SITE MANAGEMENT PLAN

DOCUMENT 1 OF 2009

PROPOSED COLLEGE PARK DEVELOPMENT SITE
1510 - 1520 MAXON ROAD
SCHENECTADY, NEW YORK
BROWNFIELDS CLEANUP PROGRAM
(BCP No. C447037)

PREPARED FOR:

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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".....providing integrated environmental and geotechnical services...."

GEO-ENVIRONMENTAL CONSULTING & PROPERTY MANAGEMENT SERVICES - SITE ASSESSMENTS - GEOTECHNICAL DRILLING & DIRECT PUSH SAMPLING SERVICES - TANK CLOSURES - EXCAVATION SERVICES - SOIL & GROUNDWATER REMEDIATION - EXPERT TESTIMONY - WASTE BROKERAGE

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at the College Park Development Site (hereinafter referred to as the "Site") under the New York State Brownfield Cleanup Program (NYSBCP) administered by the New York Sate Department of Environmental Conservation District (NYSDEC). The site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index #A4-0520-0705, Site #C447037 which was executed on September 12, 2005.

1.1.1 General

BN Partners Associates, LLC entered into a BCA with the NYSDEC to remediate ±8.32 acres of property located in the City of Schenectady, Schenectady County, New York. This BCA requires BN Partners Associates, LLC, to investigate and remediate contaminated media at the site. A map showing the site locations and boundaries of this ±8.32 acres site is provided in **Appendix A - Figure 1**. The boundaries of the site are more fully described in the metes and bounds site description and the Environmental Easement that accompanies the ALTA Title Survey included in **Appendix A - Figure 2**. The complete written Environmental Easement is attached as an **Appendix B** to this plan.

After completion of the remedial work described in the Remedial Alternatives Work Plan dated April 3, 2007 and the Remedial Measures Work Plan Schedule dated December 12, 2007, some residual was left in the subsurface at the site, which is hereafter referred to as "remaining impacts." This Site Management Plan (SMP) was prepared to manage remaining impacts at the site in perpetuity or until extinguishment of the Environmental Easement in accordance with ECL Article 71, Title 36. Remedial action work on the site began in January 2008 and was substantially completed in February 2008. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. The reports were also sent to the local document repository established as part of the NYSBCP.

This SMP was prepared by Northeastern Environmental Technologies Corporation (NETC) on behalf of BN Partners Associates LLC, in accordance with the requirements in DER-10 draft Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are established by the Environmental Easement for the site.

1.1.2 Purpose

The site contains remaining impacts after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to provide proper management of remaining impacts in the future to ensure protection of the public health and environment. An Environmental Easement will be granted to the NYSDEC, and recorded with the Schenectady County Clerk, that provides an enforceable legal instrument to ensure compliance with this SMP and all ICs and ECs placed on the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining impacts at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all collection and containment systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment operations.

To address these requirements, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs, which includes a reporting plan for the submittal of data, information, recommendations, and certifications to NYSDEC; (2) a monitoring plan for implementation of Site Monitoring; and (3) an Operation and Maintenance Plan for implementation of remedial collection, containment and recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual for all systems).

It is important to note that:

- This SMP details site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of Environmental Conservation Law and the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);

- Failure to comply with this SMP is also a violation of 6NYCRR Part 375 and the BCA Index #A4-0520-0705, Site #C447037 for the site, and thereby subject to applicable penalties.

At the time the SMP was prepared, the SMP and all site documents related to Remedial Investigation and Remedial Action were maintained at the NYSDEC offices in Schenectady, New York.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The site, ±8.32 acres in size, is composed of two contiguous parcels of land (i.e., Tax Map No.s 39.49-3-1 and 39.50-1-9.1) located in the northwest portion of the City of Schenectady, New York. The owner of record for the site is BN Partners Associates, LLC. The site is bordered by Nott Street (south), Maxon Road and an active railroad line (west), Peek Street (north) and the City of Schenectady bike path (east). The majority of the site is generally level and at grade with its surrounding road frontage. The eastern portion of the site is steeply sloped to the west. The Mohawk River exists approximately 1,500 feet northwest of the site.

1.2.2 Site History

The available historical records identify that prior to ± 1914 the majority of the site was used for residential purposes. During the period from ± 1914 - 1960 the majority of the site was used by the American Locomotive Company (ALCO). The Peckham Wolf & Co. (a planing mill and lumber yard) is also known to have operated from the eastern portions of the site during the ± 1910 - 1930 period. Map records dated 1923 - 1930 illustrate the City of Schenectady Bike path as occupied by the rail lines of the NY Central & Hudson River Railroad. Specific references to water lines, “Locomotive Assembly Shop”, “Pipe Shop”, “Pump House” and underground storage tank infrastructure are noted in the historical map records.

By June 1958, the above noted facilities were razed. The ALCO facilities across Nott Street to the south were also razed. Commercial and recreational development has been constructed on such areas (i.e., by Union College and others.) The site remained vacant until ± 1960, at which time, the Big N Plaza was constructed. The available historical records suggest the Big N Plaza was originally constructed as a retail shopping facility. The City of Schenectady assessor records identify various retail, commercial, educational and recreational establishments have operated from the Big N Plaza. Commercial activities that are known to have occurred at the Big N Plaza included an “auto & tire service center”, M&P Laboratories, and the E-Z Wash & Dry Cleaners. The available historical records suggest the auto & tire service center and the M&P Laboratories each operated from facilities located in the northern portion of the structure. Historical photographs of the Big N Plaza suggest the E-Z Wash & Dry Cleaners operated from the southern portion of the facility.

M&P Laboratories is listed as a former Resource Conservation and Recovery Act (RCRA) Small Quantity Generator (ID No. NYD98675761). No regulatory information was identified for the “auto & tire service center” or the E-Z Wash & Dry Cleaners. References to a “Tank” adjacent to the “auto & tire service

center" and pad mounted electrical transformers located southeast of the former Big N Plaza structure have been substantiated using 1990 Sanborn maps of the Big N Plaza.

1.2.3 Geologic Conditions

The field results obtained from the completed site investigation and remedial work identify the unconsolidated deposits as, in descending order, a heterogeneous mixture of historic cultural fill (consisting of slag, concrete, brick, sand and gravel) overlying a glacial till deposit. The cultural fill layer is highly variable but, in most cases, is less than 4.0 feet thick. The occurrence and thickness of the cultural fill layer corresponds with a buried reinforced concrete surface. The buried concrete is attributed to the former ALCO Building 28. The glacial till deposit generally exists ± 1.0 - 7.0 feet below the buried concrete layer. The upper surface of the glacial till deposit is weathered and moisture content in the deposits decreases with depth. Unconsolidated deposits located along the City of Schenectady Bike Path consist of a loamy sand fill.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the Final Site Investigation (FSI) dated December 18, 2006. Below is a summary of the site conditions and previous environmental reports prior to and during the FSI performed in 2006.

1.3.1 Previous Environmental Investigations

A 1989 Environmental Site Assessment (ESA) and limited subsurface investigation of the lands and structures located at 1520 Maxon Rd. were performed by Dunn Geoscience Corporation (DUNN). With the exception of the ALCO manufacturing activities, no recognized environmental conditions were identified in the DUNN report.

A subsurface investigation was completed by DUNN to further evaluate whether contamination related to ALCO's manufacturing history existed at the 1520 Maxon Rd. site. The DUNN testing services involved the installation of four soil borings along the northwest portions of the site, as well as the chemical analysis of four soil samples for the presence of RCRA metals and Polychlorinated biphenyls (PCBs). The soil quality results did not identify PCB or RCRA metal soil contamination. An assessment of the site groundwater quality was not performed during DUNN's subsurface investigation.

A subsequent 1994 ESA of 1520 Maxon Rd. was performed by Professional Service Industries, Inc. (PSI). Similar to the DUNN ESA, no recognized environmental conditions were identified in the PSI report. Notable observations

listed in the report include a floor drain, (6) 55 gallon drums of oil, motor oil, and hydraulic oil all located in the former M&P Laboratory tenant space.

PSI also performed a limited asbestos survey in four of the five tenant spaces of the Big N Plaza. The asbestos survey confirmed the presence of asbestos in (3) mudded pipe fittings and approximately 8,300 sq. ft of 9x9" floor tile. No additional asbestos containing materials were identified by PSI.

Based on the historical information described above, NETC conducted an initial site investigation (SI) during the period from February - March 2005 to further qualify the conditions at the site. The SI work identified the presence of aged petroleum in a few areas of the site and a limited number of PCB and chlorinated volatile organic compound (VOC) soil and/or groundwater impacts in other isolated areas of the site. Based on the NETC SI findings, petroleum spill #0412496 was assigned to the site for the administration of this matter.

The above noted information was used to developed and pursue the work associated with BCP#C447037. The report entitled "Final Site Investigation (FSI) - College Park - 1510-1520 Maxon Road Schenectady, New York" dated December 14, 2006 summarizes the FSI activities.

The FSI activities included the following:

- Geophysical Survey
- Soil Gas Survey
- Soil Borings and Monitoring Wells
- Surface Soil Sampling
- Test Pit Excavations
- Monitoring Well Sampling
- Background Soil sampling

To evaluate the soil and groundwater quality conditions identified at the site, the FSI laboratory results were compared to state and national environmental standards. Soil samples collected at the site were compared to the Part 375-6.8 soil cleanup objectives (SCOs) for both Track 1 and Track 4 site cleanup criteria. Groundwater samples collected at the site were compared to the NYSDEC's 6NYCRR Part 703 water quality standards. The soil gas samples were compared to the Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

1.3.2 Nature and Extent of Contamination

NETC used the above referenced reports to determine the nature and extent of chemical soil and groundwater impacts at the site. Findings from these reports are summarized in this section.

The completed FSI services found the majority of the site to be unaffected by petroleum or chemical impacts above the NYSDEC's Part 375-6.8(b) restricted commercial use SCOs. The areas of the site found to contain impacted soil are localized and are, in most cases, indicative of an aged, historic petrochemical source that exhibit low chemical concentrations. The detection of chlorinated VOCs in some locations along the southern portion of the site are attributed to the former EZ Wash Dry Cleaning facility which operated from the Big N Plaza. Target Analyte List (TAL) metal and PCB soil quality concentrations also exhibit low chemical concentrations and are, in most cases, limited to a $\pm$ 1.0 - 3.0 foot thick historic cultural fill layer.

Petroleum sheens [i.e., Light Non-Aqueous Phase Liquid (LNAPL)] and odors documented on groundwater during the test pit excavation program and in the network of monitoring wells exist primarily along the southern and eastern portions of the site. The presence of a LNAPL sheen and similar petroleum odors in select monitoring wells (i.e., MW-9-06, MW-12-06 and MW-13-06) are attributed to aged petroleum soil impacts that exist in the cultural fill layer and the underlying unconsolidated deposits. The presence of petroleum impacted soil correspond closely with areas of the site historically occupied by Underground Storage Tank (UST) infrastructure, as well as locations down gradient from suspect and known UST's (i.e., UST northeast of the former Big N Plaza adjacent to the City of Schenectady's bike path). Nuisance petroleum soil impacts are generally shallow and range from less than 2.0 feet to as great as 8.0 feet thick.

Dissolved phase petroleum and chlorinated dry cleaning chemical VOCs detected in groundwater suggest aged releases that exhibit low concentrations; in most cases, below the 6NYCRR Part 703 water quality standards. The VOC and Semi Volatile Organic Compounds (SVOC) 6NYCRR PART 703 water quality exceedences defined within the network of wells exist principally along the southern and eastern portion of the site at or down gradient from the areas containing similar VOC and SVOC soil impacts. TAL Metals exceedences, although documented in each work area, are also generally low in concentration and are limited to Arsenic, Iron, Magnesium, Manganese and Sodium.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC approved Remedial Alternatives Work Plan dated April 3, 2007 and the Remedial Measures Work Plan Schedule dated December 12, 2007. A site plan presenting the work completed in the area removal zones is included in **Appendix A, Figure 3**.

The selected Alternative C "Focused Soil Removal Program" presented in the Remedial Alternative Selection Report called for the following cleanup goals:

- Remove impacted soil from the southern and eastern portion of the site Area of Concern number 1 (AOC#1) that exceed the Part 375-6.8 (b) restricted commercial use SCOs.
- Remove impacted soil from the southern portion of a proposed future YMCA facility (AOC#2) that exceed the Part 375-6.8 (a) unrestricted commercial SCOs.
- The underground storage tank (UST) located on the eastern portion of the site would be closed according to the NYSDEC DER-10 draft Technical Guidance for Site Investigation and Remediation guidelines.
- The pad mounted and pole mounted transformers located in the southeast corner of the site would be removed and disposed of off-site.

To that end, the selected Alternative C "Focused Soil Removal Program" presented in the Remedial Alternative Selection Report called for the following institutional controls:

- A site wide soil management plan during the construction of the College Park site to properly manage on site, or dispose off site, soils that contain impacts below the applicable AOC#1 and 2 restricted commercial use SCOs.;
- Post construction monthly groundwater / LNAPL removal and quarterly groundwater monitoring will be performed using the network of wells to achieve a sheen-less groundwater condition and to maintain total dissolved phase VOC and SVOC concentrations of less than 1000 ppb.;
- Post construction engineering control measures in the form of the installation and voluntary operation of sub slab vapor mitigation systems below the proposed commercial structures.;
- A deed restriction on groundwater use.

These remediation cleanup goals were achieved at each of the area removal zones and the institutional and engineering controls will be implemented during and after the redevelopment of the site.

Changes to the completed remedial design and Project description included:

- The YMCA facility (AOC#2) was eliminated from the proposed College Park redevelopment design. The entire site was treated as AOC#1, with the removal of soil that exceeded the Part 375-6.8 (b) restricted commercial SCOs for a new Golub Headquarters office building.

- The amount of excavated impacted material decreased from the estimated 8,000 tons to 4,000 tons since the soils that exceed the Part 375-6.8 (a) unrestricted commercial SCOs (AOC#2) no longer needed to be removed from the site due to the change in the development plans.

- The amount of removed and handled construction water increased from the estimated 50,000 gallons to > 87,410 gallons due to a combination of increased sizes of area removal zones, increased duration of project completion schedule, and periods of heavy precipitation.

- An additional soil removal zone (Area 8) was added to the Focused Soil Removal Program based on tetrachloroethene (PCE) chlorinated solvent soil impacts identified in (1) geotechnical soil boring completed during the construction of the Golub Headquarters office building. A total of 528.7 tons of PCE impacted soil were removed from Area 8.

- Petroleum impacts attributed to ALCO were identified along the down gradient contiguous Maxon Road parcel. With notice to the NYSDEC and with NYSDEC's authorization, the material was excavated and later stockpiled on the College Park site. After field screening consistent with the Soil Management Plan (SoilMP), the impacted soils were handled in accordance with the SoilMP. A total of 254.46 tons of soil was removed and disposed of off site.

Appendix B in the Final Engineering Certification Report (FER) includes a summary of all remedial construction activities, as well as the results of all construction quality control testing measures performed.

The site investigation reports and NYSDEC approved Work Plans (completed from 2005 to 2008), the NYSDEC monthly status reports (produced by NETC), and the NYSDEC correspondence (compiled during the site redevelopment), are included in the FER as Appendix B.

1.4.1 Removal of Impacted Media from the Site

Remediation consisted of excavation and removal of petrochemically impacted (i.e., non virgin – mixed waste) soil with disposal at permitted landfill facilities. Excavations were filled to pre-existing grades or parking lot sub grade with imported granular soil. Groundwater encountered during the excavation services was treated on site prior to discharge to the City of Schenectady sewer system. Institutional and Engineering controls will be implemented at the site after construction of the commercial building. The institutional and engineering controls will include the installation of a sub-slab depressurization system, a foundation drain system and low permeable (asphalt and concrete) covers. An environmental easement will be filed with the County Clerk.

The NYSDEC approved work plan activities conducted to date included: (i) the removal and disposal of 4,678.84 tons of petroleum impacted soil (i.e., non virgin – mixed waste), (ii) the removal and disposal of 528.7 tons of soil impacted by the dry cleaning solvent Tetrachloroethene (PCE), (iii) the collection, treatment and discharge of 87,410 gallons of groundwater, (iv) end point soil quality testing, (v) UST and transformer removal (vi) site security and (vii) community air monitoring. As a result of the ongoing site redevelopment work, an additional 4,763.89 tons of soil was removed and disposed of, as well as the collection, treatment and discharge of an additional 319,038 gallons of groundwater. As part of the redevelopment work, an additional 254.46 tons of soil was removed and disposed of from the down gradient contiguous Maxon Road Parcel.

1.4.2 Quality of Backfill Placed in Excavated Areas

Each excavation was backfilled with clean fill from Maloy Gravel Pit located in Halfmoon, NY, a permitted commercial mining source, and placed in the excavation and compacted utilizing a motored vibratory steel drum roller.

Construction Earthwork & Grading

Clean fill soil was imported from various sources throughout the construction activities. A composite soil sample obtained from each imported fill location (and type) was chemically tested according to NYSDEC DER-10 draft Technical Guidance for Site Investigation and Remediation and ongoing NYSDEC directives. The imported fill sources and approximate imported amount are presented below:

Source	**Sample ID**	**Imported Amount**
R.J. Valente Gravel Pit		
Pipe Bedding	IF-4, IF-5, IF-6	38 cy
General Fill	IF-7, IF-8, IF-9	950 cy

Source	Sample ID	Imported Amount
Maloy Gravel Pit		
General Fill	IF-10, IF-11, IF-12	3,100 cy
Top Soil	IF-13, IF-14, IF-15	350 cy
Niskayuna High School		
General Fill Type 1	IF-1, IF-2, IF-3	3,525 cy
General Fill Type 2 (tennis court sub-base)	IF-16, IF-17, IF-18	1,000 cy
General Fill Type 3 (Road sub-base)	IF-19, IF-20, IF-20	1,100 cy
Top Soil (fabricated top soil)	IF-21, IF-22, IF-23	204 cy

In addition to the above imported fill, parking lot sub-base and "clean" stone was imported from Callanan Industries, Inc. and Larned & Sons, Inc. According to the NYSDEC DER-10 draft Technical Guidance for Site Investigation and Remediation and NYSDEC directives, this material was not analytically tested since less than 10% passed the 200 sieve.

1.4.3 On-Site and Off-Site Treatment System

The treatment system installed as part of the remedy is a sub-slab depressurization system (SSDS). A foundation drain system has been installed to assist in the dewatering of the SSDS venting layer.

The SSDS uses fan-powered vents and piping to draw air and vapors, if any, from a venting layer beneath the building's slab and discharges them to the atmosphere. This results in a lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub slab vapors into the building. Details of the SSDS design are provided in the plans and specifications contained in **Appendix C - Exhibit 1**.

The Golub Corporation's corporate office building will be completed with a foundation drain system merely as a precautionary measure. The system, which is gravity fed, is being constructed in the unlikely event that groundwater accumulates in the foundation. Any groundwater captured by the drain system will be directed to a 3000 gallon collection vessel. The vessel will be evacuated on an as needed basis. Details of the foundation drain system design are provided in the plans and specifications contained in **Appendix C - Exhibit 2**.

1.4.4 Remaining Impacts

In all cases, the project goals were obtained. All soil identified as exceeding the Track 4 SCOs were removed and disposed of off site and the areas restored to its pre-construction condition or to sub grade for future development. Construction water collected during the construction period was properly characterized and appropriately and properly pretreated and released to the City of Schenectady Sanitary Sewer system.

The record of removed soils, verification soil testing, and the removal and treated construction water, as well as the institutional controls to be implemented, establishes that the remediation project goals were obtained. The site is suitable for future use characterized as light industrial or commercial consistent with the specified and proposed industrial controls. Residential use will not be allowed. Institutional controls will include:

- Limiting end-use to light industrial or commercial use, including office buildings.
- Prohibited agricultural or gardening (for consumption) use
- Prohibited groundwater withdrawal as a potable water source
- Require conditional testing/monitoring for any groundwater withdrawal
- Require structure designed/constructed to included basement/floor slab vapor intrusion prevention and/or control
- Require all construction/excavation/grading to be done in accordance with the Site Management Plan.

1.4.5 Engineering and Institutional Controls

Since remaining residual impact is present at the site, Engineering Controls and Institutional Controls have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has the following Engineering Controls:

1. The post soil removal exposure pathway associated with residual soil impacts that remain in the subsurface soils at the site will be managed by new asphalt parking surfaces, concrete surfaces, or a minimum 1.0 foot clean soil horizon in all green space / exposed surface soil areas of the proposed College Park site. Each of the excavated areas will be closed following the soil removal services reusing on site materials or clean fill. A geosynthetic barrier will be installed (as a physical marker) in the landscaped / green space removal zone. No such barrier is necessary in paved areas. The proposed low permeable surface improvements for the College Park site are considered consistent with anticipated commercial use for the property and the lack of any exposure risk posed by deep soils with low detectable concentrations

of the compounds of concerns (CoCs) that may remain in select areas of the site.

2. All monitoring and vapor well installations present at the site will be protected and preserved during all site activities (i.e., landscaping, snow removal, etc.) by the applicable site contractor. NETC personnel will assist in directing the contractor in the installation of all protective road boxes, when necessary. Wells damaged as a result of the contractor work will be replaced.

3. Groundwater treatment measures will be considered at the site following the remedial activites. The purpose of implementing groundwater treatment measures will be to achieve a sheen-less groundwater condition and total dissolved VOC and SVOC concentrations to below 1,000 parts per billion (ppb). Based on favorable dissolved phase groundwater quality condition of the site, and the isolated nature of the LNAPL impacts, the LNAPL and dissolved phase groundwater recovery services to be implemented at the property are limited to monthly manual (vacuum assisted) methods using the existing network of monitoring wells. The need to pursue monthly groundwater treatment measures will be re-evaluated after 12 months. All recovered groundwater and LNAPL will be disposed of off site at a permitted facility. This approach is consistent with previously approved NYSDEC remedial actions at other areas of the ALCO facility. The property is serviced by the municipal water system.

4. Quarterly groundwater samples will be collected from the existing network of monitoring wells and subjected to chemical analysis via Environmental Protection Agency (EPA) Methods 8260 and 8270. Prior to any water sample collection, static water levels will be measured to the nearest one-hundredth of a foot in each monitoring well. The presence of LNAPL will be evaluated in each monitoring well using an interface probe. Monitoring wells affected by measurable LNAPL will be excluded from the sampling event. Concomitant with the development process, temperature, pH, specific conductance, turbidity and dissolved oxygen will be measured in the groundwater. Groundwater sampling will occur when a sufficient volume of water has recovered (i.e., fresh aquifer water has entered the well). Sampling will be performed using dedicated bottom filled, check valve PVC bailers and mono filament to lower and raise the bailer. All sample containers and preservatives will be provided by a NYS approved laboratory. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times will be followed. All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physiochemical changes and bring about losses due

to volatilization, adsorption, redox changes or degradation. Formal chain of custody documentation will be maintained throughout the shipment of the NETC samples to the laboratory. Observation will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. Quarterly sampling reports will be prepared and submitted to the NYSDEC to track the progress of the remedial services identified herein. The need to pursue the quarterly groundwater monitoring program will be re-evaluated after 12 months. At that time, a proposal will be submitted with regard to the continuation, if necessary, of monitoring activities.

5. A sub-slab depressurization system (SSDS) will be installed in the Golub Corporation's corporate office building. The SSDS will be operated continuously. Operation of the blowers will be monitored by red/green indicator lights, and sub slab vacuum will be monitored by permanent Magnehelic gauges installed on the SSDS riser pipes. Vacuum readings though out the floor slab will be monitoring annually using permanent sample ports located throughout the floor slab. Vacuum readings will be obtained with a digital manometer. The status of the fan operation and sub slab vacuum readings at the SSDS riser pipes will be recorded by operation personnel at daily intervals. A licensed professional engineer or authorized NYSDEC qualified environmental professional for the owner will certify the operation of the SSDS on an annual basis. A report which includes a summary of the SSDS operation will be provided to the NYSDEC annually.

Institutional Controls require the implementation, maintenance and monitoring these Engineering Controls. The Environmental Easement requires compliance with these Institutional Controls, to ensure that:

- All Engineering Controls must be operated and maintained as specified in this SMP;

- All Engineering Controls on the Site must be inspected and certified at a frequency and in a manner defined in this SMP;

- Groundwater, soil, vapor, and other environmental or public health monitoring must be performed as defined in this SMP;

- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and

replaced as necessary to ensure continued functioning in the manner specified in this SMP;

In addition, the Environmental Easement places the following restrictions on the property:

- Vegetable gardens and farming on the property are prohibited;
- Maintaining protective cover systems at the site.
- Use of groundwater underlying the property is prohibited without treatment rendering it safe for the intended use;
- All future activities on the property that would disturb remaining impacted media must be conducted in accordance with the Excavation Plan included in this SMP;
- The potential for vapor intrusion must be evaluated for any buildings developed on the site in the future and any potential impacts that are identified must be mitigated;
- The property may be used for commercial use, provided that long-term Engineering and Institutional Controls described in the SMP remain in use.

These EC/ICs are designed to:

- Prevent ingestion/direct contact with residual impacted soil;
- Prevent inhalation of or exposure to contaminants volatilizing from contaminated soil;
- Prevent ingestion of groundwater with contaminant levels that exceed drinking water standards;
- Prevent contact with or inhalation of volatiles from contaminated groundwater;
- Monitor groundwater to ensure compliance with 1.0 ppm or less of total dissolved phase volatile organic compounds;
- Monitor and maintain a sheenless groundwater condition;
- Prevent the discharge of contaminants to surface water;
- Prevent contaminated groundwater from migrating off site; and

- Prevent migration of contaminants that would result in off-site groundwater or surface water contamination.

1.4.6 Foundation Drain System

A foundation drain system has been installed in the Golub Corporation's corporate office building. The system, which is gravity fed and discharges to a precast concrete vessel, is being constructed in the unlikely event that groundwater accumulates in the foundation. Various safety measures will be implemented to ensure that the foundation drain system does not overflow. Visible observations of water levels in the holding vessel will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification.

Once installed, vessel monitoring will occur for a twenty-four month period. During this monitoring period, groundwater that accumulates in the vessel, if any, will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. The results of the chemical analysis will be provided to the NYSDEC. Further, during the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

At the end of the twenty-four month monitoring period, the chemical data will be used to evaluate the need for future vessel water chemical characterization. If the vessel water testing results comply with the NYSDEC 6NYCRR Part 703 standards, authorization from the NYSDEC will be sought to direct groundwater from the footing drain system to the Vortex storm water system. Until such authorization is obtained or in the unlikely event that groundwater standards are exceeded, all accumulated groundwater will continue to be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Remedial activities completed at the site were conducted in accordance with the NYSDEC approved Remedial Alternatives Work Plan dated April 3, 2007 and the Remedial Measures Work Plan Schedule dated December 12, 2007 for the College Park Development Site. The remedial goals included attainment of Track 4 Soil Cleanup Objectives (SCOs) for on-site soils for commercial use. A

Track 4 SCOs program was approved by NYSDEC and is listed in the Final Site Investigation (FSI) and Remedial Alternative Report (RAR). A summary of the remedial strategies and EC/ICs implemented at the site are as follows:

Since remaining impacted soil and groundwater exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

The purpose of this Plan is to provide:

- A description of all EC/ICs on the site;
- The basic operation and intended role of each implemented EC/IC;
- A description of the key components of the ICs created as stated in the Environmental Easement;
- A description of the features that should be evaluated during each periodic inspection and compliance certification period;
- A description of plans and procedures to be followed for implementation of the EC/ICs, such as the implementation of an Excavation Plan for the safe handling of remaining impacts that may be disturbed during maintenance or redevelopment work on the site;
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC; and
- A description of the reporting requirements for these controls.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Protected Cover Systems

The post soil removal exposure pathway associated with residual soil impacts that remains in the subsurface soils at the site is to be managed by new asphalt parking surfaces, concrete surfaces or a minimum 1.0 foot clean soil horizon in all green space / exposed surface soil areas of the

proposed College Park site. A geosynthetic barrier was installed (as a physical marker) in the landscaped / green space removal zone. The proposed low permeable surface improvements for the College Park site are considered consistent with anticipated commercial use for the property and the lack of any exposure risk posed by deep soils with low detectable concentrations of the compounds of concern (CoCs) that may remain in select areas of the site. The Excavation Plan in Section 2.4 outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining impacted soil is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.1.2 Groundwater Treatment Measures

Groundwater treatment measures will be considered at the site following the remedial activites. The purpose of the groundwater treatment measures will be to achieve a sheen-less groundwater condition and total dissolved VOC and SVOC concentrations to below 1,000 parts per billion (ppb). Based on favorable dissolved phase groundwater quality condition of the site, and the isolated nature of the LNAPL impacts, the LNAPL and dissolved phase groundwater recovery services to be implemented at the property are limited to monthly manual (vacuum assisted) methods using the existing network of monitoring wells. The need to pursue monthly groundwater treatment measures will be re-evaluated after 12 months. All recovered groundwater and LNAPL will be disposed of off site at a permitted facility. This approach is consistent with previously approved NYSDEC remedial actions at other areas of the ALCO facility.

Procedures for groundwater treatment measures are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.1.3 Groundwater Monitoring Measures

Quarterly groundwater samples will be collected from the existing network of monitoring wells and subjected to chemical analysis via EPA Methods 8260 and 8270. Prior to any water sample collection, static water levels will be measured to the nearest one-hundredth of a foot in each monitoring well. The presence of LNAPL will be evaluated in each monitoring well using an interface probe. Monitoring wells affected by measurable LNAPL will be excluded from the sampling event.

Concomitant with the development process, temperature, pH, specific conductance, turbidity and dissolved oxygen will be measured in the groundwater. Groundwater sampling will occur when a sufficient volume of water has recovered (i.e., fresh aquifer water has entered the well). Sampling will be performed via low flow sampling methods. All sample containers and preservatives will be provided by a NYS approved laboratory. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times will be followed. All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physiochemical changes and bring about losses due to volatilization, adsorption, redox changes or degradation. Formal chain of custody documentation will be maintained throughout the shipment of the samples to the laboratory. Observations will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. Quarterly sampling reports will be prepared and submitted to the NYSDEC to track the progress of the remedial services identified herein. The need to pursue the quarterly groundwater monitoring program will be re-evaluated after 12 months. At that time, a proposal will be submitted with regard to the continuation, if necessary, of monitoring activities.

Procedures for groundwater monitoring are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.1.4 Sub-Slab Depressurization Systems

The SSDS uses fan-powered vents and piping to draw air and soil vapors, [if any], from a venting layer beneath the building's slab and discharges them to the atmosphere. This results in a lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub slab vapors into the building. The SSDS will be operated continuously. Operation of the blowers will be monitored by red/green indicator lights,

and the sub slab vacuum will be monitored by permanent Magnehelic gauges installed on the SSDS riser pipes. Vacuum readings throughout the floor slab will be monitoring annually using permanent sample ports located throughout the floor slab. Vacuum readings will be obtained with a digital manometer. The status of the fan operation and sub slab vacuum readings at the SSDS riser pipes will be recorded by operation personnel at daily intervals. A licensed professional engineer or authorized NYSDEC qualified environmental professional for the owner will certify the operation of the SSDS on an annual basis.

A generalized approach for operating and maintaining the Sub-Slab Depressurization System is described in the Operation and Maintenance Plan (Section 4 of this SMP). A generalized approach for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). Once the SSDS is fully installed and tested, specific operation and monitoring protocols will be developed by the design engineer and provided to the NYSDEC and the building owner/occupant.

2.2.1.5 Foundation Drain System

The foundation drain system, which is gravity fed, removes any groundwater, which in an unlikely event, may accumulate in the structural fill below the SSDS venting layer. The groundwater is directed from the foundation drain system to a 3000 gallon vessel for visual and olfactory inspection and chemical analysis prior to disposal. Various safety measures will be implemented to ensure that the foundation drain system does not overflow. Visible observations of water levels will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification.

Monthly groundwater monitoring will occur for no less than twenty-four months. During this period of monitoring, any groundwater that has accumulated in the vessel will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. The results of the chemical analysis will be provided to the NYSDEC for review and inspection. During the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

At the end of the twenty-four month monitoring period, if the chemical analysis confirms that any accumulated groundwater does not exceed the groundwater standards established for the College Park site, prior

authorization by the NYSDEC will be sought to dispose of the groundwater by directing it through the Vortex to the storm water system. Until such authorization is obtained or in the unlikely event that groundwater standards are exceeded, all accumulated groundwater will continue to be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

Procedures for operating and maintaining the Foundation Drain System are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, the remedial processes will be considered to be completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The specific determination of when the following remedial processes are complete will be made in compliance with NYSDEC Closure Guidance, as per NYSDEC DER-10 draft Technical Guidance for Site Investigation and Remediation.

2.2.2.1 Protected Cover Systems

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals (i.e., quarterly) in perpetuity.

2.2.2.2 Groundwater Treatment Measures

Groundwater treatment measures will continue until a sheenless groundwater condition is documented at the site. Groundwater treatment will continue until permission to discontinue is granted in writing by NYSDEC.

2.2.2.3 Monitored Natural Attenuation

Groundwater monitoring activites to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below the mutually agreed upon threshold of 1.0 ppm total dissolved phase impacts or until permission to discontinue is granted in writing by NYSDEC.

2.2.2.4 Sub-Slab Depressurization Systems

The active SSDS will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and New York State Department of Health (NYSDOH).

2.2.2.5 Foundation Drain System

The active analytical testing of the Foundation Drain System will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that analytical data indicate that monitoring the Foundation Drain System is no longer required, a proposal to discontinue monitoring the Foundation Drain System will be submitted by the property owner to the NYSDEC and NYSDOH.

2.3 INSTITUTIONAL CONTROLS

Institutional Controls are required by the Brownfield Site Cleanup Agreement to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining impacted soil or groundwater, by controlling disturbances of subsurface impacts; and, (3) limit the use and development of the site to commercial uses only. Adherence to these Institutional Controls on the site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement by the Grantor and the Grantor's successors and assigns with all elements of this SMP;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP.
- Groundwater, Soil and Soil Vapor and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;
- On-site environmental monitoring devices, including but not limited to groundwater and vapor wells, must be protected and replaced as necessary to ensure the devices function in the manner specified in this SMP.

Institutional Controls may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming, including cattle and dairy farming, on the property are prohibited;

- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended purpose as determined by the NYSDOH or the Schenectady County Health Department;

- All future activites on the property that will disturb remaining impacted media are prohibited unless they are conducted in accordance with this SMP;

- The potential for vapor intrusion must be evaluated for any buildings developed on the site, and any potential impacts that are identified must be mitigated;

- The property may only be used for commercial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.

- The property may not be used for a more restrictive use, such as restricted-residential, as defined in 6NYCRR part 375, without additional remediation and amendment of the Environmental Easement by the Commissioner of NYSDEC.

- The site owner or remedial party will submit to NYSDEC a written statement that certifies that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitutes a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Soil Vapor Evaluation

Prior to the construction of any additional enclosed structures located over areas that contain remaining impacts, a soil vapor (SV) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to volatile organic vapors in the proposed structure. Alternatively, a SV mitigation system will be installed as an element of any new building foundation without first conducting a SV investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting a SV investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH " for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SV evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SV sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. Validated SV data will be transmitted to the property owner within 30 days of validation. SV sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 EXCAVATION PLAN

The site remedy allows for commercial use. Any future intrusive work that will penetrate, encounter or disturb the remaining impacted soils, and any modifications or repairs to the existing cover system will be performed in compliance with this Excavation Plan (EP). Intrusive construction work must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A HASP is attached as **Appendix D** to this SMP that is in current compliance with NYSDEC DER-10 draft Technical Guidance for Site Investigation and Remediation, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section 2.4.1 below. Any intrusive construction work will be performed in compliance with the EP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 2.6).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and footings).

The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.

Each hot spot and structure to be remediated (USTs, vaults and associated piping, transformers, etc.) will be removed and end-point remedial performance sampling completed before excavations related to site development commence proximal to the hot spot or structure.

Mechanical processing of historical fill and contaminated soil on-site is prohibited.

All primary contaminant sources (including but not limited to tanks and hot spots) identified during site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. The survey information will be shown on maps to be reported in the annual Periodic Review Report.

2.4.1 Notification

At least 10 days prior to the start of any activity that is reasonably anticipated to encounter remaining impacts, the site owner or their representative will notify the Department. Currently, this notification will be made to:

Mr. John Strang
NYS Department of Environmental Conservation
1130 North Westcott Rd.
Schenectady, NY 12306-2014
518-357-2045

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, or any work that may impact an engineering control,

- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern,

potential presence of grossly impacted media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work,
- A statement that the work will be performed in compliance with this EP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

2.4.2 Soil Screening Methods

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially impacted material (remaining impacts). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

2.4.3 Stockpile Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept on 6 MIL poly synthetic liners and covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

2.4.4 Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

A truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements).

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

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transported from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed, as needed, to maintain a clean condition with respect to site-derived materials.

2.4.5 Materials Transport Off-Site

All transport of materials will be performed by licensed hauler in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Hauler will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes will be identified that will: (a) limit transport through residential areas and past sensitive sites; (b) use city-mapped truck routes; (c) minimize off-site queuing of trucks entering the facility; (d) limit total distance to major highways; and (e) promote safety in access to highways.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site. Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance.

2.4.6 Materials Disposal Off-Site

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction and demolition recycling facility, etc.). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste pursuant to 6NYCRR Part 360-1.2. Material that does not meet the lower of the SCOs for residential use or groundwater protection will not be taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility) without a beneficial use determination issued by NYSDEC.

2.4.7 Materials Reuse On-Site

Future invasive activities will likely result in the removal of soils that are known to contain nuisance (i.e., visual and olfactory) petroleum impacts, (below Track 4 SCOs), as well as soils that may contain petroleum or other industrial constituents above the Track 4 Part 375-6.8 SCO's. It is expected that the

on-site reuse of nuisance soil as fill will be pursued provided the nuisance soils are not considered to otherwise represent a potential source for the propagation of LNAPL. A reuse determination for excavated soil will be based on the following, unless otherwise permitted by the NYSDEC:

(a.) Three random Photo Ionization Detector (PID) readings will be recorded for every 10 cubic yards of soils to evaluate reuse options for the material. Daily site specific field screening procedures will be maintained by and established between the contractor and NETC prior to the start of work.

(b.) Soils that exhibit VOC concentrations of 25 PPM or less will be stockpiled on site and later reused as needed for on-site fill purposes.

(c.) The reuse of excavated soil that exhibits VOC concentrations above 25 PPM will be undertaken provided post removal laboratory data demonstrates Track 4 SCO objectives are met. The soil compliance testing measures will be based on (10) representative soil samples to be collected from every 100 cubic yards of soil. From the (10) grab soil samples; (4) soil samples that exhibit the greatest VOC concentrations will be chemically analyzed for the CoCs inherent to EPA Methods SW846-8260, 8270 B/N, 8082, and TAL Metals. All excavated soil removed during site development work that exceed the 25 PPM threshold will be placed on 6 mil poly liners and remain encapsulated on site using the 6 mil poly liners until off site arrangements for waste disposal are made or until the reuse laboratory compliance test results are obtained. All staging areas will be approved by NETC and / or the NYSDEC, if necessary. No staged soil will remain on site beyond a 90 day period.

(d.) All non putrescible debris (i.e., concrete, steel, brick) removed during the excavation work will be separated for reuse on site or transported to a recycling / permitted facility.

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed above. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Impacted on-site material, including historic fill and impacted soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer and within landscaping berms.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

2.4.8 Fluids Management

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to the sites storm water sewer will be performed under a State Pollutant Discharge and Elimination System (SPDES) permit.

2.4.9 Cover System Restoration

After the completion of soil removal and any other invasive remedial activities the cover system will be restored in a manner that complies with the BCP Cleanup Agreement. The demarcation layer, consisting of geosynthetic barrier will be replaced to provide a visual reference to the top of the 'Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), see as built drawings included in the FER, this will constitute a modification of the cover element of the remedy and the upper surface of the impacted soils, if any. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

2.4.10 Backfill from Off-Site Sources

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP, applicable regulations (6NYCRR 375-6.7(d)) and DER-10 draft Technical Guidance for Site Investigation and Remediation prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Soils that meet fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

2.4.11 Stormwater Pollution Prevention

The Stormwater Pollution Prevention Plan that was used during the site construction work and which conforms to the requirements of NYSDEC Division of Water guidelines and NYS regulations is included in **Appendix E**. A summary of the plan follows:

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damage due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area.

2.4.12 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals; Target Compound List (TCL) volatiles and semi-volatiles, TCL pesticides and PCBs], unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling. Identification of unknown or unexpected

contaminated media identified by screening during invasive site work will be promptly communicated by phone to the NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in daily and periodic electronic media reports.

2.4.13 Community Air Monitoring Plan (CAMP)

The CAMP will be instituted prior to all invasive field activities at the site. All invasive earth work at the site will be subject to the CAMP. The CAMP services will be conducted in accordance to the NYSDOH guidance document entitled Generic Community Air Monitoring Plan. The CAMP will include a combination of continuous ambient air monitoring and periodic visual inspection for particulate matter and volatile organic compounds (VOC) at the perimeter of the site. Ambient VOC air quality and particulate matter (i.e., dust) will be documented up wind and down wind of the site using a properly calibrated photo ionization detector (i.e., PID - PhotoVac Model 2020) and a real-time dust monitor (i.e., Casella MicroDust Pro). Visual and olfactory conditions at the perimeter of the site will also be recorded during the CAMP testing services. The visual and olfactory inspection services will be performed to document dust particulate accumulation on site and on adjacent properties and olfactory nuisances' conditions, if any. Each day, prior to any invasive ground activities, a base line survey will be performed at each of the surrounding properties to establish site specific background reading / conditions. Readings obtained during the field activities will be compared each day to the base line reading. Construction activities will be modified, as necessary, pursuant to the CAMP, to conform to background conditions and inhibit the propagation of particulate matter and / or VOCs. It is not anticipated that the CAMP monitoring will significantly intrude upon site construction activities. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

2.4.14 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site. Specific odor control methods to be used on a routine basis will include limit on the excavation area, direct load out of trucks, and use of chemical odorants or foam. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils;. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

2.4.15 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.

- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, non-vegetated soils vulnerable to dust production.

- Gravel will be used on roadways to provide a clean and dust-free road surface.

- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

2.5 INSPECTIONS AND NOTIFICATIONS

2.5.1 Periodic Inspections

Periodic inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;

- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Site Management Reporting Plan (Section 2.6).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

2.5.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Brownfield Cleanup Agreement (BCA) 6NYCRR Part 375, and/or Environmental Conservation Law.
- 10-day advance notice of any proposed ground-intrusive activities.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, including a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Notifications will be made to Mr. John Strang, NYS Department of Environmental Conservation, 1130 North Westcott Road Schenectady, New York 12306-2014, 518-357-2045. In the event that NYSDEC develops a centralized notification system, that system will be used instead.

2.5.3 Evaluation and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;

- The Monitoring Plan is being implemented;

- Operation and maintenance activities are being conducted properly; and, based on the above items,

- The site remedy continues to be protective of public health and the environment and is performing as designed in the Remedial Alternatives Work Plan (RAWP) and FER.

2.6 REPORTING PLAN

2.6.1 Introduction

A Periodic Review Report (PRR) will be submitted to NYSDEC within eighteen months of the COC being issued, and then at a frequency set by the NYSDEC. The PRR documents the implementation of and compliance with the Site Management (SM) requirements for College Park. The SM is a concept defined in regulation 6 NYCRR 375-1.2 (at).

This report will include the following:

- Identification of all EC/ICs required by the Remedial Action Work Plan for the site;

- An assessment of the effectiveness of all Institutional and Engineering Controls for the site;

- An evaluation of the Engineering and Institutional Control Plan and the Monitoring Plan for adequacy in meeting remedial goals;

- Results of the required annual site inspections and severe condition inspections, if any;

- A compilation of all deliverables generated during the reporting period, as specified in Section 2 EC/IC Plan, Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan; and

- Certification of the EC/ICs.

2.6.2 Certification of Engineering and Institutional Controls

Inspection of the EC/ICs will occur at the frequency described in Section 3 (Monitoring Plan) and Section 4 (Operation and Maintenance Plan). After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State, depending on the need to evaluate engineering systems, will prepare a Periodic Review Report which certifies that:

- On-site ECs/ICs are unchanged from the previous certification;

- They remain in-place and are effective;

- The systems are performing as designed;

- Nothing has occurred that would impair the ability of the controls to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls;

- Access is available to the site by NYSDEC and NYSDOH to evaluate continued maintenance of such controls; and

- Site use is compliant with the environmental easement.

2.6.3 Periodic Review Report

A Periodic Review Report will be submitted every year, beginning one year after the Certificate of Completion is issued. The report will be submitted within 45 days of the end of each certification period. Other reports, such as groundwater and soil vapor monitoring data, will be submitted quarterly for the first year, and as determined by NYSDEC thereafter. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- EC/IC certification;

- All applicable inspection forms and other records generated for the site during the reporting period;

- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data sufficient for the Department to evaluate contaminant concentration trends;

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;

- A performance summary for the SSDS and Site Groundwater Monitoring Program during the calendar year, including information such as:

    - The number of days the SSDS system was run for the reporting period;
    - A description of breakdowns and/or repairs along with an explanation for any significant downtime of the SSDS;
    - A description of the resolution of performance problems;
    - A summary of the performance and/or effectiveness monitoring; and
    - Comments, conclusions, and recommendations based on data evaluation.

- A site evaluation, which includes the following:

    - The compliance of the remedy with the requirements of the site-specific RAWP, Record of Decision (ROD) or Decision Document;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard copy format, to the NYSDEC Regional Office located on 1130 North Westcott Road, Schenectady, New York 12306-2014, and in electronic format to NYSDEC Central Office and the NYSDOH Bureau of Environmental Exposure Investigation.

3.0 MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the implemented ECs to reduce or mitigate contamination at the site. ECs at the site include protective cover system, groundwater treatment measures, groundwater monitoring, sub-slab depressurization system (SSDS), and foundation drain collection system. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of appropriate media (e.g., groundwater, soil vapor, soils);
- Assessing compliance with NYSDEC approved groundwater compliance threshold of 1.0 ppm
- Assessing compliance with discharge or effluent limits;
- Assessing achievement of the remedial performance criteria;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.
- To adequately address these issues, this Monitoring Plan provides information on:
- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Quarterly monitoring of the performance of the remedy and overall reduction in contamination on-site will be conducted for the first year. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil and / or groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs for environmental media are summarized in Table 1 and outlined in detail in Sections 3.2 through 3.5 below.

TABLE 1: Media Monitoring Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater (Wells)	Quarterly for 1st Year	Groundwater	EPA Methods 8260 and 8270
LNAPL	Monthly for the 1st Year	N/A	N/A
SSDS	Annually	Air	N/A
Foundation Drain System	Monthly first 24-months	Groundwater	EPA Methods 8260 and 8270 or Other ^

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH.
^ Additional analysis will be based on disposal requirements for the groundwater and input from the NYSDEC.

3.2 GROUNDWATER MONITORING PROGRAM

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy.

3.2.1 Monitoring System Design

The network of monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the site. The network of on-site wells is illustrated on **Figure 4** in **Appendix A**.

3.2.2 Groundwater Monitoring Schedule

Quarterly groundwater samples will be collected from the existing network of monitoring wells and subjected to chemical analysis via EPA Methods 8260 and 8270. Prior to any water sample collection, static water levels will be measured to the nearest one-hundredth of a foot in each monitoring well. The presence of LNAPL will be evaluated in each monitoring well using an interface probe. Monitoring wells affected by measurable LNAPL will be excluded from the sampling event.

The sampling frequency may be modified with the approval of NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.2.3 Sampling Event Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in **Appendix F - Exhibit F-1**. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

Concomitant with the development process, temperature, pH, specific conductance, turbidity and dissolved oxygen will be measured in the groundwater. Groundwater sampling will occur when a sufficient volume of water has recovered (i.e., fresh aquifer water has entered the well). Sampling will be performed using low flow groundwater sampling techniques. All sample containers and preservatives will be provided by a NYS approved laboratory. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times will be followed. All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physio-chemical changes and bring about losses due to volatilization, adsorption, redox changes or degradation. Formal chain of custody documentation will be maintained throughout the shipment of the NETC samples to the laboratory. Observation will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. Quarterly sampling reports will be prepared and submitted to the NYSDEC to track the progress of the remedial services identified herein. The need to pursue the quarterly groundwater monitoring program will be re-evaluated after 12 months. At that time, a proposal will be submitted with regard to the continuation, if necessary, of monitoring activities.

3.3 GROUNDWATER TREATMENT MEASURES

LNAPL monitoring will be performed on a periodic basis to assess the performance of the remedy.

3.3.1 Monitoring System Design

The previously mentioned network of monitoring wells, described in Section 3.2, will be used to monitor LNAPL conditions at the site. The network of on-site wells is illustrated on **Figure 4** in **Appendix A**.

3.3.2 LNAPL Monitoring Schedule

The LNAPL and dissolved phase groundwater recovery services will occur on a monthly basis using manual (vacuum assisted) methods using the existing network of monitoring wells. The need to pursue monthly groundwater treatment measures will be re-evaluated after 12 months.

The sampling frequency may be modified with the approval of the NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.3.3 Groundwater Treatment Measures Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in **Appendix F - Exhibit F-1**. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

The presence of LNAPL will be evaluated in each monitoring well using an interface probe. Monitoring wells affected by measurable LNAPL will be manually evacuated using vacuum assisted methods. All recovered groundwater and LNAPL will be disposed of off site at a permitted facility.

3.4 MONITORING WELL REPAIRS, REPLACEMENT AND DECOMMISSIONING

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.5 FOUNDATION DRAIN SYSTEM MONITORING

Groundwater collected by the passive foundation drain system will be monitored on a monthly basis for the first 24 months. The monitoring will assess the quality of the groundwater collected by the foundation drain system.

3.5.1 Monitoring System Design

Various safety measures will be implemented to ensure that the foundation drain system does not overflow. Visible observations of water levels will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification in the event that accumulation of groundwater exceeds an established high level limit.

3.5.2 Monitoring Schedule

Once installed, vessel monitoring will occur for no less than twenty-four months. Visible and olfactory observations of water levels will be made and recorded on a monthly basis. During this period of monitoring, any groundwater that has accumulated will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. The results of the chemical analysis will be provided to the NYSDEC. Further, during the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

At the end of the twenty-four month monitoring period, if the chemical analysis confirms that any accumulated groundwater does not exceed the groundwater standards established for the College Park site, prior authorization by the NYSDEC

will be sought to dispose of the groundwater by directing it through the Vortex to the storm water system. Until such authorization is obtained or, in the unlikely event that groundwater standards are exceeded, all accumulated groundwater will continue to be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

The sampling frequency may be modified with the approval of the NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.5.3 Foundation Drain System - Groundwater Collection Protocol

Foundation drain system water sampling will occur when sufficient groundwater has accumulated in the vessel and prior to disposal. Groundwater samples will be collected via appropriate sampling techniques from the access port of the vessel. All sample containers and preservatives will be provided by a NYS approved laboratory. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times will be followed. All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physio-chemical changes and bring about losses due to volatilization, adsorption, redox changes or degradation. Formal chain of custody documentation will be maintained throughout the shipment of the NETC samples to the laboratory. Observation will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. Additional chemical analysis will be performed based on disposal facility requirements. The results of the chemical analysis will be recorded in a field book and subject to the NYSDEC's review and inspection.

All groundwater sampling activities will be recorded in a field book or a groundwater-sampling log. Other observations (e.g., sheens, groundwater elevations, etc.) will be noted on the groundwater sampling log.

3.6 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site. Main Components of the QAPP include:

- Quality Assurance / Quality Control (QA/QC) Objectives for Data Measurement;

- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected, if deemed necessary.
- Sample Tracking and Custody;
- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
    - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.7 ENGINEERING CONTROL SYSTEM MONITORING

3.7.1 Protective Cover

The post soil removal exposure pathway associated with residual soil impacts that remains in the subsurface soils at the site will be managed by new asphalt parking surfaces, concrete surfaces or a minimum 1.0 foot clean soil horizon in all green space / exposed surface soil areas of the proposed College Park site. A geosynthetic barrier is installed (as a physical marker) in all landscaped / green space zone. The low permeable surface improvements for the College Park site are considered consistent with anticipated commercial use for the

property and the lack of any exposure risk posed by deep soils with low detectable concentrations of the CoCs that may remain in select areas of the site.

As-built drawings for the Protective Cover will be prepared and provided to the NYSDEC and the building owner/occupant once the system installation is complete.

3.7.1.1 Inspection Schedule

All green space / exposed surfaces, asphalt parking areas, and concrete surfaces will be inspected annually for any penetrations or damages to the protective cover.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspection and/or sampling may take place when a suspected failure of the protective cover system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the protective system are specified later in this Plan.

3.7.1.2 Maintenance

Maintenance of the Protective cover will include the physical inspection of the asphalt and concrete surfaces as well as the 1.0 foot soil horizon over the geosynthetic barrier. Penetrations, damages and erosion to the asphalt, concrete surfaces or the 1.0 foot soil horizon over the geosynthetic barrier will be immediately repaired to maintain the protective cover.

3.7.2 SSDS

The SSDS uses fan-powered vents and piping to draw air and vapors, if any, from a venting layer beneath the building's slab and discharges them to the atmosphere. This results in a lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub slab vapors into the building.

As-built drawings for the SSDS will be prepared and provided to the NYSDEC and the building owner/occupant once the system installation and testing are complete.

3.7.2.1 Inspection Schedule

The SSDS will be operated continuously. Operation of the blowers will be monitored by red/green indicator lights, and the sub slab vacuum will be monitored by permanent Magnehelic gauges installed on the SSDS riser

pipes. The status of the fan operation and sub slab vacuum readings will be recorded by operation personnel at daily intervals. A licensed professional engineer will certify the operation of the SSDS on an annual basis.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

3.7.2.2 General Equipment Inspection

A visual inspection of the complete system will be conducted during the monitoring event. SSDS components to be monitored include, but are not limited to, the following:

- Red/Green Indicator lights
- Magnehelic gauges installed on SSDS riser pipes
- Vacuum readings from permanent sample ports

A complete list of components to be checked will be provided in an Inspection Checklist, to be included in the SSDS Operation and Maintenance (O&M) Manual. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan will be performed immediately, and the SSDS will be restarted.

3.7.2.3 System Monitoring Devices and Alarms

The SSDS is equipped with red/green indicator lights, and permanent Magnehelic gauges to monitor the operation of the SSDS. The status of the fan operation and sub slab vacuum readings will be recorded by operation personnel at daily intervals. In the event that the warning device (red/green indicator lights) are activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SSDS system restarted. Any operational problems that occur will be reported to the NYSDEC within forty-eight (48) hours of the event and will be noted in the subsequent Periodic Review Report.

3.7.3 FOUNDATION DRAIN SYSTEM

The final building will include a foundation drain system merely as a precautionary measure. The system, which is gravity fed, is being constructed in the unlikely event that groundwater accumulates in the foundation.

As-built drawings for the foundation drain system will be prepared and provided to the NYSDEC and the building owner/occupant once the system installation and testing are complete.

