING NO.:

C204

Revision No.

APPENDIX D

ON-SITE SOIL DATA AND ENVIRONMENTAL MAPPING/ CORRESPONDENCE

Hydrologic Soil Group—Clinton County, New York
(20-015.8_Plattsburgh Park_HSG Soil Survey)

Map Scale: 1:1,740 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Clinton County, New York
Survey Area Data: Version 22, Sep 1, 2021

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

Date(s) aerial images were photographed: Jun 18, 2020—Jun 20, 2020

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cs	Covert loamy sand	B	0.4	6.6%
GrB	Grattan loamy sand, 3 to 8 percent slopes	A	0.0	0.2%
Uh	Udorthents, wet substratum	B	5.9	93.2%
Totals for Area of Interest			**6.3**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Environmental Resource Mapper

The coordinates of the point you clicked on are:

UTM 18	**Easting:**	623387.716977788	**Northing:**	4947675.8521673335
Longitude/Latitude	**Longitude:**	-73.44333398519781	**Latitude:**	44.67185130534484

The approximate address of the point you clicked on is:
1-49 Sunset Dr, Plattsburgh, New York, 12901

County: Clinton
Town: Plattsburgh
USGS Quad: PLATTSBURGH

Rare Plants and Rare Animals

This location is in the vicinity of Common Loon – Listed as Special Concern by NYS

This location is in the vicinity of Plants Listed as Endangered, Threatened, or Rare by NYS

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Stormwater Interactive Map

The coordinates of the point you clicked on are:

UTM 18	**Easting:**	623406.160	**Northing:**	4947681.616
Longitude/Latitude	**Longitude:**	-73.443	**Latitude:**	44.672

The approximate address of the point you clicked on is:
Town of Plattsburgh, New York

County: Clinton
Town: Plattsburgh
USGS Quad: PLATTSBURGH

DEC Administrative Boundaries

Region 5:
(Eastern Adirondacks/Lake Champlain) Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington counties. For more information visit http://www.dec.ny.gov/about/631.html.

303D Lake Construction

PWL ID: undefined
Name: undefined
Waterbody: undefined
Description: undefined
Type: undefined

EAF Mapper Summary Report

Wednesday, October 19, 2022 4:21 PM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	Remediaton Sites:510003
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Yes - Digital mapping data for Spills Incidents are not available for this location. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Yes
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Yes
E.1.h.i [DEC Spills or Remediation Site - DEC ID Number]	510003
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	510003
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	830-195
E.2.h.iv [Surface Water Features - Stream Classification]	D
E.2.h.iv [Surface Water Features - Lake/Pond Name]	830-5

E.2.h.iv [Surface Water Features - Lake/Pond Classification]	A
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Lake Champlain, Main Lake, Middle – Nutrients;Priority Organics;Metals – Fish Consumption
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	Yes
E.2.p. [Rare Plants or Animals - Name]	Common Loon
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Plattsburgh Bay
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

U.S. Fish and Wildlife Service
National Wetlands Inventory

20-015.8_Plattsburgh Mem. Gateway Park

December 22, 2022

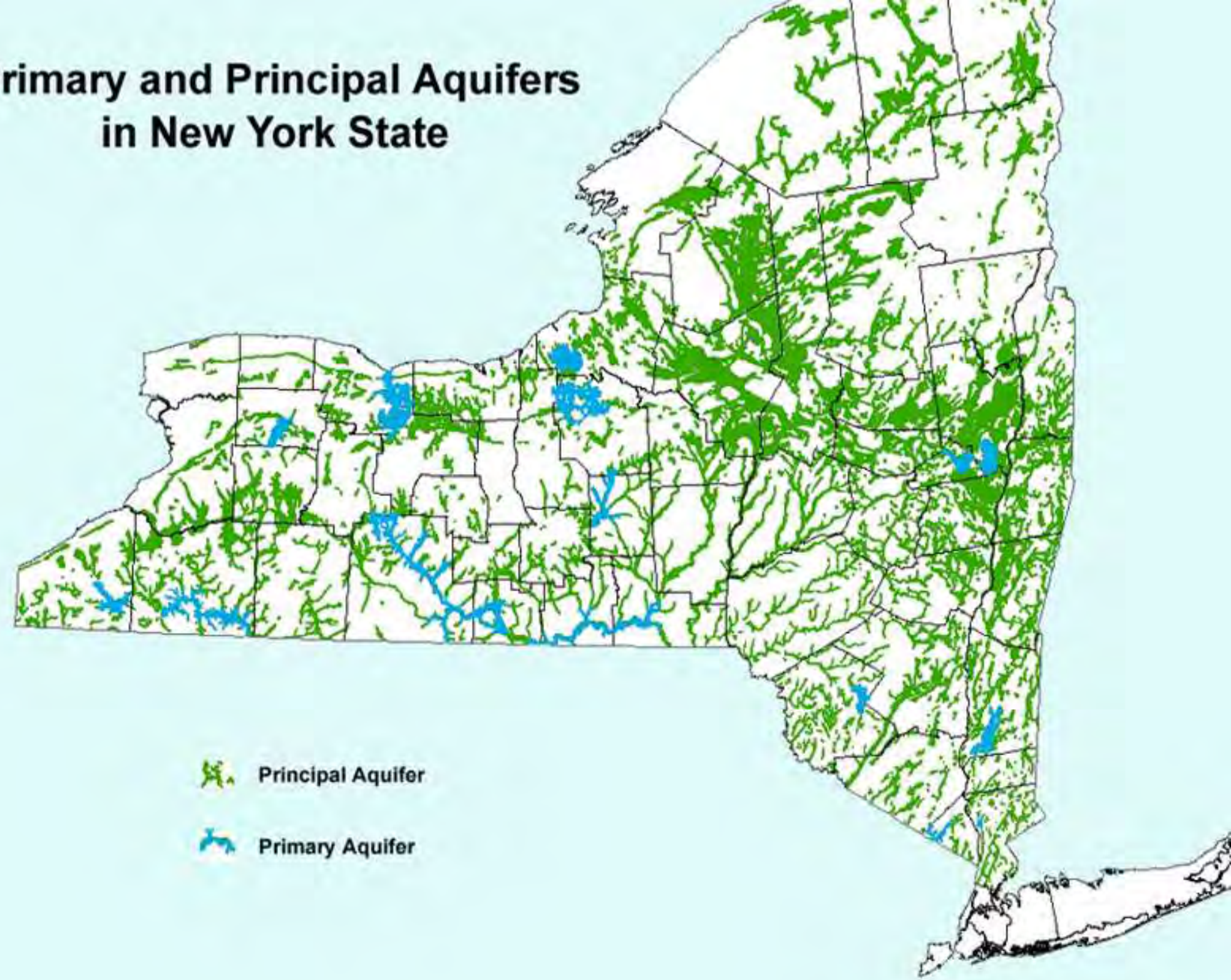
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.


Primary Aquifers in New York State
Fulton
Tonawanda
Ironodgenesee
Baldwinsville
Schenectady
Clifton Park
U. Cohocton
Cortland
Salamanca
L. Cohocton
Elmira
Endicott
Jamestown
Corning
Olean
Waverly
Owego
Woodbourne
Fishkill
Ramapo
Croton
Primary Aquifer
DOW

Primary and Principal Aquifers in New York State



NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 17, 2019

Mr. Trevor Cole
Sr. Planner
151 Banker Road
Plattsburgh, NY 12901

Re: DEC
Battlefields Memorial Gateway (Phase I)
Plattsburgh, Clinton County, NY
19PR06882

Dear Mr. Cole:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential impacts that must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We have reviewed your submission for the Battlefields Memorial Gateway (Phase I) project. We note that the project is located partially within Plattsburgh Bay, which is listed in the State and National Registers of Historic Places and is a National Historic Landmark (NHL). NHLs are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. The fueling dolphins associated with the former Plattsburgh Airforce Base are non-contributing resources within the NHL district.

Based on this review, it is the opinion of the SHPO that the proposed project will have No Adverse Impact to historic and cultural resources.

If you have any questions, I can be reached at (518) 268-2164.

Sincerely,

Weston Davey
Historic Site Restoration Coordinator
weston.davey@parks.ny.gov

via e-mail only

APPENDIX E

NOTICE OF INTENT
ACKNOWLEDGEMENT OF NOTICE OF INTENT
NOTICE OF TERMINATION

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.35

(Submission #: HPN-HWRQ-0YJM5, version 1)

Details

Originally Started By	Wade Newman
Alternate Identifier	Town of Plattsburgh Battlefield Memorial Gateway Park - Site Development Phase 1
Submission ID	HPN-HWRQ-0YJM5
Submission Reason	New
Status	Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
Town of Plattsburgh

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

Owner/Operator Contact Person First Name
Trevor

Owner/Operator Mailing Address
151 Banker Road

City
Plattsburgh

State
NY

Zip
12901

Phone
518-562-6853

Email
trevorc@townofplattsburgh.org

Federal Tax ID
14-6002377

Project Location

Project/Site Name
Town of Plattsburgh Battlefield Memorial Gateway Park - Site Development Phase 1

Street Address (Not P.O. Box)
Sunset Drive

Side of Street
North

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Town of Plattsburgh

State
NY

Zip
12901

DEC Region
5

County
CLINTON

Name of Nearest Cross Street
NYS Route 9

Distance to Nearest Cross Street (Feet)
450

Project In Relation to Cross Street
East

Tax Map Numbers Section-Block-Parcel
233.-1-32.2

Tax Map Numbers
NONE PROVIDED

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are:
- Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.
- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates
44.671387987119935,-73.44394590651794

Project Details

2. What is the nature of this project?
Redevelopment with increase in impervious area

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

Pre-Development Existing Landuse
Other: Vacant Land, Historically Industrial use

Post-Development Future Land Use
Other: Park, Trails

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots.
NONE PROVIDED

---

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area.

*** ROUND TO THE NEAREST TENTH OF AN ACRE. ***

Total Site Area (acres)
4.9

Total Area to be Disturbed (acres)
2.1

Existing Impervious Area to be Disturbed (acres)
0.4

Future Impervious Area Within Disturbed Area (acres)
0.8

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

---

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

A (%)
0

B (%)
100

C (%)
0

D (%)
0

7. Is this a phased project?
No

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

Start Date
04/01/2023

End Date
11/30/2023

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

9a. Type of waterbody identified in question 9?
Lake Off Site

Other Waterbody Type Off Site Description
NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified?
NONE PROVIDED

10. Has the surface waterbody(ies in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001?
Yes

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?
No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?
Yes

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as D (provided the map unit name is inclusive of slopes greater than 25%), E or F on the USDA Soil Survey?
No

If Yes, what is the acreage to be disturbed?
NONE PROVIDED

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

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
Yes

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

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

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

19. Is this property owned by a state authority, state agency, federal government or local government?
Yes

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

Required SWPPP Components

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)?
Yes

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?
Yes

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Registered Landscape Architect (R.L.A)

SWPPP Preparer
Elan Planning, Landscape Architecture and Engineering, DPC

Contact Name (Last, Space, First)
Tatich Jere

Mailing Address
18 Division Street, Suite 304

City
Saratoga Springs

State
NY

Zip
12866

Phone
518-306-3702

Email
jtatich@elanpd.com

Download SWPPP Preparer Certification Form
Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form

2) The certified SWPPP preparer should sign this form
3) Scan the signed form
4) Upload the scanned document
Download SWPPP Preparer Certification Form

Please upload the SWPPP Preparer Certification

> NONE PROVIDED
> **Comment**
> NONE PROVIDED

Erosion & Sediment Control Criteria

25. Has a construction sequence schedule for the planned management practices been prepared?
Yes

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

Temporary Structural
Check Dams
Silt Fence
Stabilized Construction Entrance
Storm Drain Inlet Protection
Dust Control
Construction Road Stabilization

Biotechnical
None

Vegetative Measures
Mulching
Protecting Vegetation
Seeding
Temporary Swale
Topsoiling

Permanent Structural
Land Grading
Retaining Wall
Rock Outlet Protection

Other
NONE PROVIDED

Post-Construction Criteria

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

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
Preservation of Undisturbed Area
Preservation of Buffers
Reduction of Clearing and Grading
Locating Development in Less Sensitive Areas
Roadway Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).
All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet)
0.039

29. Post-construction SMP Identification
Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity that were used to reduce the Total WQv Required (#28).

Identify the SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use the Post-Construction SMP Identification section to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet)
0.039

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

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

32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P) (0.95) (Ai) / 12, Ai=(s) (Aic)] (acre-feet)
NONE PROVIDED

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?
NONE PROVIDED

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

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

33. SMPs
Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question #29. (acre-feet)
NONE PROVIDED

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

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).
NONE PROVIDED

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)?
NONE PROVIDED

If Yes, go to question 36.

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

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

CPv Required (acre-feet)
0.156

CPv Provided (acre-feet)
0.156

36a. The need to provide channel protection has been waived because:
NONE PROVIDED

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

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)
6.02

Post-Development (CFS)
5.63

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)
14.29

Post-Development (CFS)
12.66

37a. The need to meet the Qp and Qf criteria has been waived because:
NONE PROVIDED

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

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

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). (See question #32a) This space can also be used for other pertinent project information.
NONE PROVIDED

Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs
Identify the Post-construction SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

RR Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1)
NONE PROVIDED

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1)
NONE PROVIDED

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
NONE PROVIDED

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
NONE PROVIDED

Total Contributing Acres for Tree Planting/Tree Pit (RR-3)
NONE PROVIDED

Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3)
NONE PROVIDED

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4)
NONE PROVIDED

RR Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4)
NONE PROVIDED

Total Contributing Impervious Acres for Vegetated Swale (RR-5)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Garden (RR-6)
NONE PROVIDED

Total Contributing Impervious Acres for Stormwater Planter (RR-7)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)
NONE PROVIDED

Total Contributing Impervious Acres for Porous Pavement (RR-9)
NONE PROVIDED

Total Contributing Impervious Acres for Green Roof (RR-10)
NONE PROVIDED

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1)
NONE PROVIDED

Total Contributing Impervious Acres for Infiltration Basin (I-2)
NONE PROVIDED

Total Contributing Impervious Acres for Dry Well (I-3)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Infiltration System (I-4)
NONE PROVIDED

Total Contributing Impervious Acres for Bioretention (F-5)
1.103

Total Contributing Impervious Acres for Dry Swale (O-1)
NONE PROVIDED

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Extended Detention (P-3)
NONE PROVIDED

Total Contributing Impervious Acres for Multiple Pond System (P-4)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Pond (P-5)
NONE PROVIDED

Total Contributing Impervious Acres for Surface Sand Filter (F-1)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Sand Filter (F-2)
NONE PROVIDED

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3)
NONE PROVIDED

Total Contributing Impervious Acres for Organic Filter (F-4)
NONE PROVIDED

Total Contributing Impervious Acres for Shallow Wetland (W-1)
NONE PROVIDED

Total Contributing Impervious Acres for Extended Detention Wetland (W-2)
NONE PROVIDED

Total Contributing Impervious Acres for Pond/Wetland System (W-3)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Wetland (W-4)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Swale (O-2)
NONE PROVIDED

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

Total Contributing Impervious Area for Hydrodynamic
NONE PROVIDED

Total Contributing Impervious Area for Wet Vault
NONE PROVIDED

Total Contributing Impervious Area for Media Filter
NONE PROVIDED

"Other" Alternative SMP?
NONE PROVIDED

Total Contributing Impervious Area for "Other"
NONE PROVIDED

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

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

Manufacturer of Alternative SMP
NONE PROVIDED

Name of Alternative SMP
NONE PROVIDED

Other Permits

40. Identify other DEC permits, existing and new, that are required for this project/facility.
None

If SPDES Multi-Sector GP, then give permit ID
NONE PROVIDED

If Other, then identify
NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit?
No

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth
NONE PROVIDED

42. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.
NONE PROVIDED

MS4 SWPPP Acceptance

43. Is this project subject to the requirements of a regulated, traditional land use control MS4?
No

If No, skip question 44

44. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?
NONE PROVIDED

MS4 SWPPP Acceptance Form Download
Download form from the link below. Complete, sign, and upload.
MS4 SWPPP Acceptance Form

MS4 Acceptance Form Upload
> NONE PROVIDED
> **Comment**
> NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download
Download the certification form by clicking the link below. Complete, sign, scan, and upload the form.

Owner/Operator Certification Form (PDF, 45KB)

Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Town of Plattsburgh Battlefield Memorial Gateway Park Site Development - Phase 1

eNOI Submission Number: HPN-HWRQ-0YJM5

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☑ **Other**

Certification Statement - Owner/Operator

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

Trevor — Owner/Operator First Name

R — M.I.