3.7.3.1 Inspection Schedule

Once installed, monitoring will occur for no less than twenty- four months. During this period of monitoring, any groundwater that has accumulated in the vessel will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The results of the chemical analysis will be recorded in a field book and subject to the NYSDEC's review and inspection. Further, during the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

At the end of the twenty-four month monitoring period, if the chemical analysis confirms that any accumulated groundwater does not exceed the groundwater standards established for the College Park site, prior authorization by the NYSDEC will be sought to dispose of the groundwater by directing it through the Vortex to the storm water system. Until such authorization is obtained or in the unlikely event that groundwater standards are exceeded, all accumulated groundwater will continue to be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the Foundation Drain Collection System has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the Foundation Drain Collection System are specified later in this Plan.

3.7.3.2 General Equipment Inspection

A visual inspection of the complete system will be conducted during the monitoring event. The foundation drain collection system components to be monitored include, but are not limited to, the following:

- Visible observation of water levels in vessel
- Visible observation of water for sheen and non aqueous phase liquids
- High level warning system

- Security System

A complete list of components to be checked will be provided in an Inspection Checklist, to be included in the foundation drain system O&M Manual. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan will be performed immediately, and the Foundation Drain Collection system will be restarted.

3.7.3.3 System Monitoring Devices and Alarms

Various safety measures will be implemented to ensure that the foundation drain system and vessel does not overflow. Visible observations of water levels will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification.

The Foundation Drain Collection system has a warning device to indicate that the system is not operating properly. In the event that the warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan. Operational problems will be noted in the subsequent Periodic Review Report.

3.7.3.4 Sampling Event Protocol

Foundation drain system water sampling will occur when sufficient groundwater has accumulated in the vessel and prior to groundwater disposal. Groundwater samples will be collected via appropriate sampling techniques from the access port of the vessel. All sample containers and preservatives will be provided by a NYS approved laboratory. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times will be followed. All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physio-chemical changes and bring about losses due to volatilization, adsorption, redox changes or degradation. Formal chain of custody documentation will be maintained throughout the shipment of the NETC samples to the laboratory. Observation will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. Additional chemical analysis will be performed based on disposal facility requirements. The results of the

chemical analysis will be recorded in a field book and subject to the NYSDEC's review and inspection.

All groundwater sampling activities will be recorded in a field book or a groundwater-sampling log. Other observations (e.g., sheens, groundwater elevations, etc.) will be noted on the groundwater sampling log.

3.8 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in Section 2.6.

All media and engineering system monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter report will also be prepared subsequent to each sampling event. The report (and letter) will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected;
- Copies of all field forms completed (e.g.,sampling logs, chain-of-custody documentation, inspection checklists, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether conditions have changed since the last reporting event.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

This Operation and Maintenance Plan describes the measures necessary to operate and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the SSDS, and Foundation Drain Collection systems;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS, and Foundation Drain Collection systems are operated and maintained.

Information on non-mechanical Engineering Controls (i.e. protective cover system) is provided in Section 3 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

4.2.1 Sub Slab Depressurization System (SSDS)

This section describes a conceptual approach for operation and maintenance of the SSDS. Once the SSDS installation and testing have been completed, an engineer's certification report will be prepared documenting that the system is constructed and performs in accordance with the SSDS plans and specifications. The report will include as-built drawings. Specific operation and monitoring protocols (i.e. a SSDS O&M Manual) will be prepared and provided to the NYSDEC and the building owner/occupant once the system installation and testing are complete.

4.2.1.1 Scope

The SSDS uses fan-powered vents and piping to draw air and vapors, if any, from a venting layer beneath the building's slab and discharges them to the atmosphere. This results in a lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub slab vapors into the building. The SSDS will be operated continuously. Operation of the blowers will be monitored by red/green indicator lights, and sub slab vacuum will be monitored by permanent Magnehelic gauges installed on the SSDS riser pipes. Vacuum readings though out the floor slab will be

monitoring annually using permanent sample ports located throughout the floor slab. Vacuum readings will be obtained with a digital manometer. The status of the fan operation and sub slab vacuum readings at the SSDS riser pipes will be recorded by operation personnel at daily intervals. A licensed professional engineer or NYSDEC approved qualified environmental professional will certify the operation of the SSDS on an annual basis.

4.2.1.2 System Start-Up and Testing

Following completion and final testing of the SSDS, an operating manual describing the system and its purpose will be provided to the building owner and the NYSDEC. The manual will include a discussion of system components, interpretation of and response to system failure warning devices, and key maintenance needs of the system. The key maintenance needs will include the following:

Daily (excluding weekends)

- Check pressure gauges on riser pipes to verify that the system is maintaining adequate negative pressure to depressurize the sub-slab area. Record readings in log.
- Check fan status lights (red-off, green-on). Record in log.

Monthly

- Inspect the discharge locations of the vent pipes to ensure that they are unobstructed and that no air intake has been located nearby.

Annually

- Measure and record sub-slab vacuum at all permanent sub-slab vacuum monitoring probe locations (monthly during first year of operation).
- Check HVAC system to ensure that it is being maintained and operated as designed, that makeup air is adequate, and that it is not overpowering the SSDS (monthly during first year of operation).
- Inspect fans for bearing failure or signs of other abnormal operation. Repair of replace if required.
- Check Suction pits for accumulation of water (condensate). Pump out if necessary (check monthly during first year of operation).
- Check accessible areas for evidence of floor cracking.

4.2.2 Foundation Drain System

This section describes a conceptual approach for operation and maintenance of the foundation drain system. Once the foundation drain system installation and testing have been completed, an engineer's certification report will be prepared documenting that the system is constructed and performs in accordance with the foundation drain system plans and specifications. The report will include as-built drawings. Specific operation and monitoring protocols (i.e. a foundation drain system O&M Manual) will be prepared and provided to the NYSDEC and the building owner/occupant once the system installation and testing are complete.

4.2.2.1 Scope

The foundation drain system, which is gravity fed, removes any groundwater, which in an unlikely event, may accumulate in the structural fill below the SSDS venting layer. The groundwater is directed from the foundation drain system to a 3000 gallon vessel for visual and olfactory inspection and chemical analysis prior to disposal. Various safety measures will be implemented to ensure that the foundation drain system does not overflow. Visible observations of water levels will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification.

Monthly groundwater monitoring will occur for no less than twenty-four months. During this period of monitoring, any groundwater that has accumulated in the vessel will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The groundwater will be analyzed via EPA Method 8260 and 8270 testing criteria. The results of the chemical analysis will be recorded in a field book and subject to the NYSDEC's review and inspection. During the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

4.3 MAINTENANCE REPORTING REQUIREMENTS

Maintenance reports and any other information generated during regular operations at the site will be kept on-file on-site. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and will be submitted as part of the Periodic Review Report, as specified in the 2.6.3 of this SMP.

4.3.1 Routine Maintenance Reports

Checklists or forms (see **Appendix F**) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.3.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

4.4 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

4.4.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance, the Owner or Owner' representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to Golub Corporation and the Galesi Group (or B/N Partners Associates). The emergency contact lists will be maintained in an easily accessible location in the building.

Table 2: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility mark out)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline:	(800) 457-7362

Table 3: Other Contact Numbers

Northeastern Environmental Tech Corp.	(518) 884-8545
Brown and Caldwell	(518) 472-1988
NYSDEC-Region IV	(518) 357-2045

* Note: Emergency contact numbers are subject to change and will be updated whenever a change in personnel occurs

4.4.2 Map and Directions to Emergency Health Facility

Site Location: 1510 & 1520 Maxon Road Schenectady, New York

Nearest Hospital Name: Ellis Hospital

Hospital Location: 1101 Nott Street Schenectady, New York

Hospital Telephone: (518) 243-4000

Directions to the Hospital:

1. Southeast on Maxon Road to Nott Street
2. Left onto Nott Street
3. Hospital on Left side on Nott Street

Total Distance: 0.9 Miles

Total Estimated Time: 3.0 to 5.0 minutes

4.4.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 2). The list will also be posted prominently at the site and made readily available to all personnel at all times.

4.5 EMERGENCY UTILITY WORK

Notwithstanding any provision herein to the contrary, in the event emergency repair and/or maintenance of utilities is required, the utility company shall have the right, without incurring any fee or penalty, to take any and all action necessary and required, including excavation of soils, in order to perform such emergency repair and/or maintenance of utilities, without providing prior notice to the NYSDEC or first complying with the provisions of this SMP. To the extent feasible, the utility company shall notify the property owner of such emergency prior to the commencement of emergency work, and the property owner shall have a qualified environmental professional work with the utility company to ensure that the appropriate plans and procedures are implemented pursuant to this SMP in order to protect the health and safety of the utility workers; provided, however, to the extent not feasible or no qualified environmental professional is available to work with the utility company, the utility company may proceed to perform such emergency repair and/or maintenance of utilities as it deems necessary in order to provide safe and reliable service. The property owner and/or qualified environmental professional shall be responsible

for notifying the NYSDEC within 48-hours (consistent with Section 2.5.2 in the SMP) of such emergency, working with the utility company to respond to the emergency, reporting the actions taken by the utility company in response to such emergency, and once the emergency situation has been resolved, restoring the property to pre-emergency conditions in accordance with the provisions of this SMP. The emergency contact for the property owner is BN Partners Associates, LLC, telephone number 518-356-4445 [David Buicko].

APPENDIX A

FIGURES

FIGURE - 1

SITE STATISTICS

TOTAL LOT AREA = 421,695 SF = ±9.68 AC
EXISTING ZONING: (H) HEAVY INDUSTRIAL

BULK, YARD AND SPACE PROVISIONS

	H : HEAVY INDUSTRIAL	
SETBACKS *	REQUIRED	PROPOSED
FRONT	0	81'
REAR **	8'	469'
SIDE	5'	42'
MAX BUILDING HEIGHT *	100'	±72'
MAXIMUM LOT COVERAGE		
PRINCIPAL BUILDINGS	70% MAX	±9%
ACCESSORY BUILDINGS	15%	±0%
PARKING		
TOTAL ***	800	831

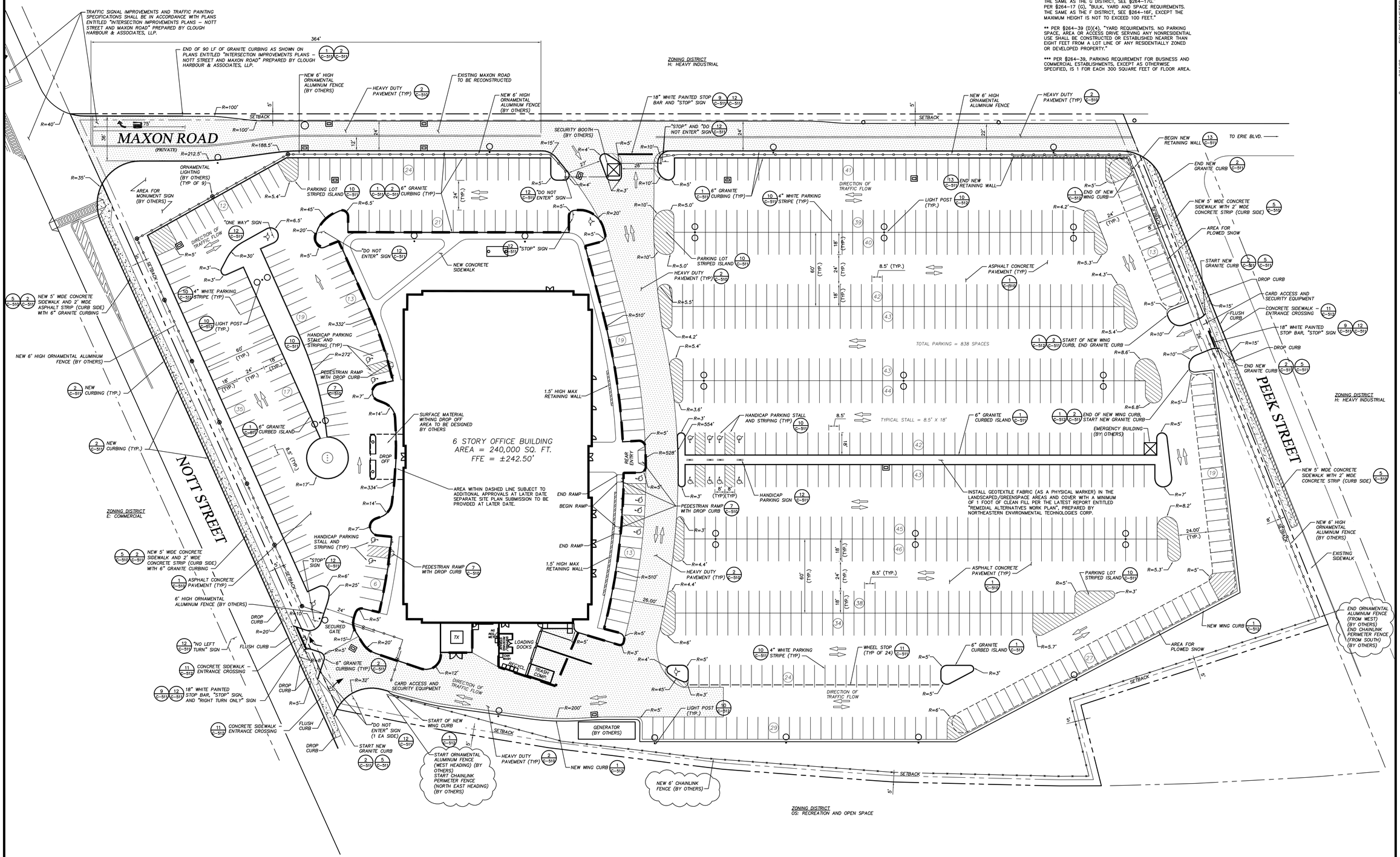
* PER §264-19 (E), "BULK, YARD AND SPACE REQUIREMENTS. THE SAME AS THE G DISTRICT, SEE §264-17G." PER §264-17 (G), "BULK, YARD AND SPACE REQUIREMENTS. THE SAME AS THE F DISTRICT, SEE §264-16F, EXCEPT THE MAXIMUM HEIGHT IS NOT TO EXCEED 100 FEET."

** PER §264-39 (Q)(4), "YARD REQUIREMENTS. NO PARKING SPACE, AREA OR ACCESS DRIVE SERVING ANY NONRESIDENTIAL USE SHALL BE CONSTRUCTED OR ESTABLISHED NEARER THAN EIGHT FEET FROM A LOT LINE OF ANY RESIDENTIALLY ZONED OR DEVELOPED PROPERTY."

*** PER §264-39, PARKING REQUIREMENT FOR BUSINESS AND COMMERCIAL ESTABLISHMENTS, EXCEPT AS OTHERWISE SPECIFIED, IS 1 FOR EACH 300 SQUARE FEET OF FLOOR AREA.

PROPOSED USE: OFFICE SPACE
OFFICE BUILDING AREA: 240,000 SQ. FT.
TOTAL SITE AREA: ±9.68 AC.
HOURS OF OPERATION (ESTIMATED): 8AM – 5PM

NOTE:
FINAL LOCATION/LAYOUT OF BUILDING AND ORNAMENTAL ALUMINUM FENCING, AREA WITHIN DASHED OUTLINE TO BE APPROVED BY PLANNING BOARD COMMISSION UNDER SEPARATE APPLICATION.



No.	DATE	DESCRIPTION	BY
8.	8/16/09	REV. PERIMETER FENCE TYPE ALONG EAST SIDE	SRH
7.	1/21/09	REV. CURBLINES TO ACCOMMODATE WB-65 TRUCK	CZ
6.	6/30/08	REV. MAXON ROAD STRIPING	SRH
5.	6/5/08	REV. CURBLINES & GENERATOR LOCATION	SRH
4.	5/23/08	REV. CURBLINE PER CITY FIRE DEPT. COMMENTS	SRH
3.	3/27/08	REVISED PER CITY COMMENTS	SRH
2.	3/21/08	PER COMMENTS	CJR
1.	3/7/08	PER CLIENT 3/5/08 COMMENTS	CJR

PROJ. MANAGER: TW
CHIEF DESIGNER: SH
REVIEWED BY: EB 1/23/08 DATE
SCALE: HORZ.: 1"=30' VERT.:
DATUM: HORZ.: NAD 83 VERT.: NGVD 29
GRAPHIC SCALE 30 15 0 30

FUSS & O'NEILL
Disciplines to Deliver
WWW.Fando.COM
24 MADISON AVE EXTENSION ALBANY, NY 12203 518.218.0600

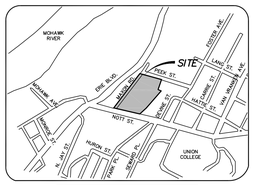
BN PARTNERS ASSOCIATES, LLC
SITE PLAN
COLLEGE PARK SCHENECTADY
CITY OF SCHENECTADY NEW YORK

PROJ. No.: 20071726.A1N
DATE: JANUARY 23, 2008

C-110

SHEET 5 OF 16

FIGURE - 2



VICINITY MAP

MAP NOT TO SCALE

NOTES CORRESPONDING TO SCHEDULE B SECTION 2 ITEMS

(14) NIAGARA MOHAWK POWER CORPORATION EASEMENT RECORDED IN LIBER 886 AT PAGE 49. AFFECTS SUBJECT PARCEL AND HAS BEEN SHOWN.

(15) EASEMENT IN FAVOR OF NIAGARA MOHAWK CORPORATION AND VERIZON NEW YORK INC. L.1795 P.624 AFFECTS SUBJECT PROPERTY AND HAS BEEN SHOWN.

(23) EASEMENT AGREEMENT BETWEEN THE CITY OF SCHENECTADY AND THE CITY OF SCHENECTADY INDUSTRIAL DEVELOPMENT AGENCY DATED 07/02/2008 AND RECORDED 07/31/2008 IN LIBER 1786 AT PAGE 752. AFFECTS FORMER MAXON ROAD RIGHT OF WAY AND HAS BEEN NOTED.

ZONING INFORMATION

"H" HEAVY INDUSTRIAL DISTRICT

MIN. FRONT YARD	25 FEET
MIN. SIDE YARD	15 FEET
MIN. REAR YARD	15 FEET
MAX. BUILDING HEIGHT	50 FEET, 4 STORIES
MAX. LOT COVERAGE	50%–PRINCIPAL STRUCTURE 10%–PRINCIPAL STRUCTURE

ZONING INFORMATION ADOPTED FROM: ZONING CHARTER 264 FROM THE CODE OF THE CITY OF SCHENECTADY

MAP REFERENCES

1. A MAP ENTITLED "No.1510–1520 MAXON ROAD", IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, STATE OF NEW YORK, MADE BY HERSHBERG & HERSHBERG C.E. & L.S., DATED 11/20/06, AND LAST REVISED 12/26/06.

PARKING TABLE

REGULAR PARKING	NA
HANDICAPPED PARKING	NA
TOTAL PARKING SPACES	NA

NOTE:
PARKING STRIPES NOT DONE AT TIME OF SURVEY

GENERAL NOTES

1. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209–2, OF THE NEW YORK STATE EDUCATION LAW.

2. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH THE LAND SURVEYOR'S SIGNATURE AND AN ORIGINAL EMBOSSED OR INK SEAL SHALL BE CONSIDERED VALID TRUE COPIES

3. THIS SURVEY WAS PREPARED FOR THE PARTIES AND PURPOSE INDICATED HEREON. ANY EXTENSION OF THE USE BEYOND THE PARTIES OR PURPOSE INDICATED IS EXPRESSLY FORBIDDEN WITHOUT WRITTEN RELEASE OR PERMISSION OF FRANCIS G. McCLOSKEY, LICENSE No. 049441.

4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.

5. ABSTRACT OF TITLE PROVIDED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, TITLE No. ORT–14635, EFFECTIVE DATED JANUARY 14, 2009.

6. THERE ARE NO BUILDINGS ON SUBJECT PARCEL AT TIME OF SURVEY.

7. NO PHYSICAL INSPECTION OF PROPERTY HAS BEEN DONE SINCE 11/07/08.

8. EASEMENT ONLY COVERS OVER No.1510 AND No.1520 MAXON ROAD. DOES NOT COVER OVER FORMER MAXON ROAD AND No.451 NOTT STREET.

LEGEND

R.O.W.	RIGHT OF WAY	⊡	MONUMENT
No.	NUMBER	○	IRON ROD
P.O.B.	POINT OF BEGINNING	MH○	MANHOLE
S.F.	SQUARE FEET	⊞	CATCHBASIN
N/F	NOW OR FORMERLY	—•—	SIGN
(100)	RECORD	—x—	FENCE LINE
N	NORTH	—G—	OVERHEAD WIRE, UTILITY POLE & GUY WIRE
S	SOUTH		WATER SHUT OFF
E	EAST	WV	WATER VALVE
W	WEST		HYDRANT
L.	LIBER	GV	GAS VALVE
P.	PAGE		LIGHT POLE
M	MONITOR WELL		CONCRETE
(464.64)	RECORD DIMENSIONS		PAVEMENT
			ARTICLE 71, TITLE 36 ENVIRONMENTAL EASEMENT AREA

RECORD DESCRIPTION HESS PARCEL

PARCEL I

ALL THAT TRACT, PIECE OR PARCEL OF LAND AND PREMISES LOCATED IN THE CITY OF SCHENECTADY COUNTY OF SCHENECTADY AND STATE OF NEW YORK, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHERLY LINE OF NOTT STREET WHICH POINT IS DISTANT SIXTY–SIX (66) FEET IN AN EASTERLY DIRECTION MEASURED ALONG SAID NORTHERLY LINE OF NOTT STREET FROM THE POINT MARKING THE INTERSECTION OF SAID NORTHERLY LINE OF NOTT STREET WITH THE EASTERLY LINE OF MAXON ROAD AND RUNNING FROM SAID POINT OF BEGINNING NORTH TEN (10) DEGREES THIRTY–FOUR (34) MINUTES EAST FOR A DISTANCE OF NINETY–SIX AND FIFTY–FIVE HUNDREDTHS (96.55) FEET TO A POINT IN SAID EASTERLY LINE OF MAXON ROAD; RUNNING THENCE NORTH FORTY–NINE (49) DEGREES TEN (10) MINUTES EAST ALONG SAID EASTERLY LINE OF MAXON ROAD FOR A DISTANCE OF ONE HUNDRED (100) FEET TO A POINT; RUNNING SOUTH NO (00) DEGREES FORTY–SEVEN (47) MINUTES WEST FOR A DISTANCE OF TWO HUNDRED TWO AND SIXTY–SIX (202.66) FEET TO A POINT IN SAID NORTHERLY LINE OF NOTT STREET; AND RUNNING THENCE NORTH SIXTY–FIVE (65) DEGREES NO (00) MINUTES WEST ALONG SAID NORTHERLY LINE OF NOTT STREET FOR A DISTANCE OF ONE HUNDRED (100) FEET TO A POINT AND PLACE OF BEGINNING.

EXCEPTING AND RESERVING:
ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, AND STATE OF NEW YORK, LYING ALONG THE SOUTHEASTERLY SIDE OF MAXON ROAD AND ALONG THE NORTHEASTERLY SIDE OF NOTT STREET AND BEING FURTHER BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT OF INTERSECTION OF THE SOUTHEASTERLY LINE OF MAXON ROAD WITH THE NORTHEASTERLY LINE OF NOTT STREET AND RUNS THENCE ALONG THE SOUTHEASTERLY LINE OF MAXON ROAD, NORTH FORTY–NINE (49) DEGREES TEN (10) MINUTES EAST, SEVENTY–FOUR AND FIFTEEN HUNDREDTHS (74.15) FEET TO A POINT; THENCE SOUTHERLY AND EASTERLY ALONG A CURVE TO THE LEFT OF RADIUS FORTY–EIGHT (48.00) FEET, A DISTANCE OF NINETY–FIVE AND SIXTY–FOUR HUNDREDTHS (95.64) FEET TO A POINT IN THE NORTHEASTERLY SIDE OF NOTT STREET; THENCE ALONG SAID NORTHEASTERLY SIDE OF NOTT STREET, NORTH SIXTY–FIVE (65) DEGREES NO (00) MINUTES WEST, SEVENTY–FOUR AND FIFTEEN HUNDREDTHS (74.15) FEET TO THE POINT OR PLACE OF BEGINNING.

PARCEL II

ALL THAT TRACT, PIECE OR PARCEL OF LAND SITUATE IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, AND STATE OF NEW YORK, LYING ALONG THE SOUTHEASTERLY SIDE OF MAXON ROAD AND ALONG THE NORTHEASTERLY SIDE OF NOTT STREET AND BEING FURTHER BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHEASTERLY SIDE OF MAXON ROAD, DISTANT NORTH FORTY–NINE (49) DEGREES (10) MINUTES EAST, SEVENTY–FOUR AND FIFTEEN HUNDREDTHS (74.15) FEET FROM THE POINT OF INTERSECTION OF THE SOUTHEASTERLY LINE OF MAXON ROAD WITH THE NORTHEASTERLY LINE OF NOTT STREET AND RUNS THENCE ALONG THE SOUTHEASTERLY LINE OF MAXON ROAD, NORTH FORTY–NINE (49) DEGREES TEN (10) MINUTES EAST, TWENTY–EIGHT AND THIRTY–FIVE HUNDREDTHS (28.35) FEET TO A POINT; THENCE SOUTH TEN (10) DEGREES THIRTY–FOUR (34) MINUTES WEST, NINETY–FIVE AND FIVE–HUNDRETHS (95.05) FEET TO A POINT IN THE INTERSECTION CURVE BETWEN NOTT STREET AND MAXON ROAD; THENCE ALONG SAID CURVE TO THE RIGHT OF RADIUS FORTY–EIGHT (48) FEET, WESTERLY AND NORTHERLY, A DISTANCE OF EIGHTY–THREE AND NINETY–FOUR HUNDREDTHS (83.94) FEET TO THE POINT OR PLACE OF BEGINNING.

PARCEL No: 39.49–2–4

SURVEY DESCRIPTION HESS PARCEL

BEGINNING AT A POINT ON THE SOUTHEASTERLY BOUNDS OF FORMER MAXON ROAD AT ITS INTERSECTION WITH THE DIVISION LINE BETWEEN LANDS NOW OR FORMERLY OF BN PARTNERS ASSOCIATES, LLC AS DESCRIBED IN BOOK 1793 OF DEEDS AT PAGE 766 PARCEL 2 TO THE EAST AND THE LANDS NOW OR FORMERLY OF BN PARTNERS ASSOCIATES , LLC AS DESCRIBED IN BOOK 1785 OF DEEDS AT PAGE 408 PARCEL I TO THE WEST; SAID POINT LOCATED S.49°10'00"W. A DISTANCE OF 646.08 AS MEASURED ALONG THE SOUTHEASTERLY BOUNDS OF FORMER MAXON ROAD FROM ITS INTERSECTION WITH THE SOUTHERLY BOUNDS OF PEEK STREET;

THENCE FROM SAID POINT OF BEGINNING S.00°47'00"W. ALONG THE FIRST DESCRIBED DIVISION LINE A DISTANCE OF 202.66 FEET TO A POINT ON THE NORTHERLY BOUNDS OF NOTT STREET ;

THENCE ALONG THE NORTHERLY BOUNDS OF NOTT STREET N.65°00'00"W., A DISTANCE OF 91.91 FEET TO A POINT OF CURVATURE;

THENCE ALONG THE SOUTHEASTERLY BOUNDS OF THE FORMER MAXON ROAD THE FOLLOWING TWO (2) COURSES AND DISTANCES:
1. ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 48.00 FEET AN INCLUDED ANGLE OF 114°10'00" FOR AN ARC LENGTH OF 95.64 FEET TO A POINT;
2. THENCE N.49°10'00"E., A DISTANCE OF 128.43 FEET TO THE POINT OF BEGINNING.

BEING THE SAME PREMISES DESCRIBED IN A BARGAIN AND SALE DEED FROM HESS CORP. TO BN PARTNERS ASSOCIATES, LLC LIBER 1785 AT PAGE 408.

OVERALL PARCEL DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE, OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY STATE OF NEW YORK AND IS FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT LOCATED AT THE INTERSECTION OF THE SOUTHWESTERLY BOUNDS OF THE FORMER MAXON ROAD AND THE NORTHEASTERLY BOUNDS OF NOTT STREET;

THENCE ALONG THE FORMER NORTHWESTERLY BOUNDS OF MAXON ROAD N.49°10'00"E., A DISTANCE OF 851.03 FEET TO A POINT;

THENCE ALONG THE SOUTHWESTERLY BOUNDS OF PEEK STREET, S.62°42'00"E., A DISTANCE OF 444.93 FEET TO A POINT;

THENCE ALONG THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF ONORIO PUZZUOLI TO THE SOUTHEAST AND THE NORTHEAST, AND THE HEREIN DESCRIBED PARCEL TO THE NORTHWEST AND THE SOUTHWEST THE FOLLOWING TWO COURSES AND DISTANCES:
1. S.31°06'00"W., A DISTANCE OF 210.07 FEET TO A POINT;
2. S.55°02'00"E., A DISTANCE OF 67.32 FEET TO A POINT;

THENCE ALONG THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF THE STATE OF NEW YORK AS DESCRIBED IN LIBER 1075 AT PAGE 542 TO THE SOUTHEAST AND THE HEREIN DESCRIBED PARCEL TO THE NORTHWEST, SOUTHWESTERLY ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2,815.50 FEET WITH AN ARC LENGTH OF 621.66 FEET TO A POINT IN THE NORTHEASTERLY BOUNDS OF NOTT STREET;

THENCE ALONG THE NORTHEASTERLY BOUNDS OF NOTT STREET, N.65°00'00"W., A DISTANCE OF 528.10 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 421,939 OR 9.69 ACRES OF LAND MORE OR LESS

SUBJECT TO ALL EASEMENTS, RESTRICTIONS AND RIGHTS–OF–WAY OF RECORD.

RECORD AND SURVEY DESCRIPTION OF FORMER MAXON ROAD

EXHIBIT A

ALL THAT TRACT, PIECE OR PARCEL OF LAND SITUATE IN THE CITY OF SCHENECTADY COUNTY OF SCHENECTADY, STATE OF NEW YORK, SAID PARCEL BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION BETWEEN THE SOUTHWESTERLY BOUNDS OF PEEK STREET WITH THE SOUTHEASTERLY BOUNDS OF MAXON ROAD; THENCE FROM SAID POINT OF BEGINNING, SOUTH 49°10'00" WEST ALONG THE SOUTHEASTERLY BOUNDS OF MAXON ROAD A DISTANCE OF 774.51 FEET TO A POINT OF CURVATURE; THENCE SOUTHERLY, CONTINUING ALONG THE SOUTHEASTERLY BOUNDS OF MAXON ROAD AND ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 48.00 FEET, INCLUDED ANGLE OF 114°10'00" FOR AN ARC LENGTH OF 95.64 FEET TO A POINT ON THE NORTHERLY BOUNDS OF NOTT STREET; THENCE NORTH 65°00'00" WEST, ALONG THE NORTHERLY BOUNDS OF NOTT STREET A DISTANCE OF 128.95 FEET TO ITS INTERSECTION WITH THE NORTHWESTERLY BOUNDS OF MAXON ROAD; THENCE NORTH 49°10'00" EAST, ALONG THE NORTHWESTERLY BOUNDS OF MAXON ROAD A DISTANCE OF 851.03 FEET TO A POINT; THENCE SOUTH 62°42'00" EAST, THROUGH MAXON ROAD RIGHT–OF–WAY A DISTANCE OF 53.88 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 43,756 SQUARE FEET OR 1.00 ACRE OF LAND.

BEING THE SAME PREMISES DESCRIBED IN A QUIT CLAIM DEED FROM CITY OF SCHENECTADY INDUSTRIAL DEVELOPMENT AGENCY TO BN PARTNERS ASSOCIATES, LLC LIBER 1786 AT PAGE 730.

RECORD DESCRIPTION OF No.1510 + No.1520 MAXON ROAD

PARCEL I:

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OR TRACT OF LAND, WITH BUILDINGS AND IMPROVEMENTS THEREON SITUATE IN THE CITY AND COUNTY OF SCHENECTADY AND STATE OF NEW YORK, LYING ALONG THE SOUTHEASTERLY SIDE OF MAXON ROAD AND ALONG THE SOUTHWESTERLY SIDE OF PEEK STREET AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY LINE OF MAXON ROAD WITH THE SOUTHWESTERLY LINE OF PEEK STREET AND RUNNING THENCE ALONG THE SOUTHEASTERLY SIDE OF MAXON ROAD SOUTH 49°10' WEST, 464.64 FEET TO A POINT; THENCE SOUTH 40°50' EAST, 399.60 FEET TO A POINT; THENCE SOUTH 49°10' WEST, 20.00, FEET TO A POINT; THENCE SOUTH 40°50' EAST, 80.00 FEET MORE OR LESS TO A POINT IN THE NORTHWESTERLY RIGHT OF WAY LINE OF NEW YORK CENTRAL & HUDSON RIVER RAILROAD, THEN, ON A CURVE TO THE LEFT ALONG THE SAID NORTHWESTERLY RIGHT OF WAY LINE OF SAID RAILROAD 455 FEET MORE OR LESS, TO A POINT IN THE SOUTHWESTERLY LINE OF LANDS FORMERLY OF WINNE AND McKAIN Co.; THENCE ALONG SAID LAST MENTIONED LANDS NORTH 55°02' WEST, 70.50 FEET TO A POINT, MARKED BY A BRASS MARKER IN CONCRETE; THENCE ALONG STILL SAID LAST MENTIONED LANDS NORTH 31°06' EAST, 202.00 FEET TO A POINT IN THE SOUTHWESTERLY LINE OF PEEK STREET; THENCE NORTHWESTERLY ALONG THE SOUTHWESTERLY LINE OF PEEK STREET, 334 FEET MORE OR LESS TO THE POINT OR PLACE OF BEGINNING, CONTAINING 5.974 MORE OR LESS IN AREA.

TOGETHER WITH AN EASEMENT, FOR THE PURPOSE OF INGRESS TO AND EGRESS FROM THE ABOVE–DESCRIBED PREMISES FOR THE PARKING OF VEHICLES, UPON, OVER AND ACROSS THOSE PORTIONS OF PREMISES ADJOINING THE ABOVE–DESCRIBED PREMISES ON THE SOUTH WHICH LIE EASTERLY AND WESTERLY OF ANY BUILDING TO BE CONSTRUCTED THEREON.

PARCEL II

ALL THAT CERTAIN TRACT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF MAXON ROAD DISTANT 202.50 FEET NORTHERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF MAXON ROAD AND THE NORTHERLY SIDE OF NOTT STREET; THENCE ALONG THE EASTERLY LINE OF MAXON ROAD, N 49°10', E 181.44 FEET TO A POINT; THENCE ON A LINE AT RIGHT ANGLES TO THE EASTERLY LINE OF MAXON ROAD ON A COURSE OF S 40°50' E 399.60 FEET TO A POINT; THENCE ON A LINE PARALLEL TO THE EASTERLY LINE OF MAXON ROAD ON A COURSE OF S 49° 10' W A DISTANCE OF 20 FEET TO A POINT; THENCE ON A LINE AT RIGHT ANGLES TO THE LAST MENTIONED COURSE S 40°50' E 80 FEET MORE OR LESS TO THE WESTERLY LINE OF LANDS OF NEW YORK CENTRAL RAILROAD; THENCE ALONG SAID LAST MENTIONED LANDS ON A CURVE TO THE LEFT A DISTANCE OF 181 FEET MORE OR LESS TO THE NORTHERLY LINE OF NOTT STREET; THENCE ALONG THE NORTHERLY LINE OF NOTT STREET N 65°00' W 301.9 FEET TO A POINT THENCE N 00°47' E 202.66 FEET TO THE POINT AND PLACE OF BEGINNING.

TOGETHER WITH AN EASEMENT FOR THE PURPOSE OF INGRESS AND EGRESS TO AND FROM THE ABOVE DESCRIBED PREMISES FOR THE PARKING OF VEHICLES UPON, OVER AND ACROSS THOSE PORTIONS OF THE PREMISES ADJOINING THE ABOVE DESCRIBED PREMISES ON THE NORTH WHICH LIE EASTERLY AND WESTERLY OF THE BUILDINGS NOW CONSTRUCTED THEREON AND OF ANY OTHER BUILDINGS TO BE CONSTRUCTED THEREON AND SUBJECT TO THE EASEMENT IN FAVOR OF THE PREMISES ADJOINING ON THE NORTH UPON, OVER AND THOSE PORTIONS OF THE ABOVE DESCRIBED PREMISES WHICH LIE EASTERLY AND WESTERLY OF ANY BUILDINGS TO BE CONSTRUCTED THEREON.

ABOVE RECORD DESCRIPTION FAILS TO MATHIMATICALLY CLOSE.

ARTICLE 71, TITLE 36 ENVIRONMENTAL EASEMENT LEGAL DESCRIPTION

ALL THAT PARCEL OF LAND SITUATE OF LAND SITUATE IN THE CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, STATE OF NEW YORK BEING MORE PARTICULARLY BOUNDED AND DESCRIBED:

BEGINNING AT A POINT LOCATED AT THE INTERSECTION OF THE SOUTHEASTERLY BOUNDS OF MAXON ROAD WITH THE SOUTHERLY BOUNDS OF PEEK STREET; THENCE FROM SAID POINT OF BEGINNING ALONG THE SOUTHERLY BOUNDS OF PEEK STREET S.62°42'00"E., A DISTANCE OF 391.06 FEET TO A POINT; THENCE ALONG THE DIVISION LINE BETWEEN LANDS NOW OR FORMERLY OF PUZZUOLI AS DESCRIBED IN LIBER 959 AT PAGE 899 TO THE EAST AND NORTH AND THE HEREIN DESCRIBED PARCEL TO THE WEST AND SOUTH THE FOLLOWING TWO COURSES AND DISTANCES:

S.31°06'00"W., A DISTANCE OF 210.07 FEET TO A POINT;
S.55°02'00"E., A DISTANCE OF 67.32 FEET TO A POINT;

THENCE ALONG THE DIVISION LINE BETWEEN LANDS NOW OR FORMERLY OF THE STATE OF NEW YORK AS DESCRIBED IN LIBER 1075 AT PAGE 542 TO THE SOUTHEAST AND THE HEREIN DESCRIBED PARCEL TO THE NORTHWEST AND ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2815.50 FEET AND AN ARC LENGTH OF 621.66 FEET TO A POINT LOCATED IN THE NORTHERLY BOUNDS OF NOTT STREET; THENCE ALONG THE NORTHERLY BOUNDS OF NOTT STREET N.65°00'00"W., A DISTANCE OF 307.23 FEET TO A POINT; THENCE ALONG THE DIVISION LINE BETWEEN LANDS NOW OR FORMERLY OF HESS REALTY CORP. AS DESCRIBED IN LIBER 1080 AT PAGE 3 TO THE WEST AND THE HEREIN DESCRIBED PARCEL TO THE EAST N.00°47'00"E., A DISTANCE OF 202.66 FEET TO A POINT LOCATED IN THE SOUTHEASTERLY BOUNDS OF MAXON ROAD; THENCE ALONG THE SOUTHEASTERLY BOUNDS OF MAXON ROAD N.49°10'00" E., A DISTANCE OF 646.08 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 364,100 S.F. OR 8.36 ACRES OF LAND MORE OR LESS.

BEING THE SAME PREMISES DESCRIBED IN A BARGAIN & SALE DEED FROM BN PARK ASSOCIATES, LLC TO BN PARTNERS ASSOCIATES, LLC LIBER 1793 AT PAGE 766.

Note: the above description describes the same property as in schedule A of title commitment No. ORT–14635 of Old Republic National Title Insurance Company bearing an effective date of January 14, 2009.

SURVEYOR'S CERTIFICATE

TO: **(1) BN PARK ASSOCIATES, LLC (2) BN PARTNERS ASSOCIATES, LLC (3) OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY (4) BANK OF AMERICA, N.A., ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTEREST MAY APPEAR (5) NEW YORK STATE DEPARTMENT OF ENVIRONMENT CONSERVATION**

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS ION 2005, AND INCLUDES ITEMS 2, 3, 4, 6, 8, 9, 10, 11(a), 12, 13 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF NEW YORK, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

DATE: 11/07/08

SIGNED: _____
Registration No. 49441

FLOOD NOTE: By graphic plotting only, this property is in Zone(s) C of the Flood Insurance Rate Map, Community Panel No. 360741 0002 B which bears an effective date of SEPTEMBER 30, 1983 and is not in a Special Flood Hazard Area. By telephone call dated 11/07/08 to the National Flood Insurance Program (800–638–6620) we have learned this community does/~~does not~~ currently participate in the program. No field surveying was performed to determine this zone and an elevation certificate may be needed to verify this determination or apply for a variance from the Federal Emergency Management Agency.
ZONE "C" AREA OF MINIMAL FLOODING

GRAPHIC SCALE

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

0 5 10 15 20
(IN meters)

FOR PURPOSE OF ARTICLE 71, TITLE 36 ENVIRONMENTAL EASEMENT & OTHER PURPOSES

HERSHBERG & HERSHBERG
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, New York 12203
Ph. (518) 459–3096
Fax (518) 459–5683
E–mail: hhershberg@aol.com

ALTA/ACSM LAND TITLE SURVEY

MAP SHOWING LOCATION OF BUILDINGS AND IMPROVEMENTS WITH REFERENCE TO PROPERTY LINES OF

No.1510 & No.1520 MAXON ROAD

CITY OF SCHENECTADY, COUNTY OF SCHENECTADY, STATE OF NEW YORK

ALTERATION OF THIS DOCUMENT, EXCEPT BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, IS ILLEGAL

REVISIONS: 2/09/09 (reviewed title), 3/25/09 (reviewed title), 3/26/09 (certifications updated)

DATE:11/07/08 | SCALE:1"=40' | BY:AVC | CHK:GRT | MAP No.:080334–F

Note: Map base on a Clough Harbour & Associates LLP Map dated July 27, 2006.
SCO Violation areas will be field surveyed. Tire clean off pad, decon pad and concrete rubble location are subject to change.

Path://PROJECTS/youngsommer/BigN/2006Docs/FinalSiteInvestigationReport/AllMaps/CompleteReportMaps/Figure 20 - Part 375-6.8 Violation Location Map

PART 375-6.8 SCO Violations

AREA 1: Volume = 800 cubic yrds.
(Chemicals of concern: SVOCs, TAL Metals, & PCBs)

AREA 2: Volume = 200 cubic yrds.
(Chemicals of concern: SVOCs)

AREA 4: Volume = 800 cubic yrds.
(Chemicals of concern: SVOCs)

AREA 5: Volume = 700 cubic yrds.
(Chemicals of concern: SVOCs & TAL Metals)
UST Removal Area
(Chemicals of concern: VOCs & SVOCs)

PEEK STREET
MAXON ROAD
NOTT STREET
CITY OF SCHENECTADY BIKE PATH

AREA 1 - Track 4 Restricted Commercial Use SCO Violations

AREA 2 - Track 4 Restricted Commercial Use SCO Violations

AREA 4 - Track 4 Restricted Commercial Use SCO Violations

AREA 5 - Track 4 Restricted Commercial Use SCO Violations

Tire Clean Off Pad
Maxon Road Access

Decon Pad

Concrete Rubble

Former Big N Plaza Building
(Unimproved Surfaces)

PROPOSED GOLUB BUILDING
6 STORY OFFCE
(L+/-240,000 SQ.FT.)

HESS GAS STATION

UST Location

Asphalt
Gravel Area
Broken Asphalt / Gravel Area
Slope Down

MW-4-06, MW-15-06, MW-8-06 06, MW-7-06, MW-6-06, MW-9-06, MW-13-06, MW-10-06, MW-11-06, MW-12-06, MW-14-06, MW-16-06, MW-1-06, MW-2-06, MW-3-06

BG-1, BG-2, BG-3

GP-2-06, GP-3-06, GP-4-06, GP-5-06, GP-6-06, GP-7-06, GP-8-06, GP-9-06, GP-10-06, GP-11-06, GP-12-06, GP-13-06, GP-14-06, GP-15-06, GP-16-06, GP-17-06, GP-18-06, GP-19-06, GP-20-06, GP-21-06, GP-22-06, GP-23-06

TP-1, TP-2, TP-3, TP-4, TP-5, TP-6, TP-7, TP-8, TP-9, TP-10, TP-11, TP-12, TP-13, TP-14, TP-15, TP-16, TP-17, TP-18, TP-19, TP-20, TP-21, TP-22, TP-23, TP-24, TP-25, TP-26, TP-27, TP-28, TP-29, TP-30, TP-31, TP-32, TP-33, TP-34, TP-35, TP-36, TP-37, TP-38, TP-39, TP-40, TP-41&59, TP-43, TP-44, TP-45, TP-46, TP-47, TP-48, TP-49, TP-50, TP-51, TP-52, TP-53 to TP-55, TP-54, TP-56 & 68, TP-57, TP-58, TP-60, TP-61, TP-62, TP-63, TP-64, TP-65, TP-66, TP-67, TP-71, TP-72, TP-73, TP-74, TP-75, TP-76, TP-77, TP-78, TP-79, TP-80, TP-81, TP-82, TP-83, TP-84, TP-85, TP-86

LEGEND

- Test Pit Location (TP-6)
- Rotary Soil Boring and Monitoring Well Location (MW-4-06)
- Bachground Soil Sampling Location (BG-3)
- Direct Push Soil Boring (GP-9-06)

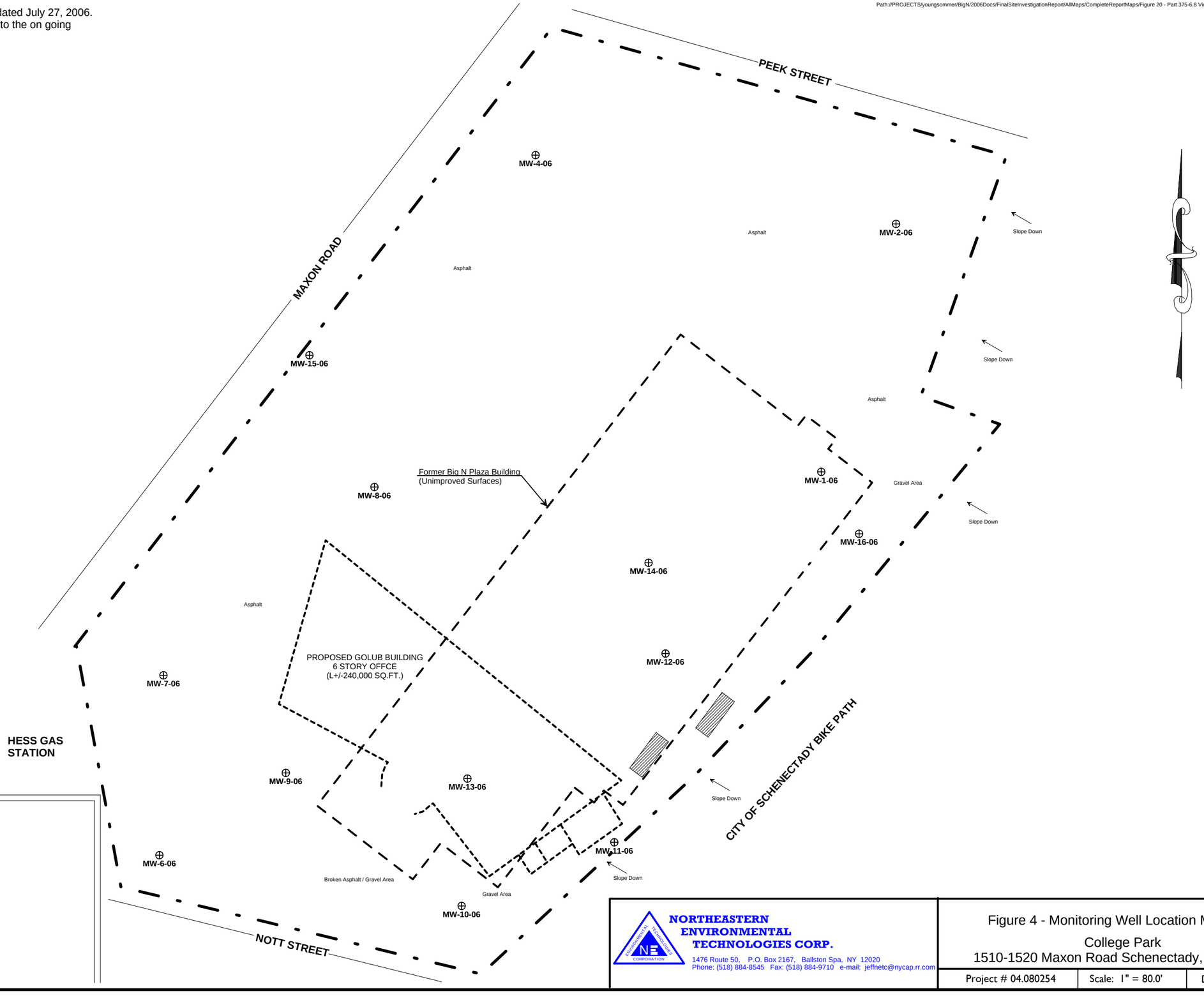
NORTHEASTERN ENVIRONMENTAL TECHNOLOGIES CORP.
1476 Route 50, P.O. Box 2167, Ballston Spa, NY 12020
Phone: (518) 884-8545 Fax: (518) 884-9710 e-mail: jeffnetc@nycap.rr.com

Figure 3 - PART 375-6.8 Violation Map
College Park
1510-1520 Maxon Road Schenectady, New York

Project # 04.080254	Scale: 1" = 80.0'	Date: 12/12/07

Note: Map base on a Clough Harbour & Associates LLP Map dated July 27, 2006. Certian monitoring well locations may have been removed due to the on going construction activites at the site.

Path://PROJECTS/youngsommer/BigN/2006Docs/FinalSiteInvestigationReport/AllMaps/CompleteReportMaps/Figure 20 - Part 375-6.8 Violation Location Map



LEGEND

⊕ Rotary Soil Boring and Monitoring Well Location
MW-4-06

NORTHEASTERN ENVIRONMENTAL TECHNOLOGIES CORP.
1476 Route 50, P.O. Box 2167, Ballston Spa, NY 12020
Phone: (518) 884-8545 Fax: (518) 884-9710 e-mail: jeffnetc@nycap.rr.com

Figure 4 - Monitoring Well Location Map
College Park
1510-1520 Maxon Road Schenectady, New York

Project # 04.080254	Scale: 1" = 80.0'	Date: 12/12/07

APPENDIX B

ENVIRONMENTAL EASEMENT

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this _____day of October, 2009, between Owner(s) BN Partners Associate, LLC., having offices at 695 Rotterdam Industrial Park, Schenectady, New York, 12306 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 1510 and 1520 Maxon Road, in the City and County of Schenectady, State of New York, known and designated on the tax map of the County Clerk of Schenectady as tax map parcel number: Section 39.50 Block 1 Lot 9.1 and Section 39.49 Block 3 Lot 1 commonly known as the College Park Site, being the same as that property conveyed to Grantor by bargain and sale deed on November 14, 2008, and recorded on November 26, 2008 in Book 1793 at page 766, comprising of approximately 8.36 ± acres and hereinafter more fully described in the ALTA/ACSM Land Title Survey of 1510 & 1520 Maxon Road, dated November 7, 2008, (revised on November 05, 2009) prepared by Hershberg & Hersberg Consulting Engineers and Land Surveyors, and corresponding Schedule "A" property description, attached hereto and made a part hereof (the "Controlled Property"); and

WHEREAS, the Commissioner does hereby acknowledge that the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established at this Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number A4-0520-0705 Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant to Article 71, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The following controls apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property:

A. The Controlled Property may be used for commercial use as described within 6 NYCRR Part 375- 1.8 (g) (2) (iii), as long as the following long-term engineering controls are employed and the land use restrictions specified below are adhered to:

Engineering Controls (ECs)

1. Protected Cover Systems - comprising of asphalt parking surfaces, concrete surfaces, or a minimum 1.0 foot clean soil horizon in all green space / exposed surface soil areas must be maintained. In the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining impacted soil is disturbed, the Excavation Plan in the SMP outlines the procedures required to be implemented. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in the SMP. The composite cover system is a permanent control and the quality and integrity of this system must be inspected at defined, regular intervals (i.e., quarterly) in perpetuity.

2. Groundwater Evaluation Measures - Procedures for groundwater evaluation measures are included in the Monitoring Plan of the SMP. The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs. Groundwater evaluation must continue until permission to discontinue is granted in writing by NYSDEC.

3. Sub-Slab Depressurization Systems - The SSDS must be operated continuously. A licensed professional engineer or authorized NYSDEC qualified environmental professional for the owner will certify the operation of the SSDS on an annual basis. Operation and Maintenance the Sub-Slab Depressurization System is described in the Operation and Maintenance Plan of the SMP. The active SSDS must not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and New York State Department of Health (NYSDOH).

4. Foundation Drain System - Procedures for operating and maintaining the Foundation Drain System are documented in the Operation and Maintenance Plan of the SMP. Procedures for monitoring the system are included in the Monitoring Plan of the SMP. The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs. The active analytical testing of the Foundation Drain System will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that analytical data indicate that monitoring the Foundation Drain System is no longer required, a proposal to discontinue monitoring the Foundation Drain System will be submitted by the property owner to the NYSDEC and NYSDOH.

Institutional Controls (ICs)

1. All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

2. All Engineering Controls on the Site must be inspected and certified at a frequency and in a manner defined in the SMP;

3. Groundwater, soil, vapor, and other environmental or public health monitoring must be performed as defined in the SMP;

4. Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

5. On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP;

In addition, the following restrictions are placed on the property:

1. Protective cover systems at the site must be maintained;

2. Use of groundwater underlying the property is prohibited without treatment rendering it safe for the intended use;

3. All future activities on the property that would disturb remaining impacted media must be conducted in accordance with the Excavation Plan included in the SMP;

4. The potential for vapor intrusion must be evaluated for any buildings developed on the site in the future and any potential impacts that are identified must be mitigated;

B. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the Site Management Plan ("SMP") that the Department has approved for the Controlled Property and all Department-approved amendments to that SMP.

The Grantor hereby acknowledges receipt of a copy of the NYSDEC-approved Site Management Plan, dated September 21, 2009. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system on the Controlled Property, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. Upon notice of not less than thirty (30) days the Department in exercise of its discretion and consistent with applicable law may revise the SMP. The notice shall be a final agency determination. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer
NYSDEC - Region 4
Division of Environmental Remediation
1130 North Westcott Road
Schenectady, NY 12306-2014
Phone: (518) 357-2045 fax: (518) 357-2087

or

Site Control Section
Division of Environmental Remediation
NYS DEC
625 Broadway
Albany, New York 12233

C. The Controlled Property may not be used for a higher level of use such as unrestricted residential or restricted residential and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

D. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant of Title 36 to Article 71 of the Environmental Conservation Law.

E. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

F. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Controlled Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer the underlying fee interest to the Controlled Property by operation of law, by deed, or by indenture, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person intentionally violates this Environmental Easement, the Grantee may revoke the Certificate of Completion provided under ECL Article 56, Title 5 or ECL Article 27 Title 14 with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by

Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach. Grantor shall then have a reasonable amount of time from receipt of such notice to cure. At the expiration of said second period, Grantee may commence any proceedings and take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement in accordance with applicable law to require compliance with the terms of this Environmental Easement.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar its enforcement rights in the event of a subsequent breach of or noncompliance with any of the terms of this Environmental Easement.