Cole, Town of Plattsburgh — Last Name

Signature

2/10/2023

Date

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Town of Plattsburgh Battlefield Memorial Gateway Park - Site Development Phase 1

Owner/Operator Information

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

Town of Plattsburgh

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Jere		Tatich
First name	MI	Last Name

Signature

2/8/2023

Date

Revised: January 2020

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

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

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

I. Owner or Operator Information

1. Owner/Operator Name: Town of Plattsburgh

2. Street Address: 151 Banker Road

3. City/State/Zip: Plattsburgh / NY / 12901

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name: Battlefield Memorial Gateway Park Site Development - Phase 1

6. Street Address: Sunset Drive

7. City/Zip: Plattsburgh / NY / 12901

8. County: Clinton

III. Reason for Termination

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

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

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

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

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

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

_____

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

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

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

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

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

□ For post-construction stormwater management practices that are privately owned, a mechanism is 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.

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

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

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

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

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

Printed Name:	
Title/Position:	
Signature:	Date:

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

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

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

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX F

NYSDEC SPDES GENERAL PERMIT (GP-0-20-001)

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

Authorized Signature 1-23-20 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 *Discharge*s.** The following *discharge*s are prohibited:

   (i) Wastewater from washout of concrete;

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

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

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

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

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

C. Post-construction Stormwater Management Practice Requirements

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

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

   a. Sizing Criteria for New Development

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

   (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site 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 not subject to the requirements of a *regulated, traditional land use control MS4*:

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

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

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

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

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

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

4. 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 standard*s, 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 <u>not</u> located in one of the watersheds listed in Appendix C or <u>not</u> *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 <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> 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

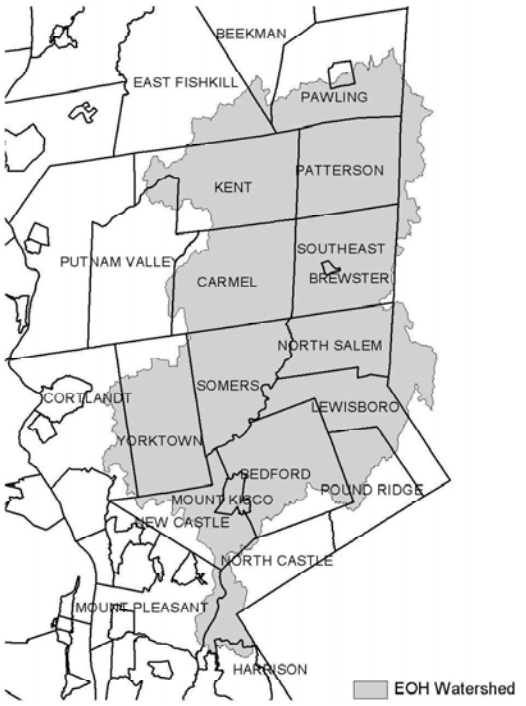


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

Figure 4 - Oscawana Lake Watershed

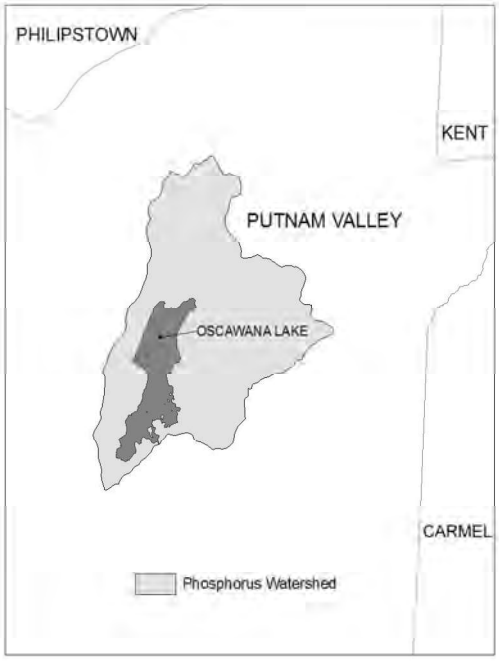
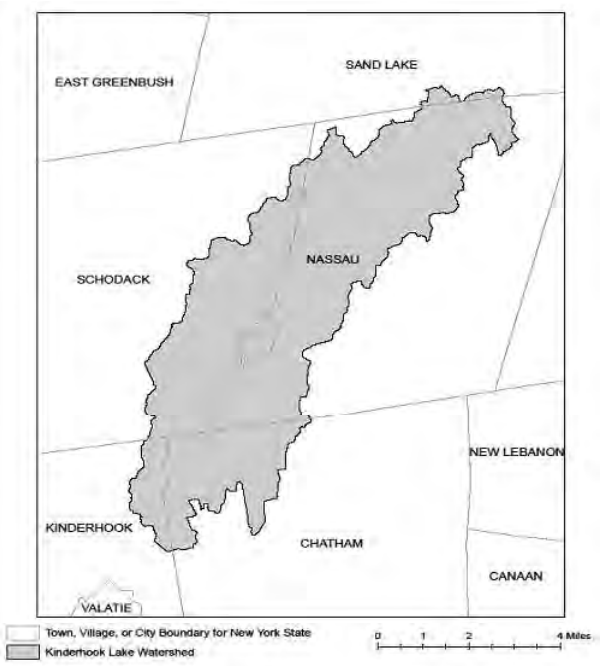


Figure 5 - Kinderhook Lake Watershed



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 G

SAMPLE INSPECTION REPORT
NOTICE TO REDUCE FREQUENCY OF SPDES SITE INSPECTIONS
NOTICE TO DISTURB GREATER THAN FIVE (5) ACRES OF SOIL

STORMWATER POLLUTION PREVENTION PLAN
INSPECTION REPORT

In accordance with the requirements of the NYSDEC SPDES General Permit for Construction Activities, GP-0-20-001, a Qualified Inspector shall prepare an inspection report subsequent to each and every inspection. All sections of this report are to be completed, and the report maintained in the SWPPP file on-site.

1. INSPECTION INFORMATION:

Inspection Number:_____

Date of Inspection_____ Time:_____

Weather Conditions:_____ Soil Conditions:_____

Qualified Inspector:_____ Title:_____

Signature:_____ **Date:**_____

2. COMPLIANCE SUMMARY AT TIME OF INSPECTION:

Was Project in Compliance? ☐ Yes

☐ No

Summarize the current status of the Project, including phase of construction, identification of any deficiencies in the pollution preventions measures employed, condition of all discharge points, and list any violations requiring immediate action.

Inspection Number:_____

3. MAINTAINING WATER QUALITY AND HOUSEKEEPING:

	YES	NO	N/A	
MAINTAINING WATER QUALITY				Confirmed there is no increase in turbidity causing a substantial visible contrast to natural conditions?
				Confirmed there is no residue from oil and floating substances, visible oil film, or globules or grease?
				All disturbances are within the limits of the approved plans?
				Confirmed receiving water bodies have not been impacted by silt from project?
GENERAL SITE CONDITIONS				Is construction site litter and debris appropriately managed?
				Are the facilities and equipment necessary for the implementation of the SWPPP in working order and/or properly maintained?
				Confirmed construction is not impacting adjacent properties?
				Is dust adequately controlled?
TEMPORARY STREAM CROSSING				Maximum diameter pipes necessary to span creek without dredging are installed?
				Installed non-woven geotextile fabric beneath approaches?
				Is fill composed of aggregate (no earth or soil)?
				Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow?

Comments:_____

Inspection Number:_____

4. RUNOFF CONTROL PRACTICES:

	YES	NO	N/A	
EXCAVATION DEWATERING				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?
LEVEL SPREADER				Installed per Plan?
				Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow?
INTERCEPTOR DIKES/ SWALES				Installed per Plan?
				Stabilized by geotextile fabric, seed or mulch with no erosion evident?
				Sediment-laden runoff directed to sediment trapping structure?
STONE CHECK DAM				Is channel stable? No erosion underneath or around structure?
				Check dam is in good condition? Rocks in place, no permanent pools?
				Accumulated sediment removed?
ROCK OUTLET PROTECTION				Installed per Plan?
				Outlet protection in good condition? Rocks in place, fabric in place?
				Accumulated sediment removed?

Comments:_____

Inspection Number:_____

5. SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES:

	YES	NO	N/A	
TOPSOIL, STOCKPILES AND REVEGETATION				Stockpiles stabilized with vegetation and/or mulch?
				Sediment control barrier installed at toe of slopes?
				Temporary seedings and mulch have been applied to idle area(s)?
				Topsoil has been applied under permanent seedings?
				Mulch been applied?
STABILIZED CONST. ENTRANCE				Stone is clean enough to effectively remove mud from vehicles?
				Installed per Plan?
				All traffic using the entrance to enter and leave the site?
				Is there adequate drainage provided to prevent ponding at entrance?
SILT FENCE				Installed on contour?
				Installed per Plan?
				Posts are stable? Joints are wrapped? Fabric is tight without rips or fraying?
STORM DRAIN INLET PROTECTION				Installed per Plan?
				Are sediments being prevented from entering the drain inlet?
				Accumulated sediment removed?
				Are the practices being properly maintained?
TEMP. SEDIMENT TRAP/BASIN				Installed per Plan?
				Are sediments being prevented from entering the drain inlet?
				Accumulated sediment removed?
				Are the practices being properly maintained?

Comments:_____

_____

_____

Inspection Number:_____

6. SITE DISCHARGE POINTS:

DP ID	YES	NO	
			Is discharge clear, stable, and free of sediments and erosion?
			Is discharge clear, stable, and free of sediments and erosion?
			Is discharge clear, stable, and free of sediments and erosion?

Comments:_____

_____

_____

_____

_____

7. SITE PLAN SKETCH:

Prepare a sketch of the current condition of the Project. Draw the sketch in the space provided below, or attach additional sheet(s) as necessary.

STORMWATER POLLUTION PREVENTION PLAN
NOTICE TO REDUCE FREQUENCY OF SPDES SITE INSPECTIONS

Pursuant to Part IV(C)(2)(c) of the SPDES General Permit, GP-0-20-001, the Owner/Operator for this Project hereby certifies that work on this Project involving soil disturbance activities will be temporarily suspended and temporary stabilization measures have been applied to all disturbed areas.

A Qualified Inspector will conduct site inspections at least once every thirty (30) calendar days during this shutdown period. The standard inspection frequency will resume when soil disturbance activities recommence.

Project Name:_____

Project Location:_____

County:_____ NYSDEC Region:_____

SPDES NOI #:_____

Reason for Temporary Shutdown: ☐ Winter Shutdown

☐ Other:_____

_____

Anticipated date work will be suspended:_____

Anticipated date work will recommence:_____

OWNER/OPERATOR:

Company Name:_____

Company Address:_____

Telephone No.:_____ Email:_____

Name of Signatory:_____ Title of Signatory:_____

Signature:_____ **Date:**_____

Date Submitted to MS4:_____ **Date Submitted to NYSDEC:**_____

STORMWATER POLLUTION PREVENTION PLAN
NOTICE TO DISTURB GREATER THAN FIVE (5) ACRES OF SOIL

Pursuant to Part II(C)(3) of the SPDES General Permit, GP-0-20-001, the Owner/Operator for this Project hereby requests written authorization to disturb greater than five (5) acres of soil at one time.

Upon written authorization, a Qualified Inspector will conduct site inspections at least twice every seven (7) calendar days whenever more than five (5) acres of soil are disturbed at one time. Inspections during this time will be separated by a minimum of two (2) full calendar days.

Project Name:_____

Project Location:_____

County:_____ NYSDEC Region:_____

SPDES NOI #:_____

REASON FOR DISTURBING GREATER THAN FIVE (5) ACRES AT ONE TIME:

_____

_____

_____

_____

_____

_____

_____

_____

_____

OWNER/OPERATOR:

Company Name:_____

Company Address:_____

Telephone No.:_____ Email:_____

Name of Signatory:_____ Title of Signatory:_____

Signature:_____ **Date:**_____

Date Submitted to MS4:_____ **Date Submitted to NYSDEC:**_____

APPENDIX H

NYSDEC STORMWATER CALCULATIONS

Project: Battlefield Memorial Gateway Park - Town of Plattsburgh — **Summary Page**
Date: 10-Feb-23

Project Summary

	Existing Conditions		Proposed Conditions	
Total Watershed Area =	7.527	ac	7.539	ac
Total Impervious Area =	1.325	ac	1.698	ac

NYSDEC Design Criteria Required (Redevelopment)

Impervious Area =	1.003	ac
Total Area =	1.611	ac

NYSDEC Design Criteria Required Summary

Total WQv Required =	0.039	ac-ft
Total Min. RRv Required =	0.004	ac-ft

Green Infrastructure Summary

	Impervious Reduced	Total Area Reduced	Impervious Remaining	Total Area Remaining	WQv Remaining	RRv Provided
	ac	ac	ac	ac-ft	ac-ft	ac-ft
Bioretention Facilities	1.003	1.611				0.039
N/A						

Total WQv Remaining =	0.000	ac-ft
WQv Provided in Standard Practices = (Bioretention)	0.009	ac-ft

NYSDEC Criteria Summary	Required	Provided	
Total WQv =	0.039	0.009	ac-ft
Total Min. RRv =	0.004		ac-ft
Total RRv =		0.039	ac-ft
Total WQv + RRv =		0.048	ac-ft
Total CPv =	0.156	0.156	ac-ft
1-Year Peak Rate (CPv) =	3.07	2.80	cfs
10-Year Peak Rate (Qp) =	6.02	5.63	cfs
100-Year Peak Rate (Qf) =	14.29	12.66	cfs

Project: Battlefield Memorial Gateway Park - Town of Plattsburgh **Design Point:** DP-2
Date: 10-Feb-23

Bioretention **SMP ID** BR-1

Contributing Subcatchments 1.1S

Contributing Areas	HSG A	HSG B	HSG C	HSG D	Total	
New Impervious Area	0.000	0.241	0.000	0.000	**0.241**	ac
Existing/Disturbed Impervious Area	0.000	0.762	0.000	0.000	**0.762**	ac
Pervious Area	0.000	0.608	0.000	0.000	**0.608**	ac
Total	**0.000**	**1.611**	**0.000**	**0.000**	**1.611**	**ac**

HSG? B *(SMP soil type)*
New Construction/Redevelopment? NC (NC/R) *(RRv not required for Redevelopment Projects)*
CPv Required? Y (Y/N) *(CPv not required for Redevelopment Projects with no increase in 1-Year Peak Discharge Rate)*

NYSDEC Design Criteria Required

WQv = [(P)(Rv)(A)]/12			**RRv_{MIN} = [(P)(Rv*)(A_i)]/12**			**CPv**		
P =	1.00	in	P =	1.00	in	1-Year Volume =	0.156	ac-ft
Impervious Area[1] =	0.432	ac	Rv* =	0.950				
Total Area =	1.611	ac	Ai =	0.051	ac	Trout Stream?	N	
Imperviousness =	26.8	%	S_{RRv} =	0.211		Detention Criteria =	24	hr
Rv =	0.29		Aic =	0.24	ac	**Max. Discharge =**	**0.08**	**cfs**
WQv Required =	**1,699**	**cf**	**Min RRv Required =**	**174**	**cf**	**CPv Required =**	**6,795**	**cf**
	0.039	**ac-ft**		**0.004**	**ac-ft**		**0.156**	**ac-ft**

[1] *Includes 25% Existing/Disturbed Impervious*

Req'd Pretreatment Vol. = **425** **cf** *(Min. 25% Required)* **Provided Pretreatment Volume =** 3,223 **(cf)**
0.010 **ac-ft** **Underdrain(s)? (Y/N)** Y (Y/N)

Design Data *(if no underdrains proposed, must infiltrate within 48 hours, HSG A and B Soils)*

Material (Sand, Peat, Leaf compost, Bioretention soil)	Material =	Bio. Soil	
d_f = filter bed depth (range 2.5 ft - 4.0 ft)	d_f (ft) =	2.50	(ft)
k = coefficient of permeability of filter media	k (ft/day) =	0.50	(ft/day)
n_f = porosity of filter media (<= 20%)	n_f (%) =	20.00	(%)
d_p = ponding depth above filter bed	d_p (ft) =	1.00	(ft)
h_f = average height of water above filter media (max 0.5 ft)	h_f (ft) =	0.5	(ft)
t_f = design filter bed drain time (max 2 days)	t_f (days) =	4.00	(days)
i = underlying soil infiltration rate	i (in/hr) =	0.50	(in/hr)

Calculate Req'd Bioretention Surface Area:
(for Bioretention Areas with underdrains)
Surface area (A_{F-5}) = $\frac{WQv \times d_f}{k\,(h_f + d_f)\,(t_f)}$
A_{F-5} = 708 sf

Calculate Req'd Bioretention Surface Area:
(for Bioretention Areas without underdrains)
Surface area (A_{F-5}) = $\frac{WQv \times d_f}{MIN[i,k] \times (h_f+d_f)\,(t_f)}$
A_{F-5} = 708 sf

Calculate Minimum Bioretention Area:
(75% WQv must be stored prior to filtration
Surface area (A_{F-5}) = $\frac{0.75 \times WQv}{(d_f \times n_f) + d_p}$
A_{F-5} = -762 sf

Required Surface Area = 708 sf
Bioretention Surface Area Provided = 875 sf

	Provided		**Required/Min.**		**@ Elev.**	
WQv =	**0.048**	**ac-ft**	**0.039**	ac-ft	**0.00**	ft
RRv =	**0.039**	**ac-ft**	**0.004**	**ac-ft**		
CPv =		**ac-ft**	**0.156**	ac-ft	**0.00**	ft

Notes: *RRv: 80% HSG A and B Soils, 40% HSG C and D Soils* *Refer to HydroCAD calculations for additional information.*

Pretreatment provided by HDS-1.