6. Notice. Whenever notice to the State (other than the annual certification) or approval from the State is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:
County, NYSDEC Site Number, NYSDEC Contract or Order Number, and the
County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: C 447037
Department of Environmental Enforcement
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

Such correspondence shall be delivered by hand, or by registered mail or by certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. This Environmental Easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor's Name: BN Partners Associates, LLC

By: FG Ventures, Inc. ("Galesi")

By: _____
David M. Buicko ~~- Manager~~

Title: Exec Member Date: 11-16-09

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation

By: _____
Alexander B. Grannis, Commissioner

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Schenectady)

On the 16 day of November, in the year 2009, before me, the undersigned, personally appeared David Buicko, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Sandra D. Andi
Notary Public - State of New York

SANDRA D. ANDI
Notary Public, State of New York
No. 4737914
Qualified in Albany County
Commission Expires November 30, 2013

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the _____ day of _____, in the year 20__, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

SCHEDULE "A" PROPERTY DESCRIPTION

ADDRESS: 1520 - 1520 Maxon Road
Schenectady, NY
TAX MAP ID: 39.49 - 3 - 1 & 39.50 - 1 -9.1

SCHEDULE A DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, situate, lying and being in the City of Schenectady, County of Schenectady, State of New York and is further described as follows:

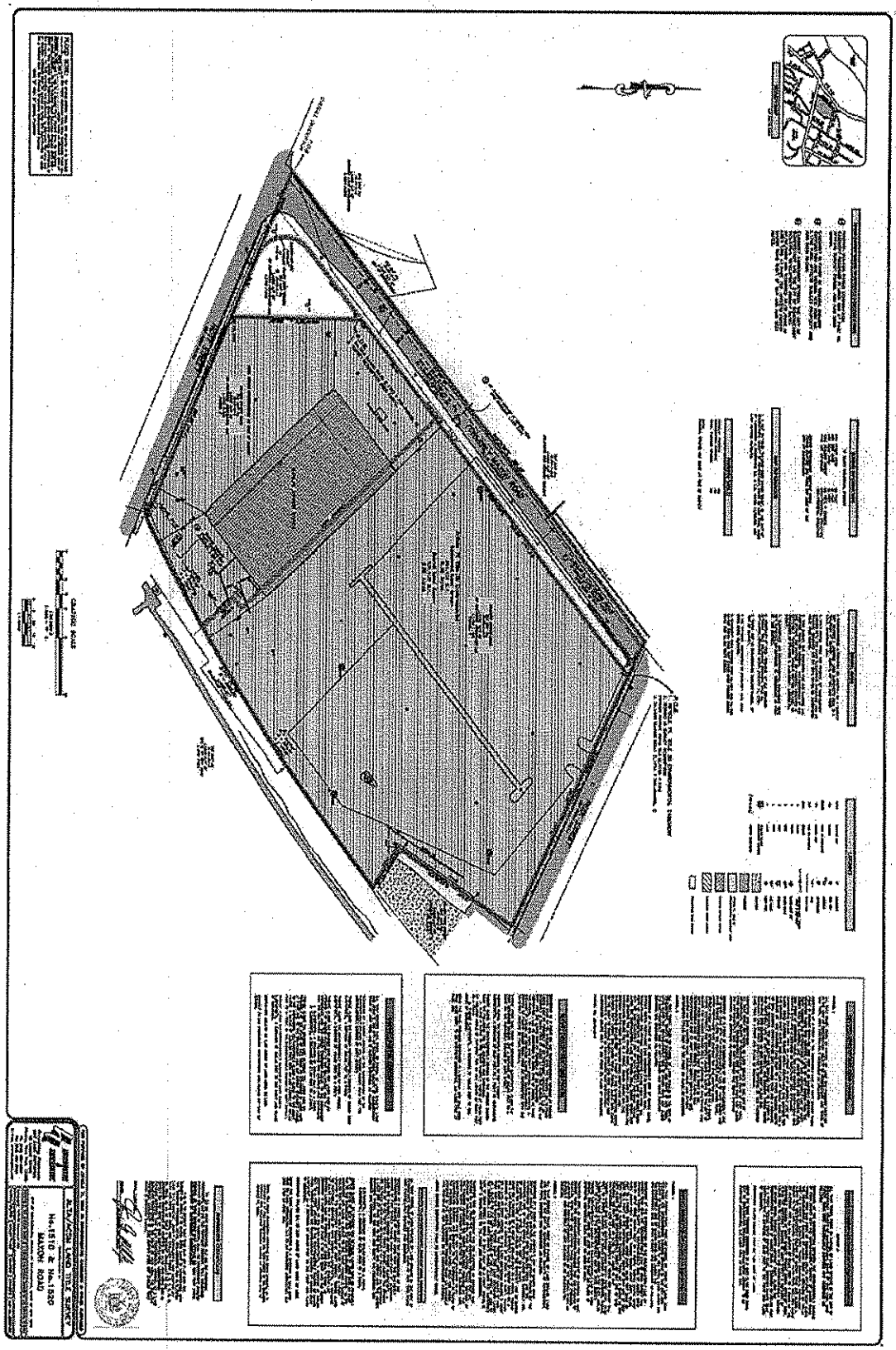
BEGINNING at a point located at the intersection of the southeasterly bounds of Maxon Road with the southerly bounds of Peek Street; thence from said point of beginning along the southerly bounds of Peek Street S. 62°-42'-00"E., a distance of 391.06 feet to a point; thence along the division line between lands now or formerly of Puzzuoli as described in Liber 959 at Page 899 to the East and North and the herein described parcel to the West and South the following two courses and distances:

S. 31°-06'- 00"W., a distance of 210.07 feet to a point;
S. 55°- 02'- 00"E., a distance of 67.32 feet to a point;

Thence along the division line between lands now or formerly of the State of New York as described in Liber 1075 at Page 542 to the southeast and the herein described parcel to the northwest and along a curve to the right having a radius of 2815.50 feet and an arc length of 621.66 feet to a point located in the northerly bounds of Nott Street; thence along the northerly bounds of Nott Street N. 65°- 00'- 00"W., a distance of 307.23 feet to a point; thence along the division line between lands now or formerly of Hess Realty Corp. as described in Liber 1080 at Page 3 to the West and the herein described parcel to the East N. 00°-47'-00"E., a distance of 202.66 feet to a point located in the southeasterly bounds of Maxon Road; thence along the southeasterly bounds of Maxon Road N. 49°-10'-00"E., a distance of 646.08 feet to the point and place of beginning.

SBL: 39.49-3-1 & 39.50-1-9.1

SURVEY



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APPENDIX C

TREATMENT SYSTEMS PLANS AND SPECIFICATIONS

NORTHEASTERN
ENVIRONMENTAL
TECHNOLOGIES CORP.

APPENDIX C - EXHIBIT 1

SUB SLAB DEPRESSURIZATION SYSTEM PLANS AND SPECIFICATIONS

NORTHEASTERN ENVIRONMENTAL TECHNOLOGIES CORP.

College Park Site
Description of Sub-Slab Depressurization System

In accordance with the approved Remedial Alternatives Work Plan (NETC, 2007), a sub-slab depressurization system (SSDS) is being installed in Golub Corporation's corporate office building currently under construction on the College Park site. The purpose of the SSDS is to mitigate the potential for vapor intrusion by residual volatile organic compounds (VOCs) that may remain in the soil and groundwater in the vicinity of the office building's foundation.

The SSDS has been designed on behalf of Golub Corporation by Brown and Caldwell Associates (BCA), an affiliate of Brown and Caldwell (BCA, 2009). A copy of the SSDS plans and specifications is included in Appendix ___ of the FER. The SSDS design is based upon and consistent with the relevant portions of the New York State Department of Health, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006; USEPA, Radon Prevention in the Design and Construction of Schools and Other Large Buildings, June 1994; and other relevant and applicable guidance.

The SSDS uses fan-powered vents and piping to draw air and vapors, if any, from a venting layer beneath the building's slab and discharge them to the atmosphere. This results in lower sub-slab air pressure relative to indoor air pressure, which prevents the infiltration of sub slab vapors into the building. Details of the SSDS design are provided in the plans and specifications contained in Appendix ___. A general description of the components of the SSDS is provided below.

Subgrade

As noted previously, the office building is located over subsurface components of the former ALCO manufacturing facility and a later shopping center that occupied the

site. Remnants of foundation footings, utility chases, sewers, piping and other structures were encountered within the building footprint during excavation and installation of the office building's foundation. These remnants were demolished and backfilled with NYSDOT No. 1 and no. 2 crushed stone as necessary to accommodate foundation pilings, grade beams, tie beams and utilities.

Subsurface utilities installed for the new office building consist of storm drain, sanitary sewer, water and electrical systems. The building is equipped with a perforated perimeter/under drain to intercept groundwater that could potentially enter the SSDS venting layer. The subsurface utilities and perimeter/under drain systems were backfilled with NYSDOT No. 1 and no. 2 crushed stone. The stone-filled foundation, utility and perimeter/underdrain trenches interconnect at a number of locations and create potentially completed air pathways between the perimeter and interior of the foundation. As described below, the SSDS includes measures to block these air pathways.

Structural Fill and Lower Vapor Barrier

A layer of structural fill will be installed above the subgrade to provide additional support of the concrete floor slab. The structural fill will consist of a 6-inch lift of crusher run followed by a 12-inch lift. A lower vapor barrier (15 mil polyethylene sheeting) will be installed across the entire foundation pad between the two lifts of crusher run (Apx ____, Sheet C-2). The purpose of the lower vapor barrier is to block air (at atmospheric pressure) from flowing upward from the stone-filled trenches into the overlying aggregate venting layer at a rate that exceeds the ability of the SSDS to maintain a vacuum in the aggregate venting layer. The lower vapor barrier will reduce the overall (bulk) permeability of the entire subgrade/structural fill to levels that

would have been expected if the foundation, utility and perimeter/underdrain trenches had been backfilled with sandy fill rather than coarse aggregate.

Aggregate Venting Layer

The aggregate venting layer will consist of a 6-inch layer of NYSDOT No. 2 crushed stone placed on top of the structural fill. The aggregate venting layer will be continuous across the foundation pad, and also surrounds the sides and bottoms of the elevator pits. Due to the presence of stone backfill in utility trenches and in areas where subsurface ALCO structures were demolished and removed, several of the stone-filled foundation, utility and perimeter/underdrain trenches have the potential to directly or indirectly communicate with the aggregate venting layer that surrounds the elevator pits. For this reason, the stone filled trenches are being systematically plugged with flowable fill or concrete to block air from flowing freely from the foundation perimeter through the stone backfill to the aggregate venting layers that surround the elevator pits (Apx ___, Sheet C-5). The plugs are positioned near locations where the stone-filled trenches intersect the perimeter foundation trench, and where the perforated underdrain crosses over stone-filled trenches. To provide redundancy, cutoff trenches will be excavated around the elevator pits and filled with flowable fill. The cutoff trenches will intersect the utility trenches that enter the aggregate venting layers surrounding the elevator pits. The stone backfill encountered by the cutoff trenches will be removed before the flowable fill is placed, enabling the fill to directly contact and seal against the sandy fill.

The SSDS design will permit selective isolation of the aggregate venting layers that surround the elevator pits from the aggregate venting layer beneath the floor slab (Apx. ____, Sheet C-6, Detail D). This will provide flexibility in the event that testing indicates that air is leaking into an elevator pit's aggregate venting layer and preventing

establishment of a vacuum under the floor slab. The selective isolation will be possible because the lower vapor barrier will extend over the aggregate venting layers that surround the elevator pits and be sealed to the concrete walls of the elevator pits. Valved pipes will penetrate the lower vapor barrier, allowing regulation of air flow from the venting layers that surround the elevator pits into the venting layer under the floor slab.

An upper vapor barrier (15 mil polyethylene sheeting) will be installed over the entire aggregate venting layer. The upper vapor barrier will be in direct contact with the concrete floor slab, and will be affixed to the exterior foundation walls and to the walls of the elevator pits. The purpose of the upper vapor barrier is to both reduce the flow of indoor air into the aggregate venting layer, and to provide a temporary barrier to vapor intrusion in the event of a temporary shut down of the venting blowers. The floor slab will be constructed with fiber reinforced concrete. The use of this material will minimize puncturing of the upper vapor barrier by eliminating the need to install wire reinforcing mesh on top of the upper vapor barrier.

Vapor Suction Pits and Roof Vents

Two vapor suction pits will be installed within the aggregate venting layer, one in each "half" of the building footprint. The suction pits will consist of a void in the aggregate venting layer. The void will be covered with an aluminum plate supported on each corner by concrete blocks. A 6-inch diameter perforated PVC pipe will extend horizontally into the suction pit and be connected to a vertical riser pipe. The riser pipe will extend through the roof to an air venting exhaust fan. The discharge point will be 8 feet above the roof surface.

Testing and Operation

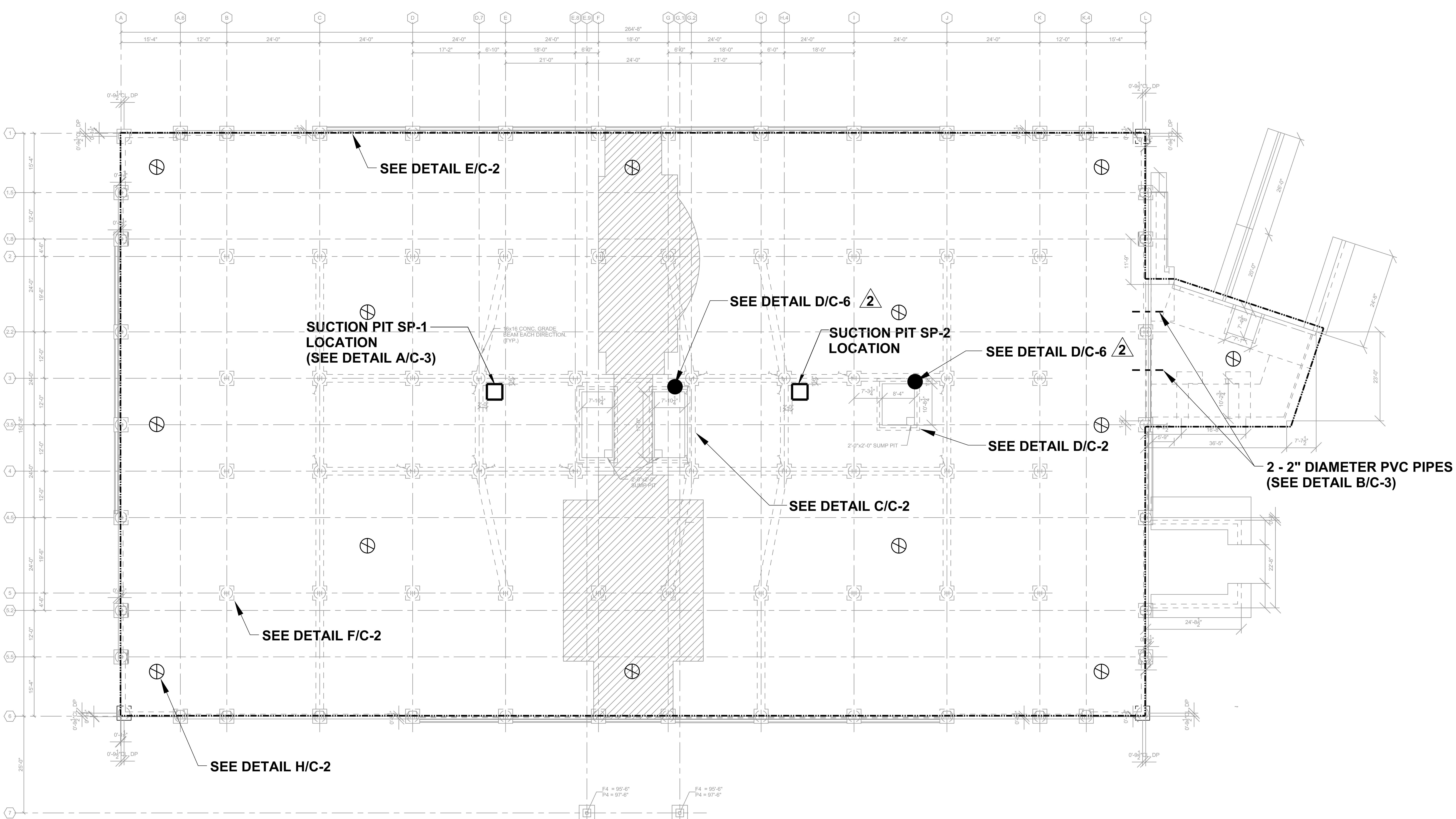
Upon completion of the floor slab, the SSDS will be tested by operating the specified air venting exhaust fans and obtaining vacuum readings at permanent sample ports located throughout the floor slab. Vacuum readings will be obtained with a digital manometer.

Once the office building is completed, the SSDS will be operated continuously as necessary to mitigate the risk, if any, of vapor intrusion into the building. Operation of the blowers will be monitored by red/green indicator lights, and sub slab vacuum will be monitored by permanent Magnehelic gauges installed on the SSDS riser pipes. The status of the fan operation and sub-slab vacuum readings will be recorded by Golub personnel at daily intervals. A licensed professional engineer will certify the operation of the SSDS on an annual basis.

References

NETC (Northeastern Environmental Technologies Corp.). "Remedial Alternatives Work Plan, Proposed College Park Development Site, 1510-1520 Maxon Road, Schenectady, New York, Brownfields Cleanup Program (BCP No. C447037)." April 3, 2007.

BCA (Brown and Caldwell Associates). Plans and specifications titled "Subslab Depressurization System, Golub Corporation, College Park Site, Schenectady, New York." October 21, 2009, revised March 19, 2009; sheet nos. 1-6..



THESE DRAWINGS SHALL BE USED FOR THE SUBSLAB DEPRESSURIZATION SYSTEM ONLY. THESE DRAWINGS SHOULD NOT BE USED FOR ARCHITECTURAL, MECHANICAL, STRUCTURAL OR ANY OTHER PROPOSED CONSTRUCTION.

SUCTION PIT LOCATION PLAN

3/32" = 1'-0"

LEGEND:

- LIMITS OF AGGREGATE VENTING LAYER AND VAPOR RETARDER LAYER
- SUB-SLAB VACUUM MONITORING LOCATION
- 2 ● ELEVATOR PIT VENTING LAYER CONNECTION. COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. LOCATE NEAR A PIPE CHASE.

WARNING:

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BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER — DATE: 7/8/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL — DATE: 7/8/08

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES

IMAGE REFERENCES

JONATHAN D. HOWLAND
PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 065649
DATE 4/9/09

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	0	DRAFT	RJ	7/22/08	
	1	ISSUED	RJ	10/21/08	
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM
SUCTION PIT LOCATION PLAN

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME: C-1 (SUCTION PIT LOCATION PLAN)
BC PROJECT NUMBER: 134434.201
CLIENT PROJECT NUMBER:
DRAWING NUMBER: C-1
SHEET NUMBER: 1 OF6

Apr 08, 2009 - 5:13pm rjames
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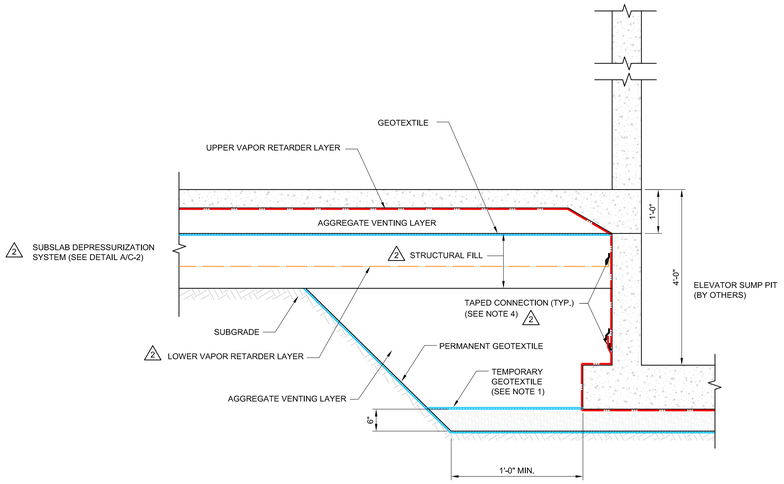

DETAIL D
ELEVATOR PIT SECTION (TYP.)
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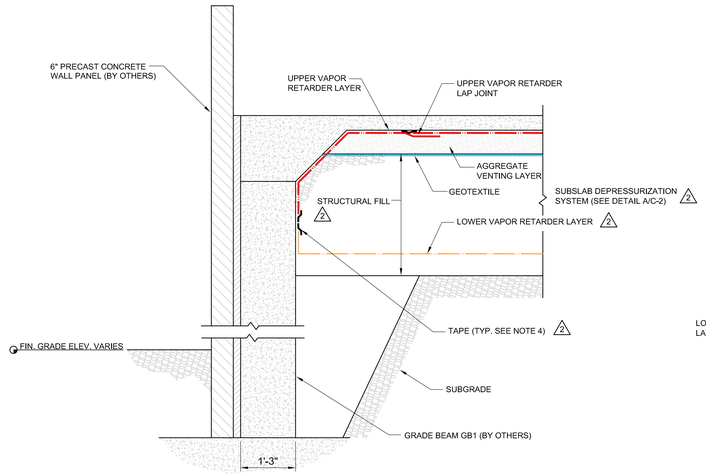
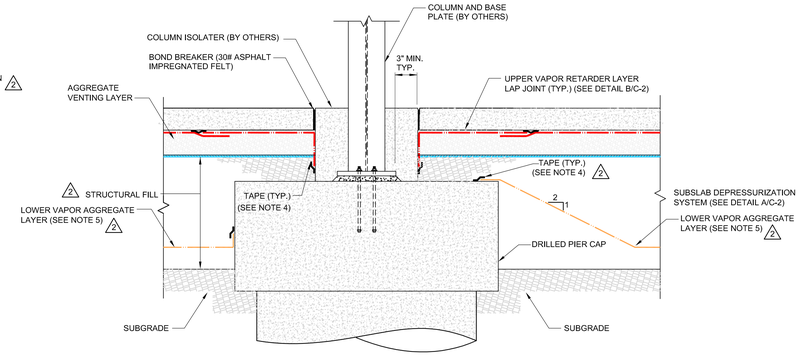
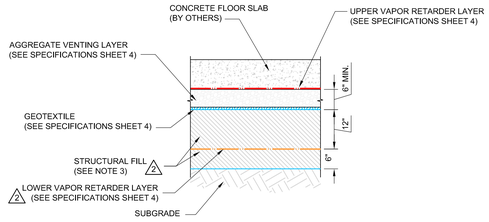


DETAIL E
GRADE BEAM GB1 SECTION
SCALE: N.T.S.



DETAIL F
TYP. DRILLED PIER DETAILS
SCALE: N.T.S.



DETAIL A
TYPICAL VAPOR RETARDER LAYER
AND AGGREGATE VENTING LAYER
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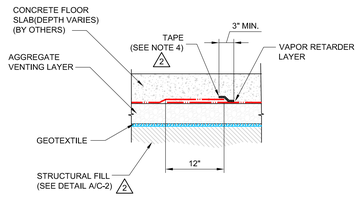
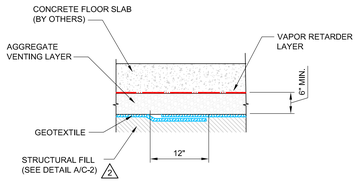
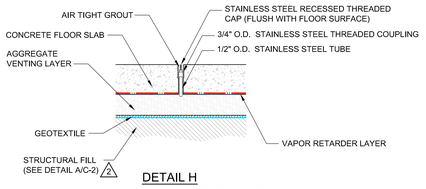


DETAIL B
VAPOR RETARDER LAP JOINT
SCALE: N.T.S.



DETAIL G
GEOTEXTILE LAP JOINT
SCALE: N.T.S.



DETAIL H
SUB-SLAB VACUUM MONITORING PROBE
SCALE: N.T.S.

DETAIL C
NOT USED

NOTES:

1. GEOTEXTILE ABOVE AGGREGATE VENTING LAYER TO BE TEMPORARILY INSTALLED PRIOR TO CONSTRUCTION OF CONCRETE SUMP PIT (TO PROTECT AGGREGATE VENTING LAYER DURING CONCRETE INSTALLATION). TEMPORARY GEOTEXTILE TO BE REMOVED PRIOR TO REPLACEMENT OF REMAINDER OF AGGREGATE VENTING LAYER.
2. WATER PROOFING OF ELEVATOR SUMP TO BE CONDUCTED BY OTHERS.
3. 18 INCHES OF STRUCTURAL FILL (RUN-OF-CRUSHER) PER FINAL GEOTECHNICAL ENGINEERING REPORT BY TRANSTECH ENGINEERING SERVICES, P.C., DATED JANUARY 2009. 2
4. CONTINUOUS TAPE REQUIRED FOR THE UPPER VAPOR RETARDER LAYER. TAPE IS OPTIONAL (FOR POSITIONING) FOR THE LOWER VAPOR RETARDER LAYER. 2
5. EITHER CONNECTION MAY BE USED FOR THE LOWER VAPOR RETARDER LAYER. 2

THESE DRAWINGS SHALL BE USED FOR THE SUBSLAB DEPRESSURIZATION SYSTEM ONLY. THESE DRAWINGS SHOULD NOT BE USED FOR ARCHITECTURAL, MECHANICAL, STRUCTURAL OR ANY OTHER PROPOSED CONSTRUCTION.

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BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER — DATE: 7/22/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL — DATE: 7/22/08

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)
DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES
IMAGE REFERENCES

STATE OF NEW YORK — JONATHAN D. HOWLAND — 065649 — LICENSED PROFESSIONAL ENGINEER
JONATHAN D. HOWLAND
PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 065649
DATE 4/9/09

REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.
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	1	ISSUED	RJ	10/21/08	
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM
DETAILS - 1

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME: C-2 SDS
BC PROJECT NUMBER: 134434.201
CLIENT PROJECT NUMBER:
DRAWING NUMBER: C-2
SHEET NUMBER: 2 OF 6

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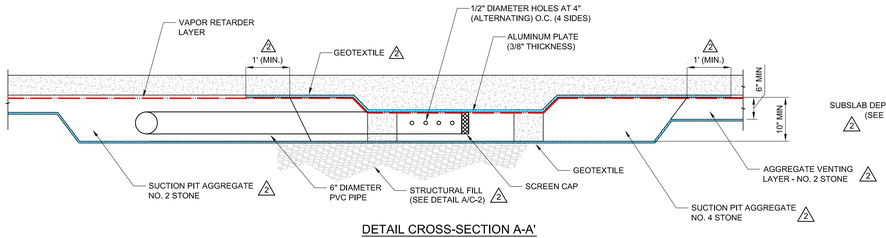
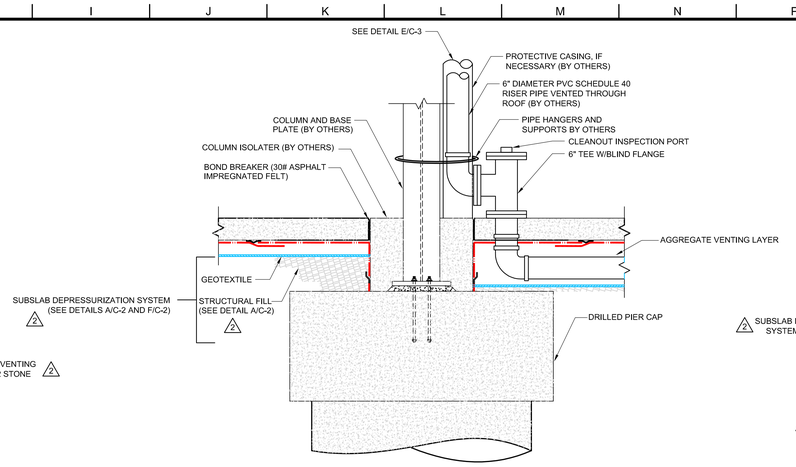
rjames



DETAIL CROSS-SECTION A-A'
SCALE: N.T.S.



DETAIL CROSS-SECTION B-B'
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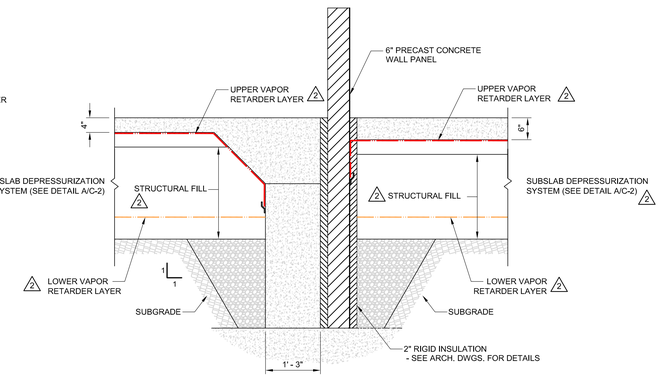

DETAIL D
PERIMETER WALL FOOTING SECTION @ GRADE BEAM
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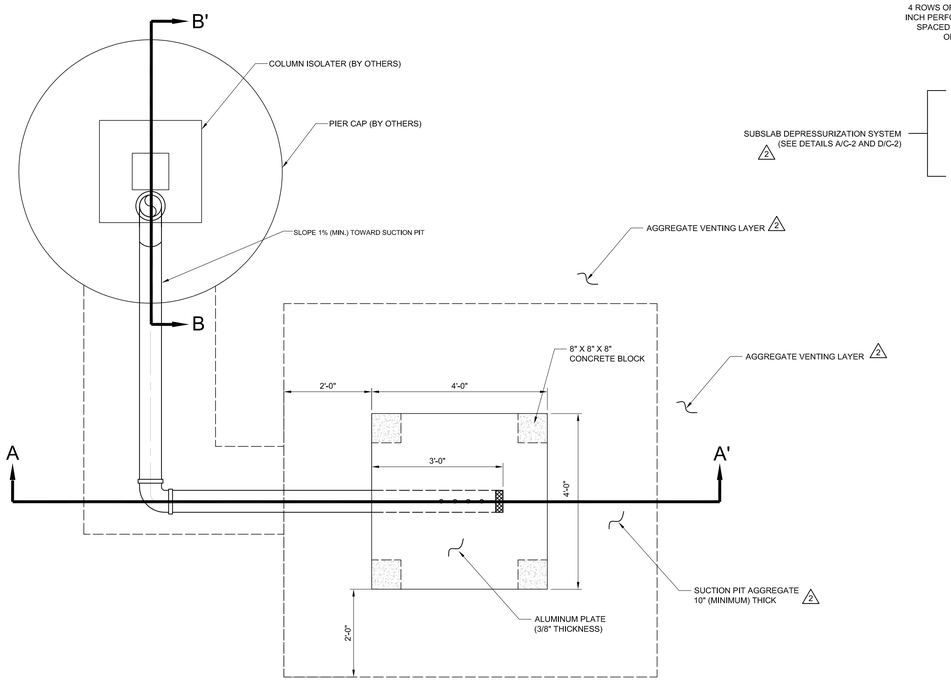

DETAIL A
VAPOR SUCTION PIT AND VENT RISER DETAIL
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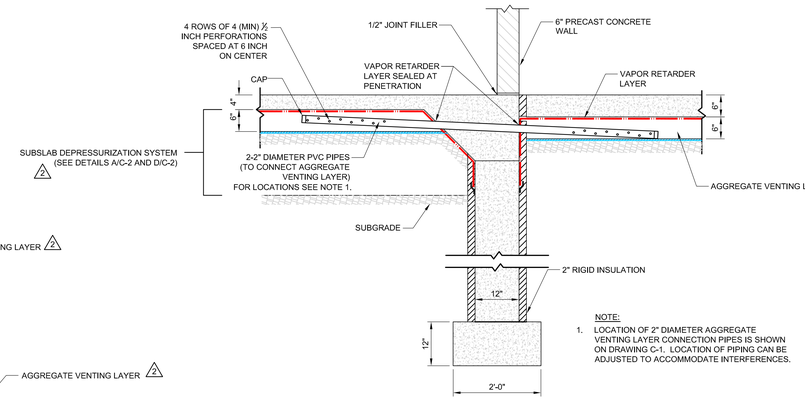
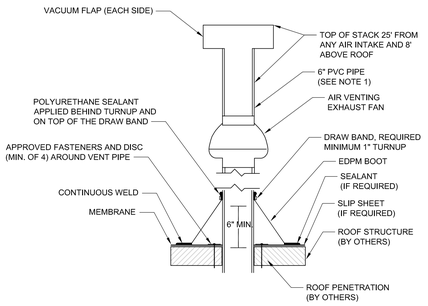


NOTE:
1. LOCATION OF 2" DIAMETER AGGREGATE VENTING LAYER CONNECTION PIPES IS SHOWN ON DRAWING C-1. LOCATION OF PIPING CAN BE ADJUSTED TO ACCOMMODATE INTERFERENCES.

DETAIL B
VENTING LAYER CONNECTION AT LOADING DOCK
SCALE: N.T.S.



DETAIL C
ROOF VENT DETAIL
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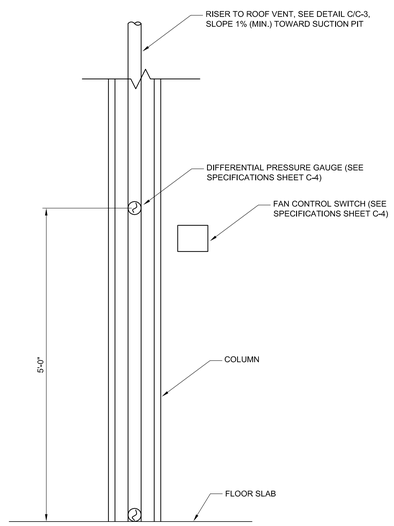

DETAIL E
RISER PIPE DETAIL
SCALE: N.T.S.

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BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER — DATE: 6/27/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL — DATE: 6/27/08

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)
DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES
IMAGE REFERENCES

JONATHAN D. HOWLAND
PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 065649
4/9/09
DATE

REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	0	DRAFT	RJ	7/22/08	
	1	ISSUED	RJ	10/21/08	
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM DETAILS - 2

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME: C-3 (SDS)
BC PROJECT NUMBER: 134434.201
CLIENT PROJECT NUMBER:
DRAWING NUMBER: C-3
SHEET NUMBER: 3 OF 6

djones
Apr 08, 2009 - 5:03pm
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SPECIFICATIONS

THESE SPECIFICATIONS ARE WRITTEN FOR A SUB-SLAB DEPRESSURIZATION SYSTEM.

PART 1 - GENERAL

1.01 DESCRIPTION

A. WORK OF THE PROJECT INCLUDES CONSTRUCTION AND INSTALLATION OF A SUB-SLAB DEPRESSURIZATION SYSTEM, INCLUDING, BUT NOT LIMITED TO, GEOTEXTILE, AGGREGATE VENTING LAYER, VAPOR RETARDER LAYER, SOIL VENTING SUCTION PIT, VENT PIPES AND FANS, AS INDICATED, SPECIFIED AND REQUIRED. PERFORM WORK IN ACCORDANCE WITH CONTRACT WITH OWNER IN ACCORDANCE WITH CONDITIONS OF CONTRACT.

1.02 SUBSTITUTIONS

A. CONTRACTOR PROPOSING ALTERNATE SYSTEM SHALL SUBMIT ENGINEERING DESIGN DRAWINGS AND SPECIFICATIONS FOR ENGINEER'S APPROVAL PRIOR TO SUBSTITUTION.

1.03 SUBMITTALS

A. PROJECT DATA - SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR SPECIFIC APPLICATION.

B. SAMPLES - SUBMIT REPRESENTATIVE SAMPLES OF THE FOLLOWING FOR APPROVAL:
1. VAPOR RETARDER LAYER
2. GEOTEXTILE
3. AGGREGATE VENTING LAYER

1.04 QUALITY ASSURANCE

A. PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

B. A PRE-INSTALLATION MEETING SHALL BE HELD PRIOR TO THE INSTALLATION OF THE SUB-SLAB DEPRESSURIZATION SYSTEM AND WILL INCLUDE OWNER'S REPRESENTATIVE, CONTRACTOR AND ENGINEER.

C. THE ENGINEER WILL VACUUM TEST THE SUB-SLAB DEPRESSURIZATION SYSTEM BEFORE AND/OR AFTER PLACEMENT OF THE FLOOR SLAB. THE CONTRACTOR SHALL MAKE PROVISIONS IN HIS SCHEDULE TO ASSIST THE ENGINEER WITH THE TESTING.

1.05 DELIVERY, STORAGE AND HANDLING

A. STORE AND PROTECT MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS IN THE SPECIFICATIONS.

B. ALL MATERIALS AND EQUIPMENT SHALL BE PLACED SO AS NOT TO INJURE ANY PART OF THE WORK OR EXISTING FACILITY AND FREE ACCESS CAN BE HAD AT ALL TIMES TO ALL PARTS OF THE WORK AREA. MATERIALS WILL BE STORED SO THAT IT WILL CAUSE OF MINIMUM OF INCONVENIENCE TO OTHERS.

1.06 COORDINATION

A. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE WORK REQUIRED HEREIN AND THE WORK OF ANY OTHER CONTRACTOR OR UTILITY SERVICE COMPANY PERFORMING ADDITIONAL WORK RELATED TO THE PROJECT AT THE SITE. CONTRACTOR SHALL ALSO COORDINATE HIS WORK WITH THE WORK OF OTHERS TO ASSURE COMPLIANCE WITH THE SCHEDULE.

B. CONTRACTOR SHALL USE A STIFF CONCRETE MIX FOR THE FLOOR SLAB IN ORDER TO REDUCE BLEEDING DURING CURING, AND TO PREVENT CURLING. MAXIMUM WATER CEMENT RATIO SHALL BE 0.45.

1.07 JOB CONDITIONS

A. ALL PLUMBING, ELECTRICAL, MECHANICAL AND STRUCTURAL ITEMS THAT PENETRATE THE GEOTEXTILE AND THE VAPOR RETARDER LAYER SHALL BE SECURED IN THEIR PROPER POSITIONS PRIOR TO INSTALLATION OF THE MATERIALS DESCRIBED HEREIN.

1.08 WARRANTY

A. THE GEOTEXTILE AND VAPOR RETARDER LAYER MANUFACTURERS SHALL CONFIRM IN WRITING, PRIOR TO SHIPMENT THAT THE MATERIAL TO BE FURNISHED WILL MEET THE INTENT OF THE SPECIFICATIONS AND SHALL GUARANTEE THE MATERIAL TO BE FREE OF DEFECTS IN WORKMANSHIP AT THE TIME OF SALE.

PART 2 - PRODUCTS

2.01 MATERIALS

A. GEOTEXTILE:
1. THE GEOTEXTILE SHALL BE POLYPROPYLENE, NEEDLEPUNCHED, NON-WOVEN AND MANUFACTURED FROM CONTINUOUS FILAMENTS OR ENGINEER'S APPROVED EQUAL AND SHALL HAVE THE FOLLOWING PROPERTIES:

GEOTEXTILE PROPERTY VALUE REQUIREMENTS

PROPERTIES	TEST METHOD	UNITS	QUALIFIER	SPECIFIED VALUE
MASS/UNIT AREA	ASTM D 5261	OZ/YD2	MARV*	6
APPARENT OPENING SIZE	ASTM D 4491	MM	MARV	0.18
PERMITTIVITY	ASTM D 4491	CM/1	MARV	1.2
PUNCTURE	ASTM D 4833	LBS	MARV	85
STRENGTH	ASTM D 4632	LBS	MARV	150

* MARV- MINIMUM AVERAGE ROLL VALUE

2. THE GEOTEXTILE MANUFACTURER SHALL FURNISH MATERIALS WHOSE "MINIMUM AVERAGE ROLL VALUES' MEET OR EXCEED THE PROPERTIES SPECIFIED IN THIS SECTIONS, AS WELL AS A CERTIFICATION THAT THE MATERIAL PROPERTIES MEET OR EXCEED THE SPECIFIED VALUES. THE GEOTEXTILES SHALL BE STOCK PRODUCTS. THE GEOTEXTILE SHALL RETAIN ITS' STRUCTURE DURING HANDLING, PLACEMENT AND LONG TERM SERVICE.

3. THE GEOTEXTILE SHALL BE PROPEX GEOSYNTHETICS GEOTEX NON WOVEN GEOTEXTILE, PRODUCT NO. 601, OR APPROVED EQUAL.

B. AGGREGATE VENTING LAYER:
1. THE AGGREGATE VENTING LAYER SHALL CONSIST OF COARSE AGGREGATE MEETING NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT), SPECIFICATIONS, SECTION 703-0201, CRUSHED STONE, SIZE DESIGNATION #2.

2. THE VAPOR SUCTION PIT AGGREGATE SHALL CONSIST OF COARSE AGGREGATE MEETING NYSDOT SPECIFICATIONS, SECTION 703-0201, SIZE DESIGNATION #4.

C. VAPOR RETARDER LAYER:
1. THE VAPOR RETARDER LAYER SHALL CONSIST OF A 15 MIL POLYETHYLENE OR EQUIVALENT FLEXIBLE SHEETING MATERIAL AND SHALL MEET THE FOLLOWING PROPERTIES:

VAPOR RETARDER LAYER PROPERTY VALUE REQUIREMENTS

PROPERTIES	TEST METHOD	UNITS	SPECIFIED VALUE
WATER VAPOR RETARDER VAPOR WATER VAPOR PERMEANCE	ASTM E 1745 SECTION 9	NA	MEETS OR EXCEEDS CLASS A REQUIREMENTS
	ASTM E 96	GR/FT^2/HR	0.3 OR LOWER
TENSILE RESISTANCE PUNCTURE RESISTANCE	ASTM E 154, ASTM D 1709	LBF/IN GRAMS	45 2200
STRENGTH			

2. THE VAPOR RETARDER LAYER SHALL BE MANUFACTURED FROM NEW, FIRST QUALITY POLYETHYLENE RESIN, AND SHALL BE DESIGNED AND MANUFACTURED SPECIFICALLY FOR USE AS A VAPOR RETARDER LAYER.

3. MANUFACTURER'S SEAM TAPE SHALL HAVE A WATER VAPOR TRANSMISSION RATE OF 0.3 PERMS OR LOWER.

4. PIPE BOOTS SHALL BE CONSTRUCTED FROM VAPOR RETARDER LAYER MATERIAL AND SEAM TAPE.

5. THE VAPOR RETARDER LAYER SHALL BE STEGO WRAP VAPOR BARRIER BY STEGO INDUSTRIES OR APPROVED EQUAL.

D.PIPING:
1. POLY VINYL CHLORIDE (PVC) PIPING SHALL CONFORM TO THE REQUIREMENTS IN ASTM D 1785. THE PIPING SHALL BE SCHEDULE 40, TYPE I GRADE 1.

2. FITTINGS SHALL BE PVC SCHEDULE 40, EITHER SOCKET WELDED OR THREADED JOINTS. SOCKET WELDING JOINTS SHALL BE SUITABLE FOR SOLVENT WELDING. THREADED JOINTS SHALL CONFORM TO JOINTS SPECIFIED FOR SCHEDULE 80 PVC FITTINGS IN ASTM D2464.

3. PIPE SLEEVE SHALL BE STANDARD WEIGHT STEEL PIPE.

4. THE PIPE SHALL BE LABELLED TO IDENTIFY THE PIPE AS A COMPONENT OF A "SUB-SLAB DEPRESSURIZATION SYSTEM" AND AS SHOWN ON THE DRAWINGS, AT LEAST EVERY FIVE FEET OF LENGTH.

E. FAN:

1. THE FAN SHALL BE A CONTINUOUS DUTY, HIGH-FLOW, IN-LINE FAN DESIGNED FOR OUTDOOR USE AND RATED FOR USE IN CLASS 1, DIVISION 2, GROUPS B, C AND D HAZARDOUS LOCATIONS. THE FAN SHALL BE RATED FOR 289 SCFM (MIN.) AT 0 INCHES W.C.

2. THE FAN SHALL BE MANFACTURED BY MARC CLIMATIC CONTROLS, ISFX SERIES, MODEL ISFX160 OR APPROVED EQUAL.

3. RED (OFF) AND GREEN (ON) INDICATOR LIGHTS SHALL BE MOUNTED IN CLOSE PROXIMITY TO THE FAN. A SWITCH CONTROLLING THE FAN SHALL BE MOUNTED ON THE WALL NEAR THE DIFFERENTIAL PRESSURE GAUGE. THE SWITCH BOX SHALL HAVE RED (OFF) AND GREEN (ON) INDICATOR LIGHTS AND BE CLEARLY LABELLED AS A COMPONENT OF THE "SUB-SLAB DEPRESSURIZATION SYSTEM, FAN 1 (OR 2)".

4. A DIFFERENTIAL PRESSURE MAGNEHELIC GAUGE SHALL BE INSTALLED AT FIVE FEET ABOVE FLOOR SLAB ELEVATION ON THE VENT PIPES. THE GAUGE SHALL HAVE A RANGE OF -3.0 TO 3.0 INCHES OF WATER (OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE).

5. THE GAUGE SHALL BE MANUFACTURED BY DWYER INSTRUMENT INC., SERIES 2000 MAGNAHELIC, MODEL 2003, OR APPROVED EQUAL.

6. THE MAGNEHELIC GAUGE SHALL BE ENCLOSED IN A TRANSPARENT LOCKING CASE, CLEARLY LABELLED AS A COMPONENT OF THE "SUB-SLAB DEPRESSURIZATION SYSTEM", AND AS SHOWN ON THE DRAWINGS.

F. ALUMINUM PLATE

1. ALLUMINUM PLATE SHALL CONFORM TO REQUIREMENTS IN ASTM B209. THE ALUMINUM SHALL BE OF ALLOY 6061-T6 CONFORMING TO ASTM B221.

2. PLATE SHALL HAVE A MINIMUM THICKNESS OF 3/8 INCH AND A DESIGN LOAD OF 250 POUNDS PER SQUARE FOOT. THE MAXIMUM CLEAN SPAN DEFLECTION SHALL EQUAL L/240 IN BOTH DIRECTIONS.

3. PLATE SHALL BE A RAISED PATTERN FLOOR PLATE WITH PATTERN STANDARD WITH THE MANUFACTURER.

4. ACCEPTABLE MANUFACTURERS INCLUDE RYERSON, ALCOA OR EQUAL.

G. CONCRETE BLOCK

1. CONCRETE BLOCK SHALL BE A SOLID, NORMAL WEIGHT CONCRETE BLOCK.

PART 3 - EXECUTION

3.01 EXAMINATION

A. CONTRACTOR SHALL PROVIDE ENGINEER WITH SUFFICIENT TIME AND MEANS FOR ENGINEER TO EXAMINE THE AREAS AND CONDITIONS UNDER WHICH THE INSTALLATION ACTIVITIES ARE TO BE PERFORMED. THE ENGINEER WILL NOTIFY CONTRACTOR OF CONDITIONS THAT MAY BE DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.

3.02 GEOTEXTILE INSTALLATION

A. AREAS WHERE GEOTEXTILE WILL BE INSTALLED SHALL BE INSPECTED AND APPROVED PRIOR TO INSTALLATION. THE SUBGRADE SHALL BE FREE OF CONSTRUCTION DEBRIS, STICKS, SHARP ROCKS, VOID SPACES, AND ABRUPT ELEVATION CHANGES.

A. THE GEOTEXTILE SHALL BE HANDLED IN SUCH A MANNER AS TO ENSURE IT IS NOT DAMAGED IN ANY WAY.

B. AFTER UNWRAPPING THE GEOTEXTILE FROM ITS OPAQUE COVER, THE GEOTEXTILE SHALL NOT BE LEFT EXPOSED FOR A PERIOD IN EXCESS OF 30 DAYS UNLESS A LONGER EXPOSURE PERIOD IS APPROVED BY THE ENGINEER.

C. GEOTEXTILE SHALL BE LAIN AND OVERLAPPED BY A MINIMUM OF TWELVE INCHES. NO SEWING OF THE SEAMS IS REQUIRED.

D. ANY HOLES OR TEARS IN THE GEOTEXTILE SHALL BE REPAIRED PRIOR TO PLACEMENT OF THE AGGREGATE VENTING LAYER.

3.03 AGGREGATE VENTING LAYER INSTALLATION

A. INSTALLATION OF THE AGGREGATE VENTING LAYER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR THE BUILDING CONSTRUCTION.

3.04 VAPOR RETARDER LAYER INSTALLATION

A. AGGREGATE VENTING LAYER SHALL BE ROLLED OR TAMPED. AGGREGATE VENTING LAYER SHALL BE INSPECTED AND ACCEPTED BY ENGINEER IMMEDIATELY PRIOR TO PLACEMENT OF VAPOR RETARDER LAYER. AREAS WHERE THE VAPOR RETARDER LAYER WILL BE TAPED TO THE COLUMN AND WALL FOOTINGS, AND SUBGRADE WALLS WILL BE FREE OF DEBRIS AND LOOSE MATERIAL.

B. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98.

C. UNROLL VAPOR RETARDER LAYER WITH THE LONGEST DIMENSION PARALLEL WITH THE DIRECTION OF THE POUR.

D. LAP VAPOR RETARDER LAYER OVER FOOTINGS AND SEAL WITH MANUFACTURER'S TAPE.

E. OVERLAP JOINTS 12 INCHES AND SEAL WITH MANUFACTURER'S TAPE.

F. SEAL ALL PENETRATIONS, INCLUDING PIPES PER MANUFACTURER'S INSTRUCTION.

G. SCHEDULE AND SEQUENCE WORK TO MINIMIZE THE TIME THAT THE VAPOR RETARDER LAYER IS IN PLACE PRIOR TO PLACEMENT OF CONCRETE. THE VAPOR RETARDER LAYER SHALL BE INSPECTED AND ACCEPTED BY THE ENGINEER IMMEDIATELY PRIOR TO PLACEMENT OF THE CONCRETE.

H. REPAIR DAMAGED AREAS BY CUTTING PATCHES OF THE VAPOR RETARDER LAYER, OVERLAPPING DAMAGED AREAS BY 12 INCHES AND TAPING ALL FOUR SIDES WITH TAPE.

3.05 SUCTION PIT INSTALLATION

A. INSTALL AGGREGATE, ALUMINUM PLATE, PIPE AND CONCRETE BLOCK AS SHOWN ON THE DRAWINGS. THE VOID UNDER THE ALUMINUM PLATE SHALL BE FREE OF AGGREGATE, DEBRIS AND OTHER MATERIALS. THE SUCTION PIT PVC PIPE END SHALL BE UNOBSTRUCTED AND CLEAR OF ANY AGGREGATE, DEBRIS OR OTHER MATERIALS.

3.06 PIPE INSTALLATION

A. INSTALL PIPES, FITTINGS, SLEEVES AND APPURTENANCES, AS SHOWN AND SPECIFIED AND AS RECOMMENDED BY THE MANUFACTURER AND IN CONFORMANCE WITH REFERENCED STANDARDS.

3.07 FAN INSTALLATION

A. INSTALL FAN IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION PROCEDURES, AND APPLICABLE CODES AND REGULATIONS.

3.08 PRODUCT PROTECTION

A. SCHEDULE AND SEQUENCE WORK TO MINIMIZE TIME MATERIALS ARE ON SITE PRIOR TO INSTALLATION AND TO MINIMIZE TIME THAT MATERIALS ARE INSTALLED PRIOR TO PLACEMENT OF THE CONCRETE.

B. USE ALL MEANS NECESSARY TO PROTECT ALL WORK AND MATERIALS, AND COMPLETED WORK OF OTHER SECTIONS.

C. IN THE EVENT OF DAMAGE, THE CONTRACTOR SHALL MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY, TO THE APPROVAL OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.

WARNING:

IT IS A VIOLATION OF ARTICLE 145, SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DRAWING, SPECIFICATION OR REPORT IN ANY WAY.

BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER DATE: 6/27/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL DATE: 6/27/08

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES

IMAGE REFERENCES

STATE OF NEW YORK — JONATHAN D. HOWLAND — 065649 — LICENSED PROFESSIONAL ENGINEER

JONATHAN D. HOWLAND
PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 065649
DATE 6/19/09

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	0	DRAFT	RJ	7/22/08	
	1	ISSUED	RJ	10/21/08	
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

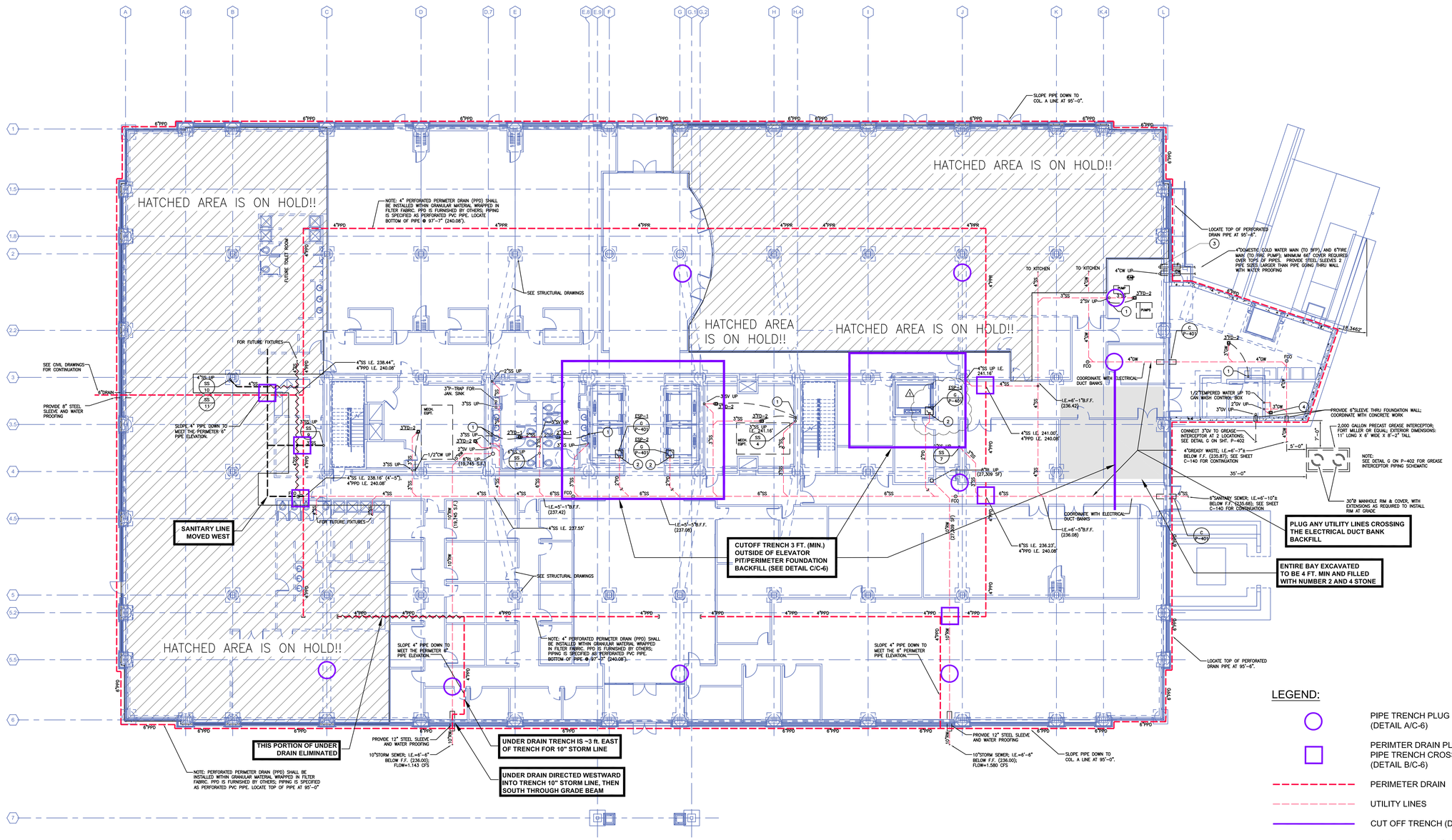
GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM SPECIFICATIONS

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME C-2 (SPECIFICATIONS)
BC PROJECT NUMBER 134434.201
CLIENT PROJECT NUMBER
DRAWING NUMBER C-4
SHEET NUMBER 4 OF 6

Apr 08, 2009 - 5:15pm rjames
P:\DRAFTING\GOLUB\134434\2011\C-4 (SPECIFICATION).DWG



PIPE TRENCH PLUG LOCATIONS

3/32" = 1'-0"

LEGEND:

- PIPE TRENCH PLUG (DETAIL A/C-6)
- PERIMTER DRAIN PLUG AT PIPE TRENCH CROSSING (DETAIL B/C-6)
- PERIMETER DRAIN
- UTILITY LINES
- CUT OFF TRENCH (DETAIL C/C-6)
- UTILITY LINE REPORTED TO BE ELIMINATED OR MOVED
- BROWN AND CALDWELL NOTES

NOTES:

1. COMPOSITE UTILITY DRAWING PROVIDED BY FACILITIES GROUP.
2. ALL UTILITY PIPE LOCATIONS SHOULD BE FIELD VERIFIED.

THESE DRAWINGS SHALL BE USED FOR THE SUBSLAB DEPRESSURIZATION SYSTEM ONLY. THESE DRAWINGS SHOULD NOT BE USED FOR ARCHITECTURAL, MECHANICAL, STRUCTURAL OR ANY OTHER PROPOSED CONSTRUCTION.

BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER, DATE: 6/27/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL, DATE: 6/27/08

JONATHAN D. HOWLAND, PROFESSIONAL ENGINEER, N.Y. LICENSE NO. 065649, DATE

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES | IMAGE REFERENCES

REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM
PIPE TRENCH PLUG LOCATIONS 2

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME: C-5 (PIPE TRENCH PLUG LOCATIONS)
BC PROJECT NUMBER: 134434.201
CLIENT PROJECT NUMBER:
DRAWING NUMBER: C-5
SHEET NUMBER: 5 OF 6

May 13, 2009 - 3:41pm
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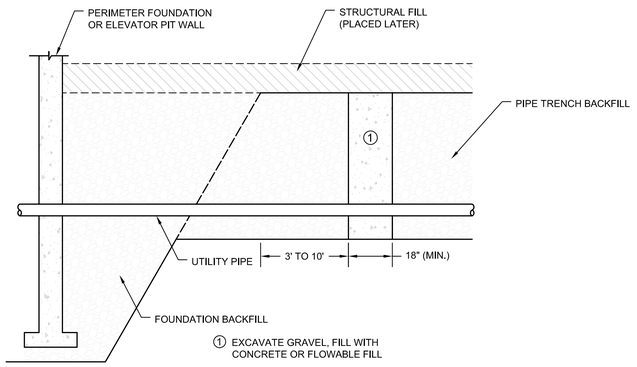
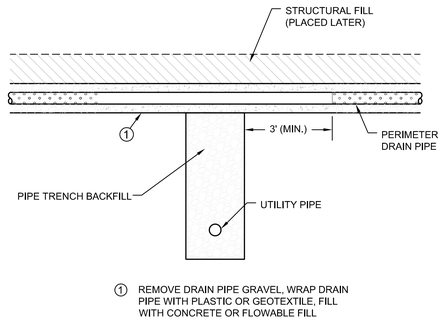
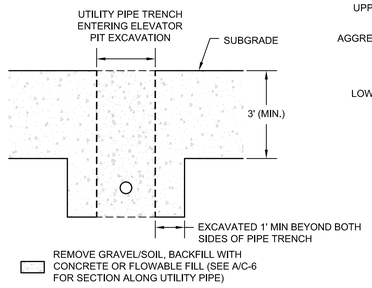
rjaines



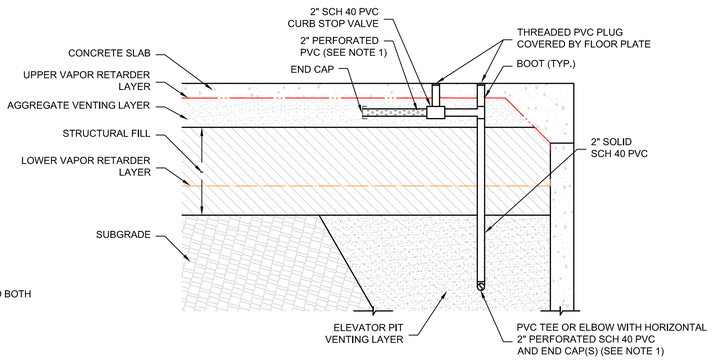
DETAIL A
PIPE TRENCH PLUG DETAIL
SCALE: N.T.S.



DETAIL B
PERIMETER DRAIN PLUG AT
PIPE TRENCH CROSSING
SCALE: N.T.S.



DETAIL C
CUT-OFF TRENCH AROUND
ELEVATOR PIT EXCAVATIONS
SCALE: N.T.S.



NOTE:

1, PERFORATIONS: 4 ROWS OF 6 PERFORATIONS (½" DIAMETER) AT 6 INCHES ON CENTER.

DETAIL D
ELEVATOR PIT
VENTING LAYER CONNECTION
SCALE: N.T.S.

THESE DRAWINGS SHALL BE USED FOR THE SUBSLAB DEPRESSURIZATION SYSTEM ONLY. THESE DRAWINGS SHOULD NOT BE USED FOR ARCHITECTURAL, MECHANICAL, STRUCTURAL OR ANY OTHER PROPOSED CONSTRUCTION.

BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: PATRICIA R. PETRINO, PROJECT MANAGER DATE: 6/27/08
APPROVED: JONATHAN D. HOWLAND, BROWN AND CALDWELL DATE: 6/27/08

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED:
DRAWN: RJ
CHECKED: PRP
CHECKED:
APPROVED:

EXTERNAL REFERENCES

IMAGE REFERENCES

STATE OF NEW YORK JONATHAN D. HOWLAND 065649 LICENSED PROFESSIONAL ENGINEER

JONATHAN D. HOWLAND, PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 065649
DATE 4/9/09

REVISIONS

ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	2	ADD LOWER VAPOR RETARDER LAYER, ADD UTILITY TRENCH PLUG, ADDRESS COLD WEATHER/CONSTRUCTIBILITY ISSUES	RJF	4/9/09	

GOLUB HEADQUARTERS
CORPORATE OFFICE BUILDING
MAXON ROAD AND NOTT STREET
SCHENECTADY, NY

SUBSLAB DEPRESSURIZATION SYSTEM
DETAILS - 3 (2)

GOLUB CORPORATION
COLLEGE PARK SITE
SCHENECTADY, NEW YORK

FILENAME: C-6 (DETAILS)
BC PROJECT NUMBER: 134434.201
CLIENT PROJECT NUMBER:
DRAWING NUMBER: C-6
SHEET NUMBER: 6 OF 6

Apr 08, 2009 - 4:15pm
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rjames

SUB SLAB DEPRESSURIZATION SYSTEM START UP AND OPERATION AND MAINTENANCE GUIDELINES

NORTHEASTERN
ENVIRONMENTAL
TECHNOLOGIES CORP.

COLLEGE PARK SITE
GOLUB CORPORATE HEADQUARTERS BUILDING
TESTING, OPERATION AND MAINTENANCE OF THE SSDS

The following is intended as a general outline for testing, operation and maintenance of the sub-slab depressurization system (SSDS) being installed as part of the Golub corporate headquarters building under construction on the College Park Site.

Final Testing

Preliminary testing of the SSDS will be performed after the sub-slab components of the system have been installed but before the concrete floor slab is poured. This will permit any necessary modifications of the SSDS to be installed before the construction of the building is completed. Final testing will be performed after the concrete slab is poured. Following testing and completion of the SSDS, the DEC and DOH will be provided with an engineer's certification report certifying that the SSDS was constructed in accordance with the plans and specifications and that it is functioning effectively. The engineer's certification report will include the results of the testing and record drawings of the SSDS.

The overall objective of the final testing will be to confirm that the SSDS is achieving an adequate negative pressure field under all areas of the slab. In general, the testing will proceed as follows:

1. Complete final inspection of the upper vapor retarder layer to confirm that the membrane (15 mil HDPE) is free of tears and punctures and that all seams and penetrations are properly sealed.
2. Temporarily connect the specified air venting exhaust fans to the two (2) suction pits constructed within the vapor collection layer. A fan will be

connected and sealed to the 6" PVC pipe extending from each pit (SSDS plans, C-3, Detail A).

3. Install a direct reading vacuum gauge (Magnehelic) to the 6" PVC pipe between the fans and the suction pits.
4. Open the valves of the elevator pit venting layer connections (SSDS plans, drawing C-6, detail D). This will permit vacuum to propagate into the venting layer that surrounds the elevator pits.
5. Operate the air venting exhaust fans and allow vacuum to equilibrate throughout the venting layer.
6. Using a digital manometer, measure vacuum in the venting layer (i.e. below the upper vapor retarder layer). Temporary penetrations of the manometer through the vapor retarder layer will be sealed to prevent leakage of air.
7. At a minimum, record vacuum at the twelve (12) locations of the permanent sub-slab vacuum monitoring points (SSDS plans, drawing C-1). A minimum subslab pressure of -0.002 inch water column is required at all test locations (USEPA, Radon Prevention in the Design and Construction of Schools and Other Large Buildings, June 1994).
8. If acceptable subslab vacuum is achieved at all locations, the test will be continued while operating only one air venting exhaust fan at a time to evaluate whether the system can be reliably operated by alternating between the two fans.
9. If acceptable subslab vacuum is not achieved at all locations, selectively close the valves of one or both elevator pit venting layer connections and repeat pressure measurements. If it is determined that air is leaking excessively into the venting layer that surrounds the elevator pits, it may be necessary to install a supplemental riser pipe and air venting exhaust fan in one or both elevator pits.

10. Install supplemental suction pits and air venting exhaust fans if needed to achieve adequate negative pressure field under all areas of the slab.

Operation and Maintenance

Following completion and final testing of the SSDS, an operating manual describing the system and its purpose will be provided to the building owner and the DEC. The manual will include a discussion of system components, interpretation of and response to system failure warning devices, and key maintenance needs of the system. The key maintenance needs will include the following:

Daily (excluding weekends)

- Check pressure gauges on riser pipes to verify that the system is maintaining adequate negative pressure to depressurize the sub-slab area. Record readings in log.
- Check fan status lights (red-off, green-on). Record in log.

Monthly

- Inspect the discharge locations of the vent pipes to ensure that they are unobstructed and that no air intake has been located nearby

Annually

- Measure and record sub-slab vacuum at all permanent sub-slab vacuum monitoring probe locations (monthly during first year of operation).
- Check HVAC system to ensure that it is being maintained and operated as designed, that makeup air is adequate, and that it is not overpowering the SSDS (monthly during first year of operation).

- Inspect fans for bearing failure or signs of other abnormal operation. Repair of replace if required.
- .Check Suction pits for accumulation of water (condensate). Pump out if necessary (check monthly during first year of operation).
- Check accessible areas for evidence of floor cracking.

APPENDIX C - EXHIBIT 2

FOUNDATION DRAIN SYSTEM PLANS AND SPECIFICATIONS

NORTHEASTERN ENVIRONMENTAL TECHNOLOGIES CORP.

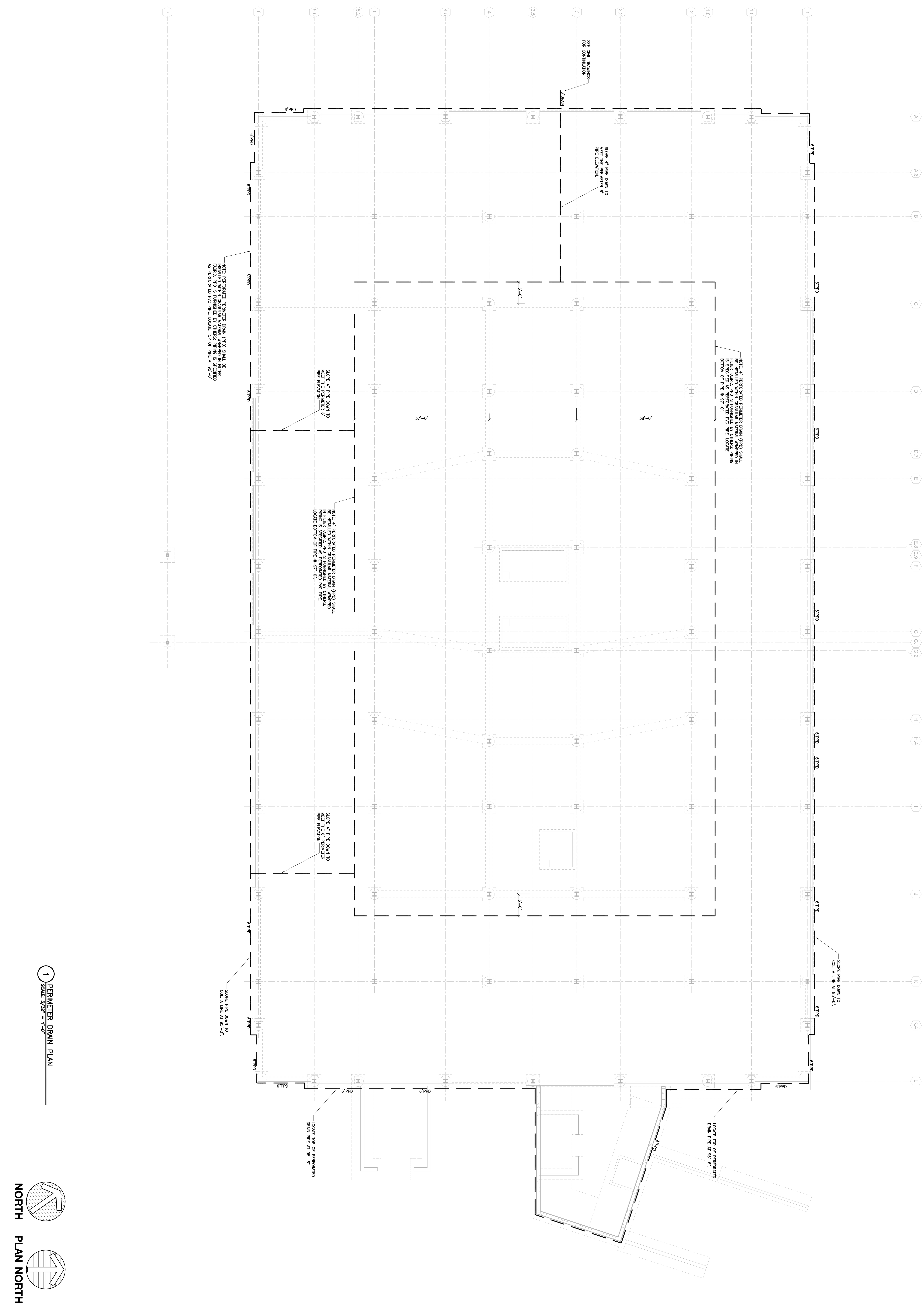
College Park Site

Description of Foundation Drain System

The final building will include a gravity fed foundation drain system merely as a precautionary measure to address the unlikely event that groundwater accumulates in the foundation of the building above an acceptable level. Once installed, monitoring of any accumulated groundwater will occur for no less than twenty- four months. During this period of monitoring, any groundwater that has accumulated will be subjected to chemical analysis to determine whether it exceeds the groundwater standards established for the College Park site. The results of the chemical analysis will be recorded in a field book and subject to the DEC's review and inspection. Further, during the monitoring period, groundwater will be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

At the end of the twenty-four month monitoring period, if the chemical analysis confirms that any accumulated groundwater does not exceed the groundwater standards established for the College Park site, prior authorization by the DEC will be sought to dispose of the groundwater by directing it through the Vortex to the stormwater system. Until such authorization is obtained or, in the unlikely event that groundwater standards are exceeded, all accumulated groundwater will continue to be transported and disposed of off-site in accordance with appropriate local, State, and Federal regulations.

Various safety measures will be implemented to ensure that the foundation drain system does not overflow. Visible observations of water levels will be made and recorded on a monthly basis. In addition, a high level warning system will be installed that will be connected to an emergency light above ground that will illuminate when water levels exceed an appropriate level. The system will be further connected to the building's security system for additional notification in the event that accumulation of groundwater exceeds an established level.



GOLUB HEADQUARTERS

CORPORATE OFFICE BUILDING
ONE GOLUB CENTER

SCHENECTADY, NY

SHEET STATUS

MARK	DATE	BY	MGR	RELEASE
	12/5/08	MA		PROGRESS
	12/19/08	MA		BID SET

SHEET TITLE: PERIMETER DRAIN PLAN

PROJECT NO. 07150

SHEET NO. A100A

FACILITY GROUP
FACILITY ENGINEERS NEW YORK
2233 LAKE PARK DRIVE
SMYRNA GEORGIA, 30080
770-437-2700

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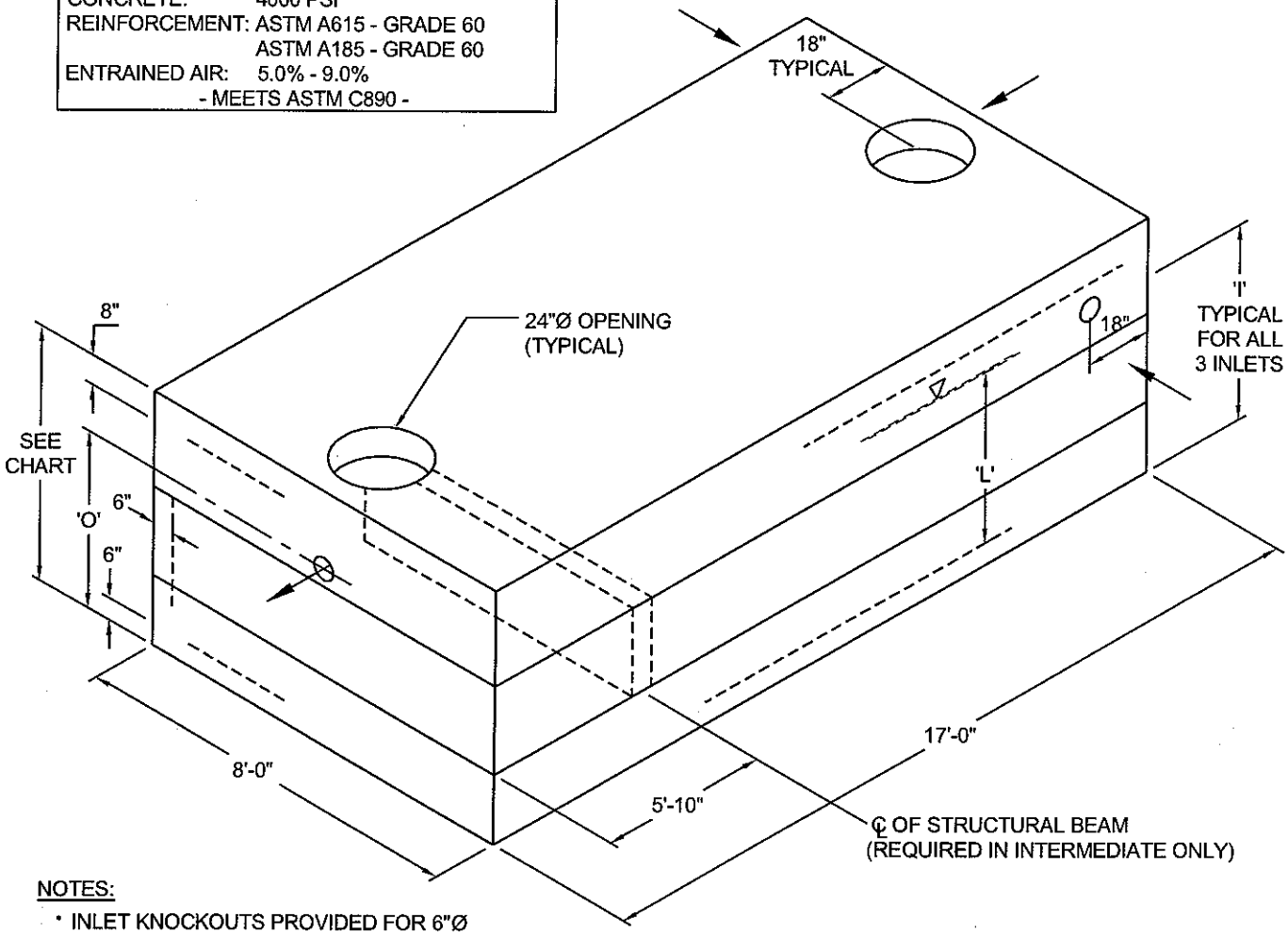
REINFORCEMENT:	ASTM A615 - GRADE 60 ASTM A185 - GRADE 60
ENTRAINED AIR:	5.0% - 9.0% - MEETS ASTM C890 -



NOTES:

- INLET KNOCKOUTS PROVIDED FOR 6"Ø PIPE ON THREE SIDES. OUTLET OPENING TO ACCOMODATE 6"Ø PIPE.
- SPECIAL BUTYL REQUIRED FOR POTABLE WATER (PLEASE INQUIRE)
- DESIGN CASE 3 (TRAFFIC)

SIZE GALLONS	ACTUAL CAPACITY GALLONS	LIQUID LEVEL 'L'	INTEGRAL TOP HEIGHT INSIDE	INTER-MEDIATE HEIGHT	INTEGRAL BASE HEIGHT INSIDE	OVERALL HEIGHT		INTEGRAL TOP (LBS)	INT. BASE (LBS)	*INTER-MEDIATE (LBS)	TOTAL WEIGHT (LBS)
						INSIDE	OUTSIDE				
3000	3299	4'-0"	2'-0"	---	3'-0"	5'-0"	6'-2"	20,800	21,000	---	41,800
3500	3508	4'-3"	2'-3"	---	3'-0"	5'-3"	6'-5"	21,800	21,000	---	42,800
4000	4136	5'-0"	3'-0"	---	3'-0"	6'-0"	7'-2"	24,400	21,000	---	45,400
4500	4484	5'-5"	3'-6"	---	3'-0"	6'-6"	7'-8"	26,200	21,000	---	47,200
5000	5184	6'-3"	3'-0"	---	4'-3"	7'-3"	8'-5"	24,400	25,600	---	50,000
5500	5603	6'-9"	3'-6"	---	4'-3"	7'-9"	8'-11"	26,200	25,600	---	51,800
6000	6021	7'-3"	4'-0"	---	4'-3"	8'-3"	9'-5"	28,000	25,600	---	53,600
6500	6440	7'-9"	3'-9"	2'-0"	3'-0"	8'-9"	9'-11"	27,200	21,000	8400	56,600
7000	6859	8'-3"	3'-0"	2'-0"	4'-3"	9'-3"	10'-5"	24,400	25,600	8400	58,400
7500	7487	9'-0"	3'-9"	2'-0"	4'-3"	10'-0"	11'-2"	27,200	25,600	8400	61,200
8000	7906	9'-6"	4'-3"	2'-0"	4'-3"	10'-6"	11'-8"	29,000	25,600	8400	63,000

*INCLUDES WEIGHT OF STRUCTURAL BEAM

APPENDIX D

HEALTH AND SAFETY PLAN (HASP)

NORTHEASTERN ENVIRONMENTAL TECHNOLOGIES CORP.

HEALTH & SAFETY PLAN

PROJECT INFORMATION

A. Project Site: College Park (BCP # C447037)

B. Project Activities:

- Topographic Survey – Mapping Services
- Test Pit Excavation Survey
- Soil Excavation & Excavation Dewatering
- Groundwater Treatment – Disposal
- Trucking Services

C. Location: 1510 – 1520 Maxon Rd. Schenectady New York

D. Name and Address of Owner/Lead Contacts:

BN Partners Associates LLC
695 Rotterdam Industrial Park
Schenectady, NY 12306

E. Emergency Contacts & Project Phone Numbers:

1.	BCI Construction, Inc. – Robert Fortune		(518) 426-3200
2.	Capitol Environmental Services, Inc. (Bo		(201) 358-0709
			(201) 906-8220
3.	City of Schenectady Police & Fire Departments (911)		(518) 382-5131
4.	City of Schenectady General Services		(518) 382-5089
5.	Ellis Hospital ER		(518) 382-4121
6.	Finke Equipment		(518) 767-9331
7.	J.H. Maloy, Inc.		(518) 438-7881
7.	Mangiardi Brothers Trucking		(518) 477-8940
8.	Mohawk Ambulance		(518) 374-4401
9.	NE Analytical Laboratories		(518) 346-4592
10.	National Grid		(800) 892-2345
11.	Northeastern Environmental Techn. Corp.		(518) 884-8545
		NETC Cell#1	(518) 365-1102
		NETC Cell#2	(518) 378-4894
		NETC Cell#3	(518) 528-3280
		NETC Cell#4	(518) 361-8556
12.	NYS Dept. of Env. Con. Region 4		(518) 356-2045
13.	Rain For Rent (John McAloon)		(585) 226-8280
		Cell#	(585) 269-8280
14.	REREM, Inc, - Steve Laurence	Cell#	(518) 434-4324
			(518) 437-1613
15.	State Police Department (911)		(518) 382-5263
16.	Underground Facilities Protection Organization		(UFPO)1-800-962-7962

F. History and Nature of Site

The Remedial Measures Work Plan Schedule (i.e., work plan) dated December 12, 2007 was developed in response to recent modifications to the planned commercial site development of College Park, specifically the construction of a new Golub Corporation headquarters building to be located along the southern portion of the site. The current redevelopment plan eliminates the construction of the (3) commercial office buildings and the YMCA. As a result, the site plan change simplifies the scope of the excavation and removal activities by eliminating Area 1 and Area 6 (i.e., track 1 - unrestricted use soils) for the YMCA. Areas of the site outside the foot print of the new Golub Corporation headquarters building will now be capped by asphalt and utilized for parking. The scope of this phase of work addresses the technical requirements outlined as necessary pursuant to the DECs Draft Brownfields Cleanup Program (BCP) Guide dated May 2004. The goal of this work plan is to remediate the site to the DECs Part 375-6.8(b) restricted commercial use track 4 cleanup standards which will ultimately allow for the contemplated commercial development of the property. This work plan presents the specific methods that will be used to pursue areas of the site that did not comply with track 4 soil cleanup objectives (SCOs), as well as the underground storage tank closure measures services originally reported in Sections 2.1, 2.2 and 2.4 of our approved Remedial Alternative (RA) Work Plan dated April 3, 2007. Following this phase of work, the property will be ready for the project construction that is expected next summer or fall. The balance of the other components of the approved RA work plan (i.e., as outlined in Sections 2.2.2, 2.3, 2.6, 2.7, 2.8, 2.9 & 2.10) will be implemented.

The recent historical use of the site has been associated with a retail plaza. Prior use of the site has been associated with the former American Locomotive Company's (ALCO) manufacturing facility. The ALCO facility existed primarily west of the City of Schenectady's bike path. Recent chemical substances used at the sites included paint, janitorial cleaning agents, dry cleaning compound and petroleum products (fuel oil / waste oils). The historical storage of petroleum has resulted in the release of petroleum to the ground and subsurface in select areas of the site.

Previously completed site investigation work at the Big N Plaza has confirmed the presence of buried cultural fill, concrete foundations, UST infrastructure as well as certain areas of the property that have detectable concentrations of petroleum, heavy metal and PCB impacted soil and groundwater. The documented chemical compounds of concern are generally confined to the southern and eastern portions of the site. The documented soil and groundwater conditions at the Big N Plaza site are in most cases consistent with those known to exist at other properties historically used by ALCO. The areas found to contain chemical contamination appear localized and do not suggest property wide impacts that would otherwise restrict the future commercial use of the site. The objective of this SI will be to delineate the horizontal and vertical extent of the soil and groundwater impacts.

The HASP describes protection standards, practices and procedures pertaining only to this SI. The HASP is written with the intent of developing the awareness of site personnel to the health and safety hazards, which may exist, thereby avoiding unnecessary risks. The HASP establishes mandatory safety practices, procedures and personal protection standards and applies to all NETC personnel associated with the CAP work. All personnel who perform project activities associated with the CAP will familiarize themselves with this HASP and comply with its requirements. Personnel will sign and date the "Tailgate Safety" form prior to entering any area on site suspected of being contaminated with hazardous materials (or any other such restricted areas - See Attachment A).

Note:

1. All information contained herein shall be reviewed and understood by all on site personnel responsible to work at the site prior to entering the work zones.

2. This HASP applies to NETC personnel and its assigned representatives only. Other outside agent / contractors are responsible for their own internal Health and Safety Plan(s) for its staff prior to entering the site.

G. Project Objectives:

This work plan is to remediate the site to the DECs Part 375-6.8(b) restricted commercial use track 4 cleanup standards which will ultimately allow for the contemplated commercial development of the property. This phase of work presents the specific methods that will be used to pursue areas of the site that did not comply with track 4 soil cleanup objectives (SCOs), as well as the underground storage tank closure measures services originally reported in Sections 2.1, 2.2 and 2.4 of our approved Remedial Alternative (RA) Work Plan dated April 3, 2007. This work will be accomplished through a focussed soil & groundwater removal services and tank closure methods all of which will be documented using conventional environmental field methods (i.e., excavation services, standard soil and ground water sampling methods) at the site.

H. Site/Waste Characteristics

Waste Types: Liquid__X__Solid__X___Sludge_X___Gas__X
Characteristics: Corrosive_____Ignitable__X____Radioactive ___Volatile _X
Toxic _X_ Reactive __ Unknown __X___

I. Field Work Description:

The areas under for consideration generally include areas previously found to contain soil and groundwater impacts and areas of the site targeted for future structural improvements. The field services will be directed in part by verbal directives from the DEC Region 4 Spill Unit. During the evaluation ambient air monitoring work will be performed at each sampling location to consider the presence of volatile organic compounds (VOC) that could compromise the environmental conditions of the site and / or surrounding area.

J. Project Work Tasks:

Task 1: Mapping - Survey
Task 2: Waste Characterization - Test Pit Survey
Task 3: Track 4 SCO Soil Removal Measures
Task 4: UST Closure Services
Task 5: Mapping - Survey

Comments:

Based on site conditions a modification to the scope of work may be deemed necessary. Any modification to the scope of services outlined in this HASP will first be endorsed by the DEC and/ or its assigned representatives.

Project Team Members:

NETC Project Coordinator & Safety Officer (PCSO):	J. Wink
Project Geologist (Alternative PCSO),:	Todd Scott, Jennifer Carter
Professional Engineer:	Keith Rupert
Geologist :	Robert Gray
Field Technicians:	Rick Earl, Dale Wojtowecz

K. Hazard Evaluation

The suspected hazards which may exist at the College park site during site activities can be grouped into three categories; chemical; heat stress; and physical hazards associated with the operation of machinery

Chemical Hazards

Chemical compounds previously identified at the site can be categorized as petroleum based hydrocarbons, heavy metals and PCBs. All previous site assessment services have been performed in level "D" protection. On this basis, continuous respiratory protection is not indicated for most field activities. However, the necessity of respiratory protection will be based on continuous gas monitoring to be performed during all test drilling work.

No planned removals of buried chemical containers will be conducted during this phase of work. Tank closure services are the responsibility of JH Maloy and are not covered by this HASP. No other work will be conducted in an enclosed environment during this investigatory phase of work. These restrictions on types of work to be performed during site investigation substantially decreases the potential for exposure to gases and vapors, as well as the direct exposure to suspected hazardous chemicals.

Cold Stress

Field activities during this phase of work will be conducted during the winter months. Therefore, cold stress will be of concern. Cold stress prevention and symptoms are further discussed in Section T.

Physical Hazards

Physical hazards exist during the operation of earth moving machinery. These types of accidents may involve a wide range of bodily injuries and will be managed using conventional first responder first aid pursuant to EMS protocol as outlined in Sections S.

L. Personnel & Responsibilities

Listed below are key personnel involved with the project. Their responsibilities are also included:

1. PROJECT COORDINATOR / SITE SAFETY OFFICER

The project coordinator / site safety (PCSO) officer will direct the site investigation. After the project starts and the PCSO has had time to evaluate the potential for hazardous site conditions, he or she may determine that a member of the project team may assume site safety officer duties. The primary responsibilities of the PCSO are:

- Assuring that all personnel are aware of the potential hazards of the site as well as the proper and improper procedures for handling those hazards, should they occur, including all health and safety provisions and standards in this HASP.

- Assuring that the proper personnel protection equipment is available and utilized properly by all site personnel.

- Assure that site personnel observe the appropriate work practices procedures.

- o Monitoring the performance of personnel to ensure that mandatory health and safety procedures are adequate and correcting any performances that do not comply with the HASP.

- o Preparation and submittal of any and all project reports including progress, accident incident and contractual.

2. SITE PERSONNEL

Site personnel will be those individuals involved in field operations. Their primary responsibilities will be:

- o Perform all required work safely.

- o Familiarize them with and understand the HASP, including proper use of personal protection equipment.

- o Report any unsafe conditions to supervisory personnel.

- o Be aware of signs and symptoms of potential exposure to site contaminants and weather stress. Based on the limited scope to the SI on site personnel will be responsible for multi tasks as designated by the PCSO.

M. Emergency Services

Emergency services (fire, police, ambulance, and local hospitals) will be notified as applicable to activities at the site. Emergency telephone numbers, will be conspicuously posted next to the field telephone. All field personnel will be made aware of the location of the site telephone and the directions to the closest emergency facility.

All field personnel will be trained in the recognition of cold stress (frost nip, frost bit, exhaustion, etc.) related to working in cold weather conditions. No person will work alone in the field; the buddy system will be strictly enforced and each will visually monitor his buddy as often as possible.

Water and first aid supplies will be strategically located on site for immediate access by on-site personnel. In the event of skin or eye contact with hazardous materials, the affected personnel will be immediately rinsed and brought to a physician. Subsequent to any emergency incident, a report describing the incident and those persons involved will be written and submitted to the PSOC.

N. Health & Safety Training

All field personnel will have received a "Health and Safety Training Course" for hazardous waste operations mandated by OSHA (29 CFR 1910.120). Appropriate personnel will receive the additional 8-hour supervisor's training.

Prior to starting work, the PCSO will conduct a training session to assure that all field personnel understand their safety responsibilities. All personnel will be instructed on potential health and safety hazards.

Specifically, the following topics will be covered in the initial training session:

- Potential routes of contact with contaminants.

- Types, proper use, limitations and maintenance of applicable protective clothing and equipment.

- respiratory protection using air-purifying respirators equipped with organic vapor and acid gas cartridges. This will include use, maintenance, storage, and limitations of use.

- Proper decontamination procedures and adherence to work zone boundaries.

- Proper waste/cuttings handling and disposal procedures.

- Reporting of accidents and availability of medical assistance.

- Recognition of symptoms and signs which indicate overexposure to contaminants or other hazards.

Each morning prior to the commencement of the day's work, on-site personnel will review the scheduled work for the day and health and safety procedures to be utilized with all team members. Additional training sessions will be conducted whenever any changes in health and safety hazards or procedures warrant it.

O. Standard Operating Safety Procedures

Standard operating safety procedures include precautions and operating practices that all responding personnel should follow. These include:

1. PERSONAL PRECAUTIONS
   - No contact lenses may be worn on-site.

   - Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated contaminated.

   - Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.

   - No facial hair which interferes with a satisfactory fit of the mask-to-face-seal is allowed on personnel required to wear respirators.

   - Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit or place equipment on drums, containers, or the ground.

   - Medicine and alcohol can increase the effects from exposure to toxic chemicals. Unless specifically approved by a qualified physician, prescribed drugs should not be taken by personnel where the potential for absorption, inhalation or ingestion of toxic substances exists. Alcoholic beverages should be avoided during off-duty hours, if possible.

2. OPERATIONS

   - All personnel entering the site must be thoroughly briefed on anticipated hazards, equipment to be worn, safety practice to be followed, emergency procedures, and communications.

   - Any required respiratory protection and chemical protective clothing must be worn by all personnel entering areas designated for wearing protective equipment.

   - Personnel on-site must use the buddy system at all times.

- Visual contact must be maintained between field and safety personnel.

- During continual operations, on-site workers act as safety backup to each other. Off-site personnel provide emergency assistance.

- Personnel should practice unfamiliar operations prior to performing the actual procedure.

- Entrance and exit locations shall be designated and emergency escape routes delineated by the PCSO.

- Communications using radios, hand signals, signs, or other means must be maintained between personnel at all times. Emergency communications will be prearranged by the PCSO in case of radio failure, necessity for evacuation of site, or other reasons.

- Personnel and equipment in the contaminated area should be minimized, consistent with effective site operations.

- All field personnel should make full use of their senses to alert themselves to potentially dangerous situations which they should avoid, e.g., presence of strong and irritating or nauseating odors.

- Field personnel should be familiar with the physical characteristics of the site, including:
  + wind direction in relation to contamination zones;
  + accessibility to associates, equipment, and vehicles;
  + communications;
  + operation zones;
  + site access; and
  + nearest water / eyewash station.

- Procedures for leaving a contaminated area must be planned and implemented in accordance with the HASP prior to going on site.

- All visitors to the job site must comply with the HASP procedures. Personal protective equipment may be modified for visitors depending on the situation. Any modifications must be approved by the site PCSO.

P. Personal Protection Program

1. PROTECTIVE EQUIPMENT

Protective clothing and respiratory protection will help prevent on-site workers from coming in contact with contaminants. The selection of protective equipment will be based upon the types, concentrations, and routes of exposure that may be encountered. The appropriate level of protection for initial site entry will be based upon a conservative assessment of the best available site contamination information.

Based upon known facts relative to the site, Level D protective equipment is indicated during on-site work involving drilling and sampling. During these activities, the minimum required personal protective equipment for personnel within the work zone (Hot Zone) will consist of the following:

- o Hard-hat
- o Safety glasses (when full-face respirator is not indicated)
- o Steel-toe work boots
- o Tyvek suit (optional) or equivalent coverall clothing
- o Gloves

- o Safety glasses
- o Hearing protection
- o Use of the full face APR (equipped with organic vapor and acid gas cartridges) will be required when 5 PPM vapor is continuously recorded on the Photoionization detector (PID) or a published TLV is documented within the ambient air of the work zone, after which use of the respirator will be mandatory.

2. FIELD MONITORING

During all drilling operations, monitoring of breathing space in proximity to the drilling equipment will be conducted with a PID calibrated to read 1:1 for Benzene. The results of PID monitoring will be used to advise personnel regarding existing conditions and to determine policy relative to the use of protective equipment. Monitoring will also be conducted during all excavation operations to detect any release of volatile organic compounds (VOC). This monitoring will be used to protect personnel from unsafe and/or unhealthful conditions. During other on-site activities not involving heavy equipment, sampling or the potential exposure to hazardous materials, Level D equipment is optional at the discretion of the site PCSO. Additional personal monitoring may be instituted based on the results of the initial field services.

Q. Site Control - Work Zones

1. CONTROL AT THE SITE

The site will be controlled to reduce the possibility of: (1) contact with any contaminants present and (2) removal of contaminants by personnel or equipment leaving the site. The possibility of exposure or translocation of substances will be reduced or eliminated by:

- Setting up security and physical barriers to exclude unauthorized personnel from the general area.
- Minimizing the number of personnel and equipment on-site consistent with effective operations.
- Establishing work zones within the site.
- Establishing control points to regulate access to work zones.
- Conducting operations in a manner to reduce the exposure of personnel and equipment and to eliminate the potential for airborne dispersion.
- Implementing appropriate decontamination procedures.

Although the community air monitoring program will treat the entire site as one work zone, three contiguous work zones are recommended for the soil and UST removal work:

Zone I: Exclusion Zone
Zone II: Contamination Reduction Zone
Zone III: Support Zone

Zone 1: Exclusion Zone

The Exclusion Zone, the innermost of three areas, is the zone where contamination could occur. This zone will generally correspond to the immediate work zone surrounding the soil or tank removal equipment targeted for the site. All people entering the Exclusion Zone must wear prescribed levels of protection. An entry and exit checkpoint will be established at the periphery of the Exclusion Zone to regulate the flow of personnel and equipment into and out of the zone. This will assist in verifying the procedures established to enter and exit are followed.

The outer boundary of Zone 1, the Hotline, has been established to be a 25 foot radius from the test bore / excavation. The Hotline will be defined by marker cones or similar barriers. During subsequent site operations, the boundary may be modified or adjusted as more information becomes available.

All personnel within the Exclusion Zone must wear the required level of protection. Personnel protective equipment is designed based on site-specific conditions including the type of work to be performed and the hazards that might be encountered. Different levels of protection may be justified within the Exclusion one as determined by the site PCSO after reviewing the specific operations.

Zone II: Contamination Reduction Zone

Between the Exclusion Zone and the Support Zone is the Contamination Reduction Zone which provides a transition between contaminated and clean zones. Based on the nature of this field services this will be a flexible zone based on the location of the sampling points but will generally correspond with the sites property line. At this time, the Contamination Reduction Zone is considered to be that area outside the safety fence and / or storm water silt fence that surrounds the individual work zones. In the event gross contamination is encountered a designated site-specific contamination zone and associated reduction corridors will be established by the designated PCOS. Unless otherwise specified by the PCSO, during excavation operations personnel entering Contamination Reduction Zone will be required to wear the prescribed personnel protective equipment, as required.

Zone III: Support Zone

The Support Zone, the outermost part of the site (inside the perimeter fence) is a non-contaminated or clean area. Support equipment is located in the zone; traffic is restricted to authorized site personnel. Since normal work clothes are appropriate within this zone, potentially contaminated personnel clothing, equipment, and samples are not permitted, but are left in the Contamination Reduction Zone until they are decontaminated.

R. Decontamination Procedures

Contaminated equipment and materials leaving the site must be decontaminated or isolated appropriately. All materials will be assumed contaminated if they have been used within the Exclusion Zone. Procedures for decontamination will consist of high pressure cleaning for the earth moving equipment, sampling equipment and trucking equipment. Decontamination procedures may also call for large quantities of water, soap and brushes, and a collection system for the contaminated wash water. Requirements for decontamination will be limited by using disposable sampling equipment. The number of vehicles entering the site will be restricted to an absolute minimum. Only authorized vehicles will be allowed to enter the Contamination Reduction Zone.

Water will be available to team members for rinsing off contaminated material. Tyvek outer clothing if used will be discarded. The decontamination area will be set up to decontaminate clothing and equipment of team members leaving the Exclusion Zone on an as needed basis. Decontamination will consist of a thorough soap and water wash. Personal decontamination will become necessary only after personnel encountering gross contamination.

In order to minimize contamination of sample handlers and laboratory personnel, sample bottles will be tightly capped in the field, label secured and placed in the appropriate transportation container(s).

S. Emergency Information

1. EMERGENCY SITUATION

All on site activities present a potential risk to on-site personnel. During routine operations, risk is minimized by establishing good work practices, staying alert, and using proper personal protective equipment. Unpredictable events such as physical injury, chemical exposure, or fire may occur and must be anticipated.

Emergency conditions are considered to exist if:

- Any member of the field crew is involved in an accident or experiences any adverse effects or symptoms of exposure while on site; or
- A condition is discovered that suggests the existence of a situation more hazardous than anticipated.

2. EMERGENCY PROCEDURES

a) General: The following emergency procedures should be followed: In the event of emergency, the appropriate contacts identified in the emergency phone numbers list at the front of this HASP shall be notified. This list should be posted conspicuously at the site and next to the site telephone

- Personnel on site should use the "buddy" system (teams).
- Buddies should prearrange hand signals or other means of emergency signals for communications in case of being out of hearing range.
- Visual contact should be maintained between "teams" in order to assist each other in case of emergencies.
- In the event that any member of the field crew experiences any adverse effects or symptoms of exposure while on site, the entire crew should immediately halt work and act according to the instructions provided by the PCSO.
- The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated should result in the evacuation of personnel and reevaluation of the hazard and the level of protection required.
- In the event an accident occurs, the PCSO will complete an Accident Report Form (see Attachment A). Follow-up action shall be taken to correct any situation that caused the accident.

b) Personal Injury: In case of personal injury at the site, the following procedures will be implemented:

- On-site personnel administer treatment to an injured worker.
- The victim will be transported to the nearest hospital or medical center. If necessary, an ambulance will be called to transport the victim.

c) Chemical Exposure: If a member of the field crew is exposed to hazardous chemicals, the procedures outlined below will be followed:

- Another crewmember (buddy) will remove the individual from the immediate area of contamination.
- Precautions will be taken to avoid exposure of other individuals to the chemicals.
- If the chemical is on the individual's clothing, first rinse the clothing if possible, and then the clothing should be removed if it is safe to do so.
- If the chemical has contacted the skin, the skin will be washed with copious amounts of water.
- In case of eye contact, an emergency eyewash will be used.
- If necessary, the victim will be transported to the nearest hospital or medical center. The nature of the injury may require that an ambulance should be called to transport the victim.
- All chemical exposure incidents must be reported in writing by the PCSO on an Accident Report Form.

d) Escape Routes: Flags will be positioned at various other locations to indicate wind direction. In the event of an sudden release of fire, all personnel will move away from the immediate area in an upwind direction and then to the site exit point. Personnel downwind of the incident will first move to the perimeter of the site and then upwind to a safe distance.

e) Signal for Evacuation: In the event of a sudden release or fire requiring immediate evacuation of personnel, the signal for evacuation will be three quick horn signals. The horns will be kept in a conspicuously visible location for quick access by all on site personnel.

f) Other Signals: All equipment will be equipped with a fire extinguisher. It will also be the operator's responsibility to practice fire prevention measures such as periodically cleaning the equipment to keep it free of accumulated oil/grease or other combustible materials. In the event of a drill equipment fire or any other fire which cannot be controlled with available fire extinguishers, the local fire department will be summoned.

T. Thermal Exposure Monitoring

1. GENERAL : Adverse weather conditions are important considerations in planning and conducting site operations.

a) HEAT STRESS (Not Anticipated Based on Winter conditions)

Heat stress can result when the protective clothing decreases natural body ventilation. This can occur even when temperatures are moderate. Various levels of personal protection require low permeability disposable suits, gloves and boots, which prevent most natural body ventilation. Discomfort due to increased sweating and body temperature (heat stress) will therefore be expected at the work site. Some signs and symptoms of heat stress are:

- o Heat Rash - Continuous exposure to heat or humid air
- o Heat Cramps - Inadequate electrolyte replacement
  - muscle spasm
  - pain in the hands and feet
- o Heat Exhaustion - Inadequate blood circulation
  - pale, cool, moist skin
  - heavy sweating
  - dizziness
  - nausea
  - fainting
- o Heat Stroke - Temperature regulation fails and the body temperature rises to critical levels
  - red, hot, usually dry skin
  - lack of or reduced perspiration
  - nausea
  - dizziness and confusion
  - strong, rapid pulse
  - coma

b) Monitoring

- o Heart Rate - Radial pulse will be recorded during a 30-second period as early as possible in the rest period.
- o If the heart rate is >110 beats/minute at the beginning of the rest period, the next work cycle will be shortened by one-third and the rest period will remain the same.
- o If the heart rate is still >110 beats/minute at the next period, the following work cycle will be shortened by one-third.
- o Strip thermometers will be used if deemed necessary to record an individual's temperature at time intervals as follows:

Ambient Air Temperature	Interval
>70oF	every 3 hours
>80oF	every 2 hour
>90oF	every 1/2 hour

- If normal temperature exceeds 99.6oF (37.6oC), the next work cycle will be shortened by one-third.
- If oral temperature still exceeds 99.6oF (37.6oC) at the beginning of the next rest period, the following work cycle will be shortened by one-third.
- No worker will be permitted to wear a semi-permeable garment when his/her oral temperature exceeds 100oF (38.1oC).

Recommendations to reduce heat stress:

- Drink plenty of fluids (to replace loss through sweating)
- Make adequate shelter available for taking rest breaks to cool off.

For extremely warm weather, follow these additional recommendations:

- Wear cooling devices to aid in ventilation (the additional weight may affect efficiency.
- Install portable showers or hose down facilities to cool clothing and body.
- Shift working hours to early morning and early evening avoiding the hottest time of the day.
- Rotate crews wearing the protective clothing.

c) COLD EXPOSURE

Prolonged exposure to cold will occur without proper protection, and the effects of cold exposure can be felt in temperatures above freezing as well as below freezing. Exposure to cold can cause severe injury (frostbite) or an overall drop in body temperature. Fingers, toes, and ears are most susceptible to frostbite. Both the outdoor temperatures and wind velocity play a part in cold weather injuries. Wind chill is used to describe the chilling effect of moving air in combination with low temperatures. Cold exposure is a serious threat to the site personnel that remove protective clothing and expose perspiration soaked underclothing to the cool air. Water conducts heat 240 times faster than air, thus rapidly cooling the body and wet clothing.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperatures - its symptoms are usually seen in 5 stages:

- shivering
- apathy, listlessness, sleepiness and rapid body cooling
- unconsciousness, glassy stare slow pulse and respiratory rates
- freezing of the extremities (most sensitive to freezing first are the fingers, toes and ears)
- death

U. Record Keeping

1. PERSONNEL EXPOSURE

A site log with a required sign-in, sign-out procedure will document the time spent by each team member on the site. This information will be supplemented by periodic air monitoring in the work zone air.

2. PROTECTIVE EQUIPMENT

A checklist will track all protective equipment brought into the field each day. This will ensure that decontamination is performed in the field that any additional preparation, such as sanitizing face masks (if deemed necessary), is performed in the decontamination area prior to reuse. Any equipment malfunction

must be noted on the checklist and repaired before reuse. Other routine maintenance checks will be scheduled and recorded on a regular basis to ensure that protective equipment is effective at all times.

3. INCIDENT REPORTS

Any chemical release to air, water, or soil must be reported to the PCSO. Any exposure to personnel resulting from such a release or from protective equipment failures must be reported immediately to the PCSO and / or other designated personnel as well as in writing within 24 hours.

4. MONITORING EQUIPMENT

All air monitoring equipment will be calibrated each day. Logs will be maintained for each calibration.

V. Sample Handling , Transportation & Shipment

1. HANDLING

All samples will be properly labeled and placed in clean containers before being removed from the site. To minimize the hazards to laboratory personnel associated with sample handling, sample volumes sent to the lab will be no larger than necessary and all sample containers will be sealed prior to shipment.

2. TRANSPORT

All samples collected at the site will be taken to a pre designated sample bank to be established / designated by the PCSO for preparation for shipment to appropriate laboratories. No samples, specimens, or other materials will be removed from the site other than those, which will be transmitted to the sample bank, or to designated disposal areas. All samples will be properly packaged following the sampling protocols to preserve the integrity of the sample and to prevent the inadvertent escape of contaminants. In addition, all samples will be placed in a suitable container before transport to prevent leakage.

2. SHIPPING

Shipping containers and labeling procedures will follow established protocols. Samples will be packed in ice chests filled with packing material and "Blue Ice". Department of Transportation regulations for sealing and marking the ice chests will be followed. At this time it is anticipated that all samples will be shipped by NETC to NE Analytical or other laboratory subcontractor designated for this work.

ATTACHMENT A

TAILGATE SAFETY MEETING FORMS

TAILGATE SAFETY MEETING

Date: _____ Time: _____ Job Number: _____

Client: _____

Job Location: _____

Type of Work: _____

Chemical Used: _____

SAFETY TOPICS PRESENTED

Protective Clothing / Equipment: _____

Chemical Hazards: _____

Physical Hazards: _____

Emergency Procedures: _____

Hospital / Clinic: _____ Phone Number: _____

Hospital Address: _____

Special Equipment: _____

Other: _____

ATTENDEES

NAME PRINTED	SIGNATURE

Meeting conducted by:

NAME PRINTED _____ SIGNATURE _____

INJURY REPORT FORMS

NORTHEASTERN
ENVIRONMENTAL
TECHNOLOGIES CORP.
MAIL: P.O. BOX 2167 • BALLSTON SPA, NY 12020
SHIPPING: 1476 ROUTE 50 • BALLSTON SPA, NY 12020

EMPLOYEE PERSONAL INJURY REPORT

Report No. _____

LOCATION & TIME

Location where employed:	Address where accident occurred:	
Date and time of accidental injury or illness diagnosis:	County where accident occurred:	Date and time accident reported:

EMPLOYEE

Name of employee:	Employee No.:	Age:	☐ Male ☐ Female
U.S. Citizen: ☐ Yes ☐ No If No, Birthplace:		Department:	
Job title:		Experience at job:	
Social Security No.:		Address of employee:	
Date hired:			

ACCIDENT & INJURY

Did the injury occur while working on the premises? ☐ Yes ☐ No

What project or operation was employee involved in at the time of the injury?

Where exactly was he/she working?	What tools and equipment were being used?

How did the employee become injured? (fell from, tripped, slipped, struck by, etc.):

Type of injury (fracture, sprain, cut, etc.) to part of body:

What was/were the unsafe act(s)?

What was/were the unsafe condition(s)?

What have you done or do you intend to do prevent recurrence?

Name of witness(es):

DISABILITY

Did the employee die? ☐ Yes ☐ No	Did the accident result in lost time? ☐ Yes ☐ No	Did the accident result in restricted activity? ☐ Yes ☐ No	
First day missed (date):	Date returned (date):	First day restricted (date):	Last day restricted (date):
If not returned, estimate length of absence:		If now restricted, estimate length of restriction:	

Was the injured paid in full for the remainder of the day of the accident? ☐ Yes ☐ No

MEDICAL CARE

Doctor: ☐ Yes ☐ No Name:

Hospital: ☐ Yes ☐ No Name: Did the employee spend the night in the hospital? ☐ Yes ☐ No

Emergency Health Center: ☐ Yes ☐ No Name:

Diagnosis:

Date prepared:	Prepared by (Supervisor):

APPENDIX E

STORMWATER POLLUTION PREVENTION PLAN

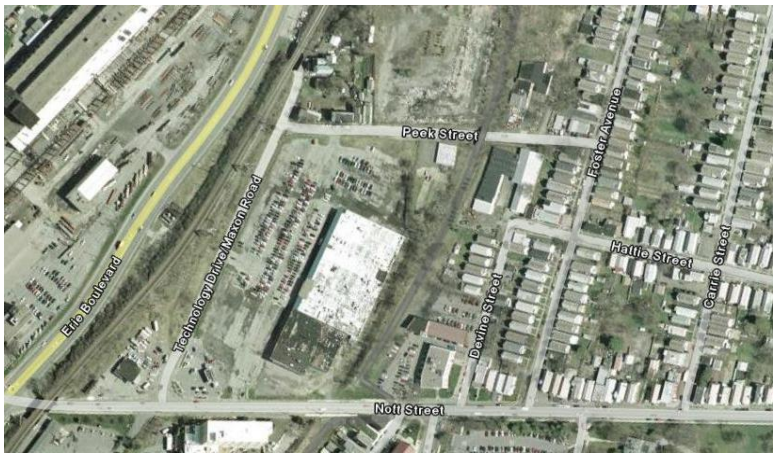
NORTHEASTERN
ENVIRONMENTAL
TECHNOLOGIES CORP.