Project: Battlefield Memorial Gateway Park - Town of Plattsburgh **Design Point:** DP-1
Date: 10-Feb-23

Hydrodynamic Separator **SMP ID** HDS-1

Contributing Subcatchments 1.1S

Contributing Areas	HSG A	B	C	D	Total	
New Impervious Area	0.000	0.241	0.000	0.000	**0.241**	ac
Existing/Disturbed Impervious Area	0.000	0.762	0.000	0.000	**0.762**	ac
Pervious Area	0.000	0.608	0.000	0.000	**0.608**	ac
Total	**0.000**	**1.611**	**0.000**	**0.000**	**1.611**	**ac**

HSG?	A		*(SMP soil type)*
New Construction/Redevelopment?	NC	(NC/R)	*(RRv not required for Redevelopment Projects)*
CPv Required?	N	(Y/N)	*(CPv not required for Redevelopment Projects with no increase in 1-Year Peak Discharge Rate)*

NYSDEC Design Criteria Required

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

P =	1.00	in
Impervious Area[1] =	0.813	ac
Total Area =	1.611	ac
Imperviousness =	50.4	%
Rv =	0.50	
WQv Required =	**2,919**	**cf**
	0.067	**ac-ft**

$RRv_{MIN} = [(P)(Rv^*)(A_i)]/12$

P =	1.00	in
Rv* =	0.950	
Ai =	0.051	ac
S_{RRv} =	0.211	
Aic =	0.24	ac
Min RRv Required =	**174**	**cf**
	0.004	**ac-ft**

[1] *Chapter 9, Section 9.2.1 (B) (III): 75% of Impervious required when treated via an approved alternative practice.*

WQv Discharge Rate Calculation

$Q_p = (q_u)(A)(WQ_v)$

q_u = unit peak discharge (cfs/sq mi/inch)
A = drainage area (sq mi)
$WQ_v = Q_d$ = water quality volume depth (watershed inches)
CN = composite curve number
P = 90% rainfall event (inches)
Q_d = runoff volume depth (inches)

WQv (cf)	A (ac)	Q_d (in)	CN	t_c (min)	t_c (hr)	Ia/P (0.1 ~ 0.5)	q_u (cf)	Q_p (cfs)
2,919	1.611	0.50	86	6.0	0.10	0.326	900	1.13

Required Treatment Capacity = **1.13** **cfs**
Required Bypass Capacity (10-Year Event) = 5.35 **cfs**

HDS Selected = FDHC GA-5
Provided Treatment Capacity = 2.35 **cfs**
Provided Bypass Capacity = 20 **cfs**

	Provided		Required/Min.	
WQv =	**0.067**	**ac-ft**	**0.067**	ac-ft

Notes: *Refer to HydroCAD calculations for additional information.*

HDS-1 is providing pretreatment for Bioretention Facility (BR-1).

APPENDIX I

EXISTING CONDITIONS WATERSHED MAP
AND
HYDROLOGICAL CALCULATIONS

LEGEND

- DP-1 — DESIGN POINT
- 1S — SUBCATCHMENT ID
- WATERSHED BOUNDARY
- TC PATH

0 15' 30' 60'

Drawing Scale: 1" = 30'-0"

N

Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund.

NYS DOS Contract No. C1006951

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

EXISTING CONDITIONS WATERSHED MAP

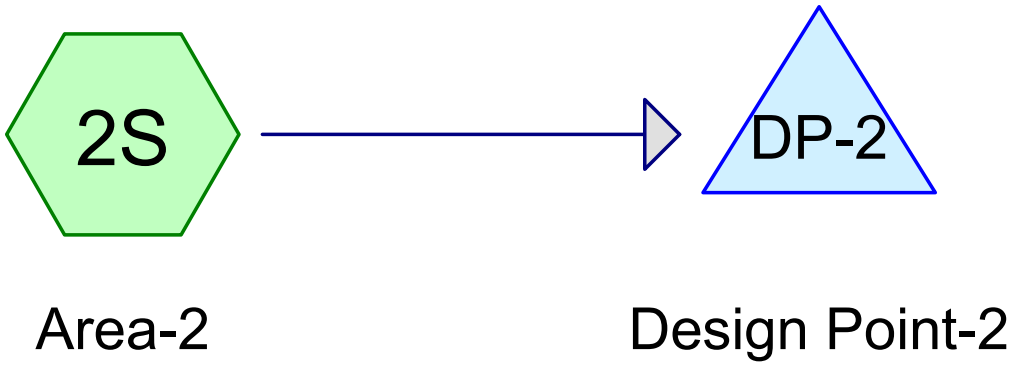
Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	.
DATE	DECEMBER 12, 2022
DRAWN BY:	MEW
CHECKED BY:	JET
FILE:	-
JOB. NO.:	20-015.8

DRAWING NO.:

W-1

Revision No.



Area-2 Design Point-2

Area-1 Design Point-1

Subcat Reach Pond Link

Routing Diagram for 20-015.8_Existing
Prepared by {enter your company name here}, Printed 12/21/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.307	61	>75% Grass cover, Good, HSG B (2S)
1.493	58	Meadow, non-grazed, HSG B (1S)
1.193	98	Paved parking, HSG B (1S, 2S)
0.132	98	Roofs, HSG B (1S)
3.402	55	Woods, Good, HSG B (1S, 2S)

Summary for Subcatchment 1S: Area-1

Runoff = 3.07 cfs @ 11.97 hrs, Volume= 0.167 af, Depth= 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.132	98	Roofs, HSG B
1.038	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.742	55	Woods, Good, HSG B
1.493	58	Meadow, non-grazed, HSG B
3.405		Weighted Average
2.235	57	65.64% Pervious Area
1.170	98	34.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.029 af, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.155	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.307	61	>75% Grass cover, Good, HSG B
2.660	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.122		Weighted Average
3.967	57	96.24% Pervious Area
0.155	98	3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.405 ac, 34.36% Impervious, Inflow Depth = 0.59" for 1-Year event
Inflow = 3.07 cfs @ 11.97 hrs, Volume= 0.167 af
Outflow = 3.07 cfs @ 11.97 hrs, Volume= 0.167 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.122 ac, 3.76% Impervious, Inflow Depth = 0.09" for 1-Year event
Inflow = 0.26 cfs @ 12.13 hrs, Volume= 0.029 af
Outflow = 0.17 cfs @ 12.29 hrs, Volume= 0.030 af, Atten= 35%, Lag= 9.8 min
Discarded = 0.17 cfs @ 12.29 hrs, Volume= 0.030 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.01' @ 12.29 hrs Surf.Area= 7,269 sf Storage= 65 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1.3 min (866.7 - 865.4)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.17 cfs @ 12.29 hrs HW=113.01' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.17 cfs)