Stormwater Pollution Prevention Plan

College Park

Schenectady, New York

January 30, 2008



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Fuss & O'Neill of New York, PC
24 Madison Avenue Extension
Albany, NY 12203

PREPARER OF THE SWPPP

"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(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: Troy A. Wojciekofsky, PE

Title: Senior Project Manager

License No.: 073746

Date: January 30, 2008

STORMWATER POLLUTION PREVENTION PLAN
College Park

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1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for major activities associated with the redevelopment of an existing property and the construction of a Corporate Office Building located in the City of Schenectady, Schenectady County, New York. This SWPPP includes the elements necessary to comply with the "New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity" General Permit Number GP-02-01, Draft SPDES General Permit for Stormwater Discharges from Construction Activity" General Permit Number GP-0-08-001, and all local agency requirements.

This SWPPP and project plans identify and detail the stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of construction. The measures described herein have been designed in accordance with the technical standards outlined in the following:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-02-01 (effective January 8, 2003).
- Draft NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-08-001.
- *NYSDEC New York State Stormwater Management Design Manual* (August 2003).
- *New York State Standards and Specifications for Erosion and Sediment Control* (August 2005).

This report considers the impacts associated with the intended construction with the purpose of:

1. Maintaining existing drainage patterns, as much as possible, while continuing the conveyance of upland watershed runoff.
2. Controlling increases in the rate of stormwater runoff resulting from the proposed development without adversely affecting adjacent or downstream properties or receiving water courses or bodies.
3. Reducing potential stormwater quality impacts and soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

To demonstrate this, pre- and post-development stormwater runoff conditions have been reviewed and evaluated for the 1, 10, and 100-year Type II 24-hour storm events. The proposed stormwater management facilities have been designed to provide both quality and quantity controls by detaining (if necessary), treating, and releasing stormwater runoff at a rate equal to or less than that which existed prior to development of the project site. Comparison of the pre- and post-development peak stormwater runoff rates demonstrates that the peak rate of runoff from the proposed site will not be increased and therefore will not pose a significant adverse impact to the adjacent or downstream properties or receiving water courses.

2.0 PROJECT DESCRIPTION

BN Partners Associates, LLC is proposing to redevelop ± 9.7 acres of land located at Nott Street and Maxon Road in the City of Schenectady, Schenectady County, New York (see Figure 1) for the construction of a Corporate Office Building with associated parking, utilities, and landscaping. The project site is identified on the City of Schenectady Tax Map as Tax Parcel Numbers 39.49-2-4, 39.49-3-1 and 39.50-1-9.1. The project site is bounded by Peek Street to the North, Maxon Road to the West, Nott Street to the South, and a bike trail to the East.

2.1 Pre-Development Conditions

This analysis concentrates on areas impacted by or tributary to the Project Site. Prior to vacancy, previous site uses included retail, business, and industrial manufacturing operations. The topography of the site generally conveys runoff overland to the south and southwest towards the existing City of Schenectady closed stormwater conveyance system on Maxon Road and Nott Street, which discharges directly College Creek and ultimately the Mohawk River (approximately 1,400 feet northwest). The Mohawk River is a greater than a fourth order stream. Watershed subcatchment elevations range from ±258 feet along the bike path to ±231 feet at an existing catch basin along Maxon Road. The majority of the onsite slopes vary from 3 to 5 percent with steeper areas along Peek Street and the bike path approaching slopes of 2(h):1(v) or greater. The site consists mostly of impervious, paved areas with small areas of landscaped islands between sidewalks and paved areas. The existing impervious coverage of the watershed subcatchment areas is ±9.3 acres.

2.1.1 Soil Conservation Service Soil Survey Data

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey for Schenectady County was reviewed and provided surficial soil conditions for the study area (see Figure 2). The SCS identified the presence of Cu, Cut and Fill Land, series soil types. Soil data was provided by the SCS and a summary of the soil data is provided in Table 1.

Table 1: USDA Soil Data

Map Symbol	Description	Depth to Groundwater (ft)	Depth to Bedrock (in)	Hydrologic Soil Group
Cu	Cut and Fill Land	3.0-6.0, >6.0	>60	A\D

The Soil Conservation Service defines the hydrologic soil groups as follows:

- Type A Soils: Soils having a high infiltration rate and low runoff potential when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a moderate rate of water transmission.

- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consists 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.

- Type C Soils: Soils having a low infiltration rate when thoroughly wet and consists chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine-to-fine texture. These soils have a low rate of water transmission.

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

For the purposes of stormwater modeling, the Cu, Cut and Fill Land, material is equivalent to Type C soils. As a majority of the site areas in the pre- and post-development conditions are impervious, the underlying soils will play a limited role in peak runoff development.

2.1.2 Groundwater, Water Bodies, and Wetlands

As indicated in Table 1, the depth to groundwater is approximately 3-6 feet, or greater according to the USDA SCS Soil Survey for Schenectady County. The nearest water body is Mohawk River, which is ±1,400 feet northwest of the site. The Mohawk River is listed as a Class A, Standard A according to Chapter 10, Article 19 of the "State of New York Official Compilation of Codes, Rules, and Regulations" and is a greater than fourth order river. There is no State or Federal wetlands present onsite or adjacent to the site.

2.1.3 Floodplains and Floodways

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM), City of Schenectady, New York, Community Panel Number 360741 0002 B, the site is entirely located within Zone C. Zone C is defined as "areas of minimal flooding".

2.2 Post-Development Conditions

The proposed project is a redevelopment of an existing site, which is located within a Municipal Separate Sewer System (MS4) municipality. The proposed development of the Corporate Office Building, parking and utilities will decrease the amount of impervious surfaces on the project site, in turn reducing the amount of stormwater runoff from the site. Topography of the site will generally remain as that of pre-development conditions, conveying runoff overland to the south and southwest towards the existing City of Schenectady closed stormwater conveyance system. In addition to overland flow, a new stormwater conveyance system will be installed within the project site limits to convey the stormwater runoff to the proposed stormwater management systems prior to entering the existing closed stormwater conveyance system.

As a result of the proposed redevelopment there will be a ±10 percent reduction in impervious coverage.

2.2.1 Impacts to Groundwater, Water Bodies, and Wetlands

No impacts to groundwater, any water bodies or wetlands are anticipated as a result of this project. All stormwater runoff from the project will be treated in accordance with NYSDEC

standards prior to entering the existing closed stormwater conveyance system, which ultimately discharges to the Mohawk River.

2.2.2 Stormwater Management & Treatment Systems

The proposed decrease in impervious surfaces on the project site has resulted in stormwater runoff rates in the post-development condition to be less than that of stormwater runoff rates in the pre-development conditions. Because the peak runoff rate from the proposed site will be less than that of the existing site, no increased impacts to the adjacent or downstream properties or receiving water courses are anticipated. Stormwater management will be in the form of water quality treatment.

Stormwater runoff from the proposed redevelopment will be collected and conveyed via a closed stormwater conveyance system to proposed stormwater quality treatment system. The proposed stormwater management system is proposed to be a Hydro International Downstream Defender® (verified proprietary stormwater management practice per NYSDEC), or approved/NYSDEC accepted equal.

The Hydro International Downstream Defender® is a vortex separator system removes finer sediment, particles, free oil, and debris from urban stormwater runoff. The unique design allows for easy inspection and unobstructed maintenance access. This high-performance system uses an effective combination of swirl-concentrator and flow-control technologies to maximize treatment.

2.3 Permits and Approvals

2.3.1 NYSDEC SPDES General Permit

Pursuant to Section 402 of the Clean Water Act, stormwater discharges from certain construction activities to waters of the United States are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York's SPDES is a NPDES approved program with permits issued in accordance with the Environmental Conservation Law. Discharges of pollutants to all other "Waters of New York State", such as groundwaters, are also unlawful unless they are authorized by a SPDES permit.

As of the date of this report, the NYSDEC SPDES General Permit GP-02-01 is valid.

A draft SPDES General Permit, GP-0-08-001 is currently under review with the NYSDEC.

There are slight differences between the SPDES General Permit GP-02-01 and the Draft SPDES General Permit GP-0-08-001. A summary of the differences are as follows:

- Requirements for completing and submitting a Notice of Intent (NOI).
- The frequency of inspection requirements.

For a complete listing of the responsibilities and obligations for all parties involved refer to the SPDES General Permit GP-02-01 and Draft SPDES General Permit GP-0-08-001 provided in Appendix A.

2.3.1.1 Certification Statements

As required by the NYSDEC SPDES General Permit and the *NYS Standards and Specifications for Erosion and Sediment Control*, the following are required to sign certification statements:

1. Owner/Operator.
2. Contractor(s).
3. Subcontractor(s).
4. Qualified Professional[1].

The certification statements (see Appendix B) shall be signed by the required parties. A copy of the signed certification statements shall also be placed in the site log book.

2.3.1.2 Notice of Intent

Prior to the commencement of any construction activities, an owner, or operator must first develop a SWPPP in accordance with the NYSDEC SPDES General Permit. Prior to submitting the a Notice of Intent (NOI) to the NYSDEC, the SWPPP should be ready for implementation and all required permits and approvals necessary for the project should be obtained.

If the SWPPP has been prepared in accordance with NYSDEC's technical standards and provided the activity is eligible for coverage under the SPDES General Permit GP-02-01, the applied-for-activity may obtain coverage under the NYSDEC SPDES General Permit GP-02-01 within 5 days after NYSDEC's receipt of the NOI. However, if the applicant wishes to deviate from NYSDEC's technical standards, such deviations must be identified in the NOI and is required to undergo a 60 business day review period.

Under the Draft SPDES General Permit GP-0-08-001, the requirements are slightly different if the construction activity is subject to the requirements of a regulated, traditional land use control Municipal Separate Sewer System (MS4). Since the proposed project is located within an MS4, the SWPPP shall be reviewed and accepted by the MS4 prior to submitting the NOI to the NYSDEC for coverage under the SPDES General Permit GP-0-08-001. Once the SWPPP is accepted, an authorized representative of the MS4 shall sign the "MS4 SWPPP Acceptance" form. This form shall be submitted along with the NOI to the NYSDEC. The owner or operator shall have the preparer of the SWPPP sign the "SWPPP Preparer Certification statement on the NOI prior to submitting the form to the NYSDEC. The completed NOI, "MS4 SWPPP Acceptance" form (if applicable), and any required fees shall be

[1] Qualified Professional shall be a person knowledgeable in the practices of erosion and sediment controls, such as a NYS professional engineer or Certified Professional in Erosion and Sediment Control (CPESC).

submitted to the NYSDEC to obtain coverage under the NYSDEC SPDES General Permit GP-0-08-001.

A blank NOI has been provided in Appendix C. The completed NOI will be submitted to the NYSDEC prior to the commencement of construction and the owner or operator shall provide any required fees to the NYSDEC.

2.3.1.3 Notice of Termination

After construction is completed as defined in the NYSDEC SPDES General Permit GP-02-01, cancellation of coverage is accomplished by submitting a Notice of Termination (NOT). Failure to submit a NOT may result in the continued obligation to pay a yearly Regulatory Fee and/or may be cause for suspension of permit coverage.

A blank NOT has been provided in Appendix D, which will be completed and filed with the NYSDEC after a final site assessment has been performed by the qualified professional.

2.3.2 Other Permits and Approvals

In addition to seeking coverage under the NYSDEC SPDES General Permit, required permits and approvals for this site include, but are not limited to:

- City of Schenectady Preliminary Site Plan Approval
- City of Schenectady Final Site Plan Approval
- City of Schenectady Highway Department, IDA
- Schenectady County Department of Health
- Schenectady County Planning Board
- Empire State Development
- NYSDEC Brownfields Cleanup Program, BCP No. C447037
- NYSDOT

3.0 REDEVELOPMENT CRITERIA

The project has been designed in accordance with the design criteria and practices of Chapter 9 - Redevelopment Practices of the *NYS Stormwater Management Design Manual*. Redevelopment of previously developed sites is encouraged by the NYSDEC as it provides an opportunity to reduce pollutant discharges from existing sites that do use any treatment practices. Redevelopment also provides opportunity to conserve natural resources by developing previously disturbed/developed areas. The following provides justification for the use of proposed alternative approaches provided in Chapter 9 of the *NYS Stormwater Management Design Manual*:

1. An already impervious area is reconstructed.

    - The project involves the redevelopment of a previously developed site. Paved and impervious areas covered ±8.7 acres of the pre-developed site. As a result of the proposed redevelopment, the impervious cover will be reduced by ±10 percent.

2. There is inadequate space for controlling stormwater runoff from the reconstructed area.

    - High project costs associated with environmental remediation and redevelopment of an urban area, the project density of the site, and the areas of soil requiring remediation have resulted in space and design constraints when trying to implement onsite standard stormwater practices.

3. The physical constraints of the site do not allow meeting the required elements of the standard practices.

    - The site has numerous physical constraints that preclude the implementation of standard treatment practices, including soils requiring remediation, highly compacted soils that are not suitable for infiltration, and incompatible surrounding land uses.

4.0 CONSTRUCTION SEQUENCING SCHEDULE AND PHASING

The purpose of the construction sequencing schedule is to reduce the overall disturbance and ensure that previously disturbed areas are re-established prior to construction in another portion of the site. The duration of the construction activities, including planned winter shutdowns, will be from February 1, 2008 to December 31, 2013.

Consistent with the *New York State Standards and Specifications for Erosion and Sediment Control*, there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the NYSDEC. The total disturbance of the proposed project is ±9.2 acres and will be completed in three (3) phases. Prior written approval from the NYSDEC to disturb more than five (5) acres at one time will not be necessary.

The general construction sequencing of the project is as follows:

1. Prior to commencing any clearing, grubbing, earthwork activities, etc. at the site, the contractor shall flag the work limits and shall install all temporary erosion and sediment control measures (i.e. silt fences, tree protection/barrier fences, stabilized construction entrances, storm drain sediment filters, drainage ditch sediment filters, etc.) indicated on the project drawings. Temporary erosion and sediment control measures must be constructed, stabilized, and functional before site disturbance begins within their tributary areas.

2. The contractor shall install the catch basins, storm drain pipes and the earthen berms along Maxon Road for the temporary sediment traps.

3. Prior to commencing clearing, grubbing and/or earthwork activities in any other area of the site, the contractor shall install inlet and outlet protection measures (rip-rap overflow weir(s), culvert inlet/outlet protection, etc.) and shall stabilize the areas disturbed during the construction of the temporary sediment traps.

4. The contractor shall install temporary diversion measures with associated stabilization measures (i.e., vegetative cover, drainage ditch sediment filters, storm drain sediment filters, etc.) to assure that stormwater runoff is conveyed to the temporary sediment traps.

5. Temporary diversion measures shall be located in a manner that will assure that the area tributary to each diversion does not exceed five (5) acres in size. These temporary diversion measures shall be inspected daily and repaired/stabilized as necessary to minimize erosion.

6. The contractor shall commence site construction activities as required.

7. Install protective measures at the locations of all grate inlets, curb inlets, and at the ends of all exposed storm sewer pipes.

8. Construct all utilities, curb and gutter, gutter inlets, area inlets, and storm sewer manholes, as shown on the plans. Inlet protection may be removed temporarily for this construction. Place required rip-rap at locations shown on the plans.

9. Finalize pavement sub-grade preparation.

10. Remove protective measures around inlets and manholes no more than 24 hours prior to placing stabilized base course.

11. Install sub-base material as required for pavement.

12. Prior to finalizing construction of the stormwater management treatment unit, all catch basins and drainage lines shall be cleaned of all silt and sediment.

13. The contractor shall remove all temporary erosion and sediment control measures and immediately establish permanent vegetation on the areas disturbed during their removal.

5.0 EROSION AND SEDIMENT CONTROL PLAN

The SWPPP and project plans identify both the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

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, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-02-01 (effective January 8, 2003).

- Draft NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-08-001.

- *New York State Standards and Specifications for Erosion and Sediment Control*, NYSDEC (August 2005).

The SWPPP and plans outline the construction scheduling for implementing the erosion and sediment control measures. The SWPPP and plans include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures. It is the responsibility of the contractor to maintain and upgrade all erosion and sediment controls as required to achieve the proper erosion and sediment controls during construction. The frequency of inspections shall be performed in accordance with the SPDES General Permit that is in effect.

5.1 Erosion and Sediment Control Measures

5.1.1 Temporary Measures

Temporary erosion and sediment control measures to be utilized during construction generally include the following:

1. Stabilized Construction Entrance

   Prior to construction, stabilized construction entrances will be installed, as shown on the detail plan, to reduce the tracking of sediment onto public roadways.

   Construction traffic must enter and exit the site at the stabilized construction entrance. The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

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

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 general contractor to a degree that is

acceptable to the owner/operator, and in compliance with the applicable local and state dust control requirements.

3. Temporary Soil Stockpile

   Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

4. Silt Fencing

   Prior to the initiation of and during construction activities, silt fencing shall be established along the perimeter of areas to be disturbed as a result of the construction which lie up gradient of water courses or adjacent properties. These barriers may extend into non-impact areas to ensure adequate protection of adjacent lands.

   Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To ensure 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. Temporary Seeding

   Within 14 days after construction activity ceases on any particular area of the site, all disturbed areas where there will not be construction for longer than 21 days shall be temporarily seeded and mulched to minimize erosion and sediment loss.

6. Stone Inlet Protection Barrier

   Concrete blocks surrounded by wire mesh and crushed stone will 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.

7. Erosion Control Blanket

   Erosion control blankets shall be installed on all slopes exceeding 3:1. 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.

8. Stone Check Dams

Stone check dams will be installed within drainage ditches to reduce the velocity of stormwater runoff, to promote settling of sediment, and to reduce sediment transport offsite.

The stone check dams shall be inspected at least every seven (7) calendar days and within 24 hours of the end of a storm event of ½-inch or greater. Damage will be repaired upon discovery. If significant erosion has occurred between structures, a liner of stone or other suitable material shall be installed in that portion of the channel.

Sediment accumulated behind the stone check dam will be removed as needed to allow the channel to drain through the stone check dam and prevent large flows from carrying sediment over or around the dam. Stones shall be replaced as needed to maintain the design cross section of the structures.

9. Temporary Sediment Traps

Temporary sediment traps 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.

Temporary sediment traps shall be inspected in accordance with the SPDES General Permit that is in effect. All damages caused by soil erosion and construction equipment shall be repaired upon discovery. Accumulated sediment shall be removed from the basin when it reaches 50 percent of the design capacity and shall not exceed 50 percent. Sediment shall not be placed downstream from the embankment, adjacent to a stream, or floodplain.

10. Dewatering

Dewatering, if required, shall not be discharged directly into wetlands, water courses, water bodies, and storm sewer systems. Proper methods and devices shall be utilized to the extend permitted by law, such as pumping water into temporary sediment basins, providing surge protection at the inlet and outlet of pumps, floating the intake of the pump, or other methods to minimize and retain the suspended solids.

5.1.2 Permanent Measures

Permanent erosion and sediment control measures to be utilized after construction generally include the following:

1. Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

All areas at final grade must be seeded and mulched within 14 days after completion of the major construction activity. All seeded areas should be protected with mulch.

Final site stabilization is achieved when all soil-disturbing activities at the site has 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.

5.2 Construction Housekeeping Practices

Good housekeeping practices are designed to maintain a clean and orderly work environment. This will reduce the potential for significant materials to come into contact with stormwater. A maintenance schedule shall be developed for these areas. The general contractor shall implement the following practices:

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

2. The general contractor will designate areas for equipment cleaning, maintenance, and repair. The general contractor and subcontractors will utilize those areas. The areas will be protected by a temporary perimeter berm.

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

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.

5. 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 at an approved solid waste or chemical disposal facility.

5.3 Other Pollutant Controls

There are other control measures that can be used that may not fit into one of the previously mentioned categories. The following additional controls to be implemented at the facility are as follows:

1. Solid Waste Disposal

   No solid materials, including building materials, are allowed to be discharged from the site with stormwater. All solid waste, including disposable materials incidental to the major construction activities, must be collected and placed in containers. The containers will be emptied periodically by a contract 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 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.

2. Sanitary Facilities

   Temporary sanitary facilities will be provided by the contractor throughout the construction phase. They must be utilized by all construction personnel and will be serviced by a commercial contractor. These facilities must comply with state and local sanitary or septic system regulations.

3. Water Source

   Non-stormwater components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site. It can be retained in the ponds until it infiltrates and evaporates.

4. Long-Term Pollutant Controls

   In addition to the permanent stormwater management facilities, identified on the accompanying plans, stormwater pollutant control measures installed during construction that will also provide benefits after construction include temporary sediment basins and rip-rapped outfalls. Temporary sediment basins that do not interfere with normal operations and appear to provide long-term benefits may be left in place after construction is completed, as directed by the owner/operator.

5.4 Inspection and Maintenance Requirements

5.4.1 Pre-Construction Meeting, Inspection, and Certifications

A pre-construction meeting shall be scheduled with the City representative, the qualified professional, the owner or operator, the contractor, and the subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

Prior to the commencement of construction, the owner/operator or contractor shall contact the qualified professional once the erosion and sediment control measures have been installed. The qualified professional shall conduct an initial assessment of the site and certify that the appropriate erosion and sediment control measures and structures have been adequately installed and implemented in accordance with the SWPPP and plans. A copy of the completed pre-construction site assessment shall be placed in the site log book. A sample pre-construction site assessment checklist has been provided in Appendix E.

5.4.2 Construction Inspections and Maintenance

5.4.2.1 General

To ensure the stability and effectiveness of all protective measures and practices during construction, all erosion and sediment control measures employed will be inspected by the Qualified Professional in accordance with the SPDES General Permit that is in effect.

The contractor shall perform daily inspections of all erosion and sediment control measures at the beginning and end of the day. The contractor shall immediately correct any deficiencies noted during their inspection or during the qualified professional's inspections.

Inspection and maintenance reports shall be prepared in accordance with the inspection schedule and the SPDES General Permit. Inspection and maintenance reports shall identify and document the maintenance of the erosion and sediment control measures. A sample construction duration inspections report has been provided in Appendix E.

5.4.2.2 Construction Temporarily Suspended

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 frequency of the inspections can be reduced. However, NYSDEC must be notified prior to reducing the frequency of the inspections. If approved, the Qualified Professional shall conduct a site inspection at least once every 30 calendar days.

5.4.3 Final Site Inspection, Assessment, and Certification

Prior to filing of the NOT or the end of permit term, the owner/operator or contractor shall have the qualified professional perform a final site inspection. The qualified professional shall

certify that the site has undergone final stabilization[2]. A sample certification of final site stabilization form has been provided in Appendix E.

5.4.4 Post-Construction Inspection and Maintenance

Inspections shall be performed by the owner, when all disturbed areas are stabilized and all stormwater management systems are in place and operable. Inspections and maintenance shall be performed as outlined on the plans and in accordance with Appendix E.

5.5 Site Log Book

The operator shall maintain a record of all inspection reports in a site log book. The site log book shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction, a copy of the following, including but not limited to, shall be placed in the site log book:

- Signed copies of the Owner/Operator, Contractor and Subcontractor, and Qualified Professional certification statements.
- Completed Pre-Construction Site Assessment Form.
- Modification Forms.
- Inspection Reports.

5.6 Post Construction Records and Archiving

Following construction, the owner/operator shall retain copies of the SWPPP, the complete construction site log book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, in its sole discretion, at any time upon written notification.

6.0 STORMWATER MANAGEMENT

The goals of this Stormwater Management Plan are to analyze the peak rate of runoff under pre- and post-development conditions, to maintain the pre-development rate of runoff in order to minimize impacts to adjacent or downstream properties, and to minimize adverse impacts to waters of the State of New York caused by the quality of runoff exiting the developed site.

Redevelopment of previously developed sites is encouraged from a watershed protection standpoint, because it often provides an opportunity to conserve natural resources in less impacted areas by targeting development to areas with existing services and infrastructure. As the same time, redevelopment provides an opportunity to correct existing problems and

[2] "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that 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.

reduce pollutant discharges from older developed areas that were constructed without effective stormwater pollution controls.

These objectives will be met by applying Stormwater Management Practices (SMPs) to limit peak runoff rates and treat the water quality. In addition, both temporary and permanent erosion and sediment control measures will be installed prior to and during construction to minimize erosion, and control sediment transport off-site.

6.1 Stormwater Management & Treatment Systems

Stormwater runoff from the redevelopment will be collected and conveyed via a closed stormwater conveyance system to the proposed stormwater management systems. As previously indicated, this project is a redevelopment; therefore, the stormwater management system has been designed in accordance with the criteria set forth in Chapter 9 – Redevelopment Projects, of the *NYS Stormwater Management Design Manual*. Design calculations have been provided in Appendix G.

6.2 Hydrologic and Hydraulic Analysis

This report presents the pre-development and post-development features and conditions associated with surface water runoff within the study area. For both cases, the drainage patterns, drainage structures, soil types, and ground cover types are considered in this study.

6.2.1 Methodology

HydroCAD, developed by Applied Microcomputer Systems of Chocorua, New Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. It utilizes the latest techniques to predict the consequences of any given storm. HydroCAD has the capability of computing hydrographs (which represents discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

Runoff curve numbers were developed based on site coverage and hydrologic soil groups and using Table 2-2a through Table 2-2d in the United States Department of Agriculture (USDA) "Technical Release 55: Urban Hydrology for Small Watersheds", June 1986.

6.2.2 Analysis

The analysis of hydrologic and hydraulic conditions and the proposed stormwater management facility servicing the study area was performed by dividing the tributary watershed into relative homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps. Proposed stormwater management system has been designed and evaluated in accordance with the *NYS Stormwater Management*

Design Manual and local regulatory requirements. The hydrologic and hydraulic analyses considered the SCS Type II 24-hour storm events.

6.3 Rainfall Data

Rainfall data utilized in the modeling and analysis was taken from National Weather Service (NWS) Technical Paper 40 (TP-40), Rainfall Frequency Atlas of the U.S. Weather Bureau, published by the U.S. Department of Commerce. Rainfall data specific to the portion of Schenectady County under consideration, for various 24 hour storm events, is presented in Table 2.

Table 2: Rainfall Data

STORM EVENT	24-HOUR RAINFALL
1 year	2.4–inches
10 year	4.0–inches
100 year	5.8–inches

These values were used to evaluate the pre- and post-development stormwater runoff conditions for Type II 24-hour storm events.

6.4 Study Area and Design Points

The study area consists of an overall watershed that encompasses approximately 10.9 acres and contains the entire project site. The overall watershed was broken down into two smaller watersheds, or subcatchments, to allow for a greater detailed analysis of both on-site and off-site areas. The analysis point of common convergence of the two subcatchments is defined as the Design Point (D.P.). Analysis between pre-development and post-development conditions were compared at the Design Point. Description of the selected design point is provided below.

- Design Point: Existing closed stormwater conveyance system on Maxon Road approximately 130 feet north of the intersection with Nott Street.

6.5 Pre-Development Watersheds

The pre-development project site is covered predominantly by impervious surfaces (i.e., pavement and compacted gravels) with small areas of grass (see Figure 3). Analysis of pre-development conditions considered rainfall data, existing drainage patterns, soil types, ground cover, and topography.

The results of the computer modeling used to analyze the overall watershed under pre-development conditions are provided in Appendix H. A summary of the pre-development discharge rates is presented in Table 3.

6.6 Post-Development Watersheds

The post-development project site is covered predominantly by impervious surfaces (i.e., pavement and rooftops) with landscaped and grass areas (see Figure 4). Analysis of post-development conditions considered rainfall data, proposed drainage patterns, soil types, ground cover, and topography.

The results of the computer modeling used to analyze the overall watershed under post-development conditions are presented in Appendix I. A summary of the post-development discharge rates is presented in Table 3.

6.7 Water Quantity and Quality Controls

6.7.1 Water Quantity Controls

The proposed quantity controls for the redevelopment project have been analyzed to review requirements of Channel Protection (C_{p_v}), Overbank Flood Control ($Q_{p_{10}}$), and Extreme Flood Control ($Q_{f_{100}}$) per Chapter 9 – Redevelopment Projects, of the *NYS Stormwater Management Design Manual.*

- Channel Protection Volume (C_{p_v}) requirements are designed to protect stream channels from erosion. This is accomplished by providing 24- hour extended detention of the 1- year 24 hour storm event.

  Per Section 9.3.2 of the *NYS Stormwater Management Design Manual*, channel protection for redevelopment projects with no increase in impervious area (10% decrease in impervious area is proposed) and no changes to hydrology that will increase the discharge rate does not apply.

- Overbank Flood Control Volume ($Q_{p_{10}}$) requirements are designed to prevent flow events that exceed the bankfull capacity of a channel, and therefore must spill over into the floodplain. This requires storage to assure that the post-development 10 year 24 hour peak discharge rates do not exceed pre-development rates.

  Per Section 9.3.2 of the *NYS Stormwater Management Design Manual*, overbank flood control for redevelopment projects with no increase in impervious area (10% decrease in impervious area is proposed) and no changes to hydrology that will increase the discharge rate does not apply.

- Extreme Flood Protection Volume ($Q_{f_{100}}$) requirements are designed to:

  1. Prevent the increased risk of flood damage from large storm events.
  2. Maintain the boundaries of pre-development 100 year floodplain.
  3. Protect the physical integrity of the stormwater management practices. This requires storage to assure that the post-development 100 year 24 hour peak discharge rates do not exceed pre-development rates.

  Per Section 9.3.2 of the *NYS Stormwater Management Design Manual*, extreme flood protection for redevelopment projects with no increase in impervious area (10% decrease in impervious area is proposed) and no changes to hydrology that will increase the discharge rate does not apply.

6.7.2 Water Quality Controls

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of the receiving water bodies. Therefore,

treatment of stormwater runoff is important since most runoff related water quality contaminants are transported from land, particularly the impervious surfaces, during the initial stages of storm events.

The proposed water quality (WQ_v) controls have been sized based on the 90% rule methodology as described in Figure 4.1 "New York Stormwater Sizing Criteria" of the *NYS Stormwater Management Design Manual* dated August 2003. The water quality volume (WQ_v) is defined as:

$$WQ_v = \frac{[(P)(R_V)(A)]}{12}$$

Where:

P	=	90% Rainfall Event Number (inches)
R_v	=	0.05 + 0.009 (I), minimum R_v = 0.2
I	=	Impervious Cover (Percent)
A	=	Site Area (Acres)

6.8 Redevelopment Water Quality Requirements

Redevelopment project water quality objectives can be achieved though the implementation of several NYSDEC acceptable practices, as outlined in Chapter 9 – Redevelopment Projects of the *NYS Stormwater Management Design Manual*. These options, at a minimum, must be equal to the existing treatment system, if any, on the site. This redevelopment project has utilized Option III, as outlined in section 9.3.2-B. III of the *NYS Stormwater Management Design Manual*. Option III requires a minimum of 75% of the water quality volume from the disturbed areas and any additional runoff from tributary areas be treated. Treatment of the water quality volume for this redevelopment project has been achieved thought the implementation of NYSDEC accepted "alternate practices", more specifically a hydrodynamic treatment chamber.

6.9 Hydrologic and Hydraulic Calculations

Table 3 "Summary of Pre- and Post-Development Peak Discharge Rates" summarizes the results of the analyses.

Table 3: Summary of Pre- & Post-Development Peak Discharge Rates

Pre- vs. Post-Development Peak Discharge Rates (cfs)			
1-yr event (2.40 in)			
DP	Pre	Post	Diff
1	29.95	26.95	-3.00
10-yr event (4.00 in)			
DP	Pre	Post	Diff
1	53.30	50.63	-2.67
100-yr event (5.80 in)			
DP	Pre	Post	Diff
1	79.18	77.06	-2.12

Comparison of pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the proposed site will not be increased at the design point; therefore, will

not pose a significant adverse impact to the adjacent or downstream properties or receiving water courses. The results of the computer modeling used to analyze the stormwater management system under pre- and post-development conditions are presented in Appendix H and Appendix I, respectively.

Table 4 "Summary of Water Quality Volumes" summarizes the calculated water quality volumes for the post-development subcatchments.

Table 4: Summary of Water Quality Volumes

Water Quality Volume per NYSDEC 90% Rule							
Subcatchment Id	Total Area (Ac)	Impervious Area (Ac)	Impervious Cover (%)	Rv	P	WQv (cf)	Option III 75% WQv (cf)
P100	5.61	4.76	85%	0.814	0.95	15,741	11,805
P200	4.49	3.08	69%	0.667	0.95	10,333	7,750
P300	0.86	0.51	59%	0.584	0.95	1,731	1,299

The total water quality volume has been calculated to be 27,805 cubic feet (cf). Persuant to Option III, only 75 percent of the water quality volume is required to be treated. Therefore, the required water quality treatment volume is 20,854 cf. The proposed stormwater management system has been sized accordingly to provide treatment for the required water quality volume. Detailed design calculations have been provided in Appendix G.

7.0 MODIFICATIONS TO THE SWPPP

Should there be a significant change in design, construction, operation or maintenance which may have a significant effect on the potential for the discharge of pollutants to water bodies or courses, the SWPPP shall be amended. The SWPPP shall also be amended if the SWPPP is determined to be ineffective in either:

1. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP.

2. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activities.

Finally, the SWPPP must be amended to identify any new Contractors or Subcontractors that will implement the measures of the SWPPP. Modifications to the SWPPP shall be documented and maintained in the site log book. A sample modifications to SWPPP form has been provided in Appendix E.

8.0 CONCLUSION

The Stormwater Pollution Prevention Plan for the planned redevelopment incorporates a Stormwater Management Plan and an Erosion and Sediment Control Plan. The SWPPP identifies the measures to be implemented during and after construction, to minimize soil erosion and control sediment transport off-site, and to control the quality and quantity of

stormwater runoff from the developed site to minimize adverse effects to downstream conditions, which is demonstrated by comparing pre- and post-development flow conditions for various storm events.

The analysis of watershed conditions, hydrologic and hydraulic analysis using computer modeling, and an evaluation of the proposed improvements across the subject site was conducted to compare the pre- and post-development watershed runoff rates. This comparison demonstrates that off-site peak flow conditions at the design point will pose no significant adverse impacts to the adjacent or downstream properties or receiving water courses or bodies.

Stormwater quality will be improved through the implementation of the proposed stormwater management facility, erosion and sediment control measures and maintenance practices outlined herein. Stormwater quantity will be controlled through the implementation of the proposed stormwater management facility.

In conclusion, it is our opinion that the proposed development will not adversely impact adjacent or downstream properties if the stormwater management facilities are properly constructed, and maintained in accordance with the requirements outlines herein.

FIGURES

COLLEGE PARK

SCALE:	WWW.FandO.COM	BN PARTNERS ASSOCIATES, LLC	PROJ. No.: 20071726.A1N
HORZ.: 1" = 2000'	FUSS & O'NEILL	USGS LOCATION MAP	DATE: JANUARY 30, 2008
VERT.:	*Disciplines to Deliver*	COLLEGE PARK SCHENECTADY	FIG. 1
DATUM:	24 MADISON AVE EXTENSION ALBANY, NY 12203 518.218.0600	CITY OF SCHENECTADY NEW YORK	
HORZ.:			
VERT.:			
0 1000 2000 GRAPHIC SCALE			

N

0 50 100 200 300 Meters

0 200 400 800 1,200 Feet

LEGEND

- SUBCATCHMENT DELINEATION
- TIME OF CONCENTRATION (Tc)
- B + — — + C TIME OF CONCENTRATION SEGMENT
- D.P.#1 DESIGN POINT

D.P.#1

D

AREA E20

1.70 Ac

MAXON ROAD

D

AREA E10

9.21 Ac

Tc

C

B

A

NOTT STREET

Tc

C

B

A

PROJ. MANAGER:	TAW
CHIEF DESIGNER:	SRH/CR
REVIEWED BY:	DATE

No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

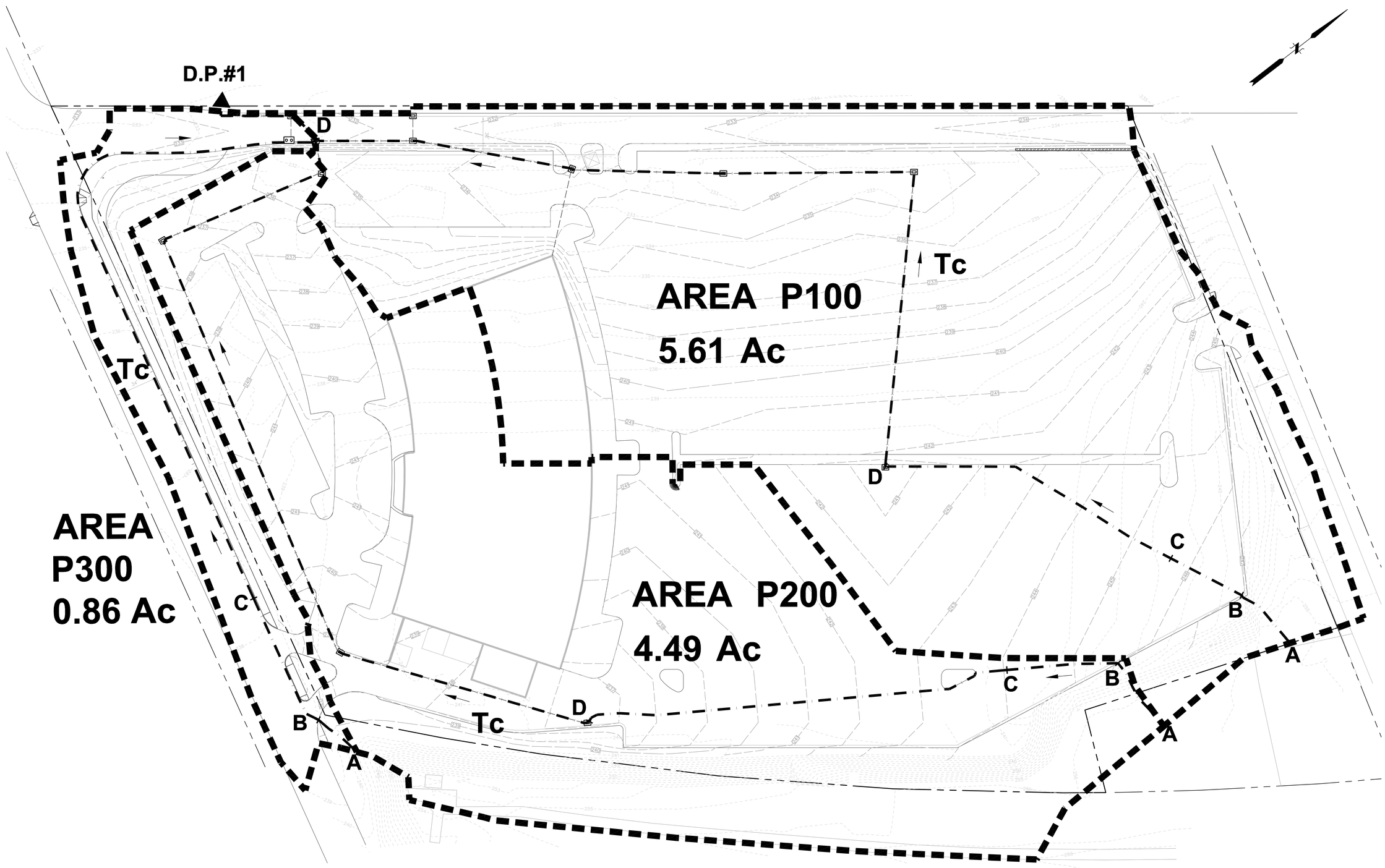
SCALE:
HORZ.: 1" = 30'
VERT.:
DATUM:
HORZ.:
VERT.:
30 15 0 30
GRAPHIC SCALE

WWW.Fond0.COM
FUSS & O'NEILL
Disciplines to Deliver
24 MADISON AVE EXTENSION ALBANY, NY 12203 518.218.0600

BN PARTNERS ASSOCIATES, LLC
PRE-DEVELOPMENT WATERSHED DELINEATION MAP
COLLEGE PARK SCHENECTADY
CITY OF SCHENECTADY NEW YORK

PROJ. No.: 20071726.A1N
DATE: JANUARY 30, 2008

FIG 3



PROJ. MANAGER: TAW
CHIEF DESIGNER: SRH/CR
REVIEWED BY: DATE

No.	DESCRIPTION	BY
1.		

REVISIONS

SCALE:
HORZ.: 1" = 30'
VERT.:
DATUM:
HORZ.:
VERT.:
30 15 0 30
GRAPHIC SCALE

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Disciplines to Deliver
24 MADISON AVE. EXTENSION ALBANY, NY 12203 518.218.0600

BN PARTNERS ASSOCIATES, LLC
POST-DEVELOPMENT WATERSHED DELINEATION MAP
COLLEGE PARK SCHENECTADY
CITY OF SCHENECTADY NEW YORK

PROJ. No.: 20071726.A1N
DATE: JANUARY 30, 2008

FIG 4

APPENDIX A

COLLEGE PARK
NYSDEC SPDES GENERAL PERMIT

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ENB - Statewide Notices

Public Notice

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) GENERAL PERMITS FOR STORMWATER DISCHARGES from CONSTRUCTION ACTIVITY and MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

This notice is to inform the public that the two (2) existing general permits, the SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-02-01 and the SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-02-02, will continue and all conditions of those general permits will remain in force and effect. These general permits were set to expire on January 8, 2008, but pursuant to the following Standard Permit Conditions contained in these general permits, GP-02-01 and GP-02-02 will continue until new general permits are issued.

Part V.B. of GP-02-01 (Construction General Permit) states:

"This permit expires five (5) years after issuance on January 8, 2008. However, coverage may be obtained under the expired general permit which will continue in force and effect until a new general permit is issued. After issuance of a new general permit, those with coverage under GP-02-01 will have six (6) months from the effective date of the new general permit to complete their project or obtain coverage under the new permit. Unless otherwise notified by the Department in writing, operators seeking authorization under a new general permit must submit a new NOI in accordance with the terms of such new general permit..."

Part VI.C of GP-02-02 (MS4 Permit) states:

"This permit expires five (5) years after issuance on January 8, 2008. However, an expired general permit continues in force and effect until the Department issues a new one unless an MS4 receives written notice from the Department to the contrary. Operators seeking authorization under a new general permit must submit a new NOI in accordance with the terms of such new general permit."

The following draft renewal permits were made available for public review on October 10, 2007: the SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-08-001, and the SPDES General Permit for Stormwater Discharges from

Municipal Separate Storm Sewer Systems (MS4s), Permit No. GP-0-08-002. The comment period for those draft general permits closed on December 10, 2007 and 125 sets of comments were submitted. Department staff expect to complete review and response to those comments within three (3) months. Until the issuance of new general permits related to stormwater discharges from construction activity and from MS4s, new and existing authorizations will continue to be administered under the existing general permits (GP-02-01 and GP-02-02).

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-02-01

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

Effective Date: January 8, 2003

Expiration: January 8, 2008

William R. Adriance
Chief Permit Administrator

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

Authorized Signature

William R. Adriance

Date: January 8, 2003

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

Preface

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater discharges from certain construction activities to waters of the United States[1] are unlawful unless they are authorized by a NPDES (National Pollutant Discharge Elimination System) permit or by a state permit program. New York's SPDES (State Pollutant Discharge Elimination System) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law ("ECL"). Discharges of pollutants to all other "Waters of New York State" such as groundwaters are also unlawful unless they are authorized by a SPDES permit.

A discharger, owner, or operator may[2] obtain coverage under this general permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this General Permit and the NOI for New York are available by calling (518) 402-8109 or at any Department of Environmental Conservation (the Department) regional office (see Appendix A on Page 23). They are also available on the Department's website at:

www.dec.state.ny.us

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[1] "Waters of the United States" means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; and
(b) All interstate waters, including interstate "wetlands"; and
(c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    (3) Which are used or could be used for industrial purposes by industries in interstate commerce; and
(d) All impoundments of waters otherwise defined as waters of the United States under this definition; and
(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; and
(f) The territorial sea; and
(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal areas in wetlands) nor resulted from the impoundment of waters of the United States.

[2] "may" refers to circumstances under which the discharger is ineligible for coverage under this general permit because of other provisions of this permit. Dischargers which are excluded from coverage under this general permit as provided for in Part I, Section C, for example, are not authorized to discharge under this permit. This also applies to possible situations in which an NOI has been submitted and/or a regulatory fee paid pursuant to Article 72 of the ECL. The submittal of an NOI and/or regulatory fee has no bearing or relevance whatsoever on the eligibility of the construction activity discharging stormwater runoff under the authority of this permit.

Local Programs of a Regulated MS4

Under the federal Phase II stormwater program, many cities, villages, towns, and other public entities in New York State which are located within "Urbanized Areas" as defined by the U.S. Census and who operate a Municipal Separate Storm Sewer System ("MS4") will be required to obtain SPDES permit coverage for stormwater discharges under their jurisdiction and control (see 40CFR Part 122 §122.26.32). Additionally, MS4s may be designated by the Department as regulated MS4s. Among other requirements, the Phase 2 NPDES stormwater regulations require regulated MS4s to address stormwater runoff from construction activities. Construction activities covered under this general permit, which are subject to stormwater runoff controls of a regulated MS4, will also need to comply with the MS4's controls.

Five (5) Day Coverage

Prior to the submission of an NOI, the owner or operator must have completed a Storm Water Pollution Prevention Plan (SWPPP) that complies with all requirements of this general permit. Submitting an NOI is an affirmation that a SWPPP has been prepared and will be implemented. If an applicant certifies that the SWPPP has been developed in conformance with the Department's technical standards, the applied-for activity may obtain coverage under this general permit in five (5) business days after the Department's receipt of the NOI provided, that the activity is eligible for coverage under this general permit and that the Department has not informed the applicant otherwise.

Sixty (60) Day Coverage

While the Department's technical standards are appropriate statewide, it is recognized that there may be situations where stormwater management goals can best be met by alternative means that are more suitable given local conditions.

For construction projects in these situations, applicants must identify in their NOI each of the deviations from the Department's technical standards that they are seeking. Applicants must also explain why the deviations are needed or desired and what impacts to water quality, if any, can be expected if the deviation were allowed. Applicants must also explain the actions, if any, that local board(s) have taken with respect to the deviation(s). For applicants which cannot certify conformance with the Department's technical standards, the SWPPP must also be certified by a licensed/certified professional that the SWPPP has been developed in a manner which will insure compliance with water quality standards and with the substantive intent of this permit.

In cases of deviations from the Department's technical standards, applicants must allow sixty (60) business days after the receipt by the Department of a completed NOI and certification before gaining coverage under this general permit and before initiating any construction activity. During this 60 day period, the Department may conduct further review of the NOI and SWPPP. If additional information is needed to complete the review, the NOI will be considered

incomplete and the applicant will be so advised. The intent of this provision is to require conformance the Department's technical standards wherever possible and appropriate. At the same time, alternative means to address stormwater control may be allowed under this general permit where they are more suitable for the site in question and where they will not diminish water quality protection.

There are other scenarios under which coverage under this general permit will not occur until 60 business days from the receipt of a completed NOI. For example, if the construction activity or post construction runoff causes the discharge of a pollutant of concern to a water identified on the 303(d) list or a watershed with an approved TMDL for that pollutant of concern, coverage under the general permit will not occur until sixty (60) business days from the receipt by the Department of a completed NOI. For these projects the operator may be required to submit the SWPPP and/or appropriate certification(s) to the Department for review. The flowchart shown in Figure 1 on page vi will help to describe the process under which certain conditions exist that require possible further analysis and water quality/quantity considerations.

Computer Tool Available For Completion of SWPPPs and NOIs Under Development

The Department is currently developing an interactive computer software tool entitled "How to Prepare SWPPPs and Notices of Intent" to assist applicants in both developing SWPPPs and completing NOIs. This will be available in the near future for use on the Department website as well as being packaged independently on compact discs. This tool will contain guidance as well as many useful links to reference materials and documents concerning erosion and sedimentation control, as well as to the design of stormwater management practices . The Department's website will contain the latest information and guidance on the various tools available.

The Department's Technical Standards

The Department's technical standards for erosion and sediment control are contained in the document, *"New York Standards and Specifications for Erosion and Sediment Control"*[3] published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quantity and water quality controls (post-construction stormwater control practices**)**, the Department's technical standards are detailed in the *"New York State Stormwater Management Design Manual."* Both of these documents are available on the Department's website. If an applicant certifies that stormwater management practices will conform to the Department's technical standards, then coverage under the permit may occur sooner than otherwise would be the case if non-conformance with the manuals existed. See Figure 1 on page vi for more information.

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[3] Previously, the *"New York Guidelines for Urban Erosion and Sediment Control"*, also commonly referred to as the "Blue Book".

Permit Valid for Any Size Disturbance

This permit may be used for construction activities involving any amount of disturbed acreage, provided that all other eligibility conditions in subsection B of Part I are satisfactorily met (see page 2 of this permit). Thus, this permit may apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(14)(x) which are also referred to as "NPDES Phase 1 construction activities" involving soil disturbances of five (5) acres or more. This permit may also apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(15) which are also referred to as "NPDES Phase 2 small construction activities" involving soil disturbances of between one (1) and five (5) acres. And, this permit may also apply to construction activities involving soil disturbances of less than one (1) acre if the Department determines that a SPDES permit is required pursuant to the ECL. In any and all cases, all of the eligibility provisions of this general permit must be met in order to gain coverage.

Notice of Termination

After construction is completed as defined in the general permit (see Part II beginning on Page 7), cancellation of coverage is accomplished by the submittal of a Notice of Termination ("NOT"). Failure to submit a NOT may result in the continued obligation to pay a yearly Regulatory Fee established pursuant to Article 72 of the ECL and/or may be cause for suspension of permit coverage.

Previous versions of NOIs, NOTs and Notices of Intent, Transfer and Termination ("NOITT"s) cannot be used in conjunction with this general permit. There is a new NOI required for obtaining coverage under this general permit. Failure to include information identified as "mandatory" entries on the new NOI form may prevent and/or delay discharge authorization being sought under this permit.

The new NOT will also include an identification of any permanent structures that are being left on the site after stabilization occurs and after termination of permit coverage under this general permit. The NOT will also include a certification that the structures were constructed as described in the SWPPP and that an Operation and Maintenance ("O&M") manual has been prepared and has been made available to the owner of such permanent structures who is expected to conduct the necessary O&M over the life of the structure(s).

Ineligible Activities

The submittal of a completed NOI and/or the payment of an annual regulatory fee by an applicant does not necessarily mean that an applicant is covered under this permit if the applicant is ineligible for coverage under this permit under the terms cited in Part I of this permit. In other words, submitting a completed NOI and paying an annual regulatory fee does not automatically gain an applicant permit coverage if the applicant is ineligible for coverage under this permit even if the Department fails to immediately inform the applicant of such ineligibility.

Permit Expiration Date

Coverage under this general permit is available January 8, 2003 and will expire five (5) years after issuance on January 8, 2008.

Activities Previously Covered Under GP-93-06

In a separate proposal, the Department is also concurrently seeking to re-issue GP-93-06 with an expiration of August 1, 2003. The purpose of this action is to provide a transition period for permittees which have had SPDES permit coverage under GP-93-06 immediately prior to January 8, 2003, the effective date of GP-02-01. **Prior to August 1, 2003**, these activities will need to:
(1) stabilize their sites in accordance with GP-93-06 and submit an NOT; or, if necessary,
(2) gain coverage under GP-02-01 by submitting a new NOI.

For **new** construction activities, coverage under GP-93-06 will not be available after the effective date of GP-02-01, January 8, 2003. Such discharges may be eligible for coverage under GP-02-01 (see Part I.B. on page 2 of this permit).

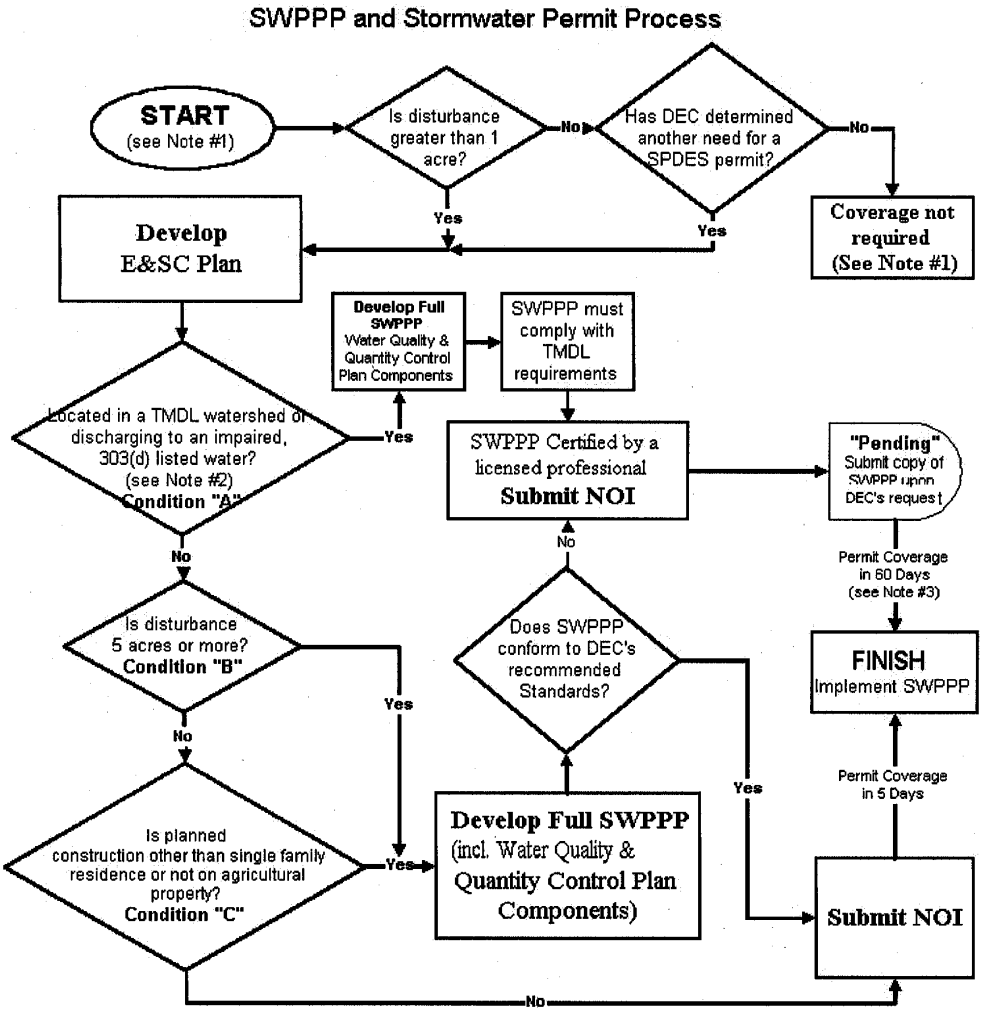
Water Quality Violations Not Permitted

This permit does not authorize any person to cause or contribute to a condition in contravention of any water quality standards that are contained in the Rules and Regulations of the State of New York (see Part I of this permit on page 2) even if the permittee is in compliance with all other provisions of this permit. Any violations of water quality standards may be considered by the Department to be violations of this permit and/or the ECL, including its accompanying regulations.

Other Department Permits

Construction activities may also require other Department permits in addition to the coverage provided by this general permit including, but not limited to, dam safety**,** wetlands and stream protection. Such other Department permits must be obtained separately from coverage under this general permit. Further information concerning these permits should be sought from the Regional Permit Administrator at the appropriate Department regional office (See Appendix A on page 23).

FIGURE 1



NOTES:

1. Under any of the above conditions other environmental permits may be required. DEC may require permit for construction disturbance < 1 acre on a case by case basis.
2. **and** the following exists: construction and/or stormwater discharges from the construction or post-construction site contain the pollutant of concern identified in the TMDL or 303(d) listing.
3. After receipt by DEC of completed application.

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

FROM CONSTRUCTION ACTIVITIES

TABLE OF CONTENTS

Part I. COVERAGE UNDER THIS PERMIT

A. **Maintaining Water Quality** - It shall be a violation of this general permit and the Environmental Conservation Law ("ECL") for any discharge authorized by this general permit 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 including, but not limited to:

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 and 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.

B. **Eligibility Under This General Permit**

1. This permit may authorize all discharges of stormwater from construction activity[4] to surface waters and groundwaters except for ineligible discharges identified under subparagraph C of this Part (see below). Discharge authorization under this permit requires the submittal of a completed NOI.

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

3. Notwithstanding paragraphs B.1 and B.2 above, the following non-stormwater discharges may be authorized by this permit: discharges from fire

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[4] This includes discharges of stormwater associated with industrial activity identified under 40 CFR Part 122, subsection 122.26(b)(14)(x), small construction activities identified under 40 CFR Part 122, subsection 122.26(b)(15) or any other stormwater from construction activities that are not otherwise ineligible for coverage under this permit (See Part I, subsection B beginning on page 2).

fighting activities; fire hydrant flushings; waters to which cleansers or other components have **not** been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this general permit, and who discharge as noted in this paragraph, and with the exception of flows from fire fighting activities, these discharges must be identified in the SWPPP(see Part III beginning on Page 7). Under all circumstances, the permittee must still comply with water quality standards (see Part I, subsection A on Page 2).

C. **Activities Which Are Ineligible for Coverage Under This General Permit** - All of the following stormwater discharges from construction activities are **not** authorized by this permit:

1. Discharges after construction activities have been completed and the site has undergone final stabilization[5];

2. Discharges that are mixed with sources of non-stormwater other than those expressly authorized under subsection B.3. of this Part (see page 3) and identified in the SWPPP required by this permit;

3. Discharges that are subject to an existing SPDES individual or general permit or which are required to obtain an individual or alternative general permit pursuant to Part V, subparagraph K (see page 21) of this permit;

4. Discharges that are likely to adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;

5. Discharges which are subject to an existing effluent (limitation) guideline addressing stormwater and/or process wastewater unless said guidelines are contained herein; or

6. Discharges which either cause or contribute to a violation of water quality standards adopted pursuant to the ECL and its accompanying regulations (See subsection A of Part I on page 2).

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[5] "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 80% 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.

D. **Authorization Under This General Permit**

1. An operator[6] must submit a completed NOI form in order to be authorized to discharge under this general permit. The NOI form shall be one which is associated with this general permit, signed in accordance with Part V. H.(see Page 19) of this permit and submitted to the address indicated on the NOI form. NOIs and NOITTs used in association with either previous or other general permits are not valid for obtaining coverage under this general permit. The submittal of an NOI is an affirmation to the operators' understanding and belief that the activity is eligible for coverage under this permit and that a SWPPP has been prepared and will be implemented in accordance with Part III of this permit.

2. All contractors and subcontractors of the operator identified under Part III.E.1 (see page 17) must provide the certification cited under Part III.E.2 (see page 17). Such certifications shall become part of the SWPPP for the construction activity covered under this general permit.

3. Unless notified by the Department to the contrary, operators who are eligible for coverage under this permit **and** who submit an NOI in accordance with the requirements of this permit, may be authorized to discharge stormwater from construction activities under the terms and conditions of this permit, and in accordance with the following timetable:

a. For construction activities which:

(1) develop a SWPPP in conformance with the Department's technical standards (See subsection D of Part III on page 10), and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

or

(2) as of the effective date of this general permit, GP-02-01, have obtained coverage under, and are operating in compliance with, GP-93-06; and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

authorization to discharge under this permit may occur five (5) business days after the date on which the NOI is received by the Department.

6 For the purposes of this permit, the term "operator" means the person, persons, or legal entity which owns or leases the property on which the construction activity is occurring. Also, see Part V., subsection H. on page 19 of this permit.

b. For activities which do not comply with the preceding subsection (i.e. Part I.D.3.a.), authorization to discharge under this permit will begin no sooner than sixty (60) business days from the receipt of the completed NOI unless notified differently by the Department pursuant to Part V, subsection K of this permit (see page 21). For activities not satisfying Part I.D.3.a.(1) above, or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must be prepared by a licensed/certified professional[7] and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with water quality standards (see Part I.A.) and with the substantive intent of this permit.

c. For construction activities which are subject to a sixty-day period provision identified in the preceding subparagraph b., the SWPPP shall include each of the components identified in Part III.A.1.b. (see page 8).

4. At its sole discretion, the Department may deny or terminate coverage under this permit and require coverage under another SPDES permit at any time based on a review of the NOI, the SWPPP or other relevant information (see Part V, subsection K of this permit on page 21).

5. A copy of the NOI and a brief description of the project shall be posted at the construction site in a prominent place for public viewing.

6. A signed copy of the NOI, the SWPPP, and any reports required by this permit shall also be submitted concurrently to the local governing body and any other authorized agency[8] having jurisdiction or regulatory control over the construction project.

7. New stormwater discharges from construction activities that require any other Uniform Procedures Act permit (Environmental Conservation Law, 6 NYCRR Part 621) cannot be covered under this general permit until the other required permits are obtained. Upon satisfaction of the State Environmental Quality Review Act ("SEQRA") for the proposed action and issuance of necessary permits, the applicant may submit an NOI to obtain coverage under this general

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7 A "licensed/certified professional" means a person currently licensed to practice engineering in New York State or is a Certified Professional in Erosion and Sediment Control (CPESC).

8 For the purposes of this general permit, "any other authorized agency" shall include any local, regional, or state entity or agency except the Department which has authority to review stormwater discharge from the project, including authority under any approved watershed protection plan or regulations.

permit.[9] In order to facilitate the Department's review of a multi-permitted project, an applicant should submit, at a minimum, a copy of the SWPPP which contains the information specified in Appendix B (see page 24). This information will assist the Department in determining whether or not coverage under this general permit or another SPDES permit is the more appropriate option. The Department may also require the submission of additional information in order to determine the SWPPP's conformance with the Department's technical standards.

8. Upon renewal of this general permit or issuance of a new general permit, the permittee is required to notify the Department of its intent to be covered by the new general permit. Coverage will continue under this permit for its term unless action is taken to terminate permit coverage as provided elsewhere in this permit. See also Part V. subsection B. on page 18 of this permit.

9. In the event of a transfer of ownership or responsibility for stormwater runoff, there can be no "automatic" transfer of permit coverage from one permittee to the next without appropriate notification from the dischargers. The former permittee must submit an NOT and notify the new discharger of the possible need for the new discharger to submit a new NOI (see Section E, subparagraph 2 below).

E. Deadlines for Notification

1. Operators who intend to obtain coverage under this general permit for stormwater runoff from construction activities must submit an NOI in accordance with the requirements of this Part at least five (5), or sixty (60) business days, as appropriately determined from Part I, Section D.3 (see page 4) prior to the commencement of construction[10] activities.

2. For stormwater runoff from construction activities where the operator changes, a new NOI must be submitted by the new operator in accordance with the requirements of this permit. The former operator must submit a NOT in accordance with Part II (see page 7) of this permit and notify the new operator of the requirement to submit a new NOI to obtain coverage under this permit. The new operator must also review and sign the SWPPP in accordance with Part III.B.(see page 9) and continue implementation of the SWPPP as required by this

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9 The purposes of this subsection is to assure that the requirements of SEQRA are fulfilled, if necessary, before any discharge authorization under this general permit is granted.

10 "Commencement of Construction" means the initial disturbance of soils associated with clearing, grading, or excavating activities, or other construction activities.

permit.

Part II. TERMINATION OF COVERAGE[11]

Where a site has been finally stabilized, the operator must submit a NOT form prescribed by the Department for use with this general permit. The NOT shall be signed in accordance with Part V. H.(see page 19) of this permit and submitted to the address indicated on the approved NOT form.

The permittee must identify all permanent stormwater management structures that have been constructed and provide the owner(s) of such structures with a manual describing the operation and maintenance practices that will be necessary in order for the structure to function as designed after the site has been stabilized. The permittee must also certify that the permanent structure(s) have been constructed as described in the SWPPP.

Part III. STORMWATER POLLUTION PREVENTION PLANS ("SWPPP"s)

A. General

1. SWPPP Preparation

a. A SWPPP shall be developed by the operator for construction activities at each site to be covered by this permit, prior to the initiation of activities requiring coverage under this permit. SWPPPs shall be prepared in accordance with sound engineering practices. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges. In addition, the SWPPP shall describe and ensure the implementation of practices which will be used to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of this permit. Operators are encouraged to have their SWPPP reviewed for adequacy and completeness by the local soil and water conservation district ("SWCD") and/or other professionals qualified in erosion and sediment control practices[12] and stormwater management. Moreover, if the construction activity is identified under Part I, subsection D.3.b. (See page 5), or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must include a certification by a licensed/certified professional.

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[11] Submittal of an NOT will terminate coverage under this general permit and will also remove the permittee from subsequent billings of the annual regulatory fee levied under Article 72 of the ECL.

[12] For example, CPESC, Inc. administers a certified program of individuals under its CPESC (Certified Professional in Erosion and Sediment Control) program which is sponsored by the International Erosion Control Association (IECA) and the Soil and Water Conservation Society (SWCS) and is endorsed by USDA - Natural Resources Conservation Service. CPESC, Inc. also administers the CPSWQ (Certified Professional in Stormwater Quality) program.

b. All SWPPPs shall include erosion and sediment controls. For construction activities meeting either Condition "A", "B" or "C" described below, the SWPPP shall also include water quantity and water quality controls (post-construction stormwater control practices).(see Part III. D.).

(1) Condition A - Construction site or post construction runoff discharging a pollutant of concern to either an impaired water identified on DEC's 303(d) list or a TMDL watershed for which pollutants in stormwater have been identified as a source of the impairment.

(2) Condition B - Construction site runoff from Phase 1 construction activities (construction activities disturbing five (5) or more acres) identified under 40 CFR Part 122, §122.26(b)(14)(x).

(3) Condition C - Construction site runoff from construction activity disturbing between one (1) and five (5) acres of land during the course of the project, exclusive of the construction of single family residences and construction activities at agricultural properties.

2. **SWPPP Implementation** - Operators are responsible for implementing the provisions of the SWPPP and ensuring that all contractors and subcontractors who perform professional services at the site provide certification of the SWPPP in accordance with Part I.D.2. (see page 4) and Part III.E.2. (see page 17) of this permit. All contractors and subcontractors identified in the SWPPP in accordance with Part III.E.1. (see page 17) of this permit must agree to implement applicable provisions of the SWPPP and satisfy the certification requirement of Part III.E.2. (see page17). However, contractors and subcontractors who are not operators, as defined in this permit (see page 4), are not required to submit a NOI in addition to the NOI submitted by the operator.

3. **Deadlines for SWPPP Preparation and Compliance** - The SWPPP must be developed prior to the submittal of an NOI and provide for compliance with the terms and schedule of the SWPPP beginning with the initiation of construction activities. The operator shall also certify in the SWPPP that all appropriate stormwater control measures will be in place before commencement of construction of any segment of the project that requires such measures.

4. **Local Requirements** - Developing a SWPPP that complies with the requirements listed herein does not relieve an operator from the obligation of complying with stormwater management requirements of the local government having jurisdiction over the project.

5. **Activities Previously Covered Under GP-93-06** - For construction activities which are covered by GP-93-06 as of the effective date of this permit (GP-02-01), the continued implementation of their SWPPP that was developed and implemented in accordance with GP-93-06 is acceptable until such time as:

(a) an NOT is submitted;

(b) the Department notifies them otherwise in accordance with this permit, including Part V, subsection K (see page 21); or

(c) this permit expires.

B. **Signature and SWPPP Review**

1. The SWPPP shall be signed in accordance with Part V. H.(see page 19), and be retained at the site where the construction activity occurs in accordance with Part IV (see retention of records on page 17) of this permit.

2. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity. The operator shall make SWPPPs available upon request to the Department and any local agency having jurisdiction; or in the case of a stormwater discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the municipal operator of the system.

3. The Department, or its authorized representative, may notify the permittee at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. Such notification shall identify those provisions of the permit which are not being met by the SWPPP and identify which provisions of the SWPPP require modifications in order to meet the minimum requirements of this permit. Within seven (7) days of such notification, (or as otherwise provided by the Department) the permittee shall make the required changes to the SWPPP and shall submit to the Department a written certification that the requested changes have been made. Notwithstanding the foregoing, the Department reserves all rights to enforce the terms of the ECL.

C. **Keeping SWPPPs Current** - The permittee shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or

2. The SWPPP proves to be ineffective in:

a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by this permit, or

b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity.

3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP (see Part III.E, page 17 below). Amendments to the SWPPP may be reviewed by the Department in the same manner as provided by Part III.B (see page 9 above).

D. **General Contents of SWPPPs** -

1. Standards for construction activities covered under this permit - The Department's technical standards for erosion and sediment controls are detailed in the "*New York Standards and Specifications for Erosion and Sediment Control*"[13] published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quality and water quantity controls (post-construction stormwater control practices), the Department's technical standards are detailed in the "*New York State Stormwater Management Design Manual.*"

If an operator certifies that the SWPPP has been developed in conformance with the Department's technical standards referenced above, they may obtain coverage under this general permit in five (5) business days from the Department's receipt of the NOI, provided the construction activity does not meet Condition A in Part III.A.1.b. For SWPPPs which will not conform with the Department's technical standards, the SWPPP must be prepared by a licensed/certified professional and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with the State's water quality standards and with the substantive intent of this permit. In addition, coverage under this general permit will not begin until sixty (60) business days from the receipt of a completed NOI.

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13 Previously, the "*New York Guidelines for Urban Erosion and Sediment Control*," also commonly referred to as the "Blue Book."

2. Minimum SWPPP Components SWPPPs prepared pursuant to this general permit shall present fully designed and engineered stormwater management practices with all necessary maps, plans and construction drawings. The SWPPP must, at a minimum, include the following:

a. For all construction activities subject to this general permit -

(1). provide background information about the scope of the project, including the location, type and size of project.

(2) provide a site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should 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), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharge(s);

(3) provide a description of the soil(s) present at the site;

(4) provide a construction phasing plan describing the intended sequence 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. Consistent with the New York Guidelines for Urban Erosion and Sediment Control, there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the Department;

(5) provide 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 storm water discharges;

(6) provide a description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response;

(7) describe the temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land

clearing and grubbing to project close-out;

(8) identify and show on a site map/construction drawing(s) the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

(9) provide the dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

(10) identify temporary practices that will be converted to permanent control measures;

(11) provide an implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and the duration that each practice should remain in place;

(12) provide a maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices;

(13) provide the names(s) of the receiving water(s);

(14) provide a delineation of SWPPP implementation responsibilities for each part of the site;

(15) provide a description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

(16) provide any existing data that describes the stormwater runoff characteristics at the site.

b. For construction activities meeting Condition A, B or C in Part III.A.1.b.

(1) provide all the information required in Parts III.D.2.a.1 - 16 above;

(2) provide a description of each post-construction stormwater control practice;

(3) identify and show on a site map/construction drawing(s) the specific location(s) and size(s) of each post-construction stormwater control practice;

(4) provide a hydrologic and hydraulic analysis for all structural components of the stormwater control system for the applicable design storms;

(5) provide a comparison of post-development stormwater runoff conditions with pre-development conditions;

(6) provide the dimensions, material specifications and installation details for each post-construction stormwater control practice;

(7) provide a maintenance schedule to ensure continuous and effective operation of each post-construction stormwater control practice.

The following three subsections, Part III.D. 3. through Part III.D. 5., apply only to construction activities covered under this general permit which meet Conditions "A" , "B"[14] or "C" in Part III. A.1.b. Beginning with Part III.E. below (see page 17) the requirements set forth therein apply to all permittees covered under this permit.

3. **<u>Site Assessment and Inspections</u>** -

a. The operator shall have a qualified professional[15] conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by Part III.D. (see page 10) of this permit have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction. Following the commencement of construction, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. During each inspection, the qualified professional shall record the following information:

(1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

(2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

(3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

(4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

(5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and

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[14] Condition "B" includes construction activities covered under GP-93-06 and, therefore, are subject to Part III.D.3 through Part III.D. 5.

[15] "Qualified professional" means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist.

containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water;
and

(6) All deficiencies that are identified with the implementation of the SWPPP.

b. The operator shall maintain a record of all inspection reports in a site log book. The site log book shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction,[16] the operator shall certify in the site log book that the SWPPP, prepared in accordance with Part III.D. (see page 10) of this permit, meets all Federal, State and local erosion and sediment control requirements.

The operator shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis.

c. Prior to filing of the Notice of Termination or the end of permit term, the operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization[17] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

d. The operator shall certify that the requirements of Parts III.D.3., III.D.4. and III.D.5 of this permit have been satisfied within 48 hours of actually meeting such requirements.

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16 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

17 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (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.

4. **Stabilization**[18] - The operator shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. This requirement does not apply in the following instances:

a. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable;

b. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures need not be initiated on that portion of the site.

5. **Maintenance** - Sediment shall be removed from sediment traps or sediment ponds whenever their capacity has been reduced by fifty (50) percent from the design capacity.

[18] "Stabilization" means covering or maintaining an existing cover over soil. Cover can be vegetative (e.g. grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g. geotextiles, riprap, or gabions).

E. **Contractors**

1. The SWPPP must clearly identify for each measure identified in the SWPPP, the contractor(s) and subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the SWPPP must sign a copy of the certification statement in Part III.E.2 (see below) of this permit in accordance with Part V.H.(see page 19) of this permit. All certifications must be included in the SWPPP. Additionally, new contractors and subcontractors (see subsection C.3. above) need to similarly certify.

2. **Certification Statement** - All contractors and subcontractors identified in a SWPPP in accordance with Part III.E.1 (see above) of this permit shall sign a copy of the following certification statement before undertaking any construction activity at the site identified in the SWPPP:

> "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

The certification must include the name and title of the person providing the signature in accordance with Part V.H.(see page 19) of this permit; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

Part IV. MONITORING, REPORTING AND RETENTION OF RECORDS

A. The Department may, at its sole discretion, require monitoring of discharge(s) from the permitted construction activity after notifying the permittee in writing of the basis for such monitoring, the parameters and frequency at which monitoring shall occur and the associated reporting requirements, if any.

B. The operator shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

C. The operator shall retain a copy of the SWPPP required by this permit at the construction site from the date of initiation of construction activities to the date of final

stabilization.

D. The operator shall also prepare a written summary of its status with respect to compliance with this general permit at a minimum frequency of every three months during which coverage under this permit exists. The summary should address the status of achieving each component of the SWPPP . This summary shall be handled in the same manner as prescribed for SWPPPs under Part III, subsection B (see Page 9).

E. **Addresses** - Except for the submittal of NOIs and NOTs, all written correspondence under this permit directed to the Department, including the submittal of individual permit applications, shall be sent to the address of the appropriate Department Office as listed in Appendix A (see page 23).

Part V. STANDARD PERMIT CONDITIONS

A. **Duty to Comply** - The 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 permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against either the operator or the contractor/subcontractor; permit revocation 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 operator or the operator's on-site representative.

B. **Continuation of the Expired General Permit** - This permit expires five (5) years after issuance on January 8, 2008. However, coverage may be obtained under the expired general permit which will continue in force and effect until a new general permit is issued. After issuance of a new general permit, those with coverage under GP-02-01 will have six (6) months from the effective date of the new general permit to complete their project or obtain coverage under the new permit. Unless otherwise notified by the Department in writing, operators seeking authorization under a new general permit must submit a new NOI in accordance with the terms of such new general permit. See also Part I, subsection D.8. on page 6.

C. **Penalties for Violations of Permit Conditions** - There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $25,000 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 a permittee 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 permittee 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 permittee shall furnish any information requested by any agency with regulatory or review authority over this project for the purpose of determining compliance with this permit or compliance with any other regulatory requirements placed on the project in conjunction with this permit. Failure to provide requested information shall be a violation of this permit. Such regulating agencies include but are not limited to the Department, SWCDs,[19] local planning, zoning, health, and building departments that review and approve erosion and sediment control plans, grading plans, and Stormwater Management Plans, as well as MS4s into whose system runoff from the permitted project or activity discharges. The SWPPP and inspection reports required by this general permit are public documents that the operator must make available for inspection, review and copying by any person within five (5) business days of the operator receiving a written request by any such person to review the SWPPP and/or the inspection reports. Copying of documents will be done at the requester's expense.

G. **Other Information** - When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Department, he or she shall promptly submit such facts or information.

H. **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. All NOIs and NOTs shall be signed as follows:

   a. For a corporation: by (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal 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 employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

[19] "SWCD" means Soil and Water Conservation District

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

c. 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).

2. The SWPPP and all reports required by the permit and other information requested by the Department or local agency shall be signed by a person described above 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 above and submitted to the Department.

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 manager, operator, superintendent, or 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).

c. **Certification** - Except for NOIs and NOTs, any person signing documents in accordance with this Part shall make the following 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 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."

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.

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. **Denial of Coverage Under This Permit**

1. At its sole discretion, the Department may require any person authorized by this permit to apply for and/or obtain either an individual SPDES permit or an alternative SPDES general permit. Where the Department requires a discharger authorized to discharge under this permit to apply for an individual SPDES permit, the Department shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of issuance or denial of the individual SPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the appropriate Department Office indicated in Appendix A of this permit. The Department may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual SPDES permit application as required by the Department under this paragraph, then the applicability of this permit to the individual SPDES permittee is automatically terminated at the end of the day specified by the Department for application submittal.

2. Any discharger authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix A on page 23 of this permit). The request may be granted by issuance of an individual permit or an alternative general permit at the discretion of the Department.

3. When an individual SPDES permit is issued to a discharger covered by this permit, or the discharger is authorized to discharge under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual SPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied for coverage under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

L. **Proper Operation and Maintenance** - The permittee 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 permittee to achieve compliance with the conditions of this permit and with the requirements of SWPPPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. **Inspection and Entry** - The permittee shall allow the Department or an authorized representative of EPA, the State, 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 permittee'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).

N. **Permit Actions** - At the Department's sole discretion, this permit may, at any time, be modified, revoked, or renewed. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not stay compliance with any terms of this permit.

APPENDIX A

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	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 Tel. (631) 444-0365	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 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	200 White Plains Road, 5th Floor Tarrytown, NY 10591-5805 Tel. (845) 332-1835
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	Route 86, PO Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Hudson Street Warrensburg, NY 12885-0220 Tel. (518) 623-1200
6	Herkimer, Jefferson, Lewis, Oneida and St. Lawrence	State Office Building 317 Washington Street Watertown, NY 13601-3787 Tel. (315) 785-2245	State Office Building 207 Genesee Street Utica, NY 13501-2885 Tel. (315) 793-2554
7	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7438	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7500
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates	6274 East Avon-Lima Road Avon, NY 14414-9519 Tel. (585) 226-2466	6274 East Avon-Lima Rd. Avon, NY 14414-9519 Tel. (585) 226-2466
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming	270 Michigan Avenue Buffalo, NY 14203-2999 Tel. (716) 851-7165	270 Michigan Ave. Buffalo, NY 14203-2999 Tel. (716) 851-7070

APPENDIX B

Information Required of Construction Activities Which Are Identified Under Part I, subsection D.7. (see page 5)

A. The location (including a map) and the nature of the construction activity;

B. The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

C. Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

D. Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

E. An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of the fill material and existing data describing the soil or the quality of the discharge; and

F. The name of the receiving water(s).

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-0-08-001

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

Effective Date: Expiration:

William R. Adriance
Chief Permit Administrator

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

Authorized Signature Date:

DRAFT

Public Notice Draft - Dated October 10, 2007

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 *NPDES (National Pollutant Discharge Elimination System)* permit or by a state permit program. New York's *SPDES (State Pollutant Discharge Elimination System)* is a NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law ("ECL").*

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

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

An *owner or operator* of a *construction activity* that is eligible for coverage under this general 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) and (15)(i), constitute construction of a point source and therefore, pursuant to Article 17-0505 of the ECL, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. They can not wait until there is an actual discharge from the construction site to obtain permit coverage.

***Note: The italicized words 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 I. PERMIT COVERAGE AND LIMITATIONS

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

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

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

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

B. Maintaining Water Quality - It shall be a violation of this general permit and the *Environmental Conservation Law ("ECL")* for any discharge authorized by this general permit 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 including, but not limited to:

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 and 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.

C. Eligibility Under This General Permit

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

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

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

D. <u>Activities Which Are Ineligible for Coverage Under This General Permit</u> - All of the following are **<u>not</u>** authorized by this permit:

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

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

3. *Discharges* that are subject to an existing *individual SPDES permit* or SPDES general permit or which are required to obtain an individual or general permit pursuant to Part VII, subparagraph K of this permit;

4. *Discharges* that are likely to adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;

5. *Discharges* which are subject to an existing effluent (limitation) guideline addressing stormwater and/or process wastewater unless said guidelines are contained herein; or

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

7. Beginning on January 8, 2008, *construction activities* for residential, commercial and institutional projects that:

a. have not made any application, prior to January 8, 2008, for any governmental approvals required for the total project;

b. are tributary to waters of the state classified as AA and AA-s (see map in Appendix E); and

c. disturb one or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.

8. Beginning on June 30, 2009, *construction activities* for residential, commercial and institutional projects that:

a. have not been authorized by or covered under a SPDES General Permit for Stormwater Discharges from Construction Activity by June 29, 2009;

b. have made any application, prior to January 8, 2008, for any governmental approvals required for the total project;

c. are tributary to waters of the state classified as AA or AA-s (see map in Appendix E); and

d. disturb one or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.

9. Beginning on June 30, 2009, *construction activities* for public roadway and linear utility projects that:

a. have not been authorized by or covered under a SPDES General Permit for Stormwater Discharges from Construction Activity by June 29, 2009;

b. are tributary to waters of the state classified as AA or AA-s (see map in Appendix E); and

c. disturb two or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.

Part II. OBTAINING PERMIT COVERAGE

A. Notice of Intent (NOI) Submittal

1. An *owner or operator* must first develop a Stormwater Pollution Prevention Plan (SWPPP) in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) form to the address below in order to be authorized to discharge under this general permit. The NOI form shall be one which is associated with this general permit, signed in accordance with Part VII. H. of this permit.

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

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* shall have their SWPPP reviewed and accepted by the *MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form 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, and then submit that form along with the NOI to the address referenced under "Notice of Intent (NOI) Submittal".

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.

B. Permit Authorization

1. An *owner or operator* who submits a complete NOI in accordance with the requirements of this permit will be authorized to discharge stormwater from their *construction activity* in accordance with the following timetable:

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 NOI for construction activities with a SWPPP that has been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 and/or 3, or

ii. Sixty (60) business days from the date the Department receives a complete NOI for construction activities with a SWPPP that has not been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 or 3.

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 a complete NOI and signed "MS4 SWPPP Acceptance" form.

2. An *owner or operator* shall not *commence construction activity* until their authorization to discharge under this permit goes into effect, they have obtained all necessary *Uniform Procedures Act (UPA) permits*, and they have satisfied the requirements of the State Environmental Quality Review Act (SEQRA). *Owners or operators* of *construction activities* that are required to obtain *Uniform Procedures Act (UPA) permits* (Environmental Conservation Law, 6 NYCRR Part 621) must submit an NOI to obtain coverage under this general permit at the time all other *UPA* permit applications are submitted to the Department. In order to facilitate the Department's review of a multi-permitted project, an *owner or operator* shall also submit a copy of the SWPPP to the appropriate DEC Regional Office in Appendix G.

3. The Department may suspend or deny an *owner's or operator's* coverage under this permit if the Department determines that the SWPPP does not meet the permit requirements.

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 areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department.

C. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (NOT) has been submitted to the address referenced in Part II.A.1.

2. The *owner or operator* shall maintain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and inspection reports at the construction site until all disturbed areas have achieved *final stabilization* and the

Notice of Termination 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; that is accessible during normal working hours to a person 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 MS4. 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. B. every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed.

b. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the New York Standards and Specifications for Erosion and Sediment Control dated August 2005, or the most current version or its successor.

c. The *owner or operator* shall not disturb greater than 5 acres at any one time between November 1 and March 1.

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

e. Any additional site specific practices needed to protect water quality.

f. The *owner or operator* includes the requirements above in their SWPPP.

4. 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.

D. Permit Coverage for Discharges Authorized Under GP-02-01

1. Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01), a*n owner or operator* of *a*

construction activity with coverage under GP-02-01, as of the effective date of GP-0-08-001, shall be permitted to discharge in accordance with GP-0-08-001 unless otherwise notified by the Department.

E. 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. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* should then submit a completed Notice of Termination (NOT) with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.1.. 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. 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*.

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 principals 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.

5. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will disturb soils; be responsible for installing, constructing, repairing, and maintaining the erosion and sediment control practices included in the SWPPP; and be responsible for the construction of all post-construction stormwater management practices included in the SWPPP. Each contractor or subcontractor identified must have at least one employee on site that has received four (4) hours of training, endorsed by the Department, from a Soil and Water Conservation District, CPESC, Inc. or other Department endorsed entity in proper erosion and sediment control principals in the last three (3) years. The *owner or operator* shall have each of these contractors and subcontractors sign a copy of the certification statement below before they commence any *construction activity*. The *owner or operator* shall attach the certification statements 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 contractor certification statement and the SWPPP must be amended to identify the new contractor's area of responsibility.

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

In addition to the statement above, the SWPPP must identify the soil disturbing activities that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; 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.

6. 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 provided 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.

7. For projects where the Department requests a copy of the SWPPP, the *owner or operator* shall submit the SWPPP in both electronic 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 general permit shall include erosion and sediment control practices designed in conformance with the New York Standards and Specifications for Erosion and Sediment Control dated August 2005, or the most current version or its successor. 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), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of different soil types with boundaries; locations of off-site material, waste, borrow or equipment storage areas; 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 Section 2 “Erosion Control Planning and Site Management” of the New York Standards and Specifications for Erosion and Sediment Control dated August 2005, or the most current version or its successor, 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. An inspection schedule to ensure continuous and effective operation of the erosion and sediment control practices; and

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 storm water discharges.

2. Post-construction stormwater management practice component - All construction projects identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the New York State Stormwater Management Design Manual (“Design Manual”) dated August 2003, or the most current version or its successor. At a minimum, 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;

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

c. The dimensions, material specifications and installation details for each post-construction stormwater management practice;

d. Identification of any elements of the design that are not in conformance with the Design Manual. 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 standards;

e. A hydrologic and hydraulic analysis for all structural components of the stormwater management control system;

f. A detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. At a minimum, the summary shall address the required design criteria from the applicable chapter of the Design Manual; including the identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required based on the redevelopment criteria or waiver criteria included in the Design Manual; and

g. 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 Design Criteria - All construction projects identified 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 Enhanced Phosphorus Removal Design Criteria included in the New York State Stormwater Management Design Manual ("Design Manual") dated August 2003, or the most current version or its successor. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.g. above.

C. <u>Required SWPPP Components by Project Type</u> - 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. *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.

Part IV. <u>INSPECTION AND MAINTENANCE REQUIREMENTS</u>

A. <u>Construction Activities That Require Site Inspections</u> - *Owners or operators* of the following *construction activities* shall have a *qualified inspector* conduct site inspections in conformance with the requirements of this Part:

1. All *construction activities* identified in Table 1 and 2 of Appendix B, with the

exception of the construction of a single family home and single family residential subdivision with 25% or less impervious cover at total site build-out that involve a soil disturbance of one (1) or more acres of land but less than five (5) acres and are 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 F; construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

B. Construction Site Inspection and Maintenance Requirements

1. Unless otherwise notified by the Department, the *owner or operator* shall have a *qualified inspector* 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 fourteen (14) calendar days and within 24 hours of the end of a rain event of 0.5 inches or greater. If the rain event occurs on a weekend day, the inspection shall be performed by or on the next business day.

b. For construction sites where soil disturbance activities are on going and the *owner or operator* has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days.

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 Regional Office stormwater contact person 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 Regional Office stormwater contact person 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 that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Certification of Final Stabilization and Post-Construction Stormwater Management Practice" section on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.A.1..

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 stormwater discharge locations, including receiving waters.

3. 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 (i.e. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the receiving waters 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. Identification of all erosion an sediment control practices that need repair or maintenance;

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

g. Location(s) and description of any petroleum or construction chemical spills;

h. 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;

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; and

j. 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).

4. Within 24 hours 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.5. of any corrective actions that need to be taken. The contractor (or subcontractor) shall begin implementing the corrective actions within 24 hours of this notification and shall complete the corrective actions in a reasonable time frame.

5. The *owner or operator* must ensure that all erosion and sediment control practices identified in the SWPPP are maintained in effective operating condition at all times.

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

7. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the Environmental Conservation Law, common law or federal law, or prohibit New York State from taking any measures, whether or 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.

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 Notice of Termination (NOT) form to the address in Part II.A.1. The NOT form shall be one which is associated with this general permit, signed in accordance with Part VII. H.

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

a. Total project completion - All construction activity identified in the SWPPP has been completed; and all areas of disturbance have achieved

final stabilization; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

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

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

3. For *construction activities* meeting subdivision a. or b. 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 certify that all disturbed areas have achieved *final stabilization;* 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 "Certification of Final Stabilization and Post-Construction Stormwater Management Practice" section on the NOT.

4. For *construction activities* meeting subdivision a. of this Part, the *owner or operator* must, prior to submitting the Notice of Termination, 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 practice(s),

c. the *owner or operator* has a deed restriction in place that requires operation and maintenance of the practice(s) in accordance with the operations and maintenance plan.

Part VI. REPORTING AND RETENTION OF RECORDS

A. 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

site achieves *final stabilization*. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

B. Addresses - With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.A.1), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DEC Regional Office listed in Appendix G.

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 permit noncompliance 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 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* or the *owner's or operator's* on-site representative.

B. Continuation of the Expired General Permit - If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* may continue to discharge in accordance with the terms and conditions of this general permit until such time that 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 permit violation. 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 make available to the Department for inspection and copying or furnish to the Department within twenty five (25) business days of receipt of a Department request for such information, any information requested for the purpose of determining compliance with this general permit. This can

include, but is not limited to, the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, and inspection reports. Failure to provide information requested by the Department shall be a violation of this permit.

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 other report, or have made revisions to the SWPPP which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information. 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 permit violation.

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 above 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 above;

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 is 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.

Under Part VII. H. (Signatory Requirements), 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. Denial of Coverage Under This Permit

1. At its sole discretion, the Department may require any *owner or operator* authorized by this permit to apply for and/or obtain either an individual SPDES permit or an alternative 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 permittee's receipt of the notification letter, whereby the authorization to discharge under this general permit shall

be terminated. Applications must be submitted to the appropriate Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Regional Water Manager, 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. Any *owner or operator* authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit or an alternative general permit. In such cases, the *owner or operator* shall submit an individual application or an alternative general permit application in accordance with the requirements of this general permit,40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix G).The request may be granted by issuance of an individual permit or an alternative general permit at the discretion of the Department.

3. 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. <u>Proper Operation and Maintenance</u> - 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 SWPPPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by an *owner or operator* only when necessary to achieve compliance with the conditions of the permit.

M. <u>Inspection and Entry</u> - The *owner or operator* shall allow the Department or an authorized representative of EPA, the State, 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).

N. <u>Permit Actions</u> - At the Department's sole discretion, this permit may, at any time, be modified, revoked, or renewed. 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. <u>Definitions</u> - Definitions of key terms are included in Appendix A of this permit.

APPENDIX A

Definitions

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 and stockpiling of fill material. 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 that involves the cutting and removal of trees or brush using wheeled or tracked equipment is considered a construction activity that will result in soil disturbance. However, 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.

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

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

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 authorizing a category of discharges.

Groundwater - 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.

Impervious Area - means all impermeable surfaces that can not 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.

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, sales pitch, advertisement, drawing, permit application, 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.

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).

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

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 Parts 700 et seq of this Title.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of

erosion and sediment control, such as licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or qualified Soil Scientist. It also means someone working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Knowledgeable in the principles and practices of erosion and sediment control means that an individual performing a site inspection has received eight (8) hours of training, endorsed by the Department, from a Soil and Water Conservation District, CPESC, Inc. or other Department endorsed entity in proper erosion and sediment control principals in the last three (3) years. Note: Inspections of any post-construction stormwater management practices that require 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 principals and practices of stormwater management and treatment, such as a licensed Professional Engineer or licensed Landscape Architect.

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

Routine Maintenance Activity - means construction activity that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. For example, re-grading of gravel roads or parking lots, stream bank restoration projects (does not include the placement of spoil material), and roadside ditch cleaning.

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.

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point souce discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, 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 or underground 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.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B

Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix F
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix F
- Construction of a barn or other agricultural building, silo, stock yard or pen.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Bike paths and trails
- Sidewalk construction or reconstruction projects that are not part of a road/ highway construction or reconstruction project
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that alter hydrology from pre to post development conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of impervious area and do not alter hydrology from pre to post development conditions
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of less than five acres and construction activities that include the construction or reconstruction of impervious area

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or directly discharging to one of the 303(d) segments listed in Appendix F
- 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 F
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes townhomes, condominiums, senior housing complexes, and apartment complexes
- Airports
- Amusement parks
- Campgrounds
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other agricultural building(e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of impervious area, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or alter the hydrology from pre to post development conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas and substations constructed as part of an over-head electric transmission line project , wind-power project or cell tower project
- All other construction activities that include the construction or reconstruction of impervious area and alter the hydrology from pre to post development conditions, and are not listed in Table 1

APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Design is Required

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Design Criteria included in the New York State Stormwater Management Design Manual ("Design Manual") dated August 2003, or the most current version or its successor.

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3

Figure 1 - New York City Watershed East of the Hudson

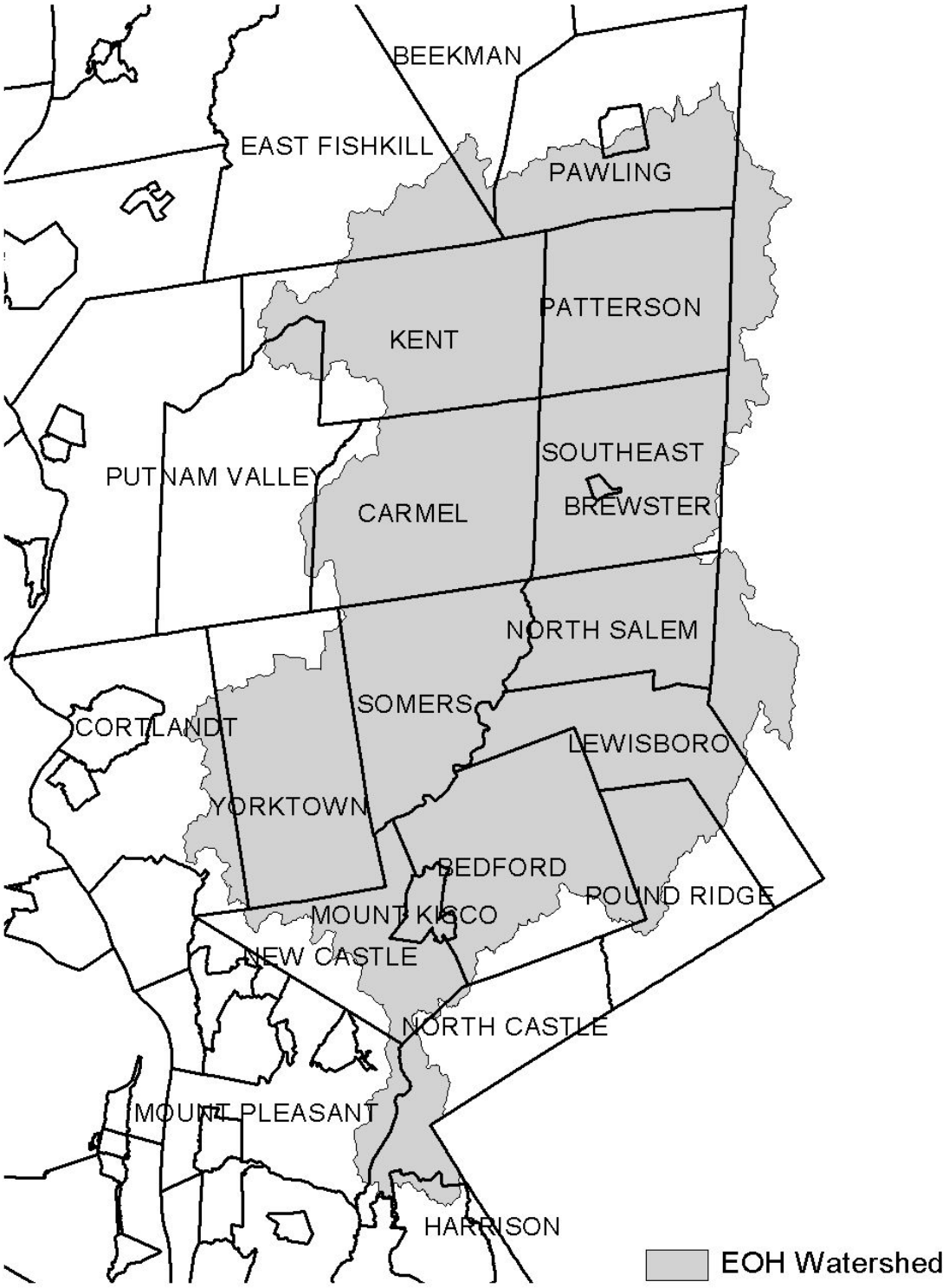
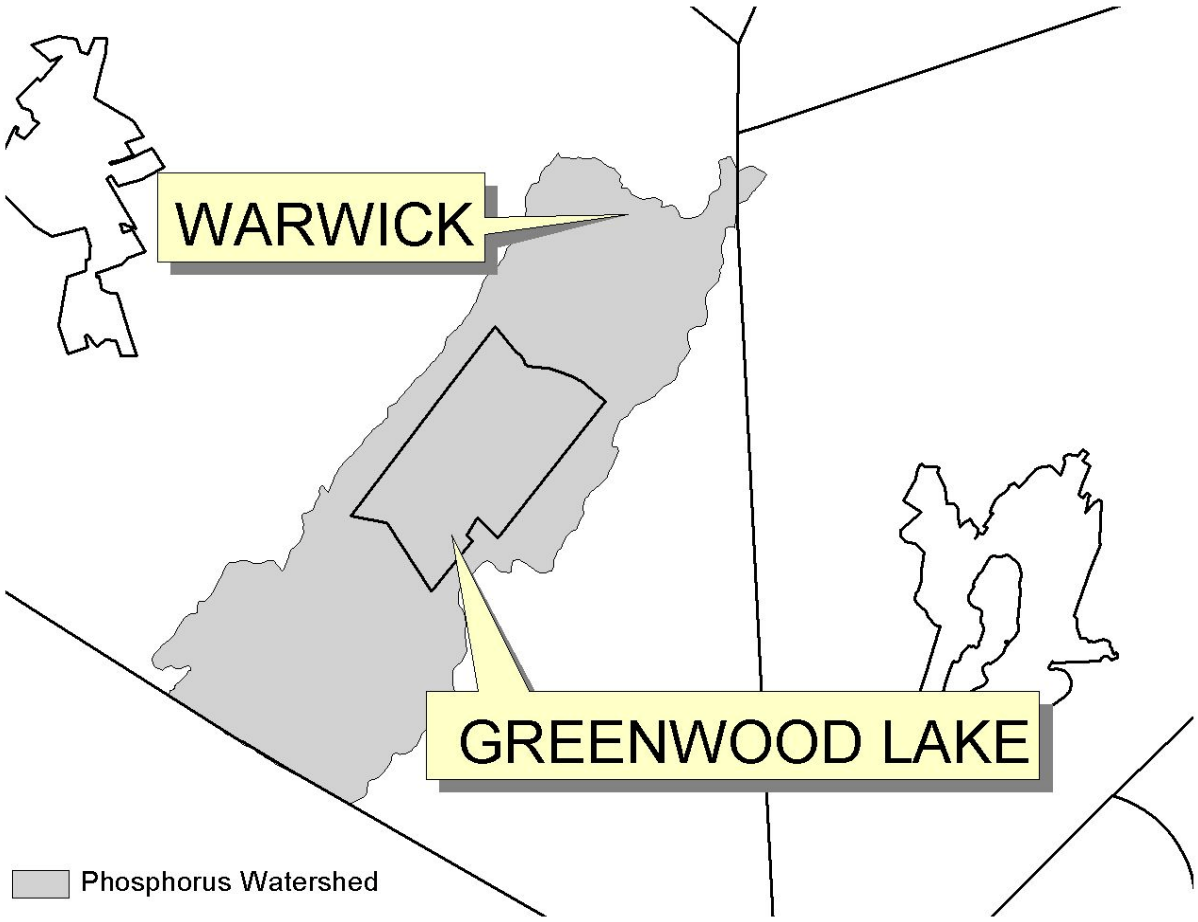


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed



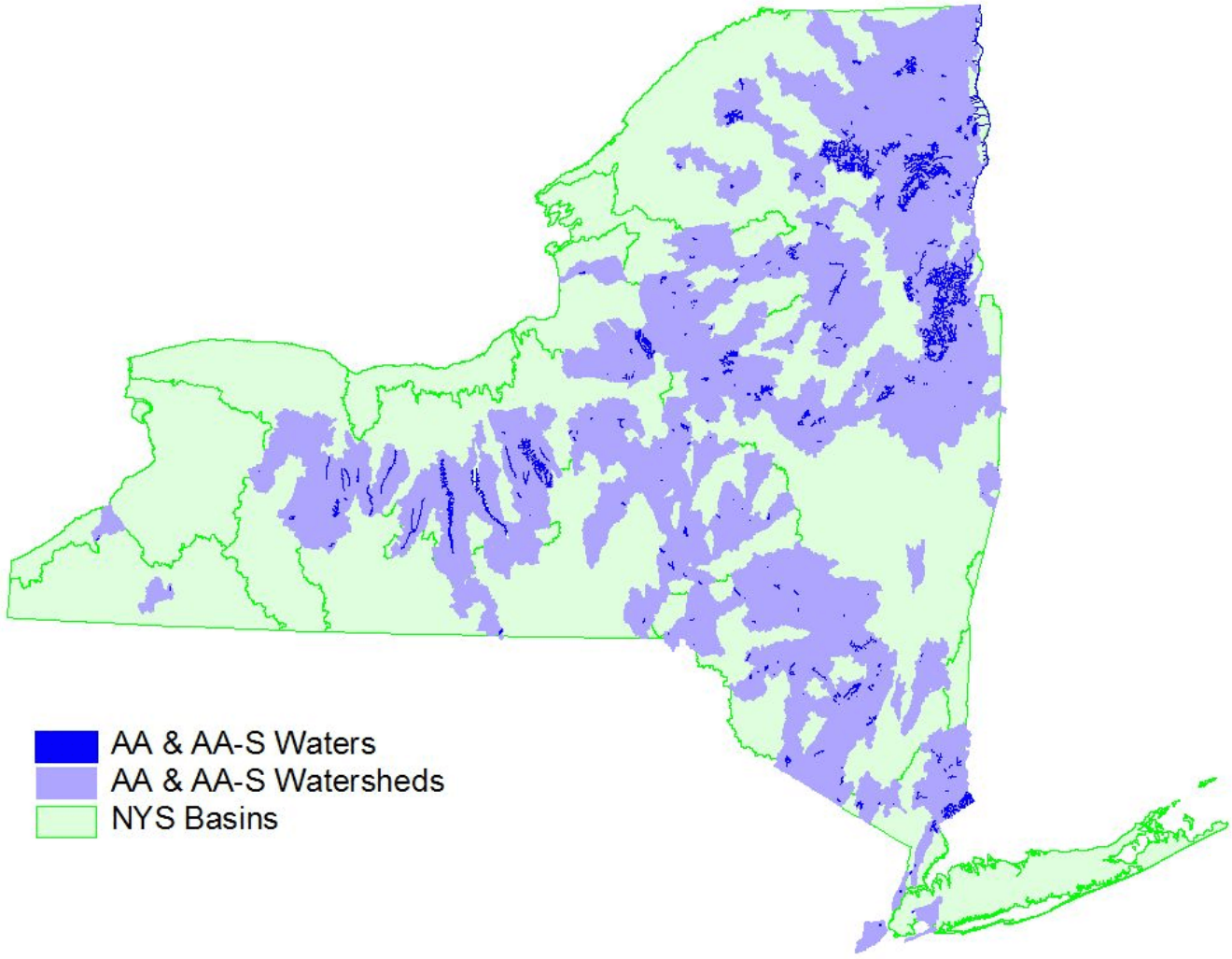
APPENDIX D

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E

Map of Watershed Areas (HUC 11) Associated With AA and AA-s Classified Waters



APPENDIX F

List of 303(d) segments impaired by pollutants related to construction activity (e.g. silt, sediment or nutrients). *Owners or operators* of single family home and single family residential subdivision construction activities 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 August 2003, or the most current version or its successor.

COUNTY	WATERBODY	COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond	Madison	Chittenango Creek
Albany	Basic Creek Reservoir	Madison	DeRuyter Reservoir
Bronx	Van Cortlandt Lake	Monroe	Genesee River, Lower, Main Stem
Broome	Whitney Point Lake/Reservoir	Monroe	Genesee River, Middle, Main Stem
Broome	Beaver Lake	Monroe	Black Creek, Lower, and minor tribs
Broome	White Birch Lake	Monroe	Buck Pond
Cayuga	Little Sodus Bay	Monroe	Long Pond
Chautauqua	Chautauqua Lake, North	Monroe	Cranberry Pond
Chautauqua	Chautauqua Lake, South	Nassau	Glen Cove Creek, Lower, and tribs
Chautauqua	Bear Lake	Nassau	LI Tribs (fresh) to East Bay
Chautauqua	Lower Cassadaga Lake	Nassau	East Meadow Brook, Upper, and tribs
Chautauqua	Middle Cassadaga Lake	Nassau	Hempstead Bay
Chautauqua	Findley Lake	Nassau	Hempstead Lake
Clinton	Great Chazy River, Lower, Main Stem	Nassau	Grant Park Pond
Columbia	Kinderhook Lake	Niagara	Bergholtz Creek and tribs
Columbia	Robinson Pond	Oneida	Ballou, Nail Creeks
Dutchess	Hillside Lake	Onondaga	Ley Creek and tribs
Dutchess	Wappinger Lakes	Onondaga	Onondaga Creek, Lower
Dutchess	Fall Kill and tribs	Onondaga	Harbor Brook, Lower, and tribs
Dutchess	Rudd Pond	Onondaga	Ninemile Creek, Lower, and tribs
Erie	Rush Creek and tribs	Ontario	Honeoye Lake
Erie	Ellicott Creek, Lower, and tribs	Ontario	Hemlock Lake Outlet and minor tribs
Erie	Beeman Creek and tribs	Oswego	Lake Neatahwanta
Erie	Murder Creek, Lower, and tribs	Oswego	Oneida Lake
Erie	South Branch Smoke Cr, Lower, and tribs	Putnam	Oscawana Lake
Erie	Little Sister Creek, Lower, and tribs	Putnam	Lake Carmel
Genesee	Black Creek, Upper, and minor tribs	Queens	Jamaica Bay, Eastern, and tribs (Queens)
Genesee	Tonawanda Creek, Middle, Main Stem	Queens	Bergen Basin
Genesee	Tonawanda Creek, Upper, and minor tribs	Queens	Shellbank Basin
Genesee	Little Tonawanda Creek, Lower, and tribs	Rensselaer	Snyders Lake
Genesee	Oak Orchard Creek	Richmond	Grasmere, Arbutus and Wolfes Lakes
Genesee	Bowen Brook and tribs	Saratoga	Dwaas Kill and tribs
Genesee	Bigelow Creek and tribs	Saratoga	Tribs to Lake Lonely
Greene	Schoharie Reservoir	Saratoga	Lake Lonely
Greene	Sleepy Hollow Lake	Schenectady	Collins Lake
Herkimer	Steele Creek tribs	Schoharie	Engleville Pond
Jefferson	Moon Lake	Schoharie	Summit Lake
Kings	Hendrix Creek	St.Lawrence	Black Lake Outlet/Black Lake
Livingston	Conesus Lake	Steuben	Lake Salubria
Livingston	Jaycox Creek and tribs	Suffolk	Millers Pond
Livingston	Mill Creek and minor tribs	Suffolk	Mattituck (Marratooka) Pond

APPENDIX F

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Suffolk	Tidal tribs to West Moriches Bay		
Suffolk	Canaan Lake		
Suffolk	Lake Ronkonkoma		
Tompkins	Cayuga Lake, Southern End		
Ulster	Ashokan Reservoir		
Ulster	Esopus Creek, Upper, and minor tribs		
Warren	Lake George		
Warren	Tribs to L.George, Village of L George		
Warren	Huddle/Finkle Brooks and tribs		
Warren	Indian Brook and tribs		
Warren	Hague Brook and tribs		
Washington	Tribs to L.George, East Shore		
Washington	Cossayuna Lake		
Wayne	Blind Sodus Bay		
Wayne	Port Bay		
Wayne	Marbletown Creek and tribs		
Westchester	Peach Lake		
Westchester	Mamaroneck River, Lower		
Westchester	Mamaroneck River, Upper, and minor tribs		
Westchester	Sheldrake River		
Westchester	Blind Brook, Lower		
Westchester	Blind Brook, Upper, and tribs		
Westchester	Lake Lincolndale		
Westchester	Lake Meahaugh		
Wyoming	Java Lake		
Wyoming	Silver Lake		

Note: The list above identifies those waters from the final New York State "2006 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy", dated May 17, 2007, that are impaired by silt, sediment or nutrients.

APPENDIX G

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	BLDG 40 - SUNY @ STONY BROOK STONY BROOK, NY 11790-2356 TEL. (631) 444-0365	BLDG 40 - SUNY @ STONY BROOK STONY BROOK, NY 11790-2356 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, PO BOX 220 WARRENSBURG, NY 12885-0220 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX B

COLLEGE PARK
CERTIFICATION STATEMENT FORMS

Owner's / Operator's 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 gather and evaluated the information submitted. Based on my inquiry of the persons 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. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Name (please print) _____

Title _____ Date _____

Address _____

Phone _____ Email _____

Signature _____

Contractor's and Subcontractors Certification

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

Name (please print) _____

Title _____ Date _____

Address _____

Phone _____ Email _____

Signature _____

Note: All contractors involved with Stormwater related activities shall sign a contractor's certification form.

Qualified Professional's Credentials and Certification

"I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the following Pre-Construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

Name (please print) _____

Title _____ Date _____

Address _____

Phone _____ Email _____

Signature _____

"Qualified Professional" means a person knowledgeable in the principles and practices of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control).