Summary for Subcatchment 1S: Area-1

Runoff = 6.02 cfs @ 11.97 hrs, Volume= 0.355 af, Depth= 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.132	98	Roofs, HSG B
1.038	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.742	55	Woods, Good, HSG B
1.493	58	Meadow, non-grazed, HSG B
3.405		Weighted Average
2.235	57	65.64% Pervious Area
1.170	98	34.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 1.14 cfs @ 12.19 hrs, Volume= 0.148 af, Depth= 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.155	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.307	61	>75% Grass cover, Good, HSG B
2.660	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.122		Weighted Average
3.967	57	96.24% Pervious Area
0.155	98	3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.405 ac, 34.36% Impervious, Inflow Depth = 1.25" for 10-Year event
Inflow = 6.02 cfs @ 11.97 hrs, Volume= 0.355 af
Outflow = 6.02 cfs @ 11.97 hrs, Volume= 0.355 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.122 ac, 3.76% Impervious, Inflow Depth = 0.43" for 10-Year event
Inflow = 1.14 cfs @ 12.19 hrs, Volume= 0.148 af
Outflow = 0.27 cfs @ 12.96 hrs, Volume= 0.149 af, Atten= 76%, Lag= 46.6 min
Discarded = 0.27 cfs @ 12.96 hrs, Volume= 0.149 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.15' @ 12.96 hrs Surf.Area= 11,625 sf Storage= 1,364 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 37.8 min (938.2 - 900.4)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.27 cfs @ 12.96 hrs HW=113.15' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Summary for Subcatchment 1S: Area-1

Runoff = 14.29 cfs @ 11.97 hrs, Volume= 0.771 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.132	98	Roofs, HSG B
1.038	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.742	55	Woods, Good, HSG B
1.493	58	Meadow, non-grazed, HSG B
3.405		Weighted Average
2.235	57	65.64% Pervious Area
1.170	98	34.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 5.94 cfs @ 12.16 hrs, Volume= 0.526 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.155	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.307	61	>75% Grass cover, Good, HSG B
2.660	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.122		Weighted Average
3.967	57	96.24% Pervious Area
0.155	98	3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.405 ac, 34.36% Impervious, Inflow Depth = 2.72" for 100-Year event
Inflow = 14.29 cfs @ 11.97 hrs, Volume= 0.771 af
Outflow = 14.29 cfs @ 11.97 hrs, Volume= 0.771 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.122 ac, 3.76% Impervious, Inflow Depth = 1.53" for 100-Year event
Inflow = 5.94 cfs @ 12.16 hrs, Volume= 0.526 af
Outflow = 0.59 cfs @ 13.64 hrs, Volume= 0.526 af, Atten= 90%, Lag= 88.7 min
Discarded = 0.59 cfs @ 13.64 hrs, Volume= 0.526 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.58' @ 13.64 hrs Surf.Area= 25,415 sf Storage= 9,426 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 189.6 min (1,060.6 - 871.0)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

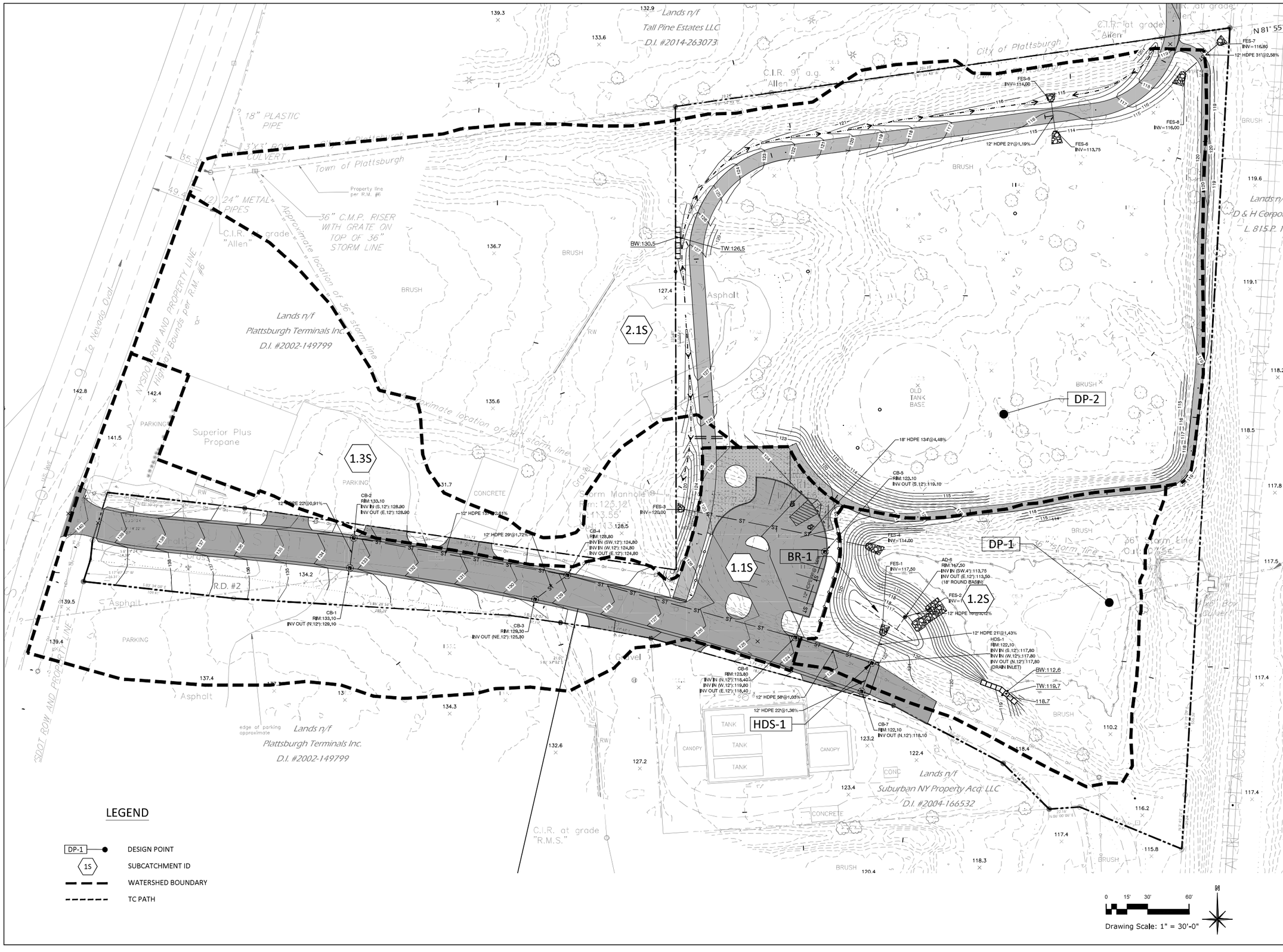
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.59 cfs @ 13.64 hrs HW=113.58' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.59 cfs)

APPENDIX J

PROPOSED CONDITIONS WATERSHED MAP
AND
HYDROLOGICAL CALCULATIONS



Lead Consultant:

ELAN
PLANNING & DESIGN, LLC
18 DIVISION STREET
STUDIO 304
SARATOGA SPRINGS
NEW YORK 12866

Project Sponsor:

NEW YORK STATE OF OPPORTUNITY. Department of State

This document was prepared with funding provided by the New York State Department of State under Title 11 of the Environmental Protection Fund.

NYS DOS Contract No. C1006931

Professional Stamp

JERE TATICH, RLA

ELAN PLANNING DESIGN & LANDSCAPE ARCHITECTURE

Verify all dimensions before the commencement of work. Report to the consultant any discrepancy found.

Project Title:

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK

SITE DEVELOPMENT PHASE I

Sheet Title:

PROPOSED CONDITIONS WATERSHED MAP

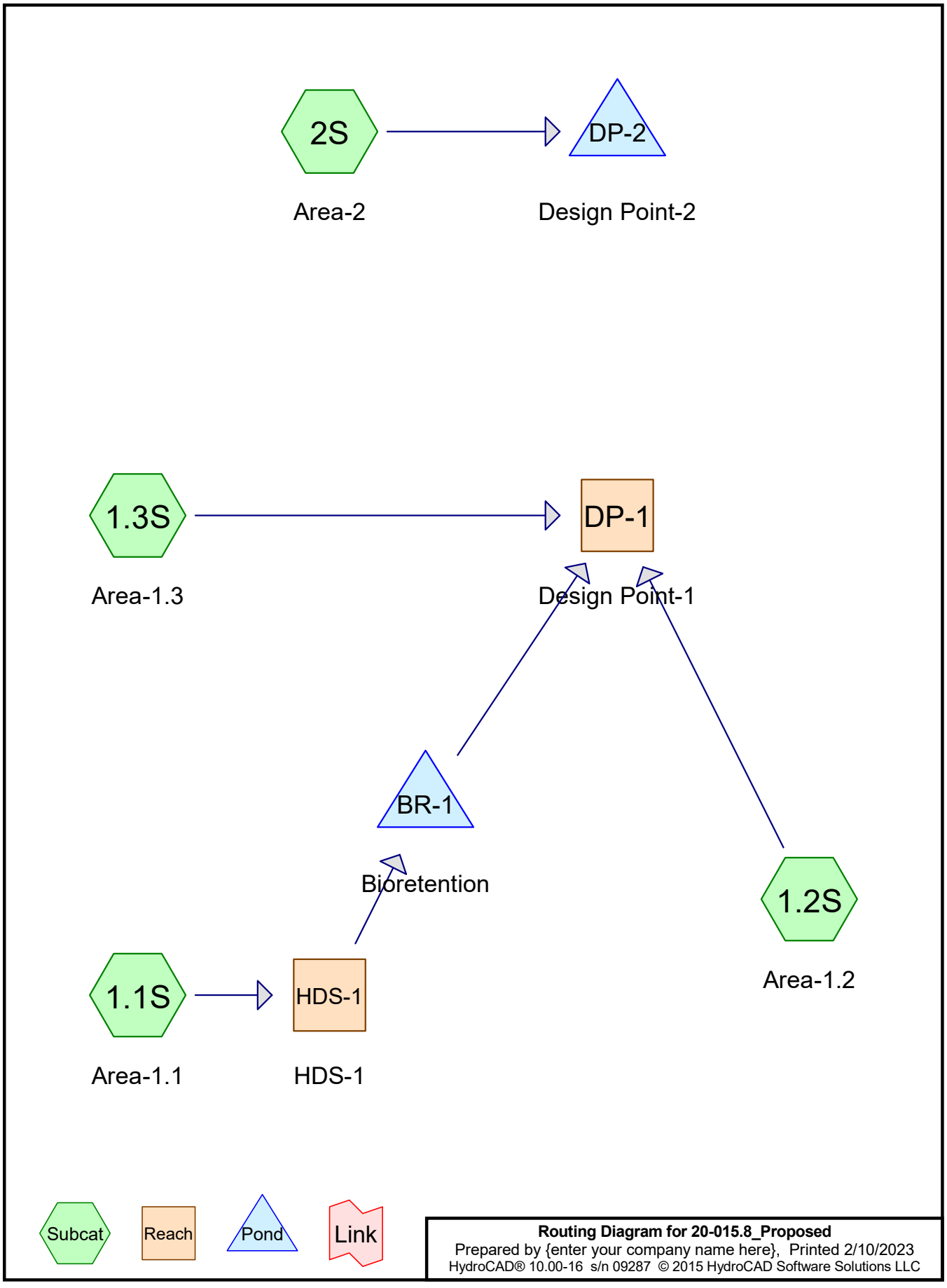
Drawing Log:

Rev. 05 DATE	
Rev. 04 DATE	
Rev. 03 DATE	
Rev. 02 DATE	
Rev. 01 DATE	
Rev. 02 DATE	
Rev. 01 DATE	. .
DATE	FEBRUARY 7, 2023
DRAWN BY:	MEW
CHECKED BY:	JET
FILE:	-
JOB. NO.:	20-015.8

DRAWING NO.:

W-2

Revision No.



Routing Diagram for 20-015.8_Proposed
Prepared by {enter your company name here}, Printed 2/10/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.563	61	>75% Grass cover, Good, HSG B (1.1S, 1.3S, 2S)
0.364	58	Meadow, non-grazed, HSG B (1.2S)
1.566	98	Paved parking, HSG B (1.1S, 1.2S, 1.3S, 2S)
0.132	98	Roofs, HSG B (1.1S, 1.3S)
2.814	55	Woods, Good, HSG B (1.2S, 1.3S, 2S)

Summary for Subcatchment 1.1S: Area-1.1

Runoff = 2.63 cfs @ 11.97 hrs, Volume= 0.142 af, Depth= 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.012	98	Roofs, HSG B
0.991	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.508	61	>75% Grass cover, Good, HSG B
0.000	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
1.511		Weighted Average
0.508	61	33.62% Pervious Area
1.003	98	66.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.2S: Area-1.2

Runoff = 0.14 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.052	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.448	55	Woods, Good, HSG B
0.364	58	Meadow, non-grazed, HSG B
0.864		Weighted Average
0.812	56	93.98% Pervious Area
0.052	98	6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.3S: Area-1.3

Runoff = 1.00 cfs @ 11.97 hrs, Volume= 0.056 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.120	98	Roofs, HSG B
0.261	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.522	61	>75% Grass cover, Good, HSG B
0.057	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
0.960		Weighted Average
0.579	60	60.31% Pervious Area
0.381	98	39.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 0.44 cfs @ 12.13 hrs, Volume= 0.045 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 1-Year Rainfall=1.90"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.262	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.533	61	>75% Grass cover, Good, HSG B
2.309	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.104		Weighted Average
3.842	57	93.62% Pervious Area
0.262	98	6.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.335 ac, 43.06% Impervious, Inflow Depth = 0.62" for 1-Year event
Inflow = 2.80 cfs @ 11.97 hrs, Volume= 0.173 af
Outflow = 2.80 cfs @ 11.97 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Reach HDS-1: HDS-1

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 1.13" for 1-Year event
Inflow = 2.63 cfs @ 11.97 hrs, Volume= 0.142 af
Outflow = 2.63 cfs @ 11.97 hrs, Volume= 0.142 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond BR-1: Bioretention

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 1.13" for 1-Year event
Inflow = 2.63 cfs @ 11.97 hrs, Volume= 0.142 af
Outflow = 2.58 cfs @ 11.98 hrs, Volume= 0.142 af, Atten= 2%, Lag= 0.7 min
Primary = 1.67 cfs @ 11.98 hrs, Volume= 0.109 af
Secondary = 0.91 cfs @ 11.98 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 117.66' @ 11.98 hrs Surf.Area= 1,148 sf Storage= 666 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 81.6 min (851.4 - 769.8)

Volume	Invert	Avail.Storage	Storage Description
#1	117.00'	1,083 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
117.00	875	0	0
118.00	1,290	1,083	1,083

Device	Routing	Invert	Outlet Devices
#1	Device 3	117.00'	**1.000 in/hr Exfiltration over Surface area**
#2	Device 3	117.50'	**12.0" x 12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Primary	113.50'	**12.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 113.50' / 113.00' S= 0.0227 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Secondary	117.50'	**6.0' long x 7.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.42 2.53 2.70 2.69 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.67 2.69 2.71 2.76

Primary OutFlow Max=1.65 cfs @ 11.98 hrs HW=117.66' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 1.65 cfs of 7.23 cfs potential flow)
  └**1=Exfiltration** (Exfiltration Controls 0.03 cfs)
  └**2=Orifice/Grate** (Weir Controls 1.62 cfs @ 1.30 fps)

Secondary OutFlow Max=0.90 cfs @ 11.98 hrs HW=117.66' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 0.90 cfs @ 0.96 fps)

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.104 ac, 6.38% Impervious, Inflow Depth = 0.13" for 1-Year event
Inflow = 0.44 cfs @ 12.13 hrs, Volume= 0.045 af
Outflow = 0.19 cfs @ 12.39 hrs, Volume= 0.045 af, Atten= 57%, Lag= 15.7 min
Discarded = 0.19 cfs @ 12.39 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.03' @ 12.39 hrs Surf.Area= 8,081 sf Storage= 262 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.9 min (845.4 - 839.5)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.19 cfs @ 12.39 hrs HW=113.03' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.19 cfs)

Summary for Subcatchment 1.1S: Area-1.1

Runoff = 4.89 cfs @ 11.97 hrs, Volume= 0.272 af, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.012	98	Roofs, HSG B
0.991	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.508	61	>75% Grass cover, Good, HSG B
0.000	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
1.511		Weighted Average
0.508	61	33.62% Pervious Area
1.003	98	66.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.2S: Area-1.2

Runoff = 0.48 cfs @ 12.00 hrs, Volume= 0.034 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.052	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.448	55	Woods, Good, HSG B
0.364	58	Meadow, non-grazed, HSG B
0.864		Weighted Average
0.812	56	93.98% Pervious Area
0.052	98	6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.3S: Area-1.3

Runoff = 2.07 cfs @ 11.97 hrs, Volume= 0.117 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.120	98	Roofs, HSG B
0.261	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.522	61	>75% Grass cover, Good, HSG B
0.057	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
0.960		Weighted Average
0.579	60	60.31% Pervious Area
0.381	98	39.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 1.47 cfs @ 12.18 hrs, Volume= 0.176 af, Depth= 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 10-Year Rainfall=3.25"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.262	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.533	61	>75% Grass cover, Good, HSG B
2.309	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.104		Weighted Average
3.842	57	93.62% Pervious Area
0.262	98	6.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.335 ac, 43.06% Impervious, Inflow Depth = 1.24" for 10-Year event
Inflow = 5.63 cfs @ 11.98 hrs, Volume= 0.346 af
Outflow = 5.63 cfs @ 11.98 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Reach HDS-1: HDS-1

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 2.16" for 10-Year event
Inflow = 4.89 cfs @ 11.97 hrs, Volume= 0.272 af
Outflow = 4.89 cfs @ 11.97 hrs, Volume= 0.272 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond BR-1: Bioretention

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 2.16" for 10-Year event
Inflow = 4.89 cfs @ 11.97 hrs, Volume= 0.272 af
Outflow = 4.83 cfs @ 11.98 hrs, Volume= 0.272 af, Atten= 1%, Lag= 0.6 min
Primary = 3.10 cfs @ 11.98 hrs, Volume= 0.194 af
Secondary = 1.72 cfs @ 11.98 hrs, Volume= 0.077 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 117.74' @ 11.98 hrs Surf.Area= 1,182 sf Storage= 761 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 51.3 min (815.0 - 763.7)

Volume	Invert	Avail.Storage	Storage Description
#1	117.00'	1,083 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
117.00	875	0	0
118.00	1,290	1,083	1,083

Device	Routing	Invert	Outlet Devices
#1	Device 3	117.00'	**1.000 in/hr Exfiltration over Surface area**
#2	Device 3	117.50'	**12.0" x 12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Primary	113.50'	**12.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 113.50' / 113.00' S= 0.0227 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Secondary	117.50'	**6.0' long x 7.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.42 2.53 2.70 2.69 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.67 2.69 2.71 2.76

Primary OutFlow Max=3.06 cfs @ 11.98 hrs HW=117.74' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 3.06 cfs of 7.31 cfs potential flow)
  ├**1=Exfiltration** (Exfiltration Controls 0.03 cfs)
  └**2=Orifice/Grate** (Weir Controls 3.04 cfs @ 1.60 fps)

Secondary OutFlow Max=1.70 cfs @ 11.98 hrs HW=117.74' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 1.70 cfs @ 1.19 fps)

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.104 ac, 6.38% Impervious, Inflow Depth = 0.52" for 10-Year event
Inflow = 1.47 cfs @ 12.18 hrs, Volume= 0.176 af
Outflow = 0.30 cfs @ 12.97 hrs, Volume= 0.176 af, Atten= 80%, Lag= 47.5 min
Discarded = 0.30 cfs @ 12.97 hrs, Volume= 0.176 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.19' @ 12.97 hrs Surf.Area= 12,967 sf Storage= 1,885 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 49.7 min (927.9 - 878.2)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.30 cfs @ 12.97 hrs HW=113.19' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.30 cfs)

Summary for Subcatchment 1.1S: Area-1.1

Runoff = 9.29 cfs @ 11.97 hrs, Volume= 0.511 af, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.012	98	Roofs, HSG B
0.991	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.508	61	>75% Grass cover, Good, HSG B
0.000	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
1.511		Weighted Average
0.508	61	33.62% Pervious Area
1.003	98	66.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.2S: Area-1.2

Runoff = 2.23 cfs @ 11.98 hrs, Volume= 0.113 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.052	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.000	61	>75% Grass cover, Good, HSG B
0.448	55	Woods, Good, HSG B
0.364	58	Meadow, non-grazed, HSG B
0.864		Weighted Average
0.812	56	93.98% Pervious Area
0.052	98	6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 1.3S: Area-1.3

Runoff = 4.60 cfs @ 11.97 hrs, Volume= 0.246 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.120	98	Roofs, HSG B
0.261	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
0.522	61	>75% Grass cover, Good, HSG B
0.057	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
0.960		Weighted Average
0.579	60	60.31% Pervious Area
0.381	98	39.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 6 min. minimum**

Summary for Subcatchment 2S: Area-2

Runoff = 6.44 cfs @ 12.16 hrs, Volume= 0.568 af, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type II 24-hr 100-Year Rainfall=5.50"

Area (ac)	CN	Description
0.000	98	Roofs, HSG B
0.262	98	Paved parking, HSG B
0.000	96	Gravel surface, HSG B
1.533	61	>75% Grass cover, Good, HSG B
2.309	55	Woods, Good, HSG B
0.000	58	Meadow, non-grazed, HSG B
4.104		Weighted Average
3.842	57	93.62% Pervious Area
0.262	98	6.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.4	100	0.0400	0.09		**Sheet Flow, Sheet Flow: Wooded** Woods: Light underbrush n= 0.400 P2= 2.25"
0.2	40	0.5000	3.54		**Shallow Concentrated Flow, Shallow Concentrated: Wooded** Woodland Kv= 5.0 fps
1.8	560	0.0300	5.31	31.87	**Channel Flow, Channel Flow** Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.040 Mountain streams
21.4	700	Total			

Summary for Reach DP-1: Design Point-1

Inflow Area = 3.335 ac, 43.06% Impervious, Inflow Depth = 2.55" for 100-Year event
Inflow = 12.66 cfs @ 11.98 hrs, Volume= 0.708 af
Outflow = 12.66 cfs @ 11.98 hrs, Volume= 0.708 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Reach HDS-1: HDS-1

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 4.06" for 100-Year event
Inflow = 9.29 cfs @ 11.97 hrs, Volume= 0.511 af
Outflow = 9.29 cfs @ 11.97 hrs, Volume= 0.511 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2

Summary for Pond BR-1: Bioretention

Inflow Area = 1.511 ac, 66.38% Impervious, Inflow Depth = 4.06" for 100-Year event
Inflow = 9.29 cfs @ 11.97 hrs, Volume= 0.511 af
Outflow = 9.19 cfs @ 11.98 hrs, Volume= 0.511 af, Atten= 1%, Lag= 0.5 min
Primary = 5.84 cfs @ 11.98 hrs, Volume= 0.349 af
Secondary = 3.35 cfs @ 11.98 hrs, Volume= 0.162 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 117.87' @ 11.98 hrs Surf.Area= 1,235 sf Storage= 915 cf

Plug-Flow detention time= 31.6 min calculated for 0.511 af (100% of inflow)
Center-of-Mass det. time= 31.8 min (790.9 - 759.1)

Volume	Invert	Avail.Storage	Storage Description
#1	117.00'	1,083 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
117.00	875	0	0
118.00	1,290	1,083	1,083

Device	Routing	Invert	Outlet Devices
#1	Device 3	117.00'	**1.000 in/hr Exfiltration over Surface area**
#2	Device 3	117.50'	**12.0" x 12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Primary	113.50'	**12.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 113.50' / 113.00' S= 0.0227 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Secondary	117.50'	**6.0' long x 7.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.42 2.53 2.70 2.69 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.67 2.69 2.71 2.76

Primary OutFlow Max=5.78 cfs @ 11.98 hrs HW=117.86' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 5.78 cfs of 7.43 cfs potential flow)
  └**1=Exfiltration** (Exfiltration Controls 0.03 cfs)
  └**2=Orifice/Grate** (Weir Controls 5.75 cfs @ 1.97 fps)

Secondary OutFlow Max=3.31 cfs @ 11.98 hrs HW=117.86' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 3.31 cfs @ 1.52 fps)

Summary for Pond DP-2: Design Point-2

Inflow Area = 4.104 ac, 6.38% Impervious, Inflow Depth = 1.66" for 100-Year event
Inflow = 6.44 cfs @ 12.16 hrs, Volume= 0.568 af
Outflow = 0.61 cfs @ 13.63 hrs, Volume= 0.568 af, Atten= 90%, Lag= 88.2 min
Discarded = 0.61 cfs @ 13.63 hrs, Volume= 0.568 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs / 2
Peak Elev= 113.62' @ 13.63 hrs Surf.Area= 26,533 sf Storage= 10,343 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 196.6 min (1,056.9 - 860.3)

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	416,145 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
113.00	6,979	0	0
114.00	38,659	22,819	22,819
115.00	57,650	48,155	70,974
116.00	63,739	60,695	131,668
117.00	68,211	65,975	197,643
118.00	71,398	69,805	267,448
119.00	74,574	72,986	340,434
120.00	76,849	75,712	416,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	**1.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.61 cfs @ 13.63 hrs HW=113.62' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.61 cfs)