APPENDIX C

COLLEGE PARK
NYSDEC NOTICE OF INTENT (NOI)

1752059166

NOTICE OF INTENT

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

NYR ☐☐☐☐☐☐
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-02-01

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required. To properly complete this form, please refer to the Instruction Manual which can be accessed at www.dec.state.ny.us/website/dow/toolbox/instr_man.pdf

-IMPORTANT-
THIS FORM FOR MACHINE PRINT ONLY
RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

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

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name

Owner/Operator Mailing Address

City

State Zip -

Phone (Owner/Operator) - - Fax (Owner/Operator) - -

Email (Owner/Operator)

Location Information

Project Site Information

Project/Site Name

Street Address (NOT P.O. BOX)

City/Town/Village (THAT ISSUES BUILDING PERMIT)

State: NY

Zip: ____ - ____

County

DEC Region (if known)

Name of Nearest Cross Street

Distance to Nearest Cross Street (Feet)

Direction to Nearest Cross Street

○ **North** ○ **South** ○ **East** ○ **West**

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

www.dec.state.ny.us/website/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site go to the dropdown menu on the left and choose "Get Coordinates". Click on the center of your site and a small window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

Y Coordinates (Northing) 44

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in imperviousness**

○ **Redevelopment with no increase in imperviousness**

Project Site Information

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

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

OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION

Number of Lots

- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ OTHER

OTHER

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

5. Is this a project which does not require coverage under the General Permit (e.g. Project done under an Individual SPDES Permit, or department approved remediation)? ○ **Yes** ○ **No**

6. Is this property owned by a state authority, state agency or local government? ○ **Yes** ○ **No**

7. 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 Acreage	**Acreage To Be Disturbed**	**Existing Impervious Area Within Disturbed**	**Future Impervious Area Within Disturbed**
.	.	.	.

8. Will there be more than 5 acres disturbed at any given time? ○ **Yes** ○ **No**

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

A	**B**	**C**	**D**
%	%	%	%

10. Is this a phased project? (**if yes, The SWPPP must address all planned phases)** * ○ Yes ○ No

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

Start Date __/__/____ - **End Date** __/__/____

Receiving System(s)

12. Provide the name of the nearest, natural, classified surface waterbody(ies) into which construction site runoff has the potential to discharge.

For Questions 13 and 14 refer to the Instruction Manual for a subset of 303(d) segments and TMDL watersheds subject to Condition A of the permit. These waterbodies and watersheds have been identified for regulation within the stormwater program due to some level of impairment by nutrients, silt or sediment. The Instruction Manual can be accessed at www.dec.state.ny.us/website/dow/toolbox/instr_man.pdf

13. Has the surface waterbody(ies) in question 12 been identified as a 303(d) segment? * ○ Yes ○ No

14. Is this project located in a TMDL Watershed? * ○ Yes ○ No

***NOTE:** If you answered Yes to either question 13 or 14, Pursuant to Part I.D.3.(b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review.*

15. Does the site runoff enter a separate storm sewer system- including roadside drains, swales, ditches, culverts, etc? (**if no, skip question 16)** ○ Yes ○ No ○ Unknown

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

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

Stormwater Pollution Prevention Plan (SWPPP)

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

19. Does this construction activity require the development of a SWPPP that includes Water Quality and Quantity Control components (Post-Construction Stormwater Management Practices) **If no, Skip question 20** ○ Yes ○ No

20. Have the Water Quality and Quantity Control components of the SWPPP been developed in comformance with the current NYS Stormwater Management Design Manual ? ○ Yes ○ No *

NOTE: If you answered no to question 18 or 20, Pursuant to Part I.D.3.(b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review. Please provide further details in the details/comment section on the last page of this form.

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

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

SWPPP Preparer Information (if different from Owner/Operator info)

SWPPP Preparer

Contact Name (Last, Space, First)

Mailing Address

City

State Zip -

Phone - - Fax - -

Email

Stormwater Pollution Prevention Plan (SWPPP)

Erosion and Sediment Control Practices

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

○ Yes ○ No

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

Temporary Structural

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

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

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

Permanent Structural

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

Other

Stormwater Pollution Prevention Plan (SWPPP)

Water Quality and Quantity Control

Important:Completion of Questions 24-30 is not required if the project:

Disturbs less than 5 acres and is planned for single-family residential homes(including subdivisions) or construction on agricultural property and does not have a discharge to a 303(d) water or is not located within a TMDL watershed.

Additionally, sites where there will be no future impervious area within the disturbed area and that do not have a change(pre to post development)in hydrology do not need to complete questions 24-30.

24. Indicate **all** the permanent Stormwater Management Practice(s) that will be installed on this site

Post Construction Stormwater Management Practices

Ponds

- ○ **Micropool Extended Detention (P-1)**
- ○ **Wet Pond (P-2)**
- ○ **Wet Extended Detention (P-3)**
- ○ **Multiple Pond System (P-4)**
- ○ **Pocket Pond (P-5)**

Filtering

- ○ **Surface Sand Filter (F-1)**
- ○ **Underground Sand Filter (F-2)**
- ○ **Perimeter Sand Filter (F-3)**
- ○ **Organic Filter (F-4)**
- ○ **Bioretention (F-5)**

Wetlands

- ○ **Shallow Wetland (W-1)**
- ○ **Extended Detention Wetland (W-2)**
- ○ **Pond/Wetland System (W-3)**
- ○ **Pocket Wetland (W-4)**

Infiltration

- ○ **Infiltration Trench (I-1)**
- ○ **Infiltration Basin (I-2)**
- ○ **Dry Well (I-3)**

Open Channels

- ○ **Dry Swale (O-1)**
- ○ **Wet Swale (O-2)**

○ **Other**

Describe other stormwater management practices not listed above or explain any deviations from the technicial standards. If the SWPPP does not conform to the technicial standards, the SWPPP must be prepared and certified by a licensed/certified professional and is subject to a 60-business day review.

Has a long term Operation and Maintenance plan for the post construction management practices been developed? ○ **Yes** ○ **No**

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

Stormwater Pollution Prevention Plan (SWPPP)
Water Quality and Quantity Control

25. Provide the total water quality volume required and the total provided for the site.

Total Water Quality Volume (WQv)

WQv Required ☐☐☐.☐☐☐ **acre-feet**

WQv Provided ☐☐☐.☐☐☐ **acre-feet**

26. Provide the following Unified Stormwater Sizing Criteria for the site.

Total Channel Protection Storage Volume (CPv) - Extended detention of post-developed 1 year, 24 hour storm event

CPv Required ☐☐☐.☐☐☐ **acre-feet**

CPv Provided ☐☐☐.☐☐☐ **acre-feet**

The need to provide for channel protection has been waived because

○ **Site discharges directly to fourth order stream or larger**

Total Overbank Flood Control Criteria (Qp) - Peak discharge rate for the 10 year storm

Pre-Development ☐☐☐.☐☐☐ **CFS**

Post-development ☐☐☐.☐☐☐ **CFS**

Total Extreme Flood Control Criteria (Qf) - Peak discharge rate for the 100 year storm

Pre-Development ☐☐☐.☐☐☐ **CFS**

Post-development ☐☐☐.☐☐☐ **CFS**

The need to provide for flood control has been waived because

○ **Site discharges directly to fourth order stream or larger**

○ **Downstream analysis reveals that flood control is not required**

IMPORTANT: For questions 27 and 28 impervious area should be calculated considering the project site and all offsite areas that drain to the post-construction stormwater management practice(s) (Total Drainage Area = Project Site + Offsite areas)

27. Pre-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the existing impervious areas before construction begins. ☐☐☐%

28. Post-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the future impervious areas that will be created/remain on the site after completion of construction. ☐☐☐%

29. Indicate the total number of permanent stormwater management practices to be installed ☐☐

30. Provide the total number of stormwater discharge points from the site (include discharges to either surface waters or to seperate storm sewer systems) ☐☐

Other Permits

31. Select any other DEC permits that are required for this project or ○ None

DEC Permits

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Other SPDES
- ○ Solid Waste
- ○ Stream Protection/Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers

Other

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

N Y R

Details/Comments

Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that this document and the corresponding documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the 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 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) days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction. and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name **MI**

Print Last Name

Owner/Operator Signature

Date

/ /

APPENDIX D

COLLEGE PARK
NYSDEC NOTICE OF TERMINATION (NOT)

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

NOTICE OF TERMINATION for Storm Water Discharges Associated with Construction Activity UNDER SPDES GENERAL PERMIT: ☐ #GP-93-06 or ☐ #GP-02-01

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

I. Permittee Information

1. Owner/Operator Name:

2a. Mailing Address:	2b. City/State/Zip:

3a. Contact Person:	3b. Phone:	3c. E-mail:

II. Site /Activity Information

4. Facility/Project Site Name:

5a. Street Address:	5b. City/State/Zip:

6. County:

III. Reason for Termination

7a. ☐ Site has been finally stabilized in accordance with permit and SWPPP. Date site stabilization completed: _____
month/year

7b. ☐ 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 permittee identified in I.1. above until new owner/operator obtains coverage under GP-02-01)

IV. Final Site Information:

8a. Are there permanent stormwater management practices remaining on the site? ☐ yes ☐ no
If the answer to question 8a. is no, go to question 8e.
If the answer to question 8a. is yes, answer the following questions 8b., 8c., and 8d.:
8b. Is the design and function of each permanent practice described in the final SWPPP? ☐ yes ☐ no
8c. Who will be responsible for long-term operation and maintenance of practice(s)? _____
8d. Has the individual(s) responsible for long-term operation and maintenance been given a copy of the operation and maintenance requirements? ☐ yes ☐ no
8e. Provide the total acreage of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____

V. Certification

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name:	Title/Position:
Signature:	Date:

Reset Button

08/16/04

APPENDIX E

COLLEGE PARK
SAMPLE FORMS

Pre-Construction Site Assessment Check List

(NOTE: Provide Comments below as necessary)

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

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

2. Resource Protection:

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

3. Surface Water Protection:

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

4. Stabilized Construction Entrance:

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

5. Perimeter Sediment Controls:

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

6. Pollution Prevention for Waste and Hazardous Materials:

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

CONSTRUCTION DURATION INSPECTIONS

Date of Inspection	Weather	Time

Qualified Professional (print name)	Title

Soil Conditions (e.g., dry, wet, saturated)	Type (e.g., biweekly, after rainfall)

Description of the condition of receiving waters at all points of discharge

Qualified Professional Signature

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

1. Maintaining Water Quality

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

2. Housekeeping

1. General Site Conditions:

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

2. Temporary Stream Crossing:

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

3. Runoff Control Practices

a. Excavation Dewatering:

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

CONSTRUCTION DURATION INSPECTIONS

Runoff Control Practices (continued)

b. Level Spreader:

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

c. Inceptor Dikes and Swales:

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

d. Stone Check Dam:

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

e. Rock Outlet Protection:

Yes	No	NA	
☐	☐	☐	Installed per plan?
☐	☐	☐	Installed concurrently with pipe installation?

4. Soil Stabilization

a. Topsoil and Spoil Stockpiles:

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

b. Revegetation:

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

5. Sediment Control Practices

a. Stabilized Construction Entrance:

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

b. Silt Fence:

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

CONSTRUCTION DURATION INSPECTIONS

Sediment Control Practices (continued)

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

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

d. Temporary Sediment Trap:

Yes	No	NA	
☐	☐	☐	Outlet structure is constructed per the approved plan or drawing.
☐	☐	☐	Geotextile fabric has been placed beneath rock fill.
			Sediment accumulation is _____% of design capacity.

e. Temporary Sediment Basin:

Yes	No	NA	
☐	☐	☐	Basin and outlet structure constructed per the approved plan.
☐	☐	☐	Basin side slopes are stabilized with seed/mulch.
☐	☐	☐	Drainage structure flushed and basin surface restored upon removal of sediment facility.
			Sediment accumulation is _____% of design capacity.

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

CERTIFICATION OF FINAL SITE STABILIZATION

Check List:

Yes	No	NA	
☐	☐	☐	All Soil disturbing activities are complete.
☐	☐	☐	Temporary erosion and sediment control measures have been removed or will be removed at the appropriate time.
☐	☐	☐	All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 80% or equivalent measures have been employed.

Qualified Professional Certification:

I hereby certify that the site has undergone Final Stabilization. "Final Stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (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. Furthermore, all temporary erosion and sediment controls not specified for permanent erosion control have been removed.

_____

Qualified Professional (print name)

_____ _____

Qualified Professional Signature Date

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

The Operator shall amend the SWPPP whenever:

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

Modification and Reason:

APPENDIX F

COLLEGE PARK
POST-CONSTRUCTION INSPECTIONS AND MAINTENANCE

POST-CONSTRUCTION INSPECTIONS AND MAINTENANCE

1. SITE COVER

a. Inspections

Site cover and associated structures and embankments should be inspected periodically for the first few months following construction and then on a biannual basis. Site inspections should also be performed following all major (i.e., intense storms, thunder storms, cloud burst, etc.) storm events. Items to check for include (but are not limited to):

1. Differential settlement of embankments, cracking or erosion.
2. Lack of vigor and density of grass turf.
3. Accumulation of sediments or litter on lawn areas, paved areas, or within catch basin sumps.
4. Accumulation of pollutants, including oils or grease, in catch basin sumps.
5. Damage or fatigue of storm sewer structures or associated components.

b. Mowing and Sweeping

Vegetated areas and landscaping should be maintained to promote vigorous and dense growth. Lawn areas should be mowed at least three times a year (more frequent mowing may be desired for aesthetic reasons). Resultant yard waste shall be collected and disposed of off-site.

Paved areas should be swept at least twice a year. Additional sweeping may be appropriate in the early spring for removal of deicing materials.

c. Debris and Litter Removal

Accumulation of litter and debris should be removed during each mowing or sweep operation.

d. Structural Maintenance, Repair, and Replacement

The frequency for cleanout of catch basin sumps will depend on the efficiency of mowing, sweeping and debris and litter removal. Sumps should be cleaned when accumulation of sediments are within six inches of the catch basin outlet pipe.

Components of the system which require repair or replacement should be addressed immediately following identification.

e. Winter Maintenance

To prevent impacts to storm water management facilities, the following winter maintenance limitations, restrictions or requirements are recommended:

1. Remove snow and ice from inlet structures, basin inlet and outlet structures and away from culvert end sections.

2. Snow removed from paved areas should not be piled at inlets/outlets of the storm water management basin.

3. Use of deicing materials should be limited to sand and "environmentally friendly" chemical products. Use of salt mixtures should be kept to a minimum.

4. Sand used for deicing should be clean, course material free of fines, silt, and clay.

5. Materials used for deicing should be removed during the early spring by sweeping and/ or vacuuming.

2. Hydro International Downstream Defender® Vortex Separator

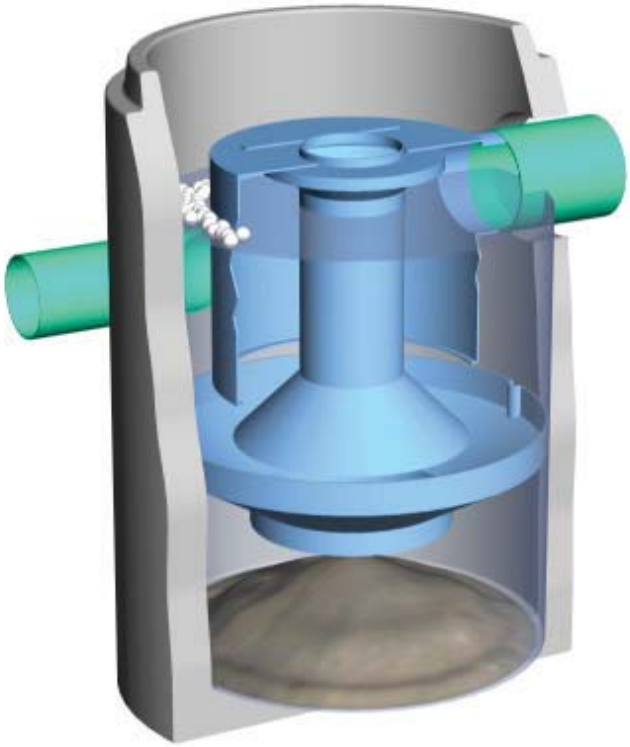
a. Inspections

See attached maintenance instructions for inspection requirements.

b. Cleaning

See attached maintenance instructions for cleaning inspection requirements.

Hydro International



Downstream Defender®

Stormwater Treatment System

Operation and Maintenance Manual

Table of Contents

Downstream Defender® by Hydro International

The Downstream Defender is an advanced Hydrodynamic Vortex Separator designed to provide high removal efficiencies of settleable solids and their associated pollutants, oil, and floatables over a wide range of flow rates.

The Downstream Defender has unique, flow-modifying internal components developed from extensive full-scale testing, CFD modeling and over thirty years of hydrodynamic separation experience in wastewater, combined sewer and stormwater applications. These internal components distinguish the Downstream Defender from simple swirl-type devices and conventional oil/grit separators by minimizing turbulence and headlosses, enhancing separation, and preventing washout of previously stored pollutants.

The high removal efficiencies and inherent low headlosses of the Downstream Defender allow for a small footprint making it a compact and economical solution for the treatment of non-point source pollution.

BENEFITS OF THE DOWNSTREAM DEFENDER

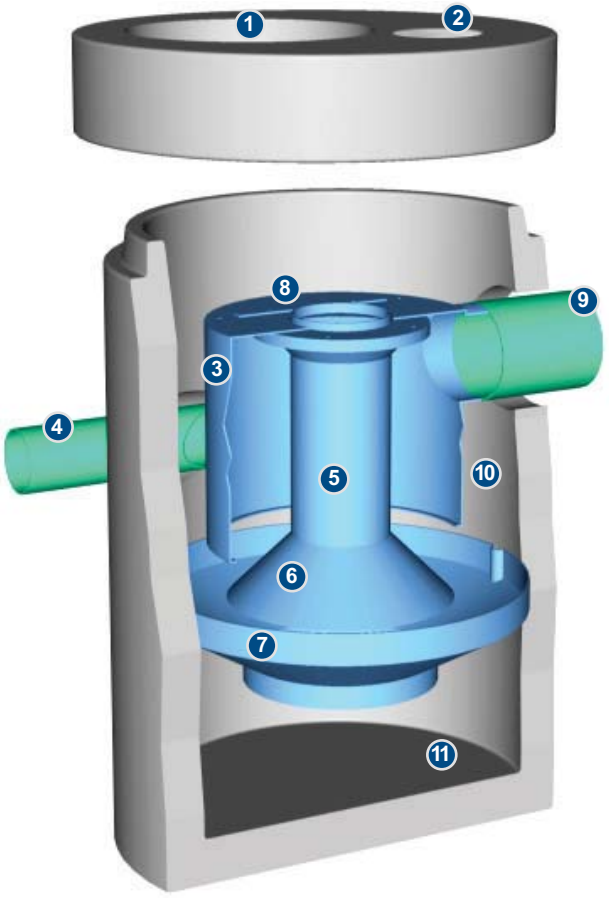
- Removes sediment, floatables, oil and grease
- No pollutant washouts
- Small footprint
- No loss of treatment capacity between clean-outs
- Low headloss
- Efficient over a wide ranges of flows
- Easy to install
- Low maintenance

APPLICATIONS

- New developments and retrofits
- Utility yards
- Streets and roadways
- Parking lots
- Pre-treatment for filters, infiltration and storage
- Industrial and commercial facilities
- Wetlands protection

DOWNSTREAM DEFENDER COMPONENTS

1. **Central Access Port**
2. **Floatables Access Port (6-ft., 8-ft. and 10-ft. models only)**
3. **Dip Plate**
4. **Tangential Inlet**
5. **Center Shaft**
6. **Center Cone**
7. **Benching Skirt**
8. **Floatables Lid**
9. **Outlet Pipe**
10. **Floatables Storage**
11. **Isolated Sediment Storage Zone**



Operation

INTRODUCTION

The Downstream Defender operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The Downstream Defender has been designed to allow for easy and safe access for inspection/monitoring and clean-out procedures. Entry into the unit or removal of the internal components is not necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

POLLUTANT CAPTURE AND RETENTION

The internal components of the Downstream Defender have been designed to protect the oil, floatables and sediment storage volumes so that separator performance is not reduced as pollutants accumulate between clean-outs. Additionally, the Downstream Defender is designed and installed into the storm drain system so that the vessel remains wet between storm events. Oil and floatables are stored on the water surface in the outer annulus separate from the sediment storage volume in the sump of the unit providing the option for separate oil disposal, and accessories such as adsorbant pads. Since the oil/floatables and sediment storage volumes are isolated from the active separation region, the potential for re-suspension and washout of stored pollutants between clean-outs is minimized.

WET SUMP

The sump of the Downstream Defender retains a standing water level between storm events. The water in the sump prevents stored sediment from solidifying in the base of the unit. The clean-out procedure becomes more difficult and labor intensive if the system allows fine sediment to dry-out and consolidate. Dried sediment must be manually removed by maintenance crews. This is a labor intensive operation in a hazardous environment.

BLOCKAGE PROTECTION

The Downstream Defender has large clear openings and no internal restrictions or weirs, minimizing the risk of blockage and hydraulic losses. In addition to increasing the system headloss, orifices and internal weirs can increase the risk of blockage within the unit.

Maintenance

OVERVIEW

The Downstream Defender protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the Downstream Defender. The Downstream Defender will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the Downstream Defender will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

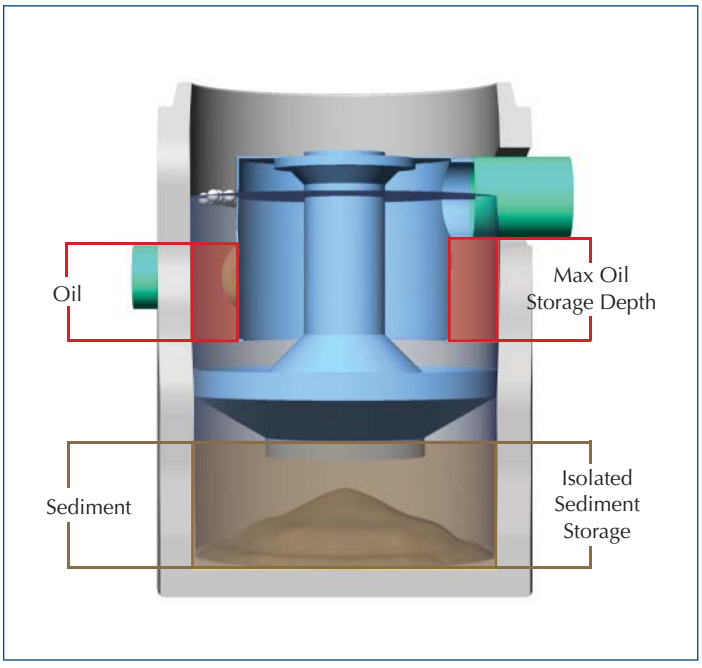


Figure 1: *Pollutant storage volumes of the Downswtream Defender*

The Downstream Defender allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole. On the 6-ft, 8-ft and 10-ft units, the floatables access port is above the outlet pipe between the concrete manhole wall and the dip plate. The sediment removal access ports for all Downstream Defender models are located directly over the hollow center shaft.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the Downstream Defender, nor do they require the internal components of the Downstream Defender to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

DETERMINING YOUR MAINTENANCE SCHEDULE

The frequency of cleanout is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil/flotables removal, for a 6-ft Downstream Defender typically takes less than 30 minutes and removes a combined water/oil volume of about 500 gallons.

INSPECTION PROCEDURES

Inspection is a simple process that does not involve entry into the Downstream Defender. Maintenance crews should be familiar with the Downstream Defender and its components prior to inspection.

SCHEDULING

- It is important to inspect your Downstream Defender every six months during the first year of operation to determine your site-specific rate of pollutant accumulation.
- Typically, inspection may be conducted during any season of the year

RECOMMENDED EQUIPMENT

- Safety Equipment and Personal Protective Equipment (traffic cones, work gloves, etc.)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net
- Sediment probe (such as a Sludge Judge®)
- Trash bag for removed floatables
- Downstream Defender Maintenance Log

Table 1

Downstream Defender Pollutant Storage Capacities and Max. Cleanout Depths

Unit Diameter	Total Oil Storage	Oil Clean-out Depth	Total Sediment Storage	Sediment Clean-out Depth	Max. Liquid Volume Removed
(feet)	(gal.)	(inches)	(gal.)	(inches)	(gal.)
4	70	<16	141	<18	384
6	230	<23	424	<24	1239
8	525	<33	939	<30	2884
10	1050	<42	1,757	<36	5546

NOTES

1. Refer to Dowmstream Defender Clean-out Detail (Fig. 1) for measurement of depths.

2. Oil accumulation is typically less than sediment, however, removal of oil and sediment during the same service is recommended.

3. Remove floatables first, then remove sediment storage volume.


Figure 4


Figure 5


Figure 6

INSPECTION PROCEDURES

1. Set up any necessary safety equipment around the access port or grate of the Downstream Defender as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the lids to the manhole. Figure 4. (NOTE: The 4-ft Downstream Defender® will only have one lid).

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. See Figure 7 and 8 for typical inspection views.

4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the outer annulus of the chamber.

5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel. Figure 5.

6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.

7. Securely replace the grate or lid.

8. Take down safety equipment.

9. Notify Hydro International of any irregularities noted during inspection.

FLOATABLES AND SEDIMENT CLEANOUT

Floatables cleanout is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Figure 6.

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

SCHEDULING

- Floatables and sump cleanout are typically conducted once a year during any season.
- Floatables and sump cleanout should occur as soon as possible following a spill in the contributing drainage area


Figure 7: *View over Center Shaft into sediment storage Zone*


Figure 8: *View of outer annulus of floatables and oil collection zone*

RECOMMENDED EQUIPMENT

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (flexible hose recommended)
- Downstream Defender Maintenance Log

FLOATABLES AND SEDIMENT CLEAN OUT PROCEDURES

1. Set up any necessary safety equipment around the access port or grate of the Downstream Defender as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the lids to the manhole (NOTE: The 4-ft Downstream Defender® will only have one lid).
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Using the Floatables Port for access, remove oil and floatables stored on the surface of the water with the vactor hose or the skimmer net. Figure 9.
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump via the Central Access Port. Vactor out the sediment and gross debris off the sump floor. Figure 6.
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
9. Securely replace the grate or lid.

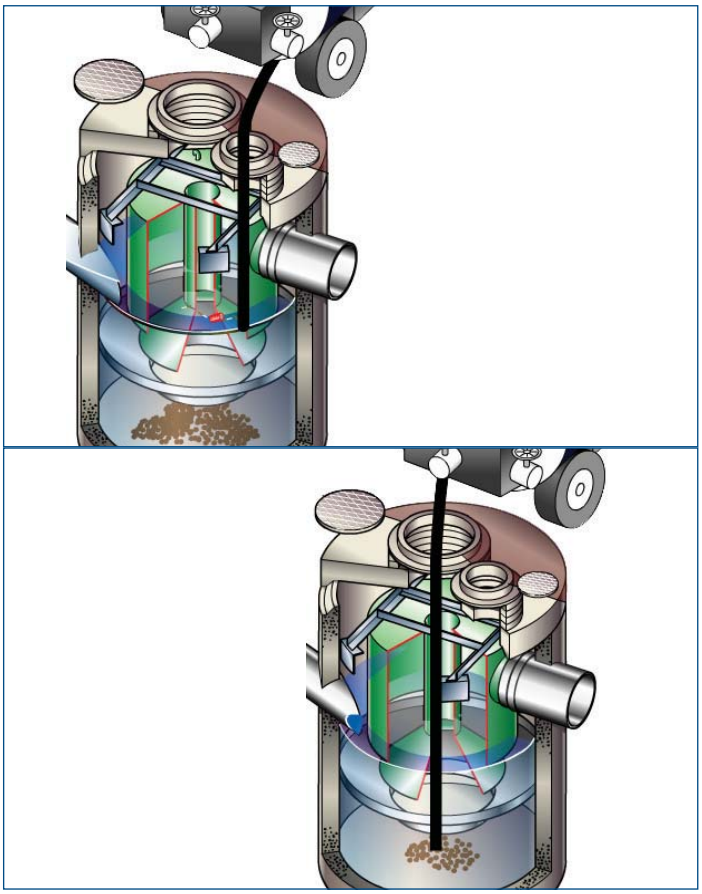


Figure 9: *Floatables and sediment are removed with a vactor hose*

Maintenance at a Glance

ACTIVITY	FREQUENCY
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area
NOTE: For most cleanouts it is not necessary to remove the entire volume of liquid in the vessel. Only removing the first few inches of oils/floatables and the sediment storage volume is required.	

Downstream Defender Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	**CONTRACTOR:**
CONTACT NAME:	**CONTACT NAME:**
COMPANY NAME:	**COMPANY NAME:**
ADDRESS:	**ADDRESS:**
TELEPHONE:	**TELEPHONE:**
FAX:	**FAX:**

INSTALLATION DATE: / /

MODEL (CIRCLE ONE): **4-FT** **6-FT** **8-FT** **10-FT** **CUSTOM**

Hydro International

Downstream Defender Inspection and Maintenance Log

DATE	INITIALS	DEPTH OF FLOATABLES AND OILS	SEDIMENT DEPTH MEASURED	VOLUME OF SEDIMENT REMOVED	SITE ACTIVITY AND COMMENTS

NOTES

NOTES

Hydro International

www.hydrointernational.biz

United Kingdom

Shearwater House • Clevedon Hall Estate
Victoria Road • Clevedon, BS21 7RD
Tel: +44 (0) 1275 878371
Fax: +44 (0) 1275 874979

United States

94 Hutchins Drive
Portland, ME 04102
Tel: 207 756 6200
Fax: 207 756 6212

Ireland

Tootenhill House
Rathcoole • Co Dublin
Tel: +353 (0)1 4013964
Fax: +353 (0)1 4013978

USDD0406

APPENDIX G

COLLEGE PARK
DESIGN CALCULATIONS

FUSS & O'NEILL

Job:	College Park	Job No.:	20071726.A1N
Prepared By:	CJR	Date:	1/14/2008
Revised By:		*Date:*	
Reviewed By:	CMZ	Date:	1/14/2008

Water Quality Volume per NYSDEC 90% Rule [a]

$WQ_v = [(P)*(R_v)*(A)]/12$

$R_v = 0.05+0.009(I)$; $R_{vmin} = 0.2$

I = impervious Cover (%)

P = 90% Rainfall Event Number

A = Site Area in acres

Table-1
Water Quality Volume per NYSDEC 90% Rule

Subcatchment Id	Total Area (Ac)	Impervious Area (Ac)	Impervious Cover (%)	Rv	P	WQv (Ac-Ft)	WQv (cf)	
P100	5.61	4.76	85%	0.814	0.95	0.3614	15,741	
P200	4.49	3.08	69%	0.667	0.95	0.2372	10,333	
P300	0.86	0.51	59%	0.584	0.95	0.0397	1,731	
	10.96	8.35	76%			0.64	27,805	=TOTAL WQv
							20,854	=75% of TOTAL WQv

Summary for Pond 6: water quality inlet

Inflow Area = 10.039 ac, 77.62% Impervious, Inflow Depth > 0.40" for WQv event
Inflow = 6.36 cfs @ 11.99 hrs, Volume= 0.332 af
Outflow = 6.36 cfs @ 11.99 hrs, Volume= 0.332 af, Atten= 0%, Lag= 0.0 min
Primary = 6.36 cfs @ 11.99 hrs, Volume= 0.332 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Primary area = Inflow area x 0.500
Peak Elev= 226.14' @ 11.99 hrs
Flood Elev= 232.10'

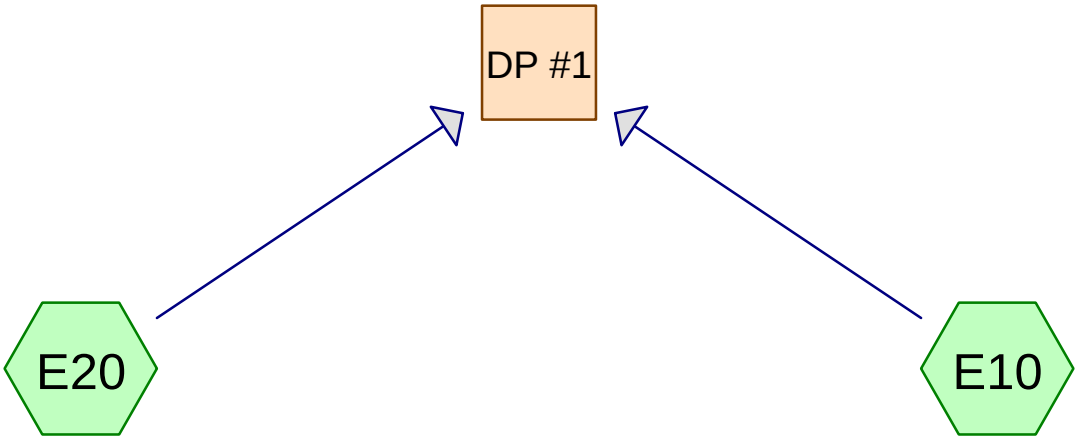
Device	Routing	Invert	Outlet Devices
#1	Primary	224.65'	**18.0" x 16.0' long Culvert** CPP, square edge headwall, Ke= 0.500 Outlet Invert= 224.49' S= 0.0100 '/' Cc= 0.900 n= 0.012
#2	Secondary	226.15'	**24.0" x 26.0' long Culvert** CPP, square edge headwall, Ke= 0.500 Outlet Invert= 225.84' S= 0.0119 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=6.19 cfs @ 11.99 hrs HW=226.11' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 6.19 cfs @ 4.47 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=224.66' (Free Discharge)
↑—**2=Culvert** (Controls 0.00 cfs)

APPENDIX H

COLLEGE PARK
PRE-DEVELOPMENT WATERSHED
CONDITIONS MODELING



Subcat Reach Pond Link

Drainage Diagram for College Park Pre
Prepared by Fuss & O'Neill of New York, PC, Printed 1/31/2008

Summary for Subcatchment E10:

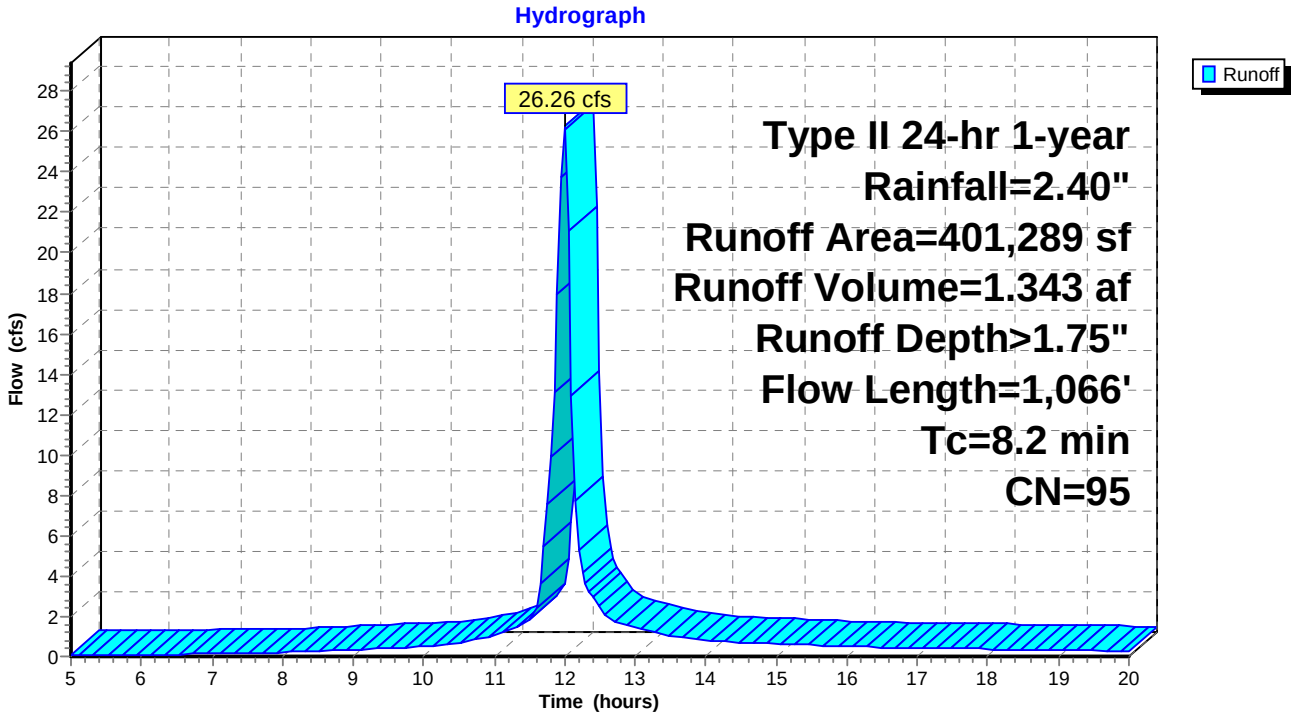
Runoff = 26.26 cfs @ 11.99 hrs, Volume= 1.343 af, Depth> 1.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.40"

Area (sf)	CN	Description
346,537	98	Impervious
54,752	74	>75% Grass cover, Good, HSG C
401,289	95	Weighted Average
54,752		Pervious Area
346,537		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	64	0.2000	0.25		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	86	0.0407	1.66		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
2.0	388	0.0261	3.28		**Shallow Concentrated Flow, C-D : Parking lot to CB** Paved Kv= 20.3 fps
1.1	528		8.00		**Direct Entry, D-DP#1 : CB to DP#1**
8.2	1,066	Total			

Subcatchment E10:



Summary for Subcatchment E20:

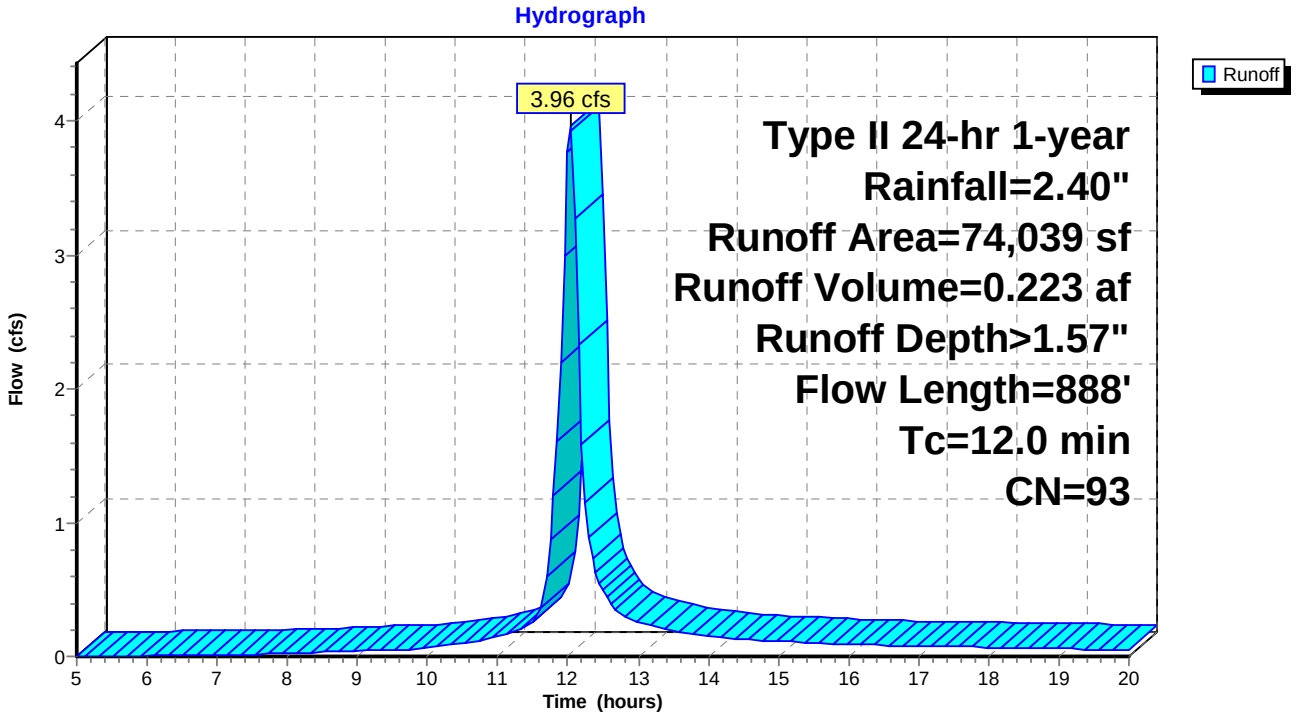
Runoff = 3.96 cfs @ 12.03 hrs, Volume= 0.223 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.40"

Area (sf)	CN	Description
58,971	98	Impervious
15,068	74	>75% Grass cover, Good, HSG C
74,039	93	Weighted Average
15,068		Pervious Area
58,971		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	64	0.3111	0.30		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
2.5	86	0.0029	0.58		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
5.8	708	0.0100	2.03		**Shallow Concentrated Flow, C-D : Nott Street** Paved Kv= 20.3 fps
0.1	30		8.00		**Direct Entry, D-DP#1 : Exist CB to DP#1**
12.0	888	Total			

Subcatchment E20:

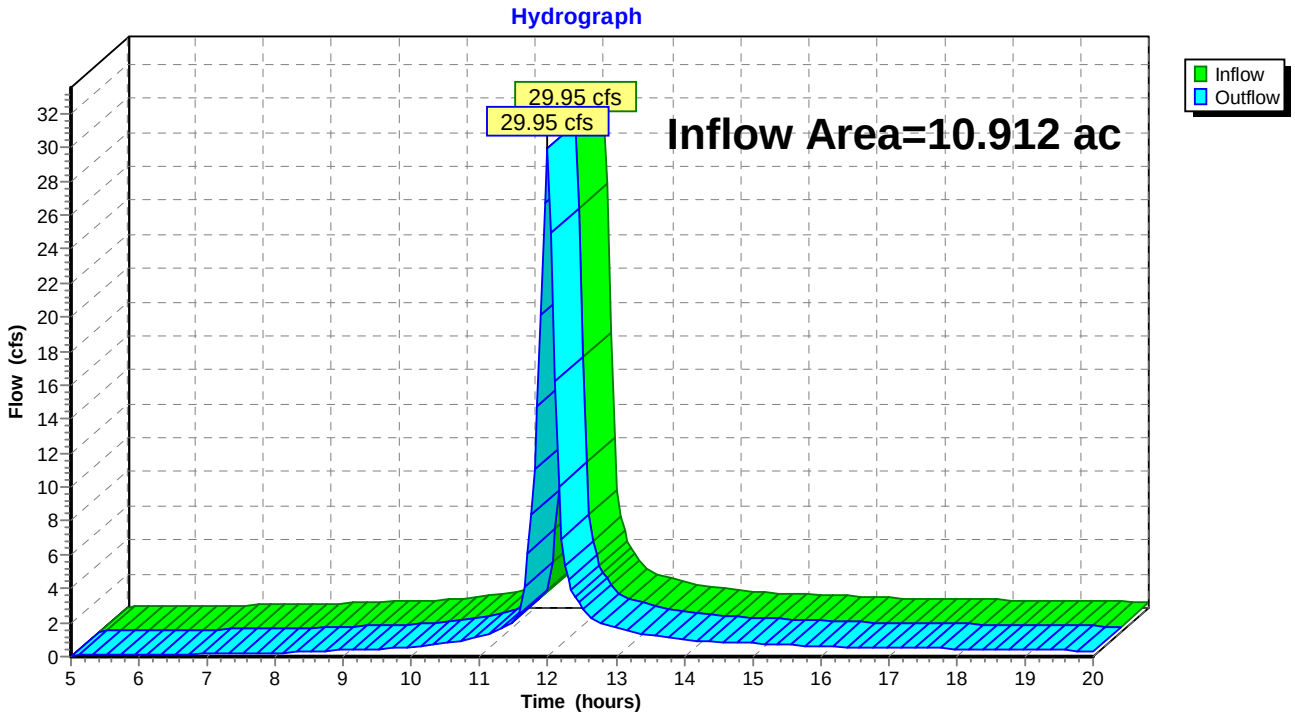


Summary for Reach DP #1:

Inflow Area = 10.912 ac, 85.31% Impervious, Inflow Depth > 1.72" for 1-year event
Inflow = 29.95 cfs @ 11.99 hrs, Volume= 1.566 af
Outflow = 29.95 cfs @ 11.99 hrs, Volume= 1.566 af, Atten= 0%, Lag= 0.0 min

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

Reach DP #1:



Summary for Subcatchment E10:

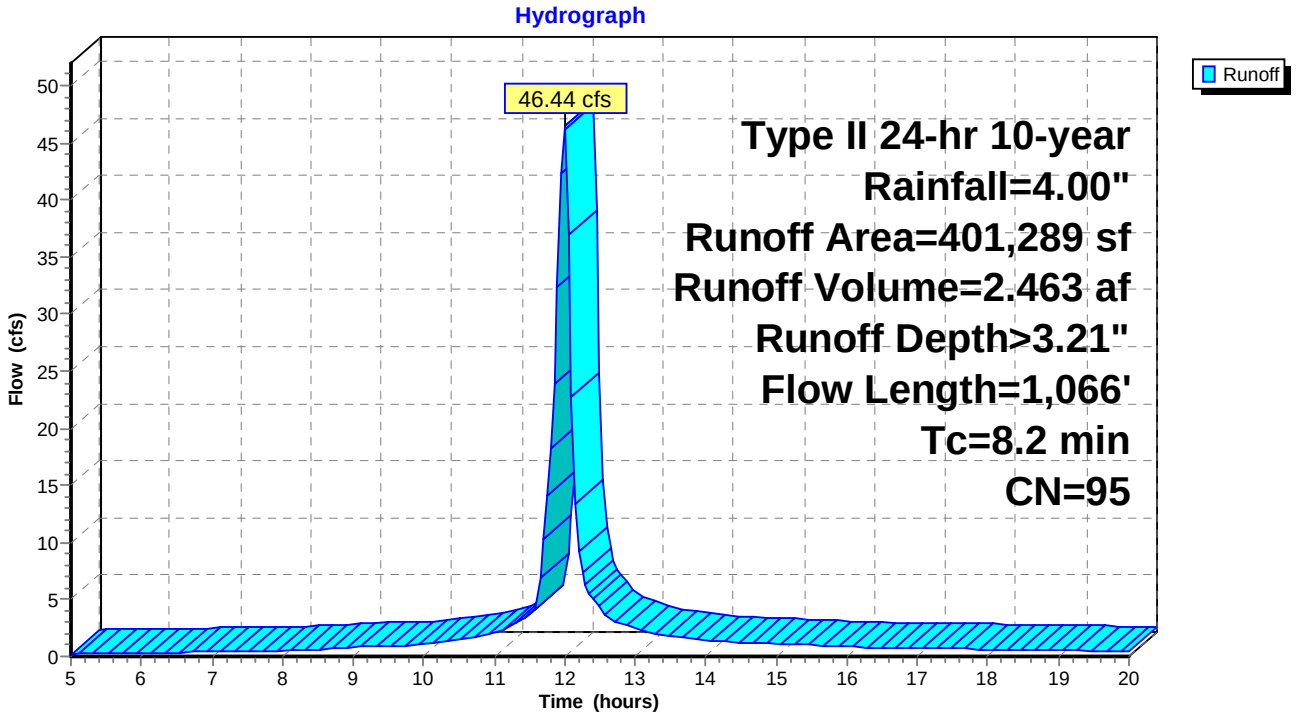
Runoff = 46.44 cfs @ 11.99 hrs, Volume= 2.463 af, Depth> 3.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.00"

Area (sf)	CN	Description
346,537	98	Impervious
54,752	74	>75% Grass cover, Good, HSG C
401,289	95	Weighted Average
54,752		Pervious Area
346,537		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	64	0.2000	0.25		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	86	0.0407	1.66		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
2.0	388	0.0261	3.28		**Shallow Concentrated Flow, C-D : Parking lot to CB** Paved Kv= 20.3 fps
1.1	528		8.00		**Direct Entry, D-DP#1 : CB to DP#1**
8.2	1,066	Total			

Subcatchment E10:



Summary for Subcatchment E20:

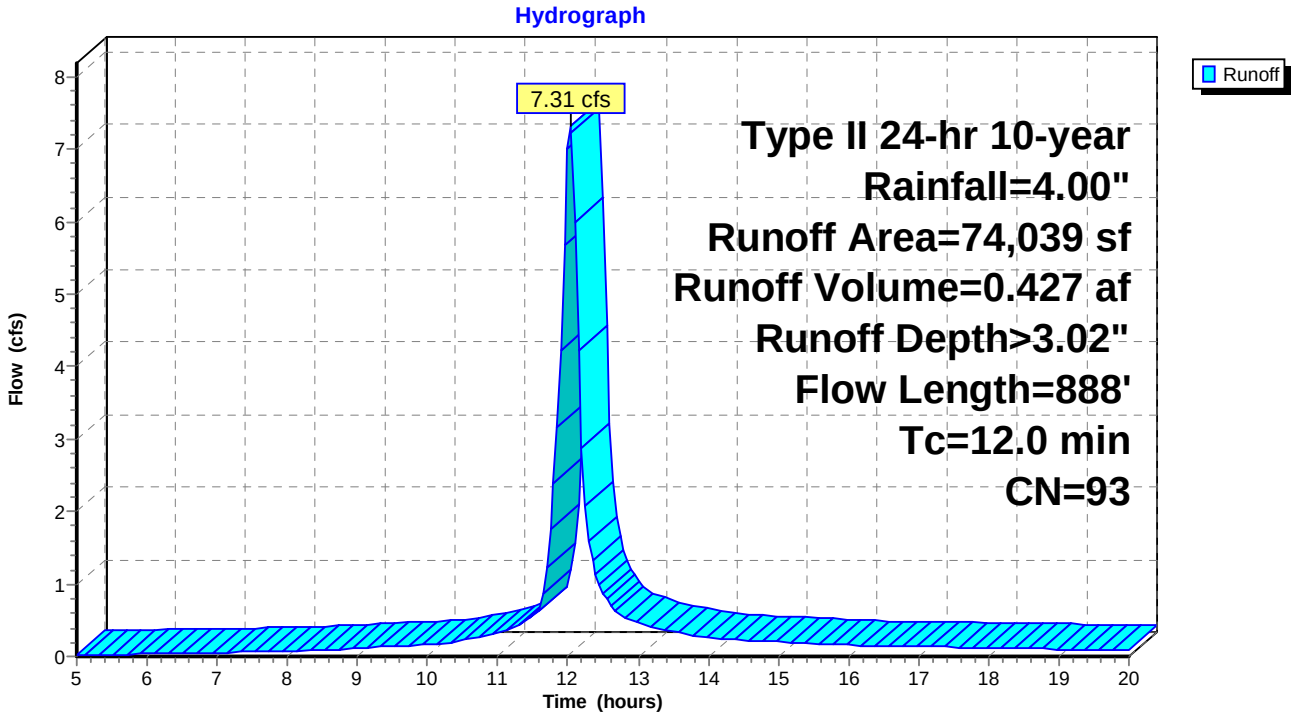
Runoff = 7.31 cfs @ 12.03 hrs, Volume= 0.427 af, Depth> 3.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.00"

Area (sf)	CN	Description
58,971	98	Impervious
15,068	74	>75% Grass cover, Good, HSG C
74,039	93	Weighted Average
15,068		Pervious Area
58,971		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	64	0.3111	0.30		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
2.5	86	0.0029	0.58		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
5.8	708	0.0100	2.03		**Shallow Concentrated Flow, C-D : Nott Street** Paved Kv= 20.3 fps
0.1	30		8.00		**Direct Entry, D-DP#1 : Exist CB to DP#1**
12.0	888	Total			

Subcatchment E20:

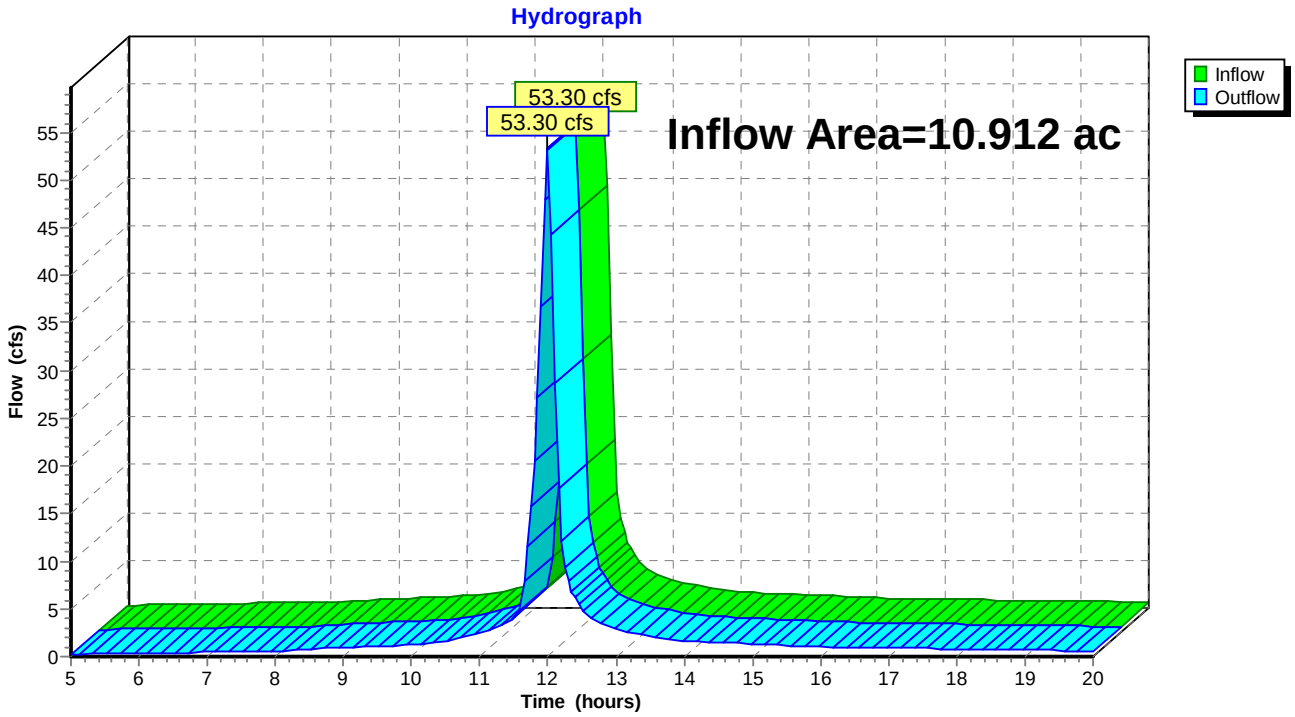


Summary for Reach DP #1:

Inflow Area = 10.912 ac, 85.31% Impervious, Inflow Depth > 3.18" for 10-year event
Inflow = 53.30 cfs @ 11.99 hrs, Volume= 2.890 af
Outflow = 53.30 cfs @ 11.99 hrs, Volume= 2.890 af, Atten= 0%, Lag= 0.0 min

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

Reach DP #1:



Summary for Subcatchment E10:

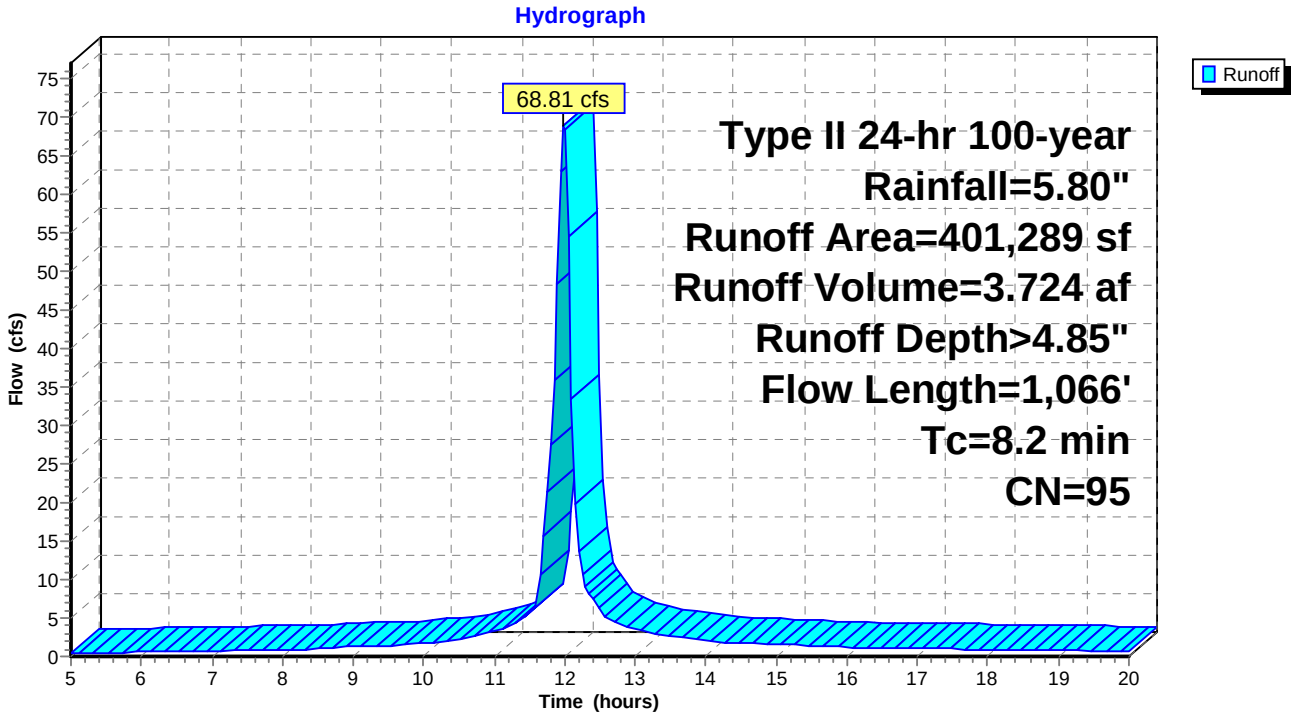
Runoff = 68.81 cfs @ 11.99 hrs, Volume= 3.724 af, Depth> 4.85"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=5.80"

Area (sf)	CN	Description
346,537	98	Impervious
54,752	74	>75% Grass cover, Good, HSG C
401,289	95	Weighted Average
54,752		Pervious Area
346,537		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	64	0.2000	0.25		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	86	0.0407	1.66		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
2.0	388	0.0261	3.28		**Shallow Concentrated Flow, C-D : Parking lot to CB** Paved Kv= 20.3 fps
1.1	528		8.00		**Direct Entry, D-DP#1 : CB to DP#1**
8.2	1,066	Total			

Subcatchment E10:



Summary for Subcatchment E20:

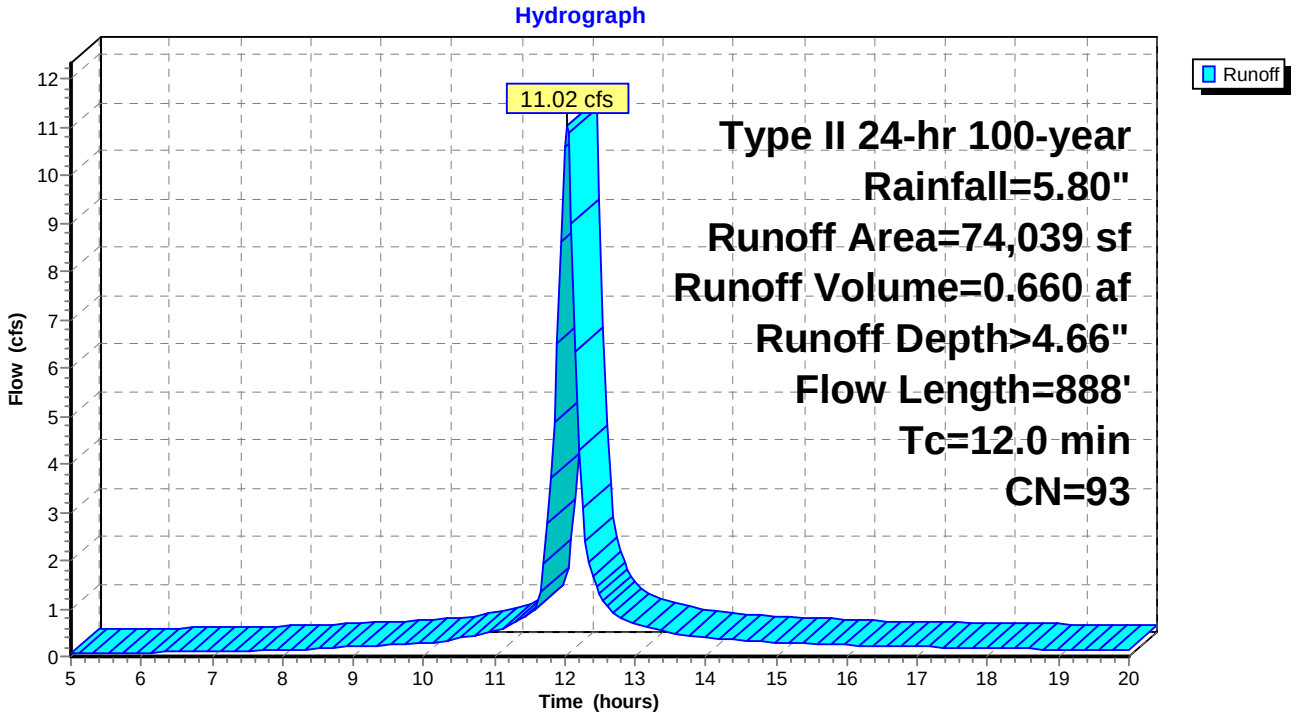
Runoff = 11.02 cfs @ 12.03 hrs, Volume= 0.660 af, Depth> 4.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=5.80"

Area (sf)	CN	Description
58,971	98	Impervious
15,068	74	>75% Grass cover, Good, HSG C
74,039	93	Weighted Average
15,068		Pervious Area
58,971		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	64	0.3111	0.30		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
2.5	86	0.0029	0.58		**Sheet Flow, B-C : Parking lot** Smooth surfaces n= 0.011 P2= 2.80"
5.8	708	0.0100	2.03		**Shallow Concentrated Flow, C-D : Nott Street** Paved Kv= 20.3 fps
0.1	30		8.00		**Direct Entry, D-DP#1 : Exist CB to DP#1**
12.0	888	Total			

Subcatchment E20:

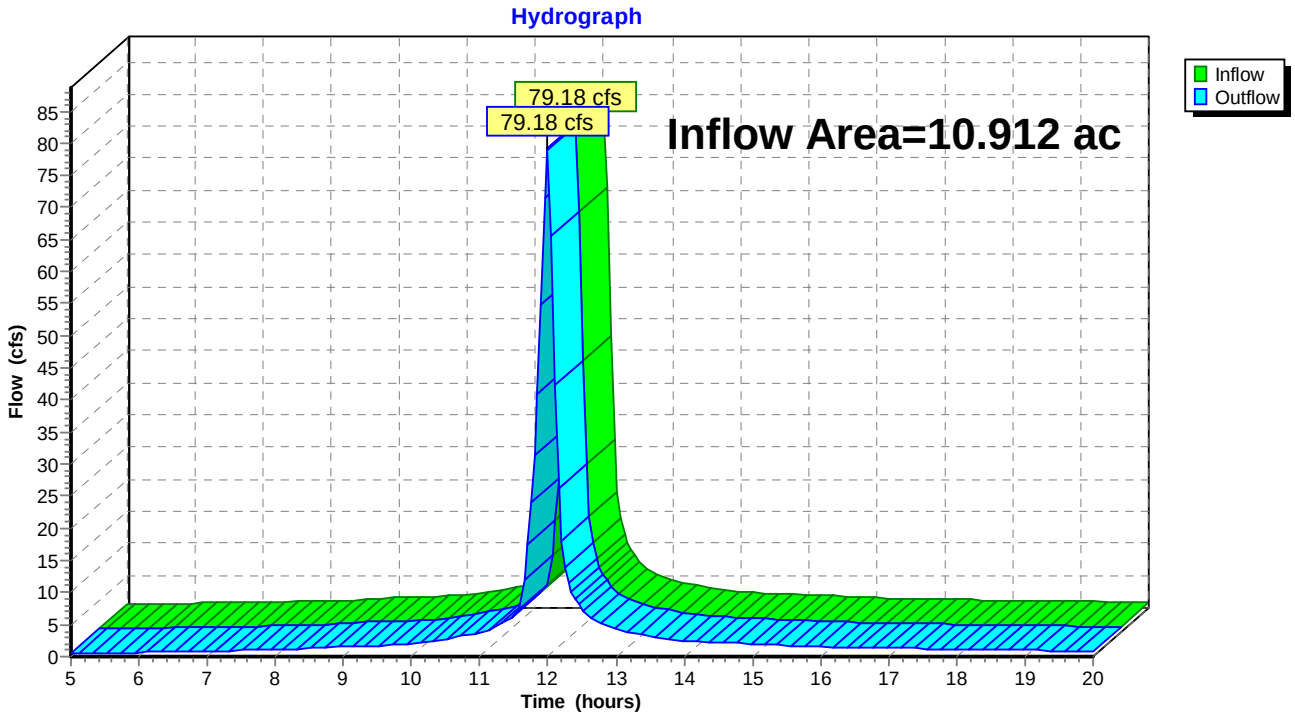


Summary for Reach DP #1:

Inflow Area = 10.912 ac, 85.31% Impervious, Inflow Depth > 4.82" for 100-year event
Inflow = 79.18 cfs @ 11.99 hrs, Volume= 4.383 af
Outflow = 79.18 cfs @ 11.99 hrs, Volume= 4.383 af, Atten= 0%, Lag= 0.0 min

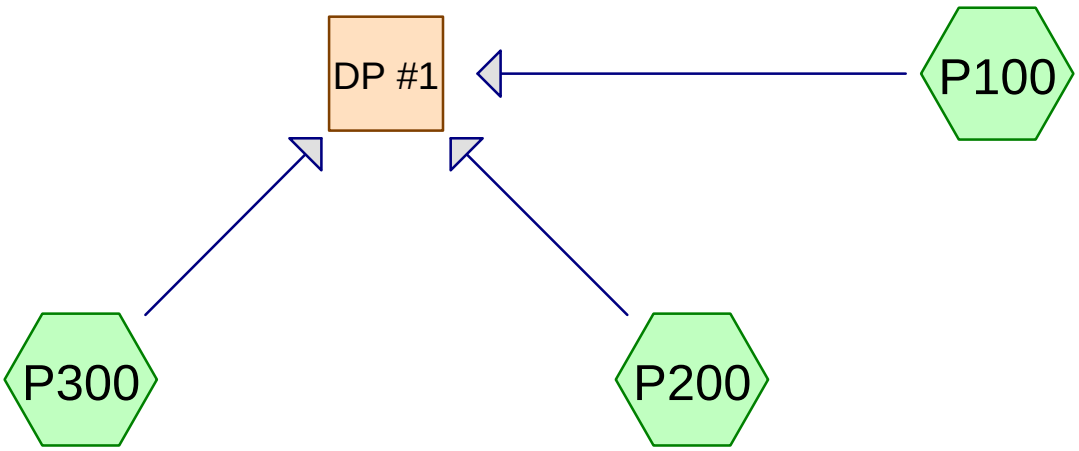
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP #1:



APPENDIX I

COLLEGE PARK
POST-DEVELOPMENT WATERSHED
CONDITIONS MODELING



Subcat Reach Pond Link

Drainage Diagram for College Park Post
Prepared by Fuss & O'Neill of New York, PC, Printed 1/31/2008

Summary for Subcatchment P100:

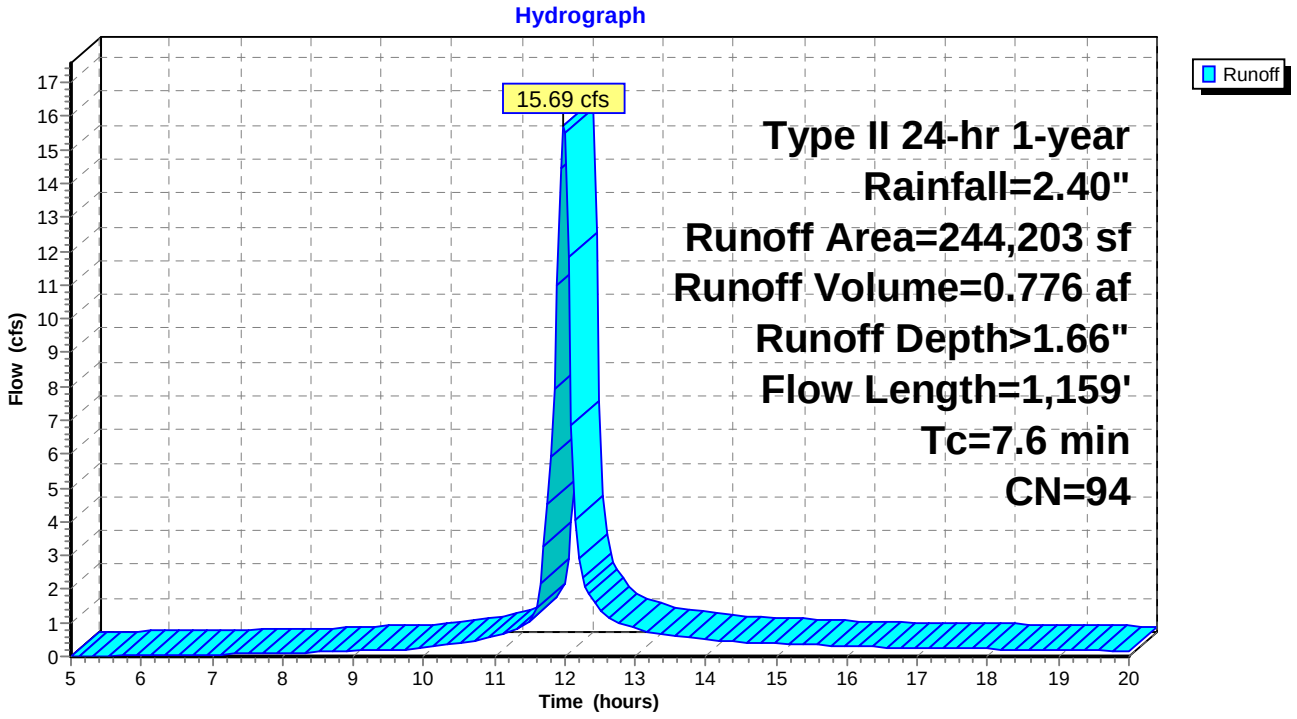
Runoff = 15.69 cfs @ 11.99 hrs, Volume= 0.776 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.40"

Area (sf)	CN	Description
207,237	98	Impervious
36,966	74	>75% Grass cover, Good, HSG C
244,203	94	Weighted Average
36,966		Pervious Area
207,237		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	55	0.2500	0.27		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	63	0.0198	1.17		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.6	244	0.0167	2.62		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	797		8.00		**Direct Entry, D-DP#1 : CB1 to DP#1**
7.6	1,159	Total			

Subcatchment P100:



Summary for Subcatchment P200:

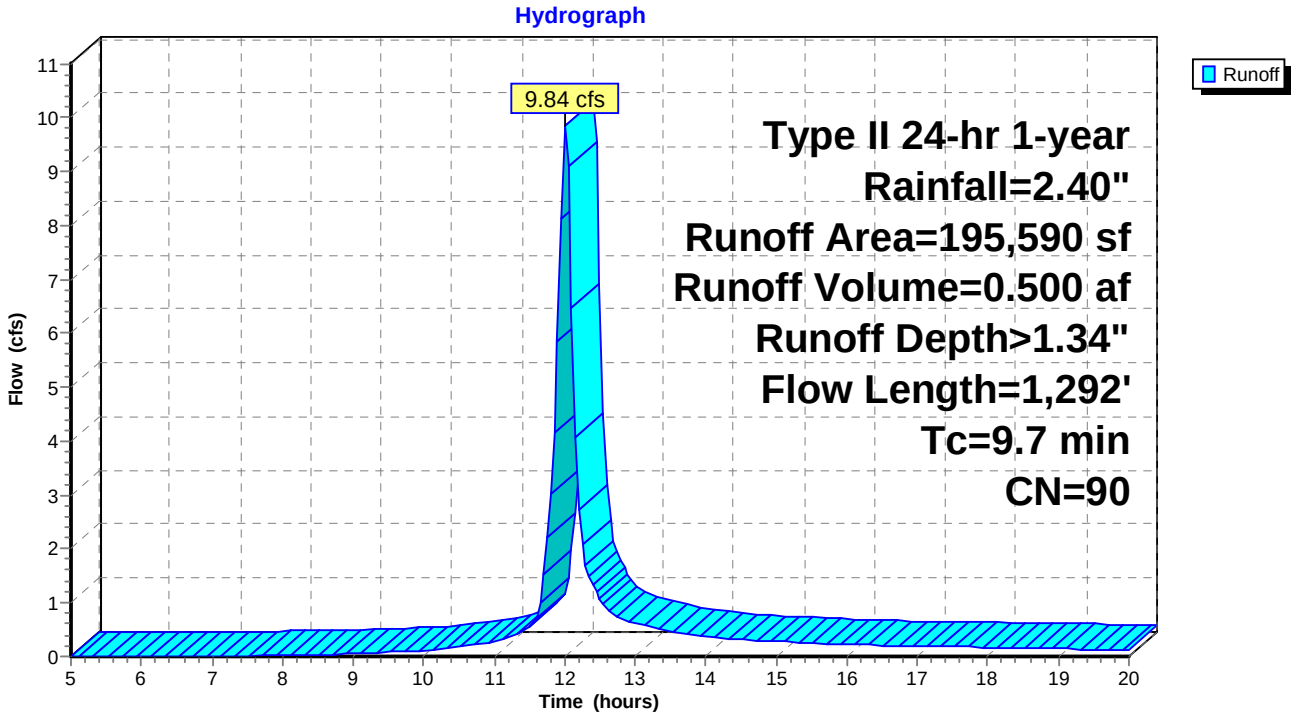
Runoff = 9.84 cfs @ 12.01 hrs, Volume= 0.500 af, Depth> 1.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.40"

Area (sf)	CN	Description
134,233	98	Impervious
61,357	74	>75% Grass cover, Good, HSG C
195,590	90	Weighted Average
61,357		Pervious Area
134,233		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	62	0.1166	0.20		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.1	88	0.0227	1.32		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.8	338	0.0227	3.06		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	804		8.00		**Direct Entry, D-DP#1 : CB9 to DP#1**
9.7	1,292	Total			

Subcatchment P200:



Summary for Subcatchment P300:

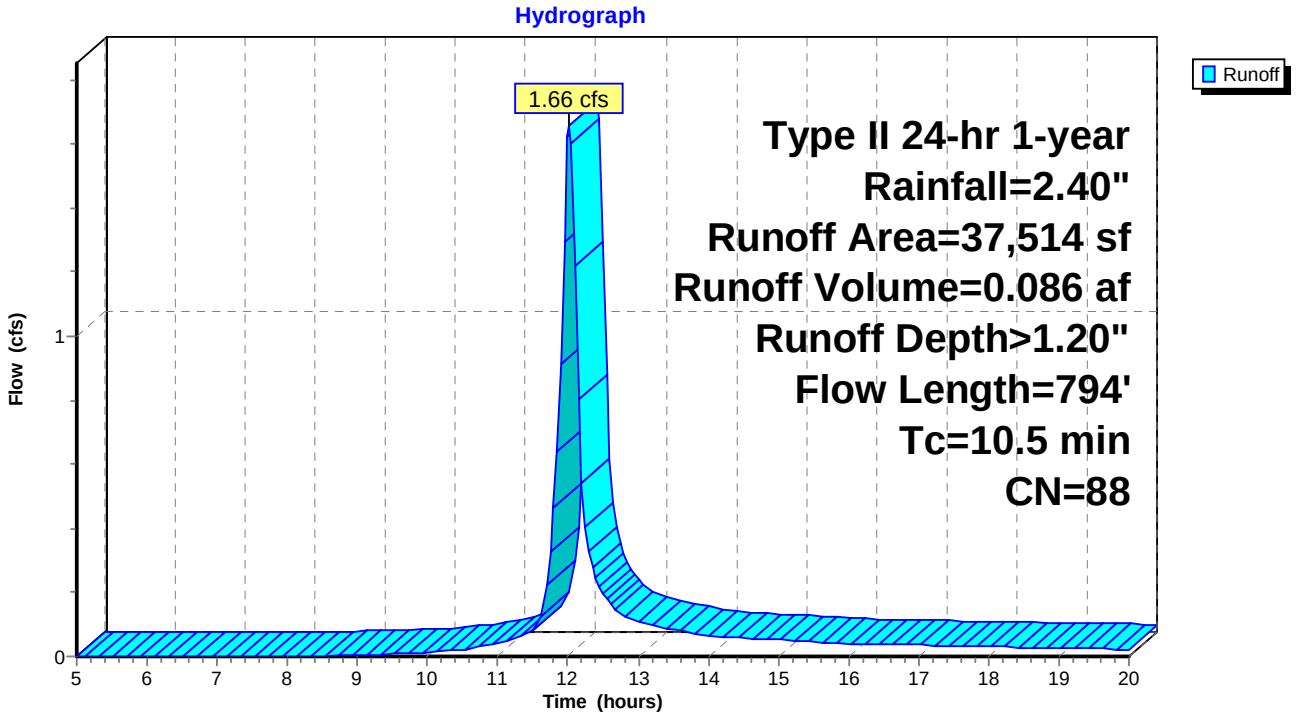
Runoff = 1.66 cfs @ 12.02 hrs, Volume= 0.086 af, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.40"

Area (sf)	CN	Description
22,186	98	Impervious
15,328	74	>75% Grass cover, Good, HSG C
37,514	88	Weighted Average
15,328		Pervious Area
22,186		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	39	0.0750	0.15		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.7	111	0.0125	1.09		**Sheet Flow, B-C : Nott St Sheet Flow** Smooth surfaces n= 0.011 P2= 2.80"
4.4	553	0.0108	2.11		**Shallow Concentrated Flow, C-D : Nott St to CB7** Paved Kv= 20.3 fps
0.2	91		8.00		**Direct Entry, D-DP#1 : CB7 to DP#1**
10.5	794	Total			

Subcatchment P300:

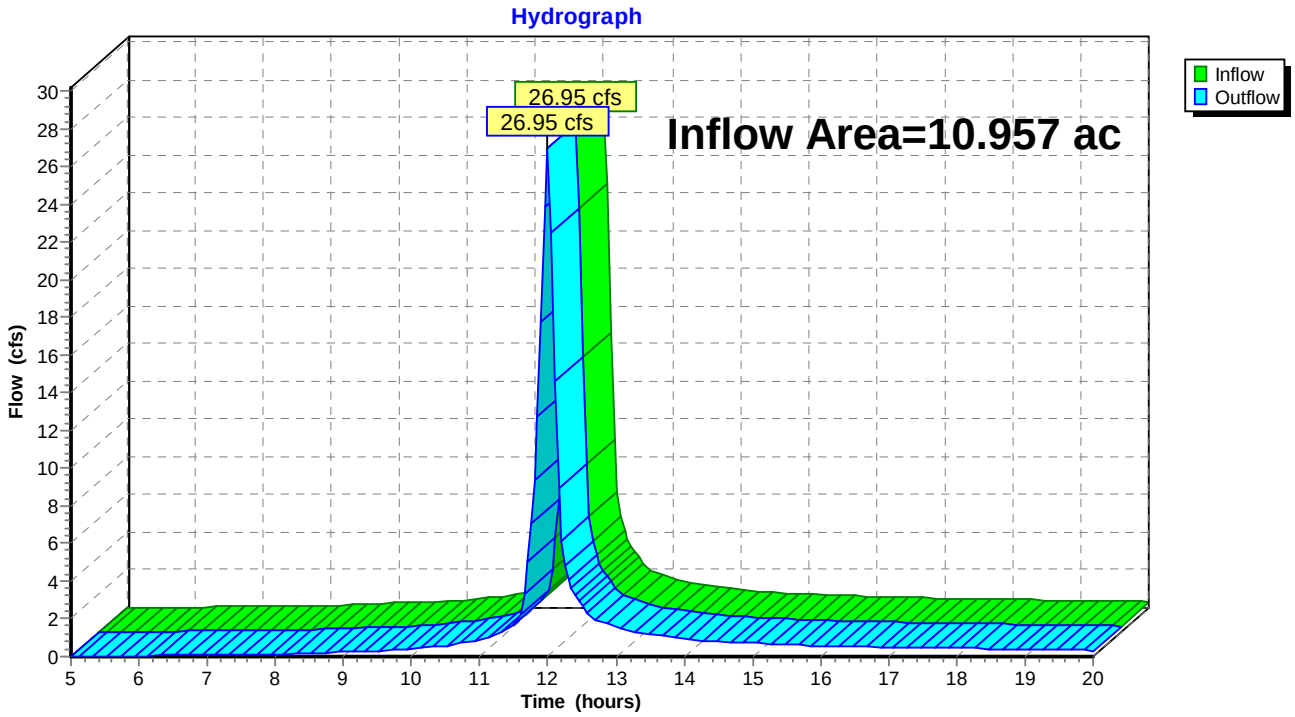


Summary for Reach DP #1:

Inflow Area = 10.957 ac, 76.19% Impervious, Inflow Depth > 1.49" for 1-year event
Inflow = 26.95 cfs @ 12.00 hrs, Volume= 1.362 af
Outflow = 26.95 cfs @ 12.00 hrs, Volume= 1.362 af, Atten= 0%, Lag= 0.0 min

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

Reach DP #1:



Summary for Subcatchment P100:

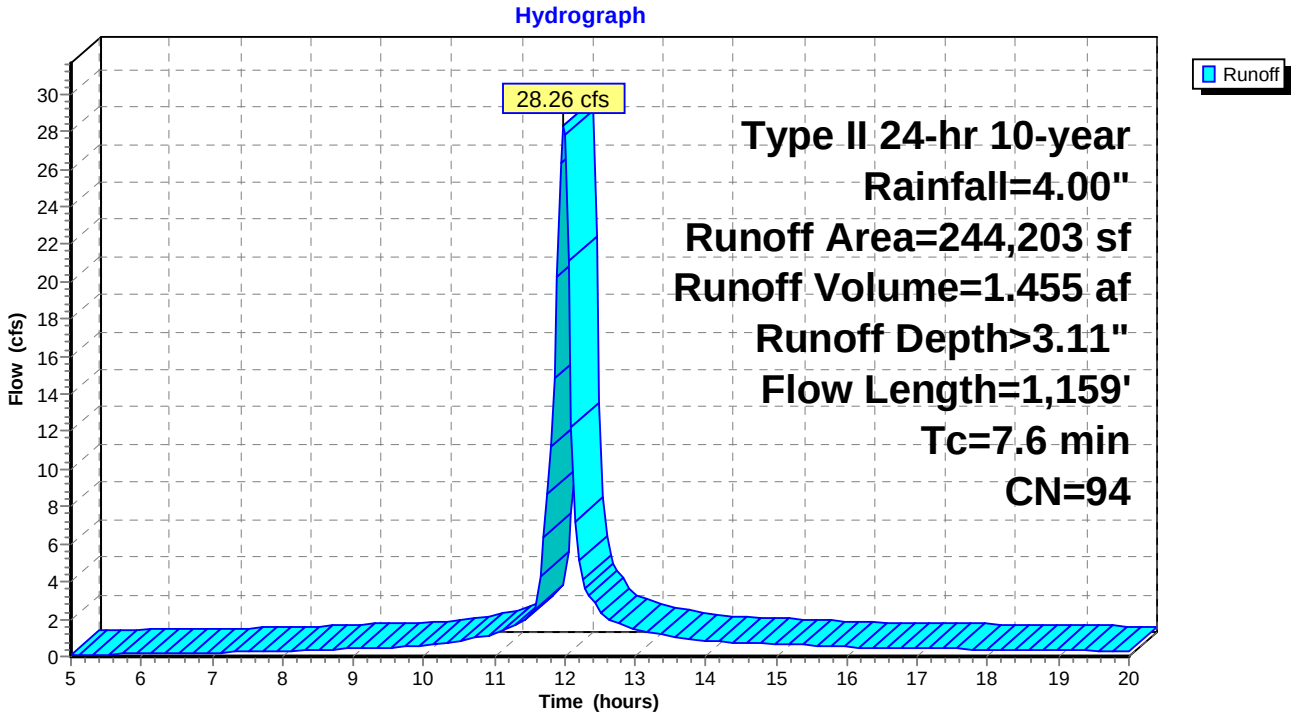
Runoff = 28.26 cfs @ 11.98 hrs, Volume= 1.455 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.00"

Area (sf)	CN	Description
207,237	98	Impervious
36,966	74	>75% Grass cover, Good, HSG C
244,203	94	Weighted Average
36,966		Pervious Area
207,237		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	55	0.2500	0.27		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	63	0.0198	1.17		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.6	244	0.0167	2.62		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	797		8.00		**Direct Entry, D-DP#1 : CB1 to DP#1**
7.6	1,159	Total			

Subcatchment P100:



Summary for Subcatchment P200:

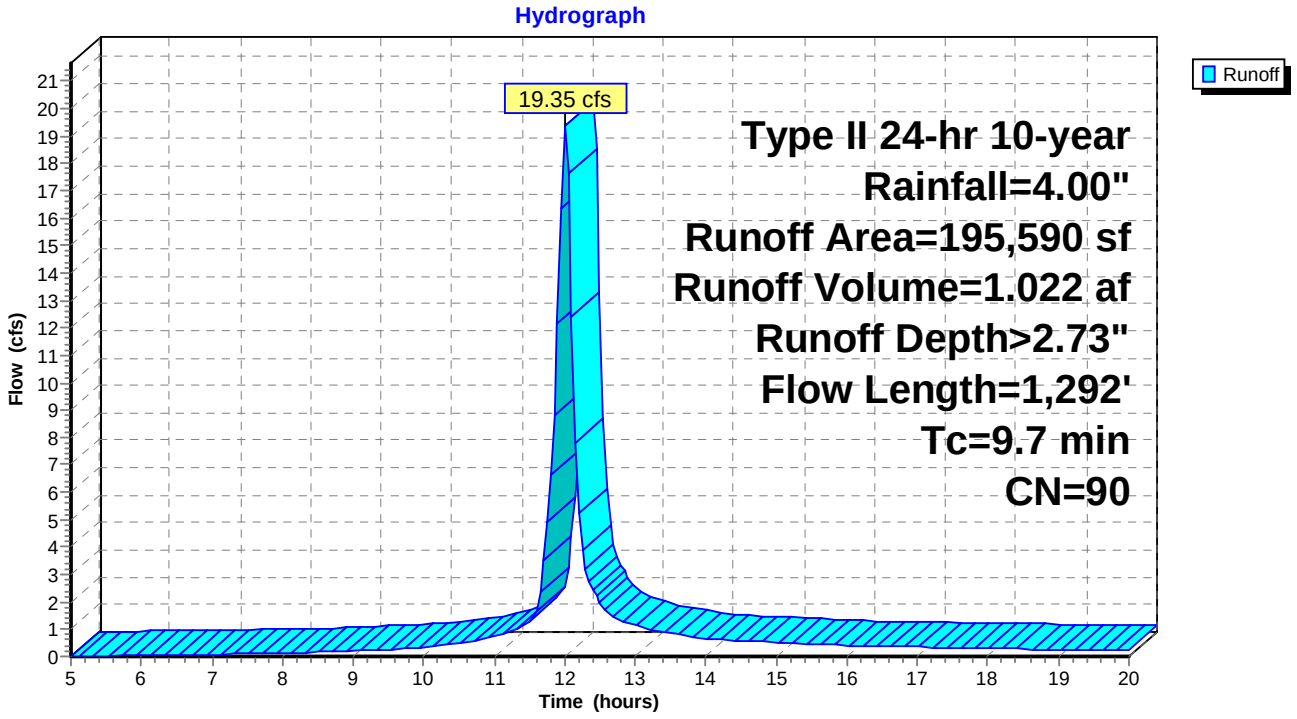
Runoff = 19.35 cfs @ 12.01 hrs, Volume= 1.022 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.00"

Area (sf)	CN	Description
134,233	98	Impervious
61,357	74	>75% Grass cover, Good, HSG C
195,590	90	Weighted Average
61,357		Pervious Area
134,233		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	62	0.1166	0.20		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.1	88	0.0227	1.32		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.8	338	0.0227	3.06		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	804		8.00		**Direct Entry, D-DP#1 : CB9 to DP#1**
9.7	1,292	Total			

Subcatchment P200:



Summary for Subcatchment P300:

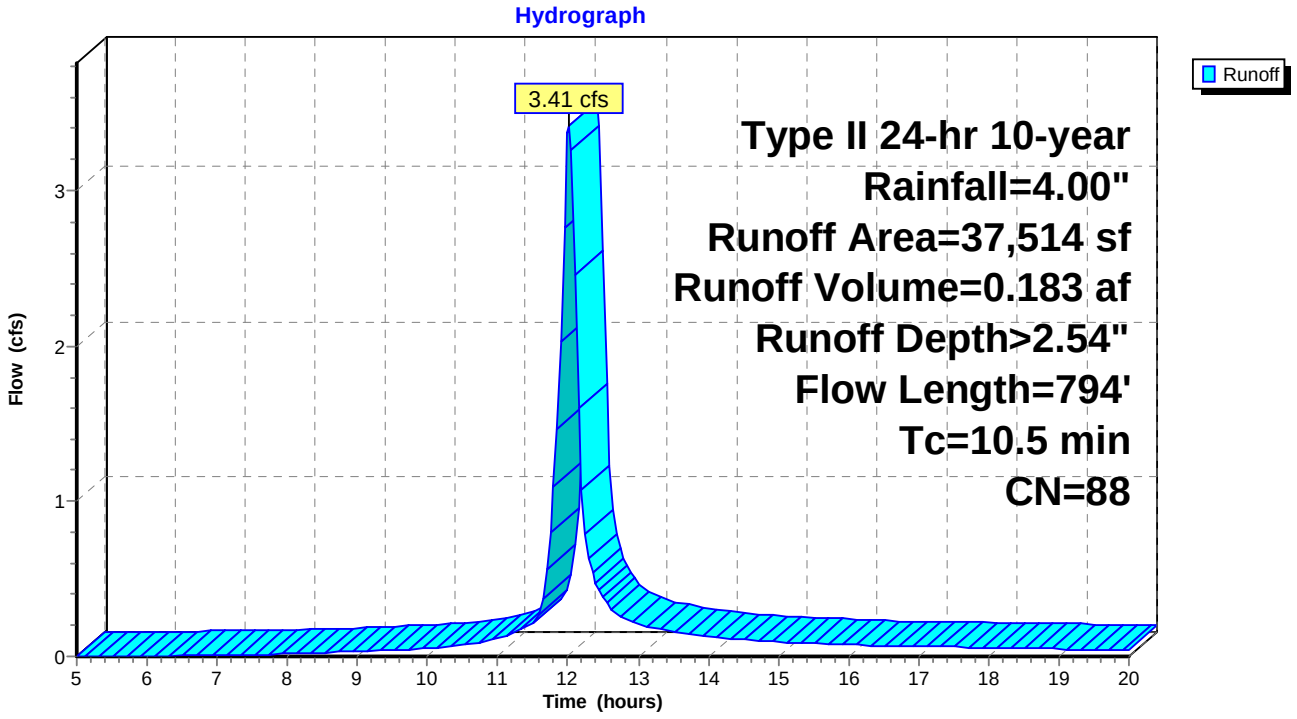
Runoff = 3.41 cfs @ 12.02 hrs, Volume= 0.183 af, Depth> 2.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.00"

Area (sf)	CN	Description
22,186	98	Impervious
15,328	74	>75% Grass cover, Good, HSG C
37,514	88	Weighted Average
15,328		Pervious Area
22,186		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	39	0.0750	0.15		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.7	111	0.0125	1.09		**Sheet Flow, B-C : Nott St Sheet Flow** Smooth surfaces n= 0.011 P2= 2.80"
4.4	553	0.0108	2.11		**Shallow Concentrated Flow, C-D : Nott St to CB7** Paved Kv= 20.3 fps
0.2	91		8.00		**Direct Entry, D-DP#1 : CB7 to DP#1**
10.5	794	Total			

Subcatchment P300:

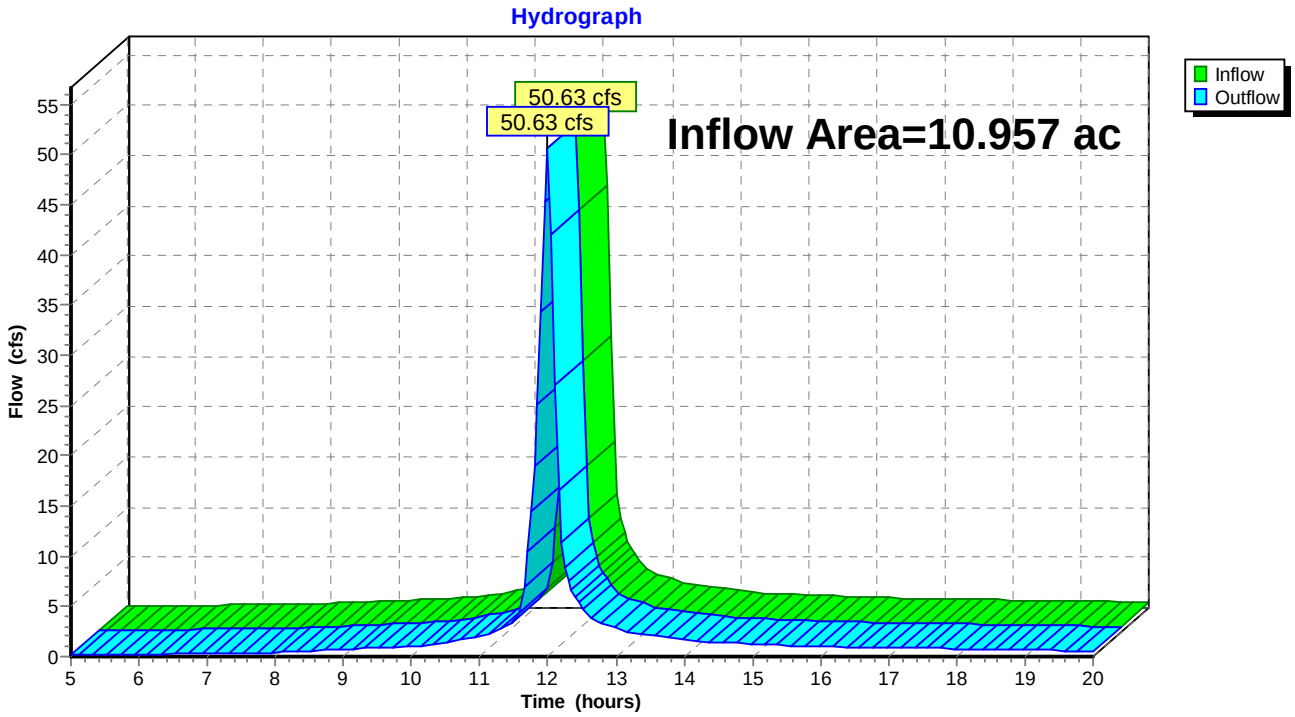


Summary for Reach DP #1:

Inflow Area = 10.957 ac, 76.19% Impervious, Inflow Depth > 2.91" for 10-year event
Inflow = 50.63 cfs @ 11.99 hrs, Volume= 2.659 af
Outflow = 50.63 cfs @ 11.99 hrs, Volume= 2.659 af, Atten= 0%, Lag= 0.0 min

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

Reach DP #1:



Summary for Subcatchment P100:

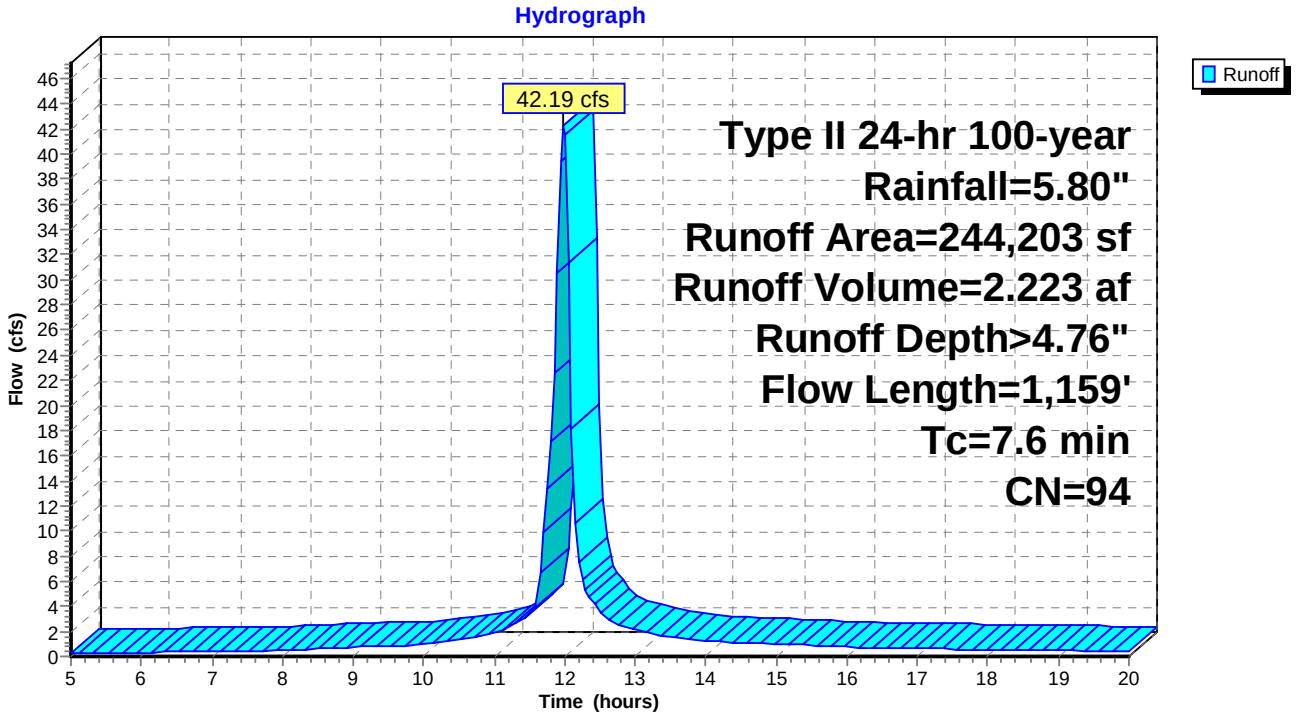
Runoff = 42.19 cfs @ 11.98 hrs, Volume= 2.223 af, Depth> 4.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=5.80"

Area (sf)	CN	Description
207,237	98	Impervious
36,966	74	>75% Grass cover, Good, HSG C
244,203	94	Weighted Average
36,966		Pervious Area
207,237		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	55	0.2500	0.27		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
0.9	63	0.0198	1.17		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.6	244	0.0167	2.62		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	797		8.00		**Direct Entry, D-DP#1 : CB1 to DP#1**
7.6	1,159	Total			

Subcatchment P100:



Summary for Subcatchment P200:

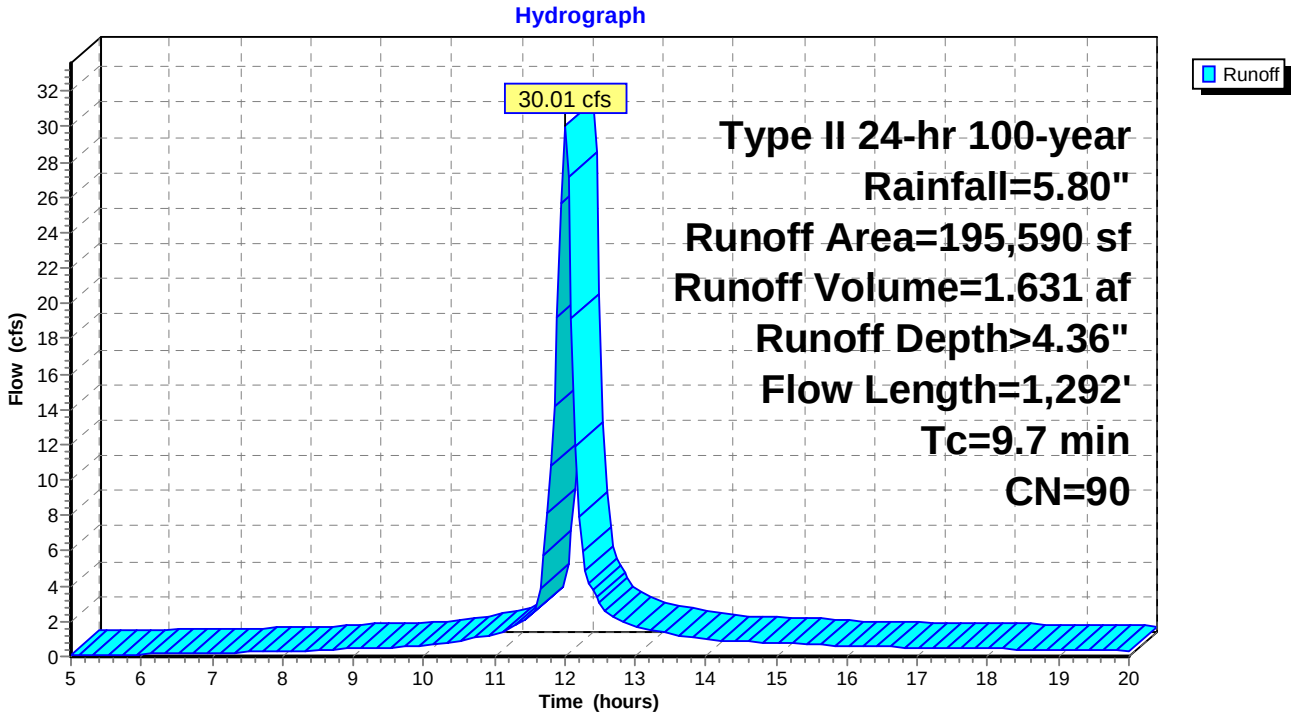
Runoff = 30.01 cfs @ 12.01 hrs, Volume= 1.631 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=5.80"

Area (sf)	CN	Description
134,233	98	Impervious
61,357	74	>75% Grass cover, Good, HSG C
195,590	90	Weighted Average
61,357		Pervious Area
134,233		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	62	0.1166	0.20		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.1	88	0.0227	1.32		**Sheet Flow, B-C : Parking lot sheet flow** Smooth surfaces n= 0.011 P2= 2.80"
1.8	338	0.0227	3.06		**Shallow Concentrated Flow, C-D : Parking lot** Paved Kv= 20.3 fps
1.7	804		8.00		**Direct Entry, D-DP#1 : CB9 to DP#1**
9.7	1,292	Total			

Subcatchment P200:



Summary for Subcatchment P300:

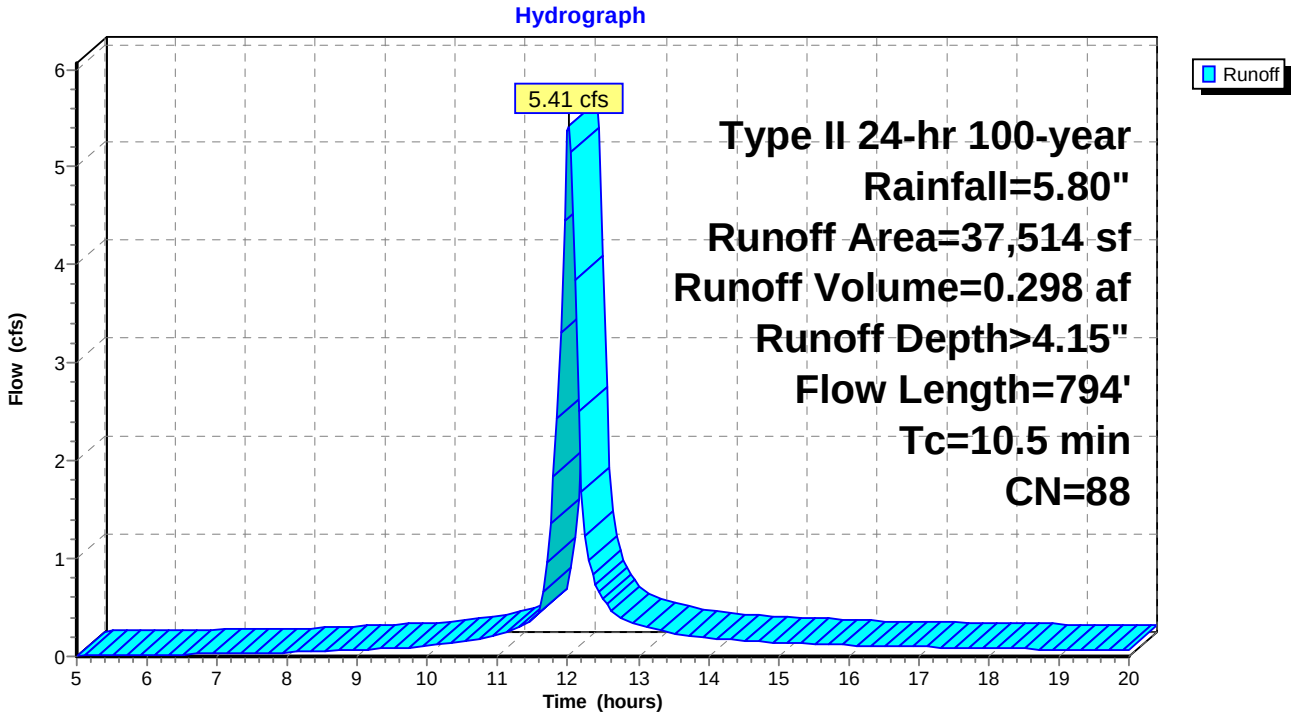
Runoff = 5.41 cfs @ 12.02 hrs, Volume= 0.298 af, Depth> 4.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=5.80"

Area (sf)	CN	Description
22,186	98	Impervious
15,328	74	>75% Grass cover, Good, HSG C
37,514	88	Weighted Average
15,328		Pervious Area
22,186		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	39	0.0750	0.15		**Sheet Flow, A-B : Lawn** Grass: Dense n= 0.240 P2= 2.80"
1.7	111	0.0125	1.09		**Sheet Flow, B-C : Nott St Sheet Flow** Smooth surfaces n= 0.011 P2= 2.80"
4.4	553	0.0108	2.11		**Shallow Concentrated Flow, C-D : Nott St to CB7** Paved Kv= 20.3 fps
0.2	91		8.00		**Direct Entry, D-DP#1 : CB7 to DP#1**
10.5	794	Total			

Subcatchment P300:

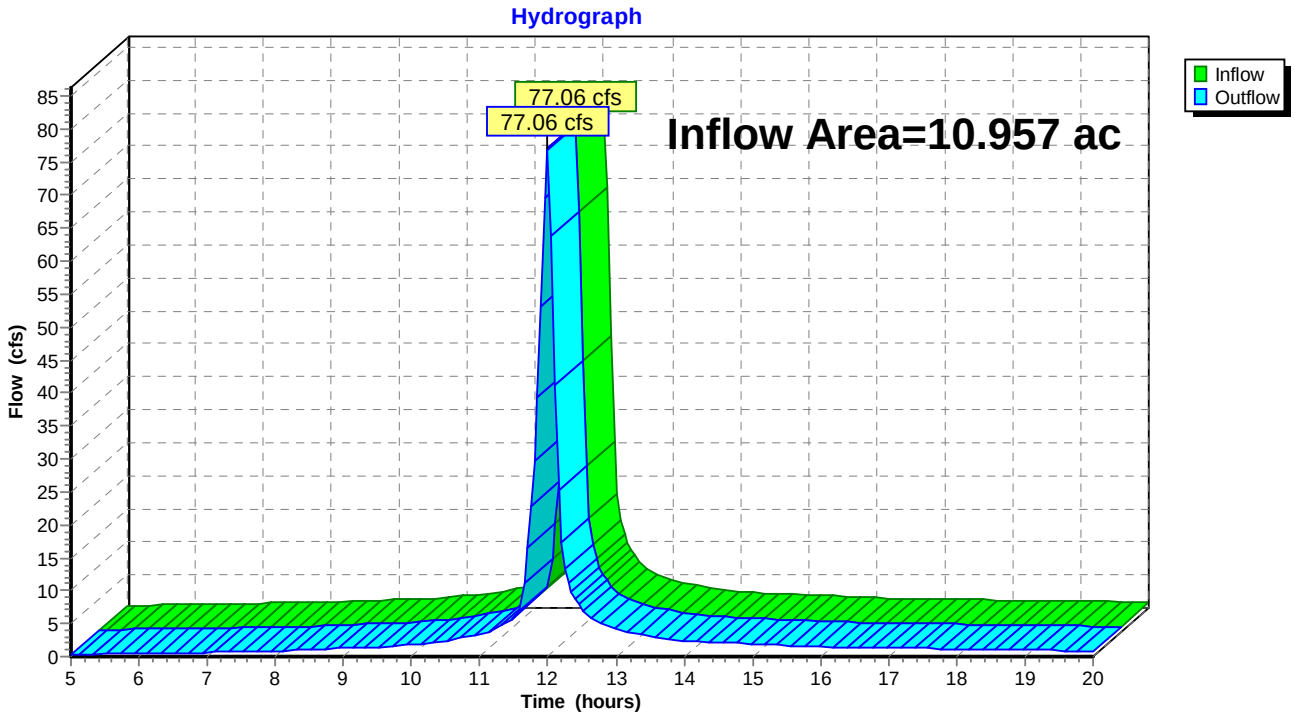


Summary for Reach DP #1:

Inflow Area = 10.957 ac, 76.19% Impervious, Inflow Depth > 4.55" for 100-year event
Inflow = 77.06 cfs @ 11.99 hrs, Volume= 4.152 af
Outflow = 77.06 cfs @ 11.99 hrs, Volume= 4.152 af, Atten= 0%, Lag= 0.0 min

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

Reach DP #1:



APPENDIX F

FORMS

APPENDIX F - EXHIBIT 1

GROUNDWATER SAMPLING LOG

NORTHEASTERN
ENVIRONMENTAL
TECHNOLOGIES CORP.

WATER LEVEL MEASUREMENTS

Sheet ___ of ___

PROJECT:_____

CLIENT:_____ PROJECT #._____

SAMPLER:_____ TIME OF ARRIVAL:_____

MEASURING DEVICE:_____ TIME OF DEPARTURE:_____

TEMP / WEATHER:_____

DATE:_____

Well Id	Total Depth	Depth to Product	Depth to Water	Volume Bailed	Color	Odor	Recovery Time	Temp.	pH	Sample Time	Sampling Depth*

* Groundwater samples should be allowed to recover to original elevation prior to sampling

Comments: