CARMINA WOOD
DESIGN

STORMWATER POLLUTION PREVENTION PLAN
for
CONSTRUCTION ACTIVITIES

At

Proposed Warehouse
North America Drive
West Seneca, Erie County, New York

Prepared for

Sonwil

2732 Transit Road
West Seneca, NY 14224

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101 SCOPE

A. **PURPOSE:** Sonwil has placed an emphasis on following the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity governing storm water discharges during construction, and in accordance with erosion control practices. The Contractor's participation in this program is mandatory and its non-compliance is subject to various remedies, including without limitation, monetary set-offs, withholding payments; reimbursement for costs, expenses (including reasonable attorney's fees), fines and civil penalties incurred by Sonwil; and/or liquidated damages. This section provides a descriptive explanation of Sonwil's Storm Water Pollution Prevention Program and required Contractor participation.

The Engineer of record for this project certifies that this SWPPP meets the requirements and is in compliance with the New York State Stormwater Management Design Manual and latest NYSDEC Phase II stormwater regulation requirements.

B. **SPDES General Permit for Stormwater Discharges from Construction Activity:** Regulations promulgated by the NYSDEC to regulate the discharge of storm water from construction activities on sites where more than one (1) acre of soil is disturbed. One of the ways to comply with these regulations for affected sites is to request coverage under the General Permit for Construction Activities for New York State. In order to use the General Permit, a Notice of Intent (NOI) form must be completed and submitted to the NYSDEC and a Storm Water Pollution Prevention Plan (SWPPP) for the site must be prepared and followed during the construction activities.

Approval from a regulated, traditional land use control MS4:

1. An **owner or operator** of a construction activity that is <u>not</u> subject to the requirements of a regulated, traditional land use control MS4 must first develop a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the NYSDEC.

2. An **owner or operator** of a construction activity that is subject to the requirements of a regulated, traditional land use control MS4 must first develop a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the MS4 prior to submitting the NOI to the NYSDEC. 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".

C. **RESPONSIBILITIES OF THE CONTRACTOR:** The Contractor shall manage the discharge of storm water from the site in accordance with the NYSDEC General Permit for Construction Activities conditions and the following provisions of this section. The Operator shall be responsible for conducting the storm water management practices in accordance with the permit. The Contractor shall be responsible for providing **qualified inspectors** to conduct the inspections required by the SWPPP. The Contractor shall be responsible for any enforcement action taken

or imposed by federal, state, or local agencies, including the cost of fines, construction delays, and remedial actions resulting from the Contractor's failure to comply with the permit provisions. It shall be the responsibility of the Contractor to make any changes to the SWPPP necessary when the Contractor or any of his subcontractors elects to use borrow or fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction site. Such sites are considered to be part of the construction site covered by the permit and this SWPPP. Off-site borrow, fill, or material storage sites which are used for multiple construction projects are not subject to this requirement, unless specifically required by state or local jurisdictional entity regulations. The Contractor should consider this requirement in negotiating with earthwork subcontractors, since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections required by the SWPPP for the site.

D. **NOTICE OF INTENT:** The Operator has petitioned the NYSDEC for coverage under the storm water discharges during construction at this site to be covered by the SPDES General Permit for Construction Activity for the State of New York. A Notice of Intent (NOI) for coverage under this permit has been filed by the Operator. The SWPPP must be prepared prior to submittal of the NOI form. The Operator will require the Contractor to be a co-permittee with the Operator. The Contractor will be required to maintain the NOI at the construction site along with any building permits. Construction work can begin 5 business days after the submittal of the eNOI. The MS4 SWPPP Acceptance Form must also be submitted along with the SWPPP.

E. **CONTRACTOR CERTIFICATION & TRAINING:** Proof of Training/Certification of the Contractor's designated individual shall be kept on site at all times.

F. **REQUIREMENTS FOR THE GENERAL CONTRACTOR AND SUBCONTRACTOR(S):** The General Contractor and Subcontractor(s) shall sign the "Contractor's Certification Statement" (located in the Appendix of this report) verifying they have been instructed on how to comply with and fully understand the requirements of the SPDES General Permit for Construction Activity for the State of New York and the SWPPP. These certifications must be signed, by a responsible corporate officer or other party meeting the "Signatory Requirements" of the SPDES General Permit, on behalf of each entity, prior to the beginning of any construction activities.

G. **STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS:** The SWPPP is meant to be a working document that shall be maintained at the site of the Construction Activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or NYSDEC or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the Final Stabilization section of this document. A sign or other notice must be posted near the main entrance of the construction site which contains a completed NOI, the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other state specific requirements.

H. **INSPECTIONS AND RECORD-KEEPING:**

A. <u>General Construction Site Inspection and Maintenance Requirements</u>

1. The **owner or operator** must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.

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

B. Owner or operator Maintenance Inspection Requirements

1. The **owner or operator** shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.

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

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

C. Qualified inspector Inspection Requirements

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

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

- Licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or

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

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

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

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

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

   d. Construction activities located in the watersheds identified in Appendix D of the General Permit that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

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

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

   b. For construction sites where soil disturbance activities are on-going and the **owner or operator** has received authorization in accordance with Part II.C.3 of the General Permit to **disturb greater than five (5) acres** of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

   c. For construction sites where soil disturbance activities have been **temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas**, the **qualified inspector** shall conduct a site inspection at least once every thirty (30) calendar days. The **owner or operator** shall notify the Regional Office stormwater contact person

(see contact information in Appendix F of the General Permit) or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the **owner or operator** of the construction activity) in writing prior to reducing the frequency of inspections.

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

3. 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, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.

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

   a. Date and time of inspection;

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

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

   d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment

from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

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

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

g. 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;

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;

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); and

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

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

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

SWPPP. Copies of the inspection reports shall also be provided to the MS4 electronically.

Record Retention - The **owner or operator** shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the site achieves final stabilization. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

I. **SWPPP MODIFICATIONS:** The inspection report should also identify if any revisions to the SWPPP are warranted due to unexpected conditions. The SWPPP is meant to be a dynamic working guide that is to be kept current and amended whenever there is a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants or when the plan proves to be ineffective in eliminating or significantly minimizing pollutant discharges. The Contractor's failure to modify or report deficiencies to the Operator will result in the Contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action.

J. **FINAL STABILIZATION AND TERMINATION OF PERMIT COVERAGE:** A site can be considered finally stabilized when all soil disturbing activities have been completed and a uniform perennial vegetative cover with a density of **85%** for the unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been established and the facility no longer discharges storm water associated with construction activities and a Notice of Termination (NOT) form filed by the Operator(s) with the NYSDEC. The Operator's Project Manager must complete the NOT. The NOT must be signed by the signatory (or equivalent position) on the NOI, the qualified inspector and the MS4 and subsequently submitted to the appropriate agency. The Operator's Project Manager must provide a completed copy of the NOT to the Contractor for inclusion in the SWPPP, which will then be optically scanned into the final SWPPP document as required. This filing terminates coverage under the General Permit and terminates the Contractor's responsibility to implement the SWPPP, but the requirements of the SWPPP, including periodic inspections, must be continued until the NOT is filed. The **owner or operator** shall also have the **qualified inspector** perform a final site inspection prior to submitting the NOT to the Department. Final payment and/or the release of retainage may be withheld until all provisions of the SWPPP have been submitted, completed and accepted by the Operator.

102 PROJECT NAME AND LOCATION

Proposed Warehouse

North America Drive

Town of West Seneca, County of Erie, New York

Easting: 196258.735

Northing: 4750161.634

Estimated Area of Site ≈ 32 acres

Estimated Area to be disturbed by Construction Activities ≈ 31 acres

A general location map is included as Appendix A.

103 OPERATOR'S NAME AND ADDRESS

Sonwil

2732 Transit Road

West Seneca, NY 14224

Contact Person: Peter Wilson

Telephone: 716-684-0555

104 PROJECT DESCRIPTION

This project is a development of approximately 31 Acres of a 60 acre site located at the east end of North America Drive. Construction will consist of the 333,852 sf warehouse building and associated vehicle and trailer parking. A rail spur is also proposed as part of this project. The proposed site development area to be disturbed for this project is approximately 32 acres.

Soil disturbing activities will include:

A. Construction of temporary construction exit point

B. Clearing & grubbing of the site within disturbance limits

C. Mass grading

D. Installation of building pad and foundations

E. Installation of the detention basin, bioretention area including topsoil & seed

F. Installation of storm sewer pipes and inlets

G. Construction of utilities

H. Construction of curbing and pavement

I. Final grading & landscaping

The site is owned by Sonwil and will be developed by the same. The work area consists of approximately 31 acres for which erosion and sediment controls have been developed and fully addressed in this written plan and the Erosion and Sediment Control Plans. See the construction documents for additional details.

105 RUNOFF COEFFICIENT, SOILS, AND RAINFALL INFORMATION

The soils on the portion of the site in the project area are approximately 8% "A", 37% "C", 55% "D" type soils per the Web Soil survey. The initial runoff curve number for the pre-construction site is "CN" = 75. The post-construction runoff curve number for the site will be

"CN" = 92. The site is 60 acres of which approximately 31 acres will be disturbed by construction activities.

See soils information located in Appendix H.

The site is in Erie County, which receives an average of approximately 45 inches rainfall annually with the highest amounts of rainfall received in the months of May thru September. Annual snow for this area is approximately 120 inches.

106 WATERS

The runoff generated from the site will discharge to the existing creek on the east side of the site following the storm water management area.

107 INDIAN COUNTRY LANDS

This project is not located on Indian Lands.

108 ENDANGERED AND THREATENED SPECIES

No endangered or threatened species have been determined to be on the site.

109 CRITICAL HABITAT

See section 108 above.

110 HISTORIC PLACES

A Phase 1A/1B Cultural Resource Investigation was prepared by Powers Archaeology, dated 5/11/22. This investigation found nothing of concern and recommended no additional investigation. A SHPO clearance letter was issued on _____.

The NYSHPO information is included in the Appendix I of this report.

111 WETLANDS AND/OR OTHER SURFACE WATERS

NYSDEC wetlands are not present on site. Jurisdictional Federal wetlands are not located on site. The above was determined per the Wetland Delineation report prepared by Earth Dimensions dated 10/30/19. The Wetland Delineation Report and Jurisdictional Determination are included in the Appendix of this report.

112 EROSION AND SEDIMENT CONTROLS

112.1 STABILIZATION PRACTICES

Stabilization practices for this site include:

A. Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed.

B. Use of stabilization method for all slopes having a slope greater than 1V:3H.

C. Seeding and planting of all disturbed areas

D. Vegetation preservation in undisturbed areas.

E. Frequent watering to minimize wind erosion during construction.

a. **For sites where 5 acres or more are disturbed at any one time:** 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 most current version of the New York Standards and Specifications for Erosion and Sediment Control.

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

c. The **owner or operator** shall install any additional measures needed to protect water quality.

112.2 STRUCTURAL PRACTICES

A. Inlet protection using a method detailed in the Construction Documents.

B. Perimeter protection using temporary silt fence/silt sock or silt sock.

C. Outlet protection using rip-rap stone and end sections.

D. Stabilized Construction Entrance.

E. Temporary stone wash off areas.

F. Storm sewer, curb/gutter.

G. Sediment traps and basins.

112.3 SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

Construct temporary construction exit at locations shown on the Demolition & Erosion Control Plans.

B. Install perimeter silt fence/silt socks in the locations shown on the Demolition & Erosion Control Plan Sheet.

C. Clear & Grub site.

D. Installation of detention basin to act as sediment basin (do not install bioretention soil or underdrains until stabilized)

E. Commence site grading.

F. Install building pad and foundation.

G. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.

H. Installation of proposed utilities.

I. Finalize pavement subgrade preparation.

J. Construct all curb, drainage inlets, storm sewer pipes and storm sewer manholes, as shown on the plans. Install temporary inlet protection at the locations of all inlets.

K. Dust control.

L. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.

M. Install base material as required for pavement.

N. Carry out final grading and seeding and planting.

O. Clean storm system following construction, clean detention basins of any silt and return to design grades.

P. Remove silt fencing/silt sock only after all paving is complete and exposed surfaces are stabilized.

Q. Remove temporary construction exits only prior to pavement construction in these areas.

Note: Sediment control storage during construction (traps & basins) during construction shall be 134 cy per acre of disturbance per NYSDEC requirements.

112.4 STORM WATER MANAGEMENT

The existing site currently sheet drains to the existing creek on the east portion of the site and off site to the property to the north. The proposed site will continue to drain to both points following development.

The proposed onsite storm sewer system for this project consists of smooth interior and HDPE pipes connected by a series of catch basins to include bioretention areas and a dry detention basin located on the east portion of the site. Storm water runoff will be conveyed through the pipe network and bioretention areas and ultimately discharge to the existing creek on the east side of the site. A portion of the north and far west parts of the site will continue to sheet drain to the property to the north. This discharge will be less than existing.

The bioretention areas on site is designed to provide the minimum required runoff reduction volume (RRv) for the 32 acre project area. The soils in the vicinity of the bioretention area are

mainly USDA hydrologic group 'C' and 'D' therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention areas will consist of 6" perforated HDPE underdrains in drainage gravel, followed by filter fabric and then finally 18" minimum of bioretention soil. Overflow catch basins will be installed to allow 6" maximum ponding for RRv treatment. Stormwater detention is required per NYSDEC standards and specifications. The proposed storm water management area outlet structure is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates.

Runoff reduction volume (RRv), water quality volume (WQv) and stormwater volume attenuation for the site is designed in accordance with Chapter 4 of the NYSDEC Stormwater design manual. The bioretention areas will be provided as a "green infrastructure" practice to provide runoff reduction to meet the Chapter 4 requirements for the currently undeveloped areas. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The amount of impervious cover post-development is 18.0 acres. The proposed dry detention basin is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates.

The NYSDEC Stormwater Management Design Manual requires a five-step process for Stormwater Management Planning as outlined in Chapter 3. The five steps include:

1. Site planning to preserve natural features and reduce impervious cover.
    - The entire portion of the site east of the creek will remain undisturbed.
2. Calculation of Water Quality Volume (WQv=RRv) for site.
    - See Stormwater Drainage Calculations.
3. Incorporation of Green Infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity.
    - A bioretention area was incorporated into the site design to provide required RRv for the development. See Stormwater Drainage Calculations.
4. Use of standard SMPs where applicable, to treat the portion of water quality volume not addressed by green infrastructure techniques and standard SMPs with RRv capacity.
    - Since the provided RRv is less than the WQv required, use of standard SMPs to treat the remaining WQv is applicable.
5. Design of volume and peak rate control practices where required.
    - See Stormwater Drainage Calculations.

The NYSDEC Stormwater Management Design Manual requires (5) five different criteria be considered when designing a stormwater management system. Those criteria are Water Quality, Runoff Reduction Volume, Channel Protection, Overbank Flooding and Extreme Storm Protection. Below is a summary of each item and how it is incorporated into this project.

Water Quality & Runoff Reduction Volume:

The NYSDEC requires reduction of the total water quality volume by green infrastructure techniques and SMP's to replicate pre-development hydrology. A bioretention area was incorporated into the site layout to provide the minimum required RRv for contributing WQv runoff area for the development. The bioretention area will provide 17,280 cf RRv. The minimum RRv required is 16,691 cf. The bioretention will also treat 47,334 cf of WQv. The required WQv = 64,614 cf. The sum of the WQv treated and the RRv is equal to the required WQv, therefore the practice is acceptable.

Channel Protection:

The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 26,743 cf is accommodated in the detention basin at elevation 674.69.

Overbank Flooding:

The NYSDEC requires that the 10-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event. A volume of 96,797 cf is accommodated in the detention basin at elevation 676.24.

Extreme Storm Protection:

The NYSDEC requires that the 100-year proposed storm event be attenuated with detention and that the outlet be restricted to the 100-year existing storm event. A volume of 226,706 cf is accommodated in the detention basin at elevation 678.63.

Refer to engineer's report for storm sewer design criteria, runoff summary table and stormwater drainage calculations.

113 OTHER CONTROLS

113.1 OFF-SITE VEHICLE TRACKING

A stabilized construction exit will be provided to help reduce vehicle tracking of sediments. Existing paved areas will remain as long as possible and will be used for vehicle wash areas and to further aid in the reduction of vehicle tracking of sediments. The paved streets adjacent to the site entrance shall be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material to/from the construction site will be covered with a tarpaulin. The job site superintendent will be responsible for seeing that these procedures are followed.

113.2 EXCAVATION SPOIL MATERIALS

Excavation spoil materials are potentially generated during grading operations for this project. These materials must be properly managed to prevent them from contributing to storm water discharges. The materials generated from the development of this project will be hauled off-site or stockpiled for re-use in designated areas which will have temporary erosion & sediment

control measures installed. Any removal from site will be done under the necessary permits required by the local governing agencies.

113.3 DUST CONTROL

Minimizing wind erosion and controlling dust will be accomplished by one or more of the following methods:

A. Frequent watering of excavation and fill areas.

B. Providing gravel or paving at entrance/exit drives, parking areas and transit paths.

113.4 WASTE DISPOSAL

If needed, all waste materials will be collected and stored in securely lidded metal dumpsters rented from an approved waste management company. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpsters. The dumpsters will be emptied when full and then hauled to a NYSDEC approved landfill for proper disposal. No construction waste will be buried on-site. All personnel will be instructed regarding the correct procedures for waste disposal.

113.5 SANITARY WASTE

If needed, portable toilet units or field offices with toilet facilities connected to the municipal sanitary sewer will be used for sanitary purposes. All portable toilet units will be emptied a minimum of once per week by a licensed portable facility provided in compliance with local and state regulations.

113.6 CONCRETE WASTE FROM CONCRETE TRUCKS

A. Emptying of excess unhardened concrete and/or washout from concrete delivery trucks will be allowed on the job site, but in either (1) specifically designated diked areas which have been prepared to prevent contact between concrete and/or washout and storm water which will be discharged from the site or (2) in locations where waste concrete will be poured into forms to make rip-rap or other useful concrete products.

B. Hardened waste concrete from the designated diked areas described above will be disposed of in accordance with applicable local and state regulations with regards to disposal of construction debris.

113.7 HAZARDOUS SUBSTANCES & HAZARDOUS WASTE

A. All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job superintendent, who will also be responsible for seeing these practices are followed. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that

is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such products are stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

B. The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this SWPPP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials of hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge shall be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job superintendent to properly train all personnel in the use of the SPCC plan.

C. Any spills of hazardous materials which are in excess of the Reportable Quantities as defined by the EPA regulations shall be immediately reported to the EPA National Response Center at 1-100-424-1102.

D. In order to minimize the potential for a spill of hazardous materials to come in contact with storm water, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on the job site.

3. A spill control and containment kit (containing for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

4. All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.

5. All products will be stored in and used from the original container with the original product label.

6. All products will be used in strict compliance with instructions on the product label.

7. The disposal of excess or used products will be in strict compliance with instructions on the product label.

113.8 CONTAMINATED SOILS

A. Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

B. The job site superintendent will be responsible for seeing that these procedures are followed.

114 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The Contractor will obtain copies of any and all local and state regulations which are applicable to storm water management, erosion control, and pollution minimization at this job site and will comply fully with such regulations. The Contractor will submit written evidence of such compliance if requested by the Operator or any agent of a regulatory body. The Contractor will comply with all conditions of the SPDES General Permit for Construction Activity for the State of New York, including the conditions related to maintaining the SWPPP and evidence of compliance with the SWPPP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance.

The SWPPP for this site development project requires regulated MS4 approval from the Village of West Seneca. All changes to the SWPPP must be approved by the Village of West Seneca prior to applying changes to the SWPPP in the field.

115 INSPECTION AND MAINTENANCE PROCEDURES

The following inspection and maintenance practices will be used to maintain erosion and sediment controls and stabilization measures.

1. All control measures will be inspected by the owner/operator at least weekly and shall continue until the site complies with the Final Stabilization section of this document (See Section 116).

2. All control measures will be inspected by a Qualified Professional at least weekly and shall continue until the site complies with the Final Stabilization section of this document (See Section 116).

3. All measures will be maintained in good working order; if repairs or other measures are found to be necessary, they will be initiated within 24 hours of report.

4. Built up sediment will be removed from silt fence/silt sock when it has reached one-third the height of the fence.

5. Silt fence/silt socks will be inspected for depth of sediment, tears, etc., to see if the fabric is securely attached to the fence posts, and to see that the fence posts are securely in the ground.

6. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.

7. A maintenance inspection report will be made after each inspection.

8. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities, and filling out inspection and maintenance reports.

9. Personnel selected for the inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order. They will also be trained in the completion of, initiation of actions required by, and the filing of the inspection forms. Documentation of this personnel training will be kept on site with the SWPPP.

10. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering stormwater systems.

11. Report to the NYSDEC within 24 hours any noncompliance with the SWPPP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the NYSDEC in the permit to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

12. Releases of hazardous substances or oil in excess of reportable quantities (as established under 40 CFR 110, 40 CFR 117 or 40 CFR 302) must be reported.

Upon completion of construction, the property owner is responsible for ensuring that the stormwater facilities are regularly inspected and maintained. Maintenance and inspection procedures are as follows (for applicable items).

1. On a quarterly basis and following significant rainfall events or snow-melts, perform the following:

•

- Remove and properly dispose of any collected debris and sediment in accordance with applicable state, federal and local regulations.
- Inspect grassed/landscaped areas for un-vegetated areas or areas with less than 85% healthy stand of grass and reseed and mulch as necessary. Water daily if reseeded in July and August.
- A record of all inspections should be kept.

2. Maintain all lawn areas by regular mowing, including the grassed slopes of the stormwater pond and any grass swales. Any eroded areas shall be regarded, seeded and mulched immediately.

116 INSPECTION AND MAINTENANCE REPORT FORMS

Once installation of any required or optional erosion control device or measure has been implemented, inspections shall be performed by a Qualified Professional at least once every seven (7) calendar days. 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 of the General Permit to disturb greater than five (5) acres of soil at any one time, the **qualified inspector** shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days. The owner and contractor shall obtain from the MS4 an approval for disturbing more than five-acres at any given time. For construction sites where active construction has been suspended, inspection frequency under the general permit can be reduced to once every 30 days, provided temporary stabilization measures have been applied to all disturbed areas.

The report forms shall become an integral part of the SWPPP and shall be made readily accessible to governmental inspection officials, the Operator's Engineer, and the Operator for review upon request during visits to the project site. In addition, copies of the reports shall be provided to any of these persons, upon request, via mail or facsimile transmission. Inspection and maintenance report forms are to be maintained by the permittee for five years following the final stabilization of the site.

117 OTHER RECORD-KEEPING REQUIREMENTS

The Contractor shall keep the following records related to construction activities at the site:

- Dates when major grading activities occur and the areas which were graded
- Dates and details concerning the installation of structural controls
- Dates when construction activities cease in an area
- Dates when an areas is stabilized, either temporarily or permanently
- Dates of rainfall and the amount of rainfall
- Dates and descriptions of the character and amount of any spills of hazardous materials

- Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled

118 SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN

118.1 MATERIALS COVERED

The following materials or substances are expected to be present onsite during construction:

- Concrete/Additives/Wastes
- Cleaning solvents
- Sanitary wastes
- Detergents
- Petroleum based products
- Paints/Solvents
- Pesticides
- Solid and construction wastes
- Acids
- Fertilizers
- Soil stabilization additives

118.2 MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. The job site superintendent will be responsible for ensuring that these procedures are followed.

A. Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project.

1. An effort will be made to store only enough products required to do the job.

2. All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or in a containment area. At a minimum, all containers will be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.

3. Products will be kept in their original containers with the original manufacturer's label in legible condition.

4. Substances will not be mixed with one another unless recommended by the manufacturer.

5. Whenever possible, all of a product will be used up before disposing of the container.

6. Manufacturer's recommendations for proper use and disposal will be followed.

7. The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

B. Hazardous Products

These practices will be used to reduce the risks associated with hazardous materials. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

1. Products will be kept in original containers with the original labels in legible condition.

2. Original labels and material safety data sheets (MSDS's) will be procured and used for each material.

3. If surplus product must be disposed of, manufacturer's or local/state/federal recommended methods for proper disposal will be followed.

4. A spill control and containment kit (containing for example, absorbent such as kitty litter or saSonwilust, acid neutralizing poSonwiler, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

5. All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.

C. Hazardous Waste

All hazardous waste materials will be disposed of by the Contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job site superintendent, who will also be responsible for seeing that these practices are followed.

D. Product Specific Practices

The following product specific practices will be followed on the job site.

1. Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any petroleum storage tanks stored onsite will be located within a containment area that is designed with an impervious surface between the tank and the ground. The secondary containment must be designed to provide a containment volume that is equal to 110% of the volume of the largest tank. Drip pans shall be provided for all dispensers. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations. The location of any fuel tanks and/or equipment storage areas must be identified on a plan by the contractor once the locations have been determined.

2. Fertilizers

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to stormwater. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

3. Paints, Paint Solvents, and Cleaning Solvents

All containers will be tightly sealed and stored when not in use. Excess paint and solvents will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

4. Concrete Wastes

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site, but only in either (1) specifically designated diked areas which have been prepared to prevent contact between the concrete and/or wash out and storm water which will be discharged from the site or (2) in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.

The hardened residue from the concrete wash out diked areas will be disposed of in the same manner as other non-hazardous construction waste materials or may be broken up and used on site as deemed appropriate by the Contractor. The job site superintendent will be responsible for seeing that these procedures are followed.

All concrete wash out areas will be located in an area where the likelihood of the area contributing to storm water discharges is negligible. If required, additional BMPs must be implemented to prevent concrete wastes from contributing to storm water discharges. The location of concrete wash out area(s) must be identified on a plan by the contractor once the locations have

been determined. In addition, a standard detail on the construction of the concrete wash out shall be included on this plan.

E. Solid and Construction Wastes

All waste materials will be collected and stored in an appropriately covered container and/or securely lidded metal dumpster rented from a local waste management company which must be a solid waste management company licensed to do business in New York and the Town of Clarence. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week or more often if necessary, and the trash will be hauled to a landfill approved by the NYSDEC. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal.

All waste dumpsters and roll-off containers will be located in an area where the likelihood of the containers contributing to storm water discharges is negligible. If required, additional BMPs must be implemented, such as sandbags around the base, to prevent wastes from contributing to storm water discharges. The location of waste dumpsters and roll-off containers must be identified on a plan by the contractor once the locations have been determined.

F. Sanitary Wastes

Portable toilet units or field offices with toilet facilities connected to the municipal sanitary sewer will be used for sanitary purposes. All portable toilet units will be emptied a minimum of once per week by a licensed portable facility provided in compliance with local and state regulations.

All sanitary waste units will be located in an area where the likelihood of the unit contributing to storm water discharges is negligible. If required, additional BMPs must be implemented, such as sandbags around the base, to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on a plan by the contractor once the locations have been determined.

G. Contaminated Soils

Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Materials Management Plan and in accordance with applicable state and federal regulations.

118.3 SPILL PREVENTION AND RESPONSE PROCEDURES

The Contractor will train all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water

discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in spill prevention and clean up procedures.

A. In order to minimize the potential for a spill of hazardous materials to come into contact with storm water, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on the job site.

3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing poSonwiler, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.

4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

B. In the event of a spill, the following procedures should be followed

1. All spills will be cleaned up immediately after discovery.

2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.

3. The project manager and the Engineer of Record will be notified immediately.

   Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 110, 40 CFR 117, and 40 CFR 302) must be immediately reported to the EPA National Response Center, telephone 1-100-424-1102. From SWPPP-9 "Reportable Quantity Release Form" must be filled out.

4. If the spill exceeds a Reportable Quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the release, and the date of the release. The plans must identify measures to prevent the recurrence of such releases and to respond to such releases.

C. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the office trailer onsite.

119 CONTROL OF NON-STORM WATER DISCHARGES

Certain types of discharges are allowable under the NYSDEC SPDES General Permit for Construction Activity for the State of New York, and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this SWPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. The following allowable non-storm water discharges which may occur at the job site include:

A. Discharges from firefighting activities.

B. Fire hydrant flushings (see note below).

C. Waters used to wash vehicles or control dust in order to minimize offsite sediment tracking.

D. Routine external building washdown which does not use detergents.

E. Pavement wash waters where spills or leaks of hazardous materials have not occurred or detergents have not been used.

F. Air conditioning condensate.

G. Springs or other uncontaminated groundwater, including dewatering ground water infiltration.

H. Foundation or footing drains where no contamination with process materials such as solvents is present.

Note: The Contractor shall discharge any super-chlorinated water from water distribution pipe disinfection activities into sanitary sewer system.

120 STORM WATER CONTROL FACILITY MAINTENANCE

The items to be inspected for the bioretention areas shall match those listed on the Performance Criteria for the "Bioretention Areas" in Appendix L of the SWPPP. The Operator/Developer, Sonwil, shall provide a qualified inspector to inspect and maintain all post-construction storm water management practices.

The proposed catch basins, as per section 115, shall be inspected 4 times per year for removal of floatable debris. Any silt buildup over 6" in depth shall be removed and disposed of properly off-site.

Appendix A

Site Location Map

Erie County On-Line Mapping Application

Legend

- Parcels
- Streets and Highways
  - Interstate
  - Primary State Road
  - Secondary State Road
  - County Road
  - Local Road
- DEC Wetlands
- National Wetlands Inventory

0.3 0 0.14 0.3 Miles

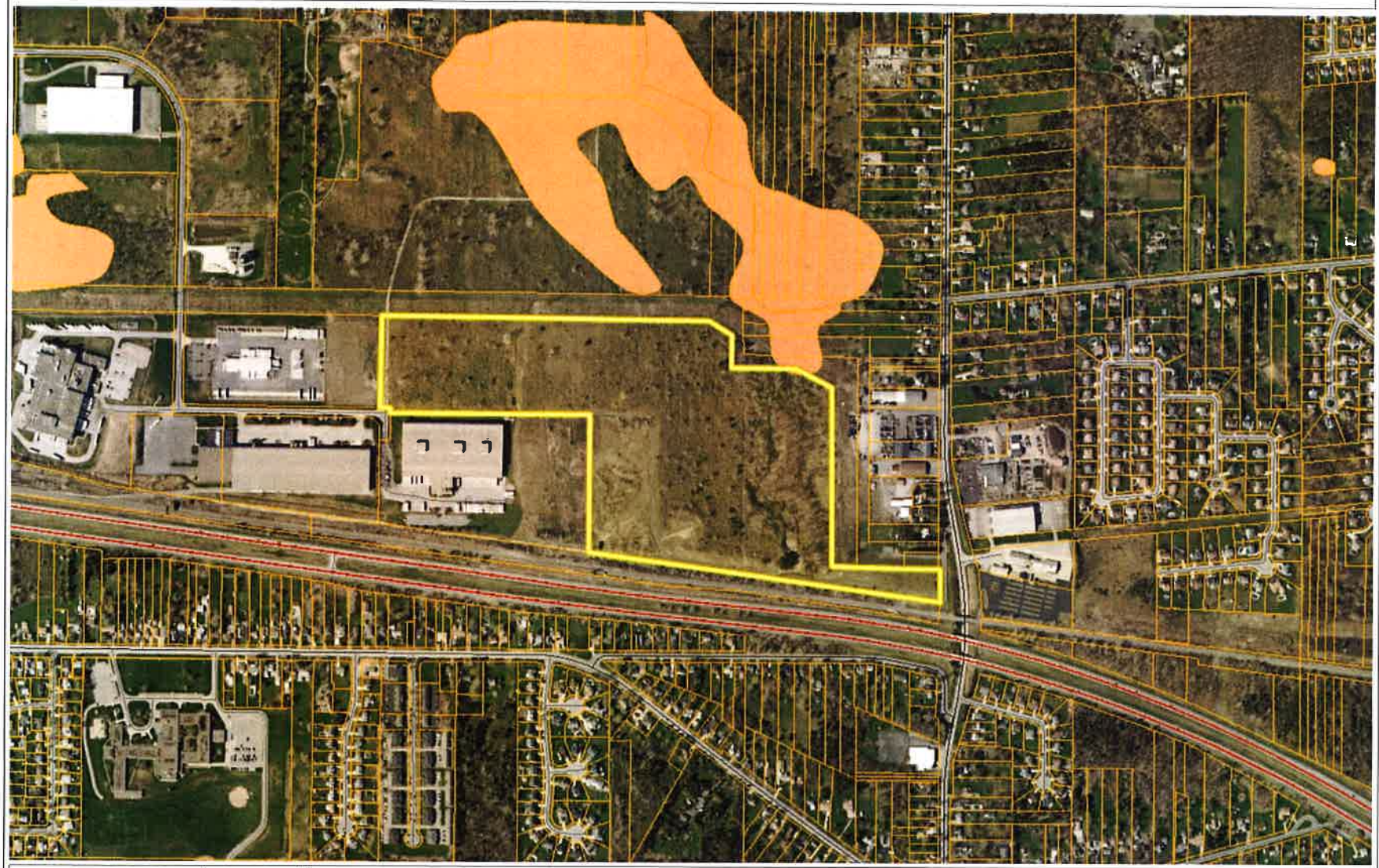
WGS_1984_Web_Mercator_Auxiliary_Sphere
THIS MAP IS NOT TO BE USED FOR NAVIGATION

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

1: 9,028

Erie County On-Line Mapping Application



Legend
- Parcels
- Streets and Highways
  - Interstate
  - Primary State Road
  - Secondary State Road
  - County Road
  - Local Road
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0.3 0 0.14 0.3 Miles

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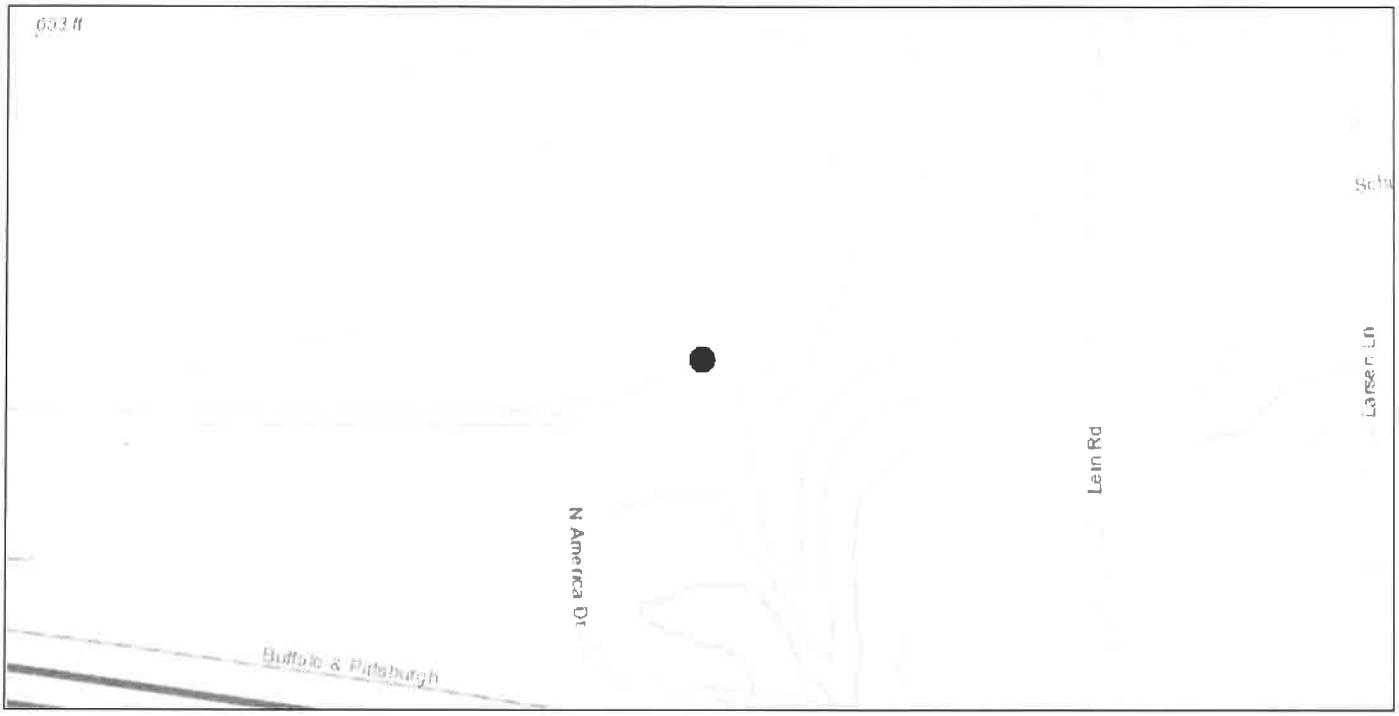
1: 9,028

Stormwater Interactive Map



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	196258.735	**Northing:**	4750161.634
Longitude/Latitude	**Longitude:**	-78.717	**Latitude:**	42.844

The approximate address of the point you clicked on is:
14224, Buffalo, New York

County: Erie
Town: West Seneca
USGS Quad: ORCHARD PARK

DEC Administrative Boundaries

Region 9:
(Western New York) Allegany, Chautauqua, Cattaraugus, Erie, Niagara and Wyoming counties. For more information visit **http://www.dec.ny.gov/about/617.html**.

Regulated MS4s

UA 2000: 11350
Standard: Buffalo
Municipality: WEST SENECA
SWIS: 146800
Regulated: Automatic

Appendix B

NYSDEC Notice of Intent (NOI)

0644089821

NOTICE OF INTENT

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

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

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

-IMPORTANT-

RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

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

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

Owner/Operator Contact Person First Name
Peter

Owner/Operator Mailing Address
2732 Transit Road

City
West Seneca

State
NY

Zip
14224-____

Phone (Owner/Operator)
716-684-0555

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)
pwilson@sonwil.com

FED TAX ID
87-1181514 (not required for individuals)

Project Site Information

Project/Site Name
Sonwil Warehouse

Street Address (NOT P.O. BOX)
North America Drive

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

City/Town/Village (THAT ISSUES BUILDING PERMIT)
West Seneca

State NY | Zip 14224 - | County Erie | DEC Region 9

Name of Nearest Cross Street
Union Road

Distance to Nearest Cross Street (Feet)
8100

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

Tax Map Numbers
Section-Block-Parcel
135.11-2-5.12

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
-7 8717
Ex. -73.749

Y Coordinates (Northing)
42844
Ex. 42.652

2. What is the nature of this construction project?

● **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use		Post-Development Future Land Use	
○ FOREST		○ SINGLE FAMILY HOME	Number of Lots
● PASTURE/OPEN LAND		○ SINGLE FAMILY SUBDIVISION	
○ CULTIVATED LAND		○ TOWN HOME RESIDENTIAL	
○ SINGLE FAMILY HOME		◉ MULTIFAMILY RESIDENTIAL	
○ SINGLE FAMILY SUBDIVISION		○ INSTITUTIONAL/SCHOOL	
○ TOWN HOME RESIDENTIAL		● INDUSTRIAL	
○ MULTIFAMILY RESIDENTIAL		○ COMMERCIAL	
○ INSTITUTIONAL/SCHOOL		○ MUNICIPAL	
○ INDUSTRIAL		◉ ROAD/HIGHWAY	
○ COMMERCIAL		○ RECREATIONAL/SPORTS FIELD	
○ ROAD/HIGHWAY		○ BIKE PATH/TRAIL	
○ RECREATIONAL/SPORTS FIELD		○ LINEAR UTILITY (water, sewer, gas, etc.)	
○ BIKE PATH/TRAIL		◉ PARKING LOT	
○ LINEAR UTILITY		○ CLEARING/GRADING ONLY	
○ PARKING LOT		○ DEMOLITION, NO REDEVELOPMENT	
○ OTHER		○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)	
		◉ OTHER	

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

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

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
60.0	32.0	0.0	18.0

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

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

A	B	C	D
%	%	40 %	60 %

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

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

Start Date	End Date
10/01/2022	08/08/2024

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

Name

unnamed creek

9a. Type of waterbody identified in Question 9?

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

9b. How was the wetland identified?

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

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ● **No**

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

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

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

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

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

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

N / A

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

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

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

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

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

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

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

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

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

SWPPP Preparer
Carmina Wood Design DPC

Contact Name (Last, Space, First)
Wood Christopher

Mailing Address
487 Main St

City
Buffalo

State Zip
NY 14127-

Phone
716-842-3165

Fax
716-842-0263

Email
cwood@cwm-ae.com

SWPPP Preparer Certification

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

First Name
Christopher

MI

Last Name
Wood

Signature

Date
09/12/2022

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

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

Temporary Structural

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

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

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

Permanent Structural

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

Other

Post-construction Stormwater Management Practice (SMP) Requirements

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

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

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

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

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

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

Total WQv Required

		1	.	4	8	3

acre-feet

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

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

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

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

RR Techniques (Area Reduction)	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
○ Disconnection of Rooftop Runoff (RR-4)		and/or	

RR Techniques (Volume Reduction)	
○ Vegetated Swale (RR-5)	
○ Rain Garden (RR-6)	
○ Stormwater Planter (RR-7)	
○ Rain Barrel/Cistern (RR-8)	
○ Porous Pavement (RR-9)	
○ Green Roof (RR-10)	

Standard SMPs with RRv Capacity	
○ Infiltration Trench (I-1)	
○ Infiltration Basin (I-2)	
○ Dry Well (I-3)	
○ Underground Infiltration System (I-4)	
☑ Bioretention (F-5)	18.00
○ Dry Swale (O-1)	

Standard SMPs	
○ Micropool Extended Detention (P-1)	
○ Wet Pond (P-2)	
○ Wet Extended Detention (P-3)	
○ Multiple Pond System (P-4)	
○ Pocket Pond (P-5)	
○ Surface Sand Filter (F-1)	
○ Underground Sand Filter (F-2)	
○ Perimeter Sand Filter (F-3)	
○ Organic Filter (F-4)	
○ Shallow Wetland (W-1)	
○ Extended Detention Wetland (W-2)	
○ Pond/Wetland System (W-3)	
○ Pocket Wetland (W-4)	
○ Wet Swale (O-2)	

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

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

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

Name

Manufacturer

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

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

Total RRv provided

0.397 **acre-feet**

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

○ **Yes** ● **No**

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

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

Minimum RRv Required

0.383 **acre-feet**

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

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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

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

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

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

WQv Provided

1.087 **acre-feet**

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

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 1.483

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

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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

CPv Required

0.613 **acre-feet**

CPv Provided

0.613 **acre-feet**

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

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

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

Total Overbank Flood Control Criteria (Qp)

Pre-Development

31.65 **CFS**

Post-development

15.02 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

84.12 **CFS**

Post-development

28.58 **CFS**

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

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

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

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

Sonwil

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

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

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N Y R]
- ○ Other [ ]
- ● None

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

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

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● Yes ○ No

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

3547089826

Owner/Operator Certification

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

Print First Name

Peter

MI

Print Last Name

Wilson

Owner/Operator Signature

Date

09/12/2022

Appendix C

MS4 SWPPP Acceptance Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

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

I. Project Owner/Operator Information	
1. Owner/Operator Name:	Sonwil
2. Contact Person:	Peter Wilson
3. Street Address:	2732 Transit Road
4. City/State/Zip:	West Seneca, NY 14224
II. Project Site Information	
5. Project/Site Name:	Proposed Warehouse
6. Street Address:	North America Drive
7. City/State/Zip:	West Seneca, NY 14224
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4:	
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Contact Person:	
14. Street Address:	
15. City/State/Zip:	
16. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

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

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

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Appendix D

NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020 Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature Date

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

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

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

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

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

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

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

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

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

B. Effluent Limitations Applicable to Discharges from Construction Activities

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

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* ("SWPPP") the reason(s) for the

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

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

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

   (ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

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

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

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

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

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

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

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

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

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

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

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

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

e. **Prohibited *Discharges***. The following *discharges* are prohibited:

   (i) Wastewater from washout of concrete;

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

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

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

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

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

C. Post-construction Stormwater Management Practice Requirements

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

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

a. Sizing Criteria for New Development

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

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

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

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

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

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

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

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

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

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

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site *discharges* directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

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

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

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

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

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

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

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

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

D. Maintaining Water Quality

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

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

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

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

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

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

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

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

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

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

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

1. *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 E.3. of this Part and identified in the SWPPP required by this permit;

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

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

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

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

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

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

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

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

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

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

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

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

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

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

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

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

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

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

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

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

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

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

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

C. Permit Authorization

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

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

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

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

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

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

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

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

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

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

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

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

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

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

D. General Requirements For Owners or Operators With Permit Coverage

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

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

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

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

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

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

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

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator.*

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

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

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

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

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

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

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

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

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

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

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

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

d. to document the final construction conditions.

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

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

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

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

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

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

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

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

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

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

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

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

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

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

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

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

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

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

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

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

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

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

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

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

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

c. A Stormwater Modeling and Analysis Report that includes:
   (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

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

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

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

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

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

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

e. Infiltration test results, when required; and

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

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

C. Required SWPPP Components by Project Type

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

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

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

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

B. Contractor Maintenance Inspection Requirements

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

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

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

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

C. Qualified Inspector Inspection Requirements

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

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

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

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

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

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

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

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

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

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

   b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

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

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

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

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

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

a. Date and time of inspection;

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

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

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

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

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

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

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

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

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

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

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

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

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

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

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

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

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

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

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

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

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

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

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

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

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

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

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

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

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

B. Addresses

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

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

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

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

B. Continuation of the Expired General Permit

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

C. Enforcement

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

D. Need to Halt or Reduce Activity Not a Defense

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

E. Duty to Mitigate

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

F. Duty to Provide Information

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

G. Other Information

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

H. Signatory Requirements

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

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

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

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

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

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

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

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

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

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

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

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

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

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

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

I. Property Rights

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

J. Severability

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

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

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

L. Proper Operation and Maintenance

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

M. Inspection and Entry

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

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

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

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

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

N. Permit Actions

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

O. Definitions

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

P. Re-Opener Clause

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

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

Q. Penalties for Falsification of Forms and Reports

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

R. Other Permits

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

APPENDIX A – Acronyms and Definitions

Acronyms

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

Definitions

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

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

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

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

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

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

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

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

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

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

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

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

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

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

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

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

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

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

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

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

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

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

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

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

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

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

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

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

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

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

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

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

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

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

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

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

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

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

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

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

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

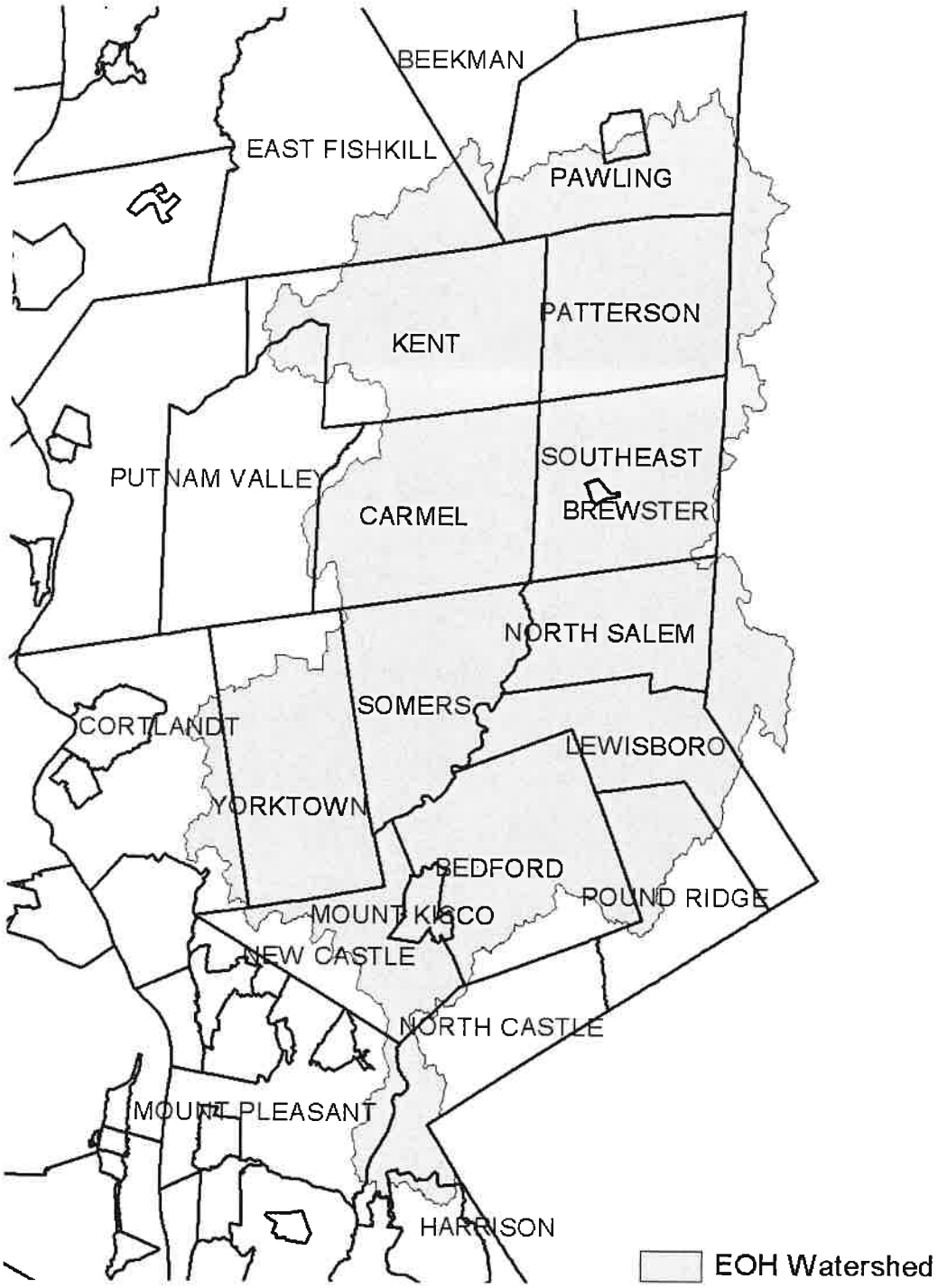


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

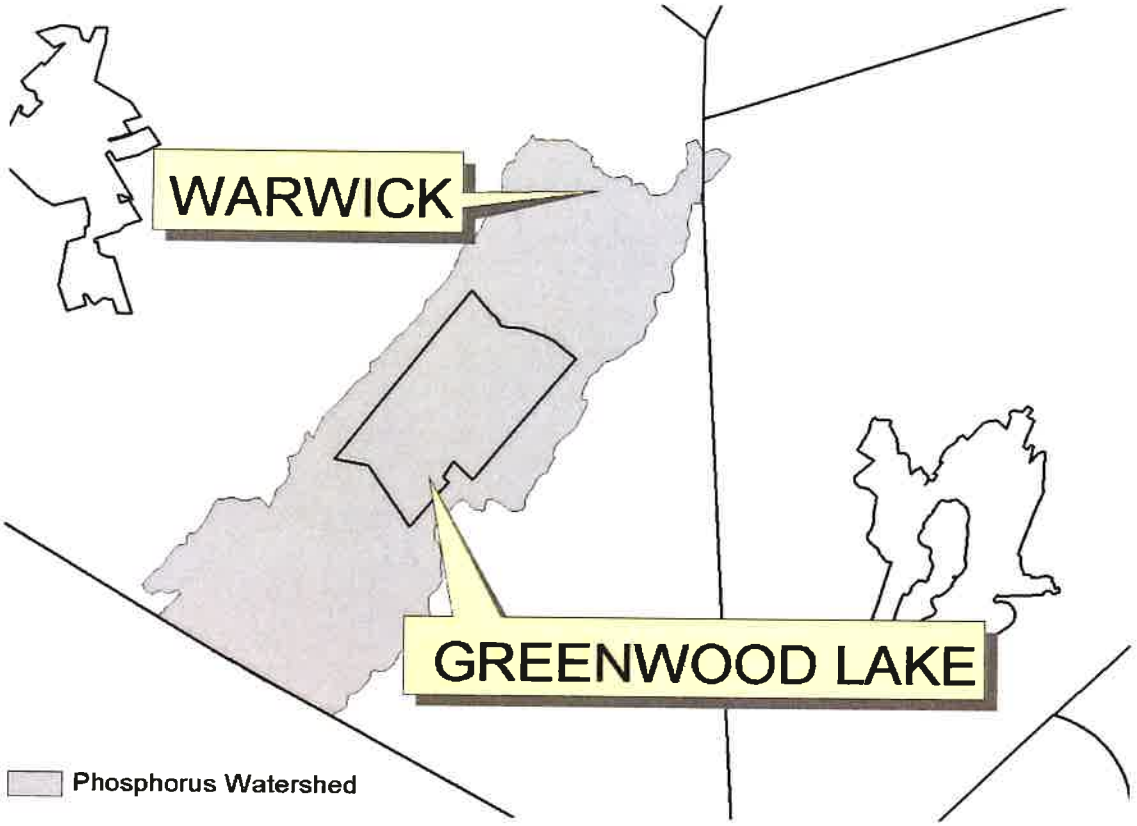


Figure 4 - Oscawana Lake Watershed

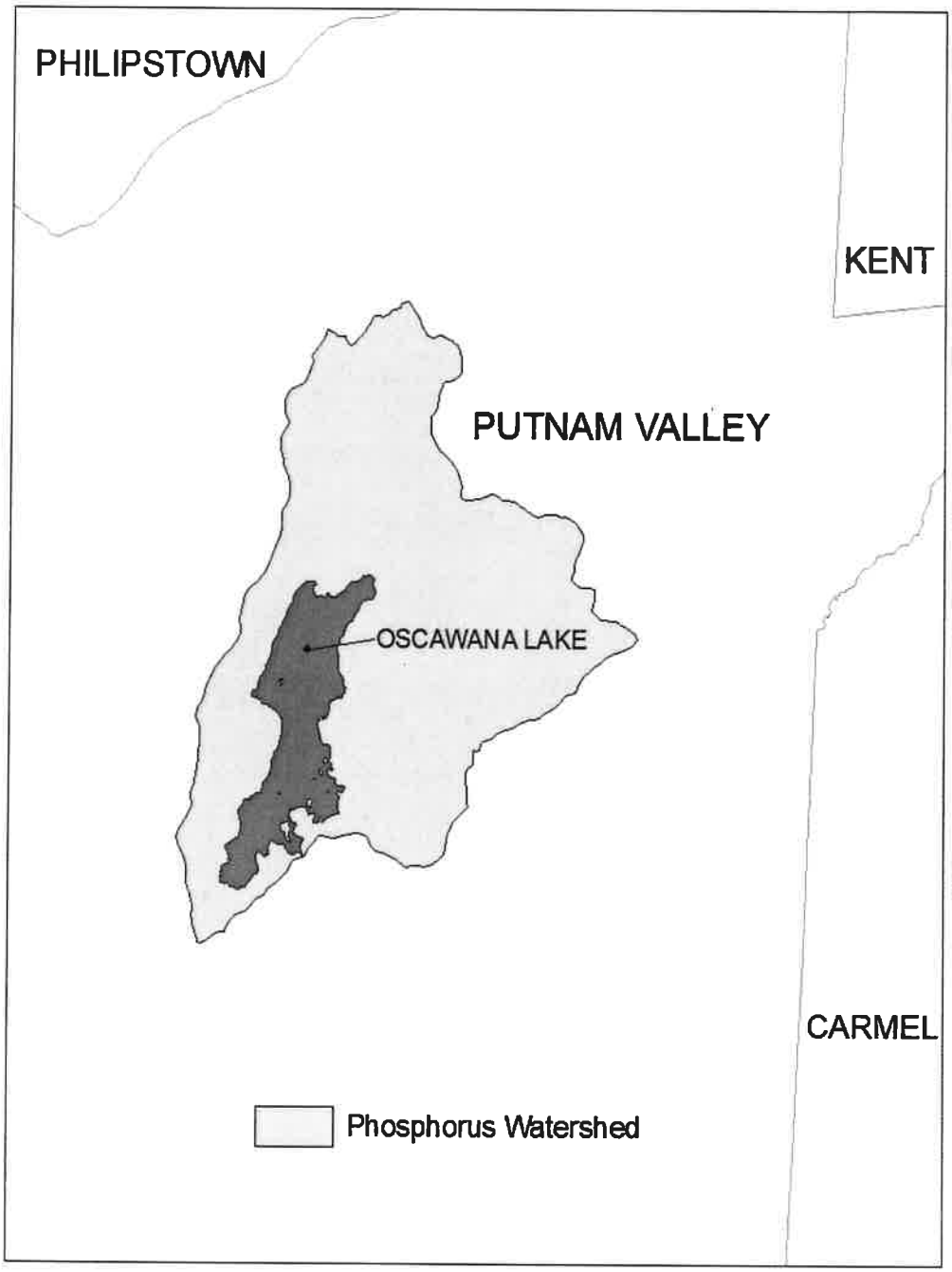
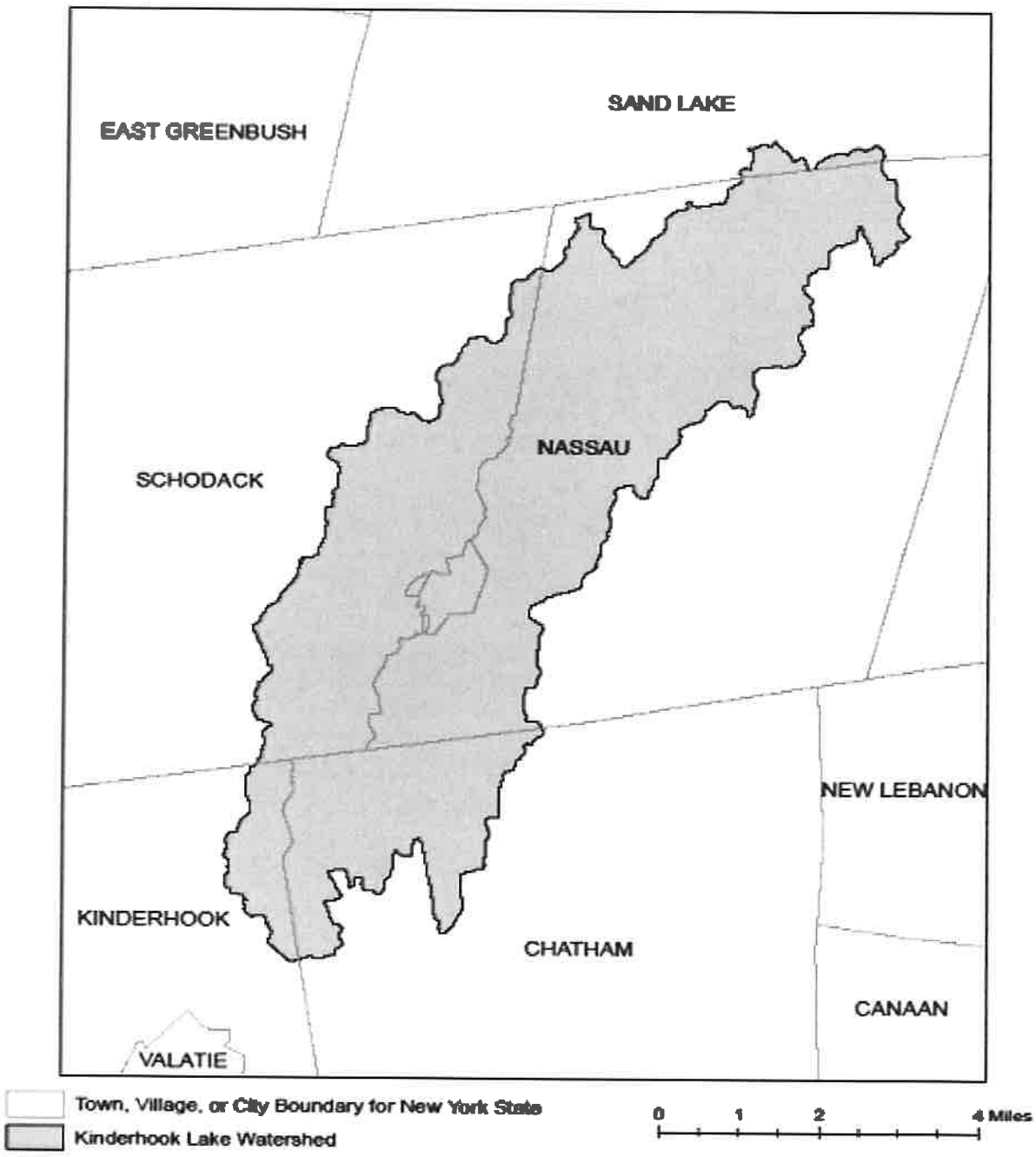


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

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

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

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

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

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

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

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

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

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

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

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

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

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	Division of Environmental Permits (DEP) Permit Administrators	Division of Water (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Appendix E

Forms

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

Sonwil Warehouse

CONTRACTOR'S CERTIFICATION:

"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 storm water. 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 storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

Note: The contractor shall have at least one NYSDEC trained individual onsite at all times when earthwork and other SWPPP associated work is being performed from each contractor(s) and subcontractor(s). Each contractor(s) and subcontractor(s) shall provide copies of these individuals' certifications to the Town of West Seneca.

Name: _____
(Print)

Signature: _____

Title: _____

Company Name: _____

Address: _____

Telephone Number: _____

Date: _____

Scope of Services: _____

Trained Individual(s) Responsible for Implementation: _____

This form must be signed by a responsible corporate officer or other party meeting the "Signatory Requirements" of the NYSDEC SPDES General Permit

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

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

Project Site Information

Project/Site Name

Proposed Warehouse

Owner/Operator Information

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

Sonwil

Certification Statement – SWPPP Preparer

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

Christopher		Wood
First name	MI	Last Name

Signature

9/7/2022

Date

Revised: January 2020

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

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

Project/Site Name: Sonwil Warehouse

eNOI Submission Number: _____

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

Certification Statement - Owner/Operator

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

Peter | G. | Wilson

Owner/Operator First Name | M.I. | Last Name

Peter G. Wilson

Signature

9/13/2022

Date

Appendix F

NYSDEC Notice of Termination (NOT)

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

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

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

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

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

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

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

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

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

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

_____

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

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

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

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

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

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

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

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

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

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

V. Additional Information/Explanation:

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

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

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

Printed Name:	
Title/Position:	
Signature:	Date:

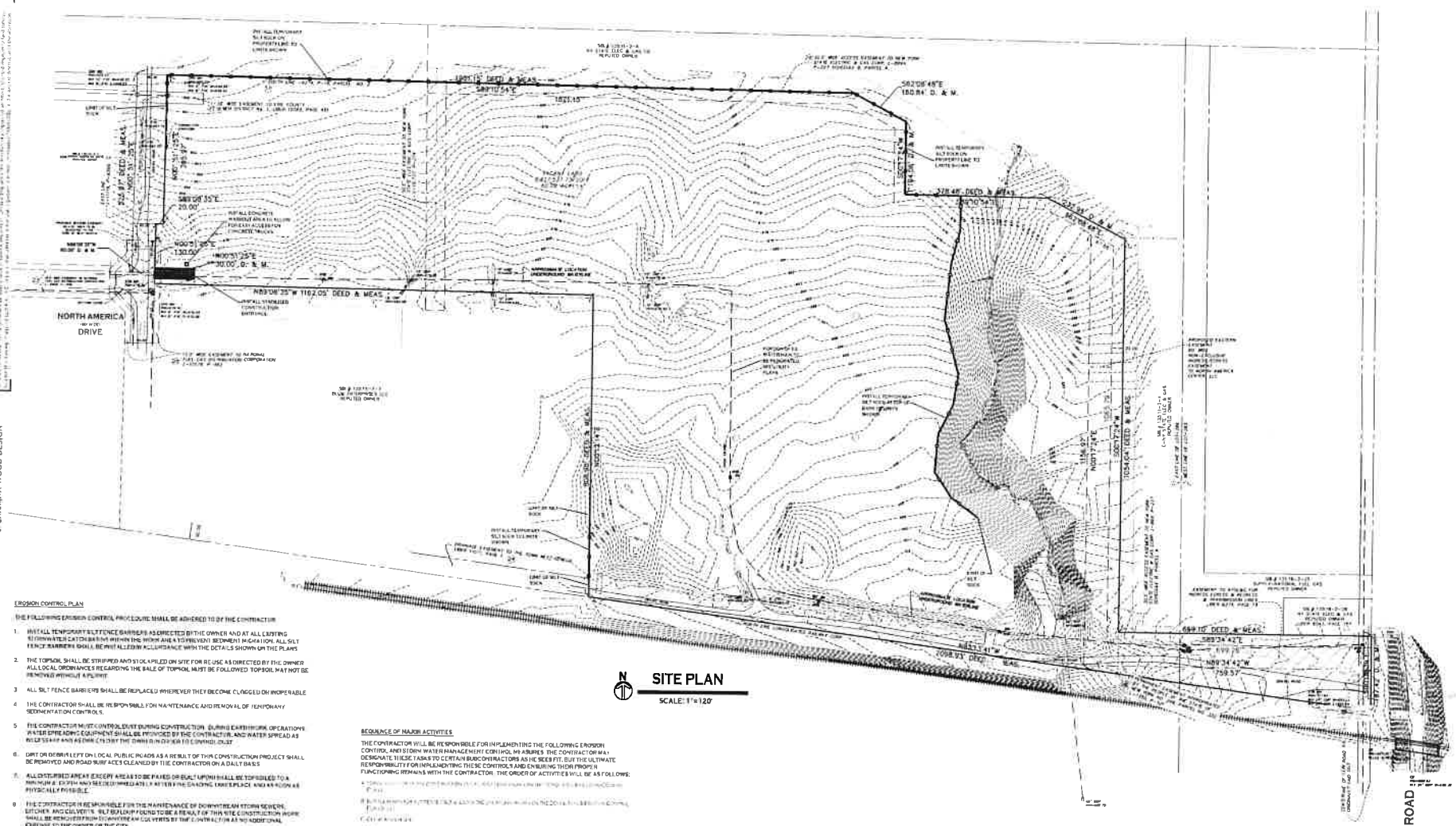
NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:	
I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):	
I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
IX. Owner or Operator Certification	
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

Appendix G

Construction Documents



EROSION CONTROL PLAN

THE FOLLOWING EROSION CONTROL PROCEDURE SHALL BE ADHERED TO BY THE CONTRACTOR

1. INSTALL TEMPORARY SILT FENCE BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS
2. THE TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE AS DIRECTED BY THE OWNER ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT
3. ALL SILT FENCE BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS WATER SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND WATER SPREAD AS REQUESTED AND AS MAY ON OCCASION BE DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 6" DEPTH AND SEEDED IMMEDIATELY AFTER THE GRADING HAS BEEN PLACE AND AS RAPIDLY AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING ANY WORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT FENCE AROUND THE BASE OF STOCKPILES

NOTES:

1. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS
2. TEMPORARY SILT FENCE AND STRAW BALES TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
3. FOR THOSE STRUCTURES TO BE DEMOLISHED, ALL EXISTING UTILITY SERVICES SHALL BE ABANDONED IN ACCORDANCE WITH LOCAL REGULATIONS. ALL MAINS SHALL BE RETURNED TO PROPER OWNERS
4. THE CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES WHERE ACCESS INTO THE SITE FROM PAVED ROADWAYS
5. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH NYS MUTCD STANDARDS PRIOR TO STARTING WORK.

SEQUENCE OF MAJOR ACTIVITIES

THE CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING THE FOLLOWING EROSION CONTROL AND STORM WATER MANAGEMENT CONTROL MEASURES. THE CONTRACTOR MAY DESIGNATE THESE TASKS TO CERTAIN SUBCONTRACTORS AS HE SEES FIT, BUT THE ULTIMATE RESPONSIBILITY FOR IMPLEMENTING THESE CONTROLS AND ENSURING THEIR PROPER FUNCTIONING REMAINS WITH THE CONTRACTOR. THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

NOTES:

1. BASINS TO BE CLEANED AND GRADED TO DESIGN GRADES FOLLOWING CONSTRUCTION. TOPSOIL & SEED FOLLOWING CLEANING
2. AE MAIL COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WEEKLY INSPECTION REPORTS ARE TO BE PROVIDED TO THE TOWN
3. TEMPORARY SILT FENCE IS TO BE INSTALLED AT THE BASE OF ALL TEMPORARY STOCK PILE AREAS AND REMAIN UNTIL VEGETATION IS ESTABLISHED.
4. STUMPS AND BRUSH SHALL NOT BE BURIED ON THE SITE
5. THE CLEARING LIMIT STAKEOUT SHALL BE APPROVED BY THE ENGINEERING DEPARTMENT PRIOR TO COMMENCING ANY SITE CLEARING ACTIVITIES
6. INSTALL TEMPORARY SILT SOCK AROUND PERIMETER OF ALL BIORETENTION AREAS UNTIL TRIBUTARY AREAS ARE STABILIZED.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY

CARMINA WOOD DESIGN

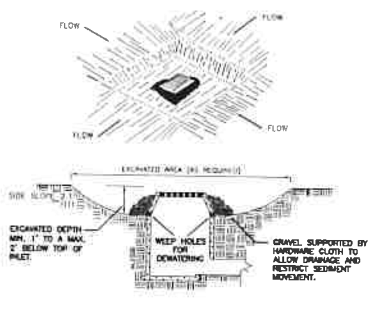
Proposed Warehouse
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Erosion & Sediment Control Plan

DRAWING NO.
C-001

Project No: 22.117

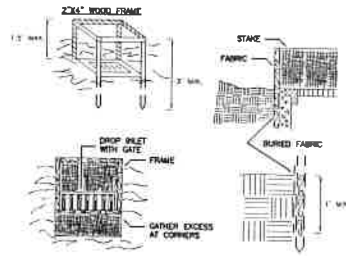


CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

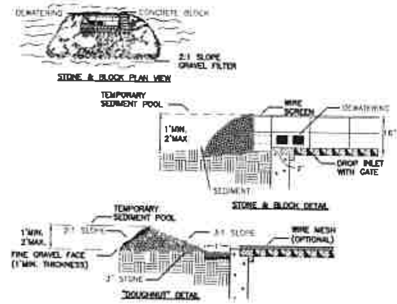


CONSTRUCTION SPECIFICATIONS

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

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2



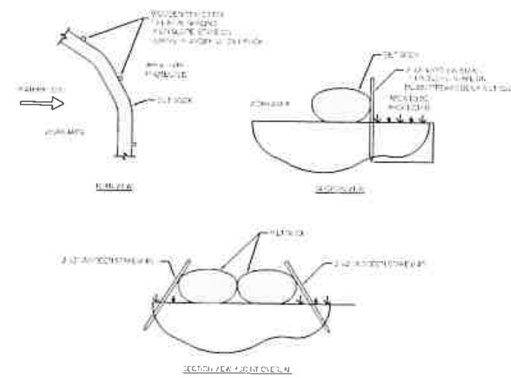
CONSTRUCTION SPECIFICATIONS

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

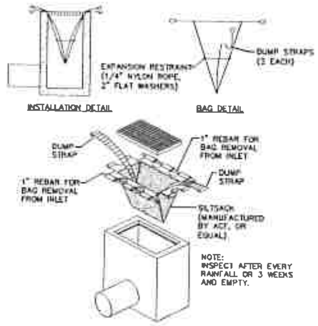
MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3

NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN FOLLOWING INSTALLATION OF THE PROPOSED CB'S

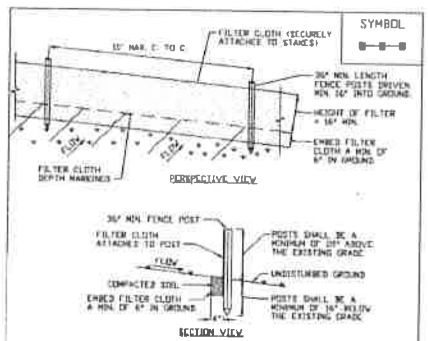


SILT SOCK DETAIL



SILT SACK DETAIL

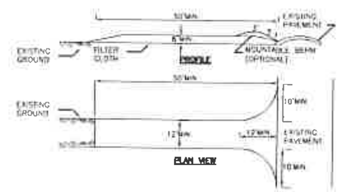
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE (WITHOUT WIRE MESH BACKING)

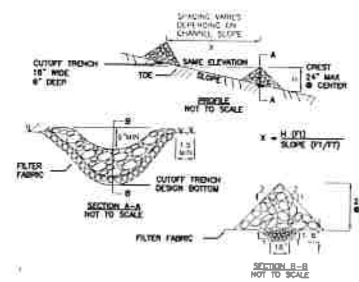


CONSTRUCTION SPECIFICATIONS

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

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

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

MAXIMUM DRAINAGE AREA 2 ACRES

STONE CHECK DAM DETAIL

NOT TO SCALE

CARMINA WOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Erosion & Sediment Control Details

DRAWING NO.
C-002

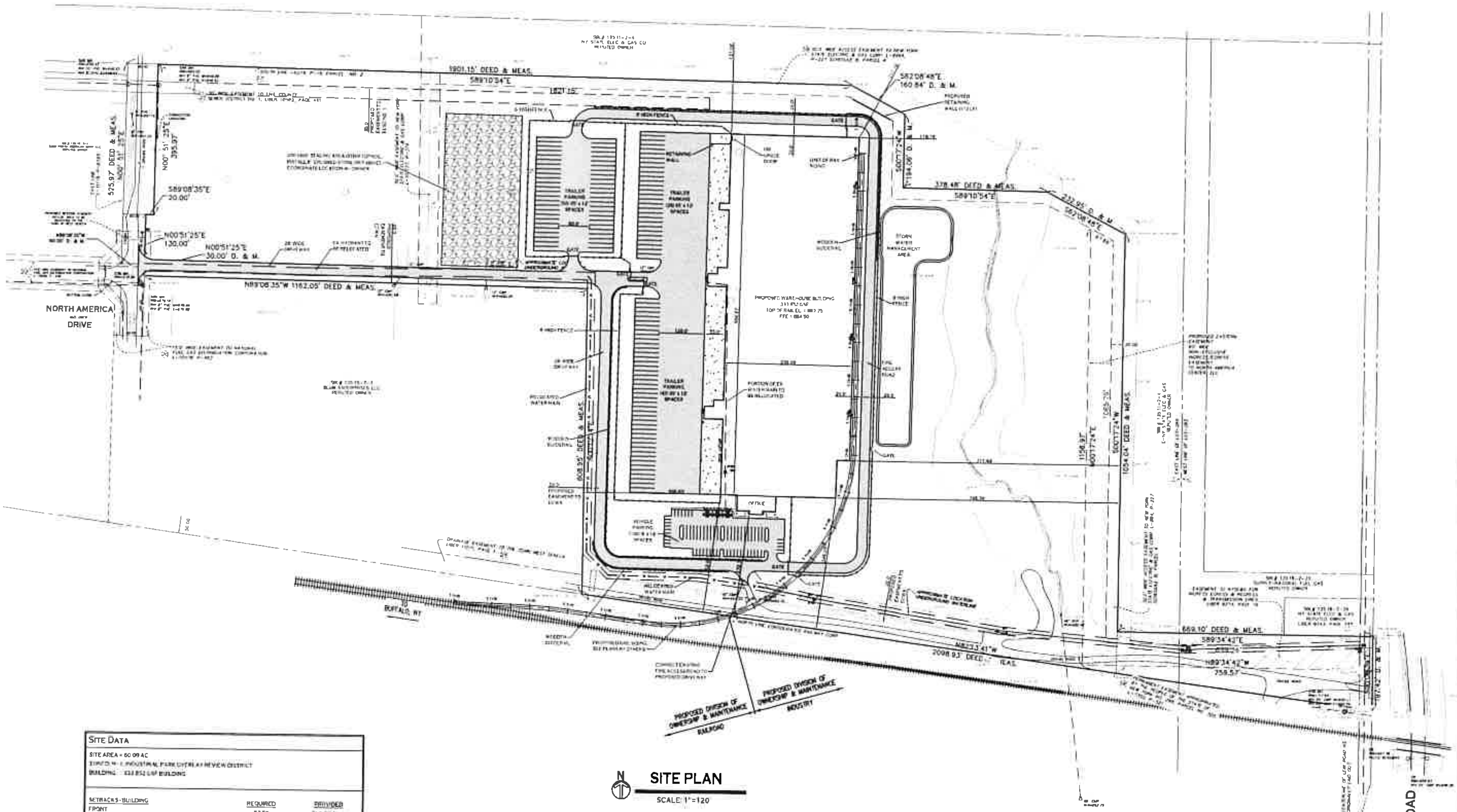
Project No: 22.117

CARMINA/WOOD
DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

PRELIMINARY



SITE PLAN

SCALE: 1"=120'

SITE DATA

SITE AREA = 60.09 AC
ZONED: [illegible]
BUILDING: [illegible]

SETBACKS - BUILDING	REQUIRED	PROVIDED
FRONT	50 FT	250.78 MIN
SIDE (ABUTTING COMM / ABUTTING R)	10 FT / 50 FT	260.0 MIN
REAR (ABUTTING COMM / ABUTTING R)	20 FT / 50 FT	119.87 MIN
LOT COVERAGE	[illegible]	[illegible]
MIN. LOT SIZE	2 ACRES	60.09 ACRES
MAX. BUILDING HEIGHT	40 FT	[illegible]
LANDSCAPE AREA	[illegible]	[illegible]

* NOTE: BUILDING HEIGHT HIGHER THAN 40' CAN BE APPROVED BY THE TOWN BOARD

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED SIGN
- PROPOSED PARKING NUMBER
- PROPOSED LIGHT POLE
- PROPOSED WALL MOUNTED LIGHT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

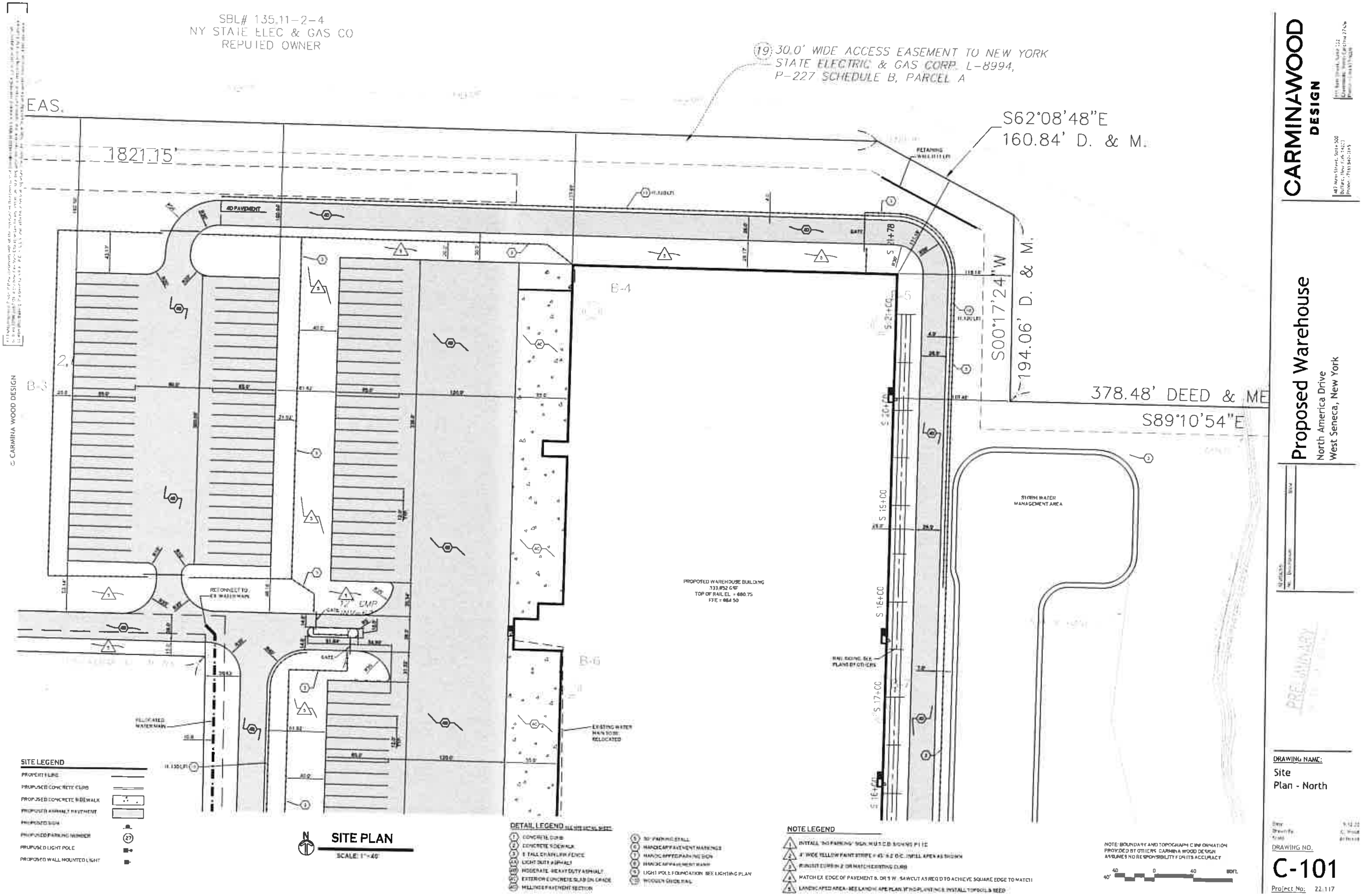
120' 120 0 120 240ft

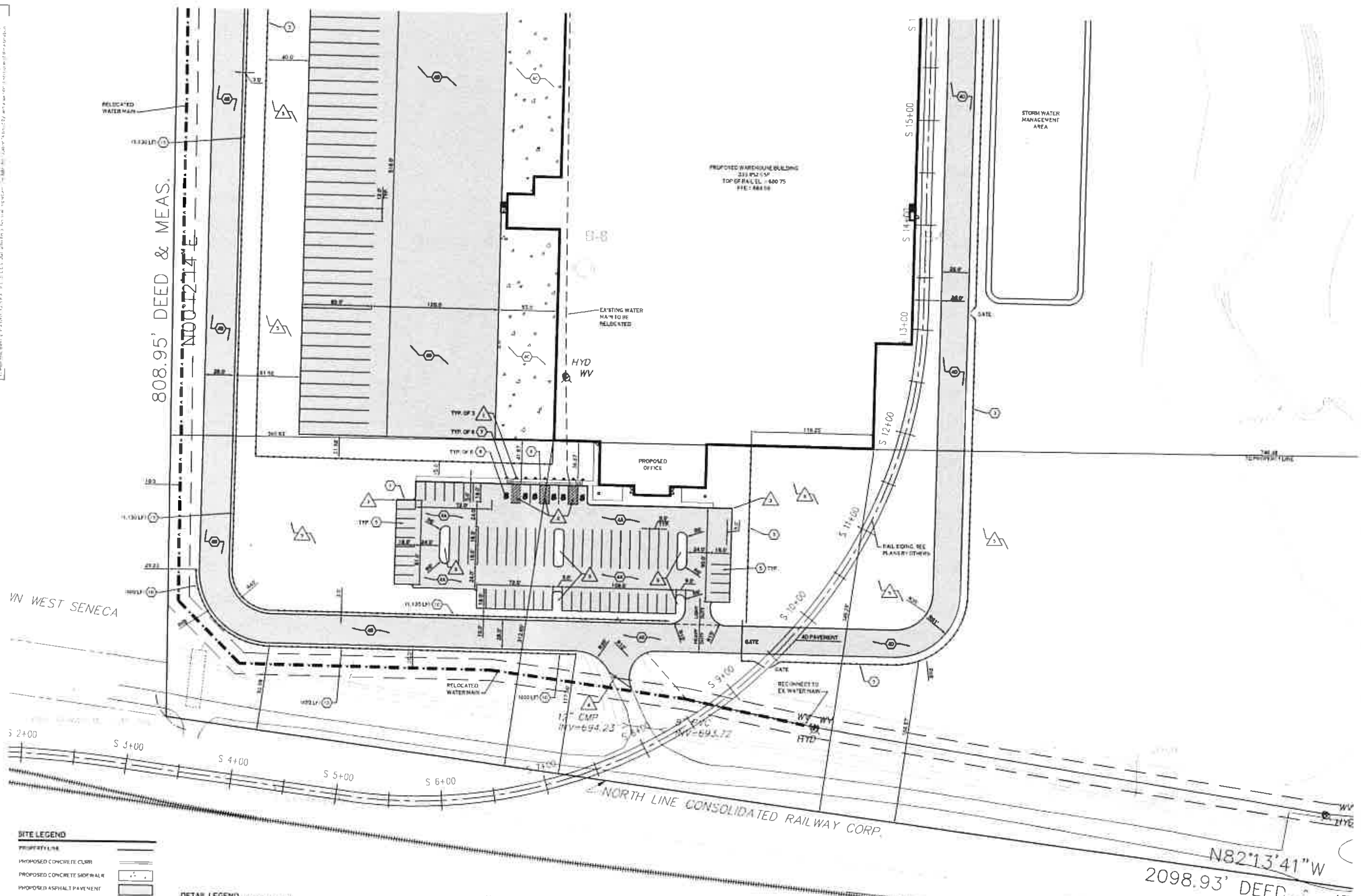
DRAWING NAME:
Overall Site Plan

Date: 9.12.22
Drawn By: C. Wood

DRAWING NO.
C-100

Project No: 22.117


SBL# 135.11-2-4
NY STATE ELEC & GAS CO
REPUTED OWNER
(19) 30.0' WIDE ACCESS EASEMENT TO NEW YORK STATE ELECTRIC & GAS CORP. L-8994, P-227 SCHEDULE B, PARCEL A
EAS.
1821.15'
S62°08'48"E
160.84' D. & M.
S00°17'24"W
194.06' D. & M.
378.48' DEED & ME
S89°10'54"E
B-4
B-6
B-3
STORM WATER MANAGEMENT AREA
PROPOSED WAREHOUSE BUILDING
RETAINING WALL
RECONNECT TO EX WATER MAIN
RELOCATED WATER MAIN
EXISTING WATER MAIN TO BE RELOCATED
RAIL SIDING, SEE PLANS BY OTHERS
© CARMINA WOOD DESIGN
SITE LEGEND
PROPERTY LINE
PROPOSED CONCRETE CURB
PROPOSED CONCRETE SIDEWALK
PROPOSED ASPHALT PAVEMENT
PROPOSED SIGN
PROPOSED PARKING NUMBER
PROPOSED LIGHT POLE
PROPOSED WALL MOUNTED LIGHT
SITE PLAN
SCALE: 1"=40'
DETAIL LEGEND
CONCRETE CURB
CONCRETE SIDEWALK
LIGHT DUTY ASPHALT
MODERATE HEAVY DUTY ASPHALT
EXTERIOR CONCRETE SLAB ON GRADE
MILLINGS PAVEMENT SECTION
PARKING STALL
HANDICAP PAVEMENT MARKINGS
HANDICAPPED PARKING SIGN
HANDICAP PAVEMENT RAMP
LIGHT POLE FOUNDATION SEE LIGHTING PLAN
WOODEN GUIDE RAIL
NOTE LEGEND
MATCH EX. EDGE OF PAVEMENT
NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY
CARMINA WOOD DESIGN
Proposed Warehouse
North America Drive
West Seneca, New York
DRAWING NAME:
Site
Plan - North
DRAWING NO.
C-101
Project No: 22.117



SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED SIGN
- PROPOSED PARKING NUMBER
- PROPOSED LIGHT POLE
- PROPOSED WALL MOUNTED LIGHT

DETAIL LEGEND

1. CONCRETE CURB
2. CONCRETE SIDEWALK
3. 6' TALL CHAIN LINK FENCE
4A. LIGHT DUTY ASPHALT
4B. MODERATE-HEAVY DUTY ASPHALT
4C. EXTERIOR CONCRETE SLAB ON GRADE
4D. MILLINGS PAVEMENT SECTION
5. 90° PARKING STALL
6. HANDICAP PAVEMENT MARKINGS
7. HANDICAPPED PARKING SIGN
8. HANDICAP PAVEMENT RAMP
9. LIGHT POLE FOUNDATION. SEE LIGHTING PLAN
11. WOODEN GUIDE RAIL

NOTE LEGEND

1. INSTALL "NO PARKING" SIGN, N.U.T.C.D. SIGN NO. P1-1C
2. 4" WIDE YELLOW PAINT STRIPE @ 45° & 2' O.C. INFILL AREA AS SHOWN
3. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
4. MATCH EX. EDGE OF PAVEMENT & OR S.W., SAWCUT AS REQ'D TO ACHIEVE SQUARE EDGE TO MATCH
5. LANDSCAPED AREA. SEE LANDSCAPE PLAN. IF NO PLANTINGS INSTALL TOPSOIL & SEED

SITE PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY

© CARMINA WOOD DESIGN

CARMINA WOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

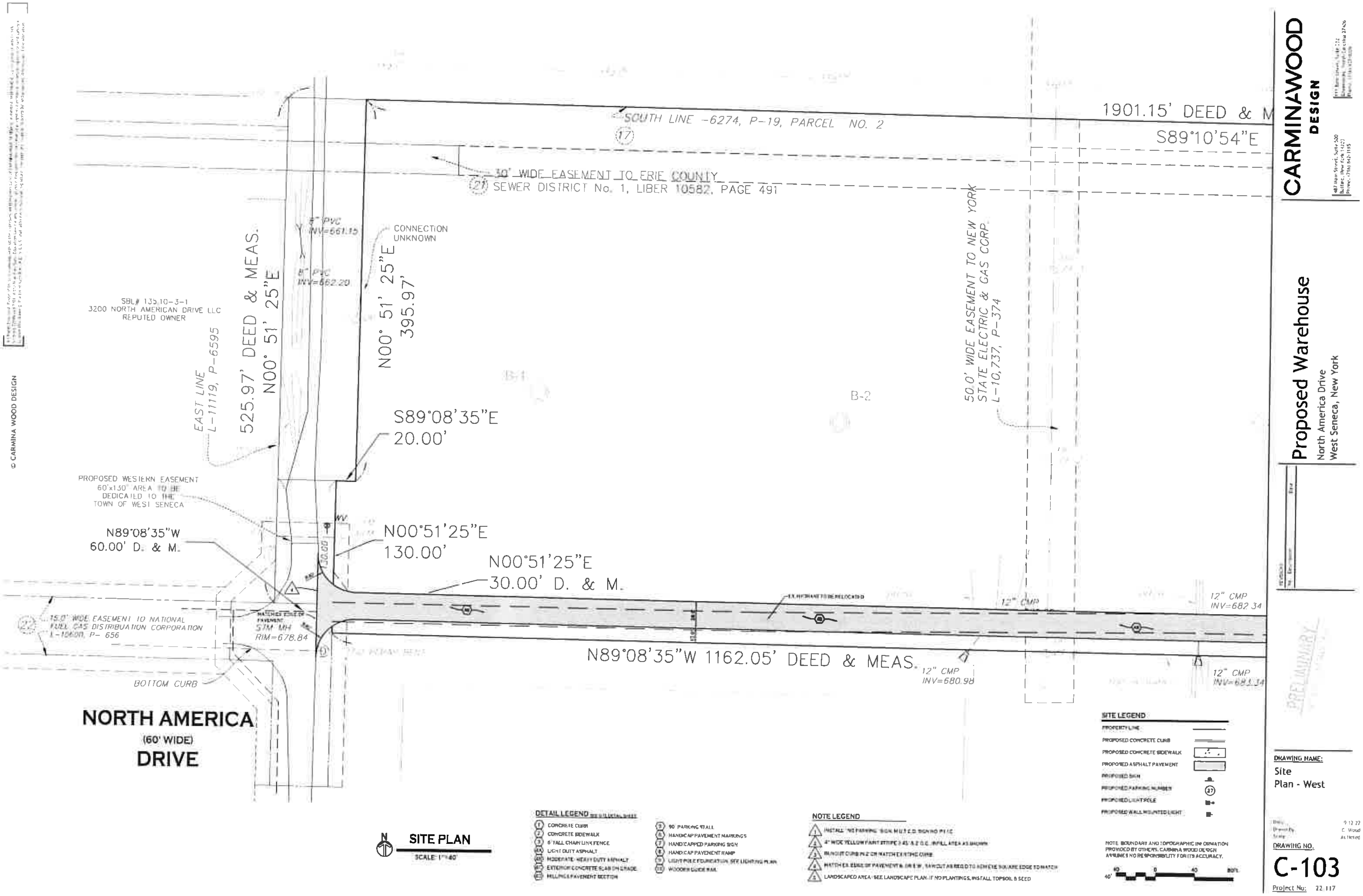
PRELIMINARY

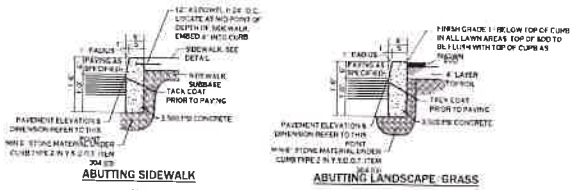
DRAWING NAME: Site Plan - South

Date: 9.12.22
Drawn by: C. Wood
Scale: As Noted

DRAWING NO. C-102

Project No. 22.117


CARMINA WOOD DESIGN
Proposed Warehouse
North America Drive
West Seneca, New York
1901.15' DEED & M
S89°10'54"E
SOUTH LINE -6274, P-19, PARCEL NO. 2
30' WIDE EASEMENT TO ERIE COUNTY
SEWER DISTRICT No. 1, LIBER 10582, PAGE 491
50.0' WIDE EASEMENT TO NEW YORK
STATE ELECTRIC & GAS CORP.
L-10,737, P-374
CONNECTION UNKNOWN
N00° 51' 25"E
395.97'
SBL# 135.10-3-1
3200 NORTH AMERICAN DRIVE LLC
REPUTED OWNER
EAST LINE
L-11119, P-6595
525.97' DEED & MEAS.
N00° 51' 25"E
S89°08'35"E
20.00'
PROPOSED WESTERN EASEMENT
60'x130' AREA TO BE
DEDICATED TO THE
TOWN OF WEST SENECA
N89°08'35"W
60.00' D. & M.
N00°51'25"E
130.00'
N00°51'25"E
30.00' D. & M.
15.0' WIDE EASEMENT TO NATIONAL
FUEL GAS DISTRIBUTION CORPORATION
L-10600, P-656
STM MH
RIM=678.84
BOTTOM CURB
N89°08'35"W 1162.05' DEED & MEAS.
12" CMP
INV=682.34
12" CMP
INV=680.98
12" CMP
NORTH AMERICA
(60' WIDE)
DRIVE
B-1
B-2
SITE PLAN
DETAIL LEGEND
CONCRETE CURB
CONCRETE SIDEWALK
6' TALL CHAIN LINK FENCE
LIGHT DUTY ASPHALT
90 PARKING STALL
HANDICAP PAVEMENT MARKINGS
HANDICAPPED PARKING SIGN
HANDICAP PAVEMENT RAMP
NOTE LEGEND
LANDSCAPED AREA - SEE LANDSCAPE PLAN. IF NO PLANTINGS, INSTALL TOPSOIL & SEED
SITE LEGEND
PROPOSED CONCRETE CURB
PROPOSED CONCRETE SIDEWALK
PROPOSED ASPHALT PAVEMENT
DRAWING NAME:
Site
Plan - West
DRAWING NO.
C-103
Project No: 22.117

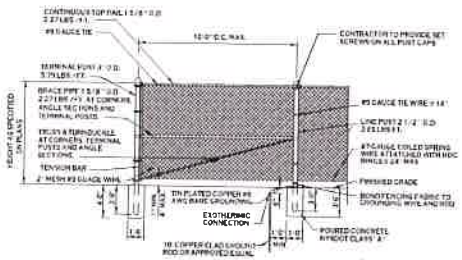


ABUTTING SIDEWALK

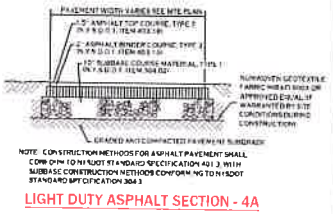
ABUTTING LANDSCAPE - GRASS

NOTES
1 CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702 0700.
2 WHERE THE CURB DROPS TO FLUSH WITH ASPHALT THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY

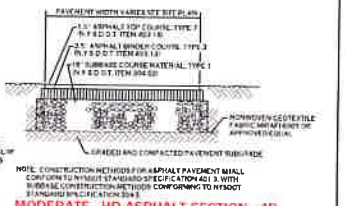
TYPE "A" CONCRETE CURB - 1



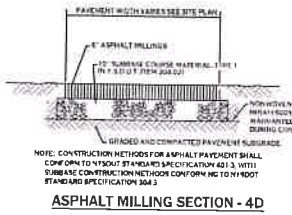
CHAIN LINK FENCE DETAIL - 3



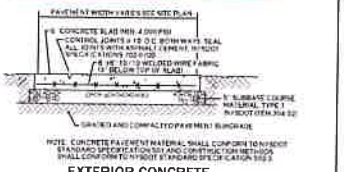
LIGHT DUTY ASPHALT SECTION - 4A



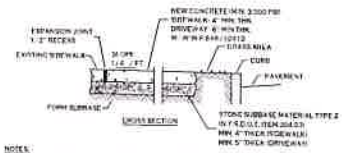
MODERATE - HD ASPHALT SECTION - 4B



ASPHALT MILLING SECTION - 4D

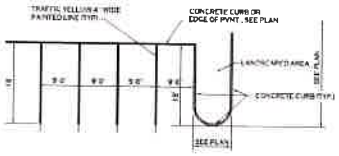


EXTERIOR CONCRETE SLAB-ON-GRADE SECTION - 4C

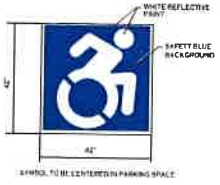


NOTES:
1 CONTROL JOINTS TO BE AT 5'-0" O.C. BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702 0700.
2 CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608.3
3 SUBGRADE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE. PROVIDE CONTINUOUS STONE PATH TO CURB UNDER DRAIN WHERE PROVIDED.
4 FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702 0700.
5 SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB.
6 INSTALL 6" LONG #3 DOWELS - 12'-0" O.C. WHERE SIDEWALK ADJTS A BUILDING WALL AT AN ENTRANCE. THICKEN SIDEWALK TO 6'-0" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 10' EITHER SIDE OF ENTRANCE.
7 INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE

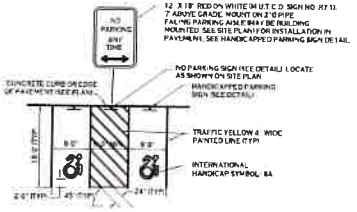
CONCRETE SIDEWALK - 2



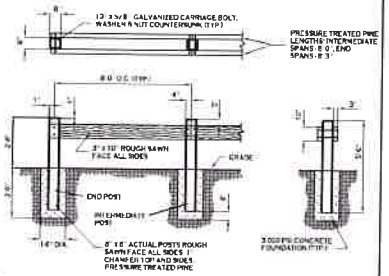
90° PARKING STALL LAYOUT - 5



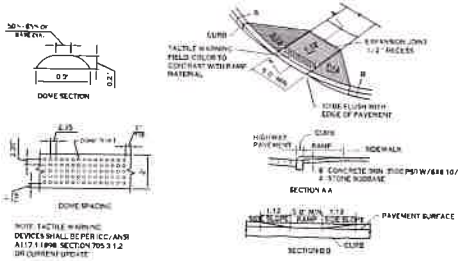
INTERNATIONAL HANDICAP SYMBOL - 6A



HANDICAPPED PAVEMENT MARKINGS & SIGNAGE - 6

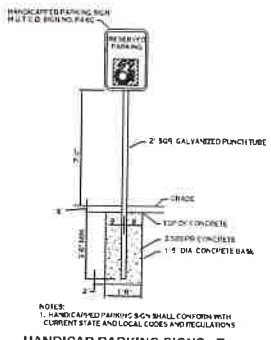


WOODEN GUIDE RAIL - 10



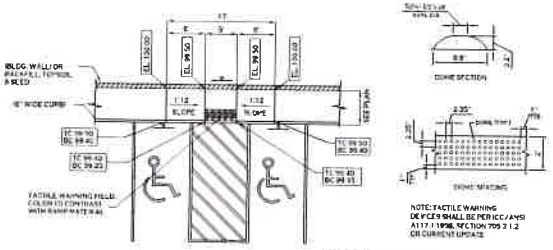
NOTE: TACTILE WARNING DEVICES SHALL BE PER ICC/ANSI A117.1-1998, SECTION 705.2.1.2 OR CURRENT UPDATE

SIDEWALK CURB RAMP - 3



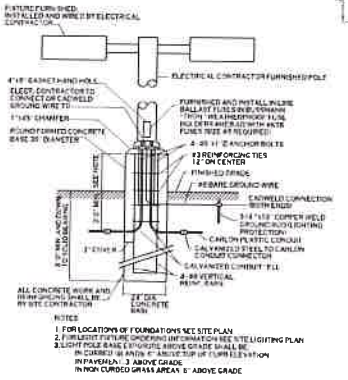
HANDICAP PARKING SIGNS - 7

INSTALLED IN GRASS/LANDSCAPED AREA



NOTE: ELEVATIONS & DIMENSIONS SHOWN ARE TO ILLUSTRATE GRADE CHANGE ONLY. SEE SITE & GRADING PLAN FOR ACTUAL DATUM & DIMENSIONS

HANDICAPPED PAVEMENT RAMP - 8



LIGHT POLE FOUNDATION - 9

CARMINAWOOD DESIGN

Proposed Warehouse

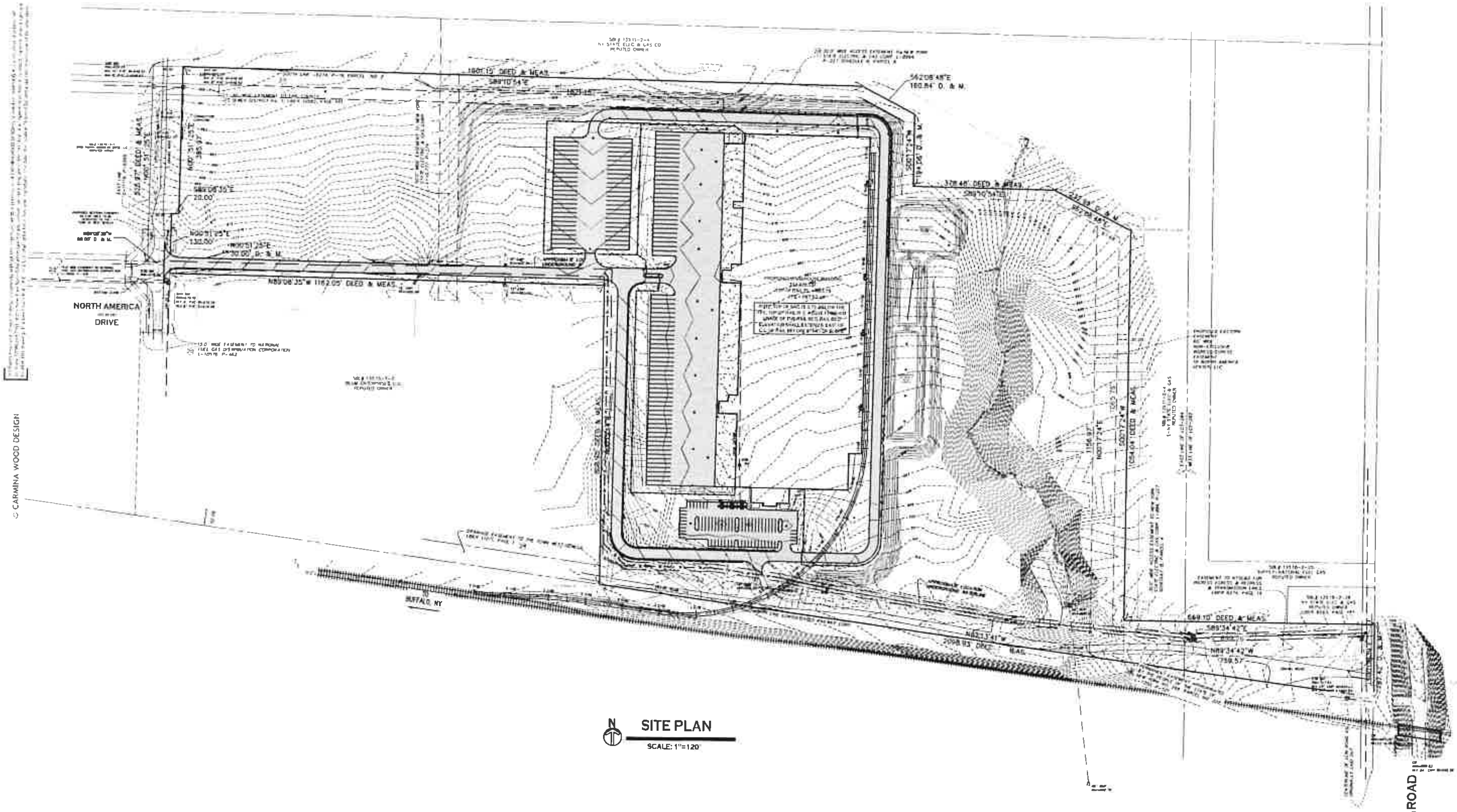
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Site Details

DRAWING NO.
C-104

PROJECT NO: 22.117



SITE PLAN

SCALE: 1"=120'

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	—101—
PROPOSED SPOT ELEVATION	607.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 606.44 BC 605.94
PROPOSED CATCH BASIN	■ CB
PAVEMENT/GROUND SLOPE	→
PROPOSED YARD DRAIN	● YD
PROPOSED MANHOLE	● MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

120' 120 0 120 240ft.

CARMINA WOOD DESIGN

Proposed Warehouse

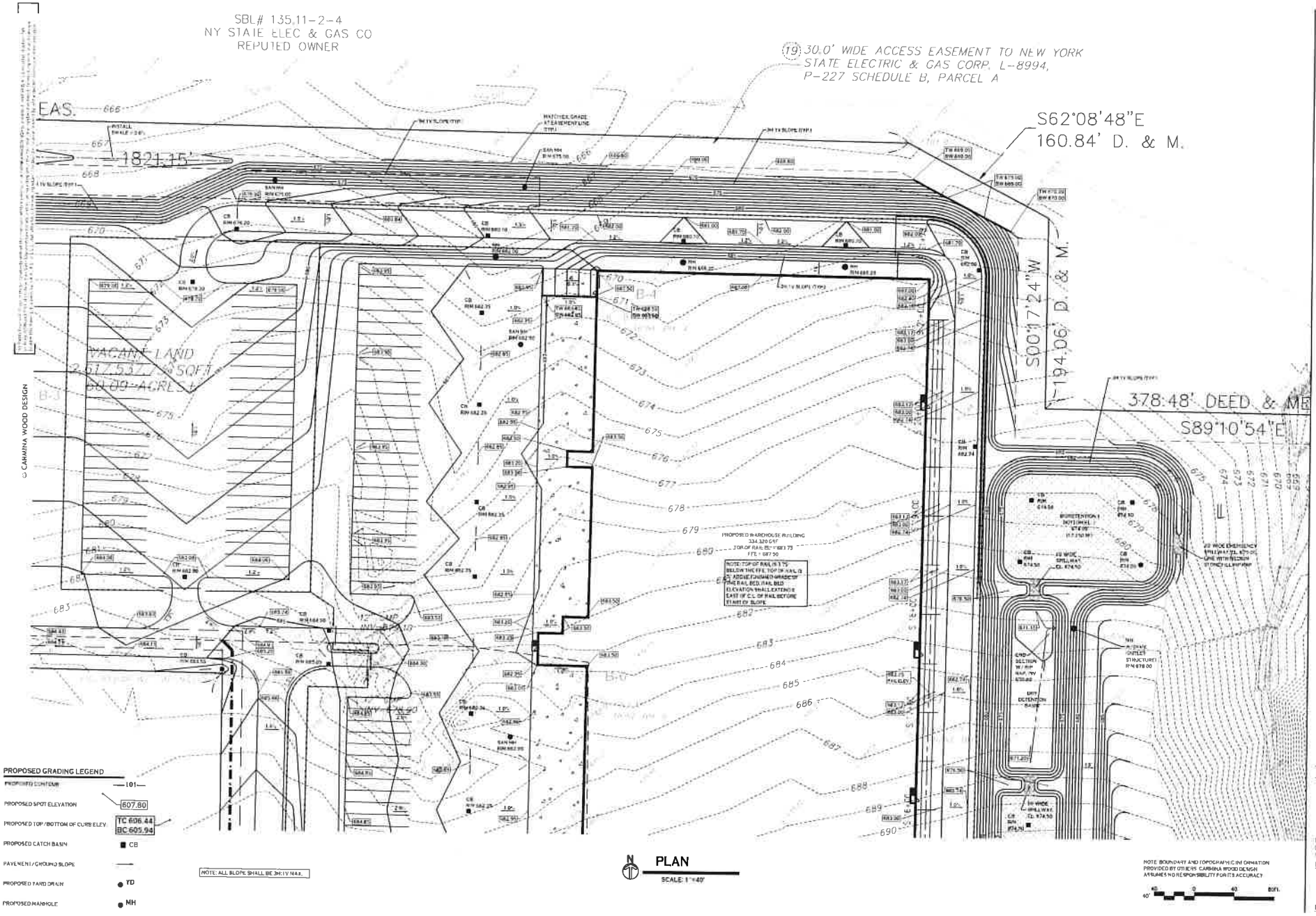
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Grading Plan

DRAWING NO.
C-200

Project No: 22.117



PROPOSED GRADING LEGEND

- PROPOSED CONTOUR — 101
- PROPOSED SPOT ELEVATION — 607.80
- PROPOSED TOP/BOTTOM OF CURB ELEV. — TC 606.44 / BC 605.94
- PROPOSED CATCH BASIN — CB
- PAVEMENT / GROUND SLOPE
- PROPOSED YARD DRAIN — YD
- PROPOSED MANHOLE — MH

NOTE: ALL SLOPE SHALL BE 3H:1V MAX.

N

PLAN

SCALE: 1" = 40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 0 40 80Ft.

CARMINA WOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

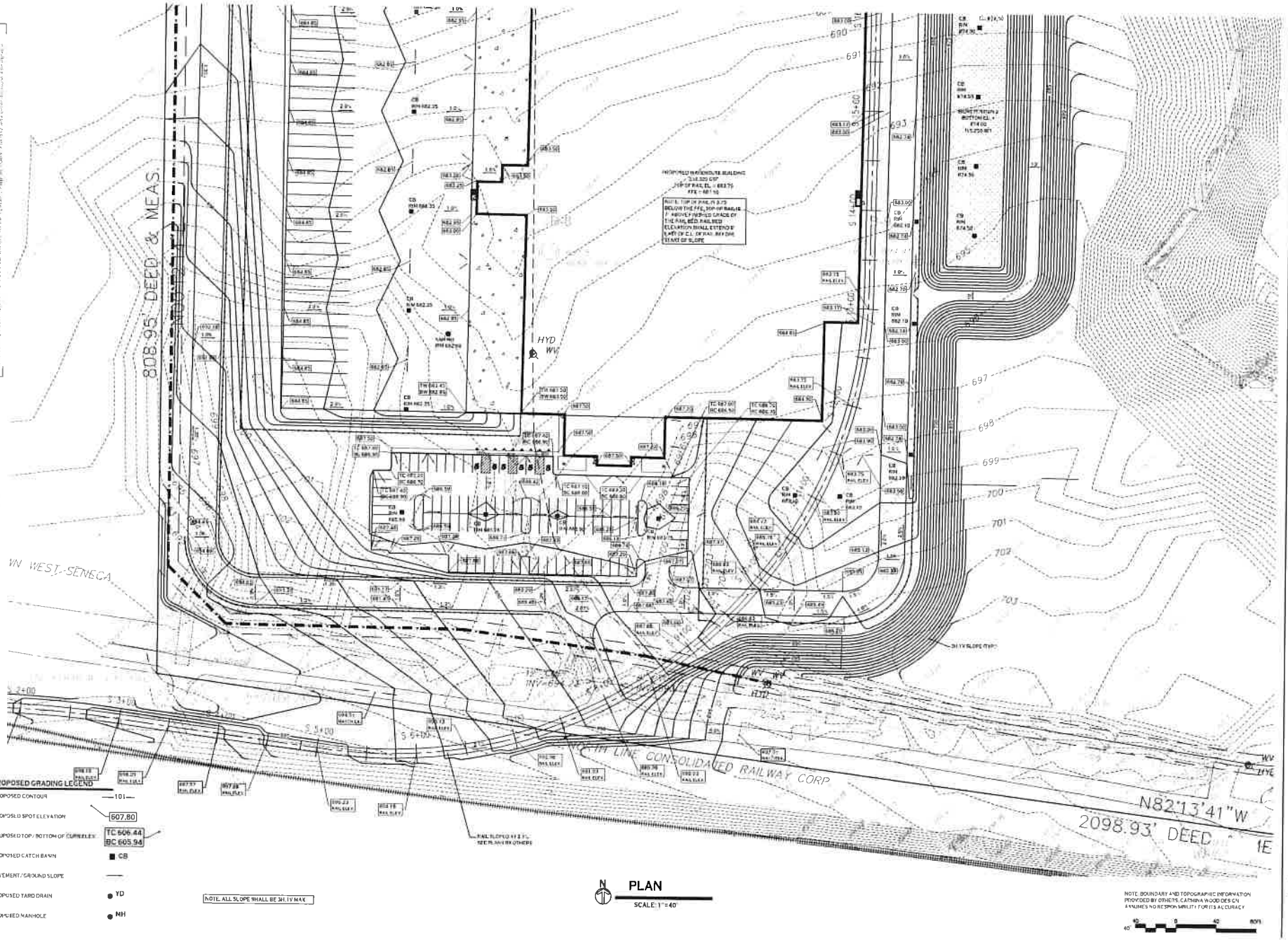
PRELIMINARY

DRAWING NAME:
Grading
Plan - North

Date: 9.12.22
Drawn By: K. Wood
Scale: as Noted

DRAWING NO.
C-201

Project No: 22.117



CARMINA WOOD DESIGN

CARMINA WOOD DESIGN

Proposed Warehouse

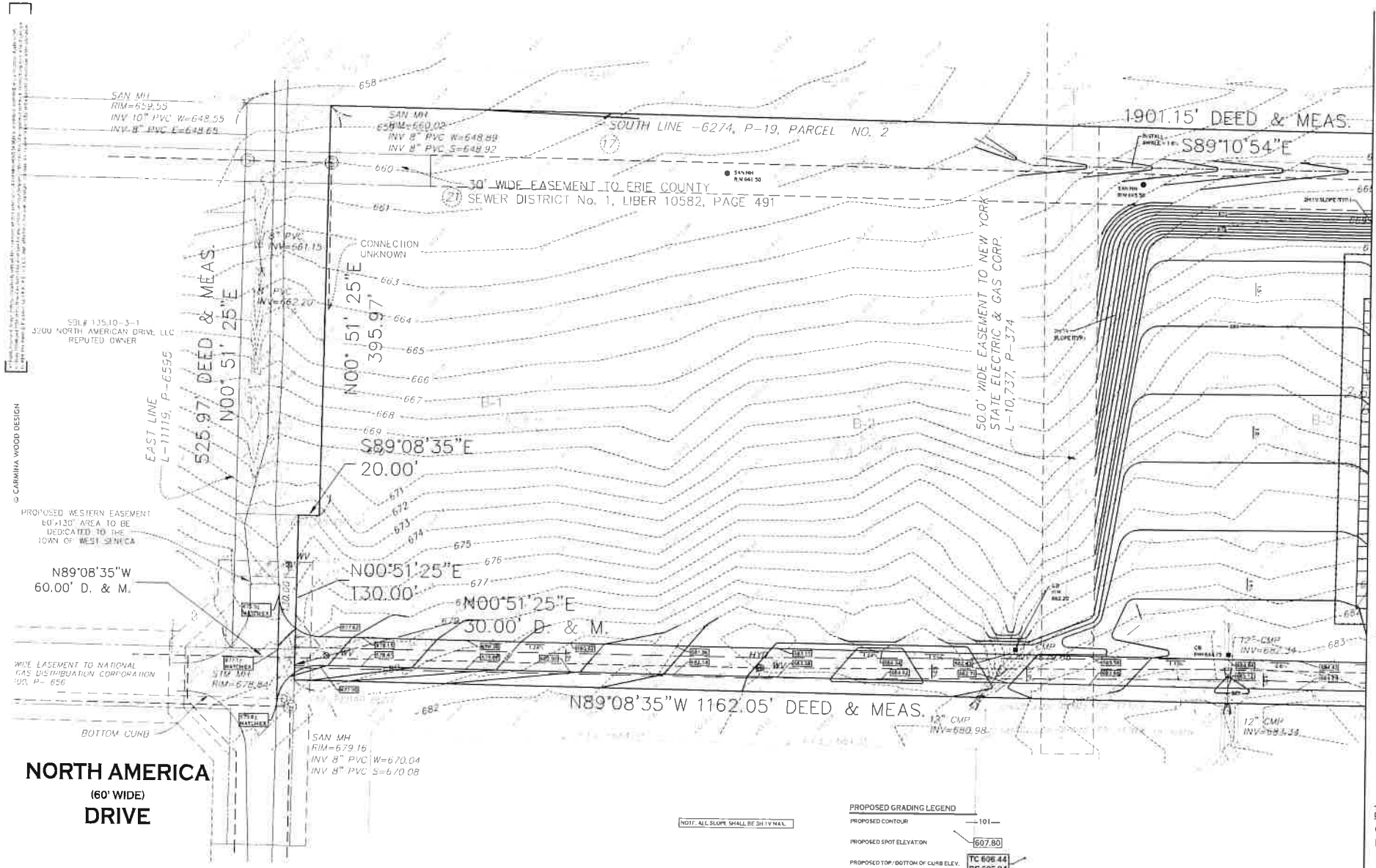
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Grading
Plan - South

DRAWING NO.
C-202

Project No: 22.117



NOTE: ALL SLOPE SHALL BE 3H:1V MAX.

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	101
PROPOSED SPOT ELEVATION	607.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 606.44 BC 605.94
PROPOSED CATCH BASIN	CB
PAVEMENT/GROUND SLOPE	
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH

PLAN
SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

40' 0 40 80'

CARMINAWOOD DESIGN

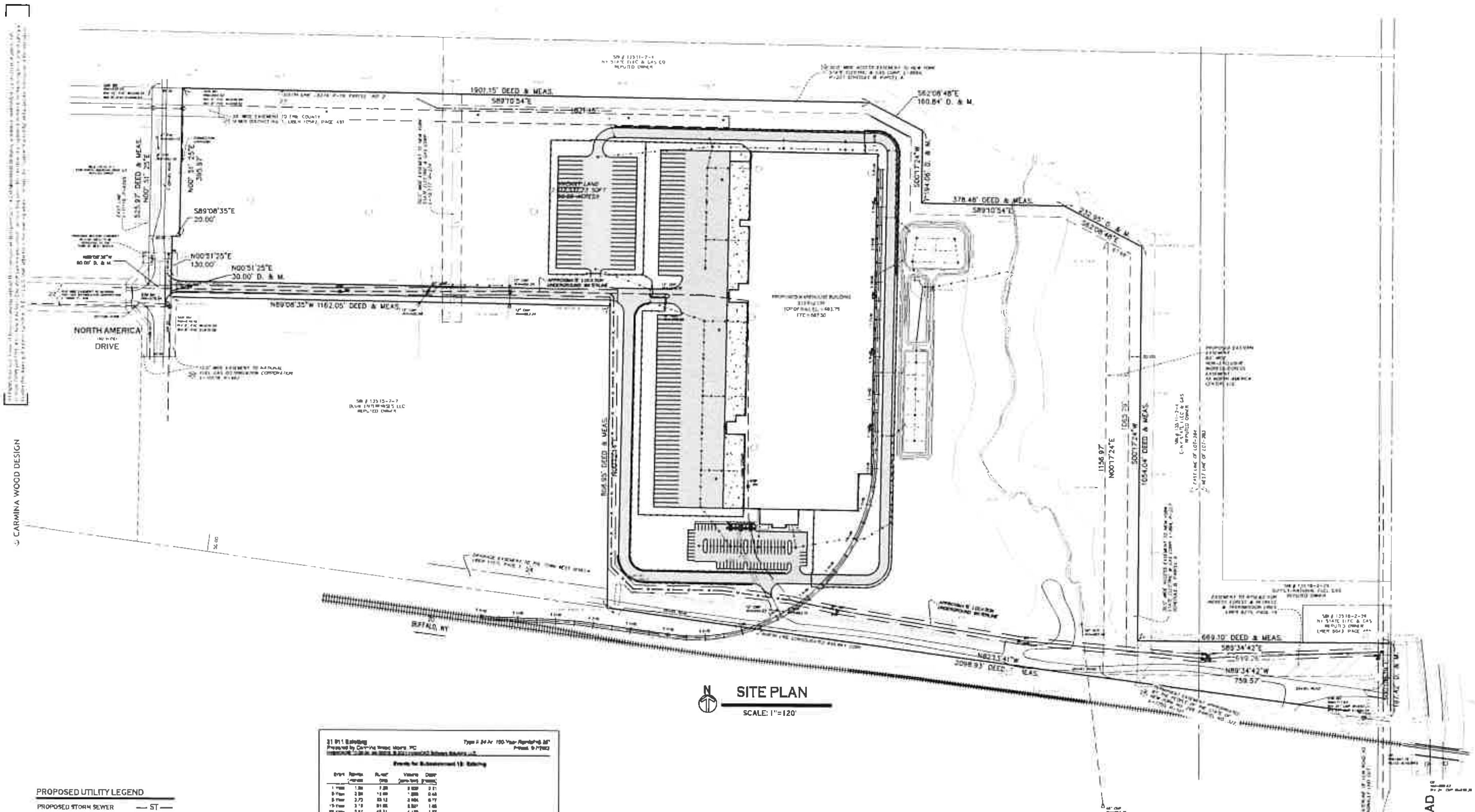
Proposed Warehouse
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Grading
Plan - West

DRAWING NO.
C-203

Project No: 22.117



Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-Year	[illegible]	[illegible]	[illegible]	[illegible]
2-Year	[illegible]	[illegible]	[illegible]	[illegible]
5-Year	[illegible]	[illegible]	[illegible]	[illegible]
10-Year	[illegible]	[illegible]	[illegible]	[illegible]
25-Year	[illegible]	[illegible]	[illegible]	[illegible]
50-Year	[illegible]	[illegible]	[illegible]	[illegible]
100-Year	[illegible]	[illegible]	[illegible]	[illegible]

22.117 Proposed Basin

Events for Pond 1P: Basin

Event	Inflow	Outflow	Primary	Secondary	Elevation	Storage
1-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100-Year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

22.117 Proposed Basin

Event	Rainfall	Runoff	Volume	Depth
1-Year	[illegible]	[illegible]	[illegible]	[illegible]
2-Year	[illegible]	[illegible]	[illegible]	[illegible]
5-Year	[illegible]	[illegible]	[illegible]	[illegible]
10-Year	[illegible]	[illegible]	[illegible]	[illegible]
25-Year	[illegible]	[illegible]	[illegible]	[illegible]
50-Year	[illegible]	[illegible]	[illegible]	[illegible]
100-Year	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	— ST —
PROPOSED SANITARY SEWER	— 6"SA —
PROPOSED WATERLINE	— 1"W —
PROPOSED CATCH BASIN	■ CB
PROPOSED YARD DRAIN	● YD
PROPOSED MANHOLE	● MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	● GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC. INSTALL A CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

CARMINA WOOD DESIGN

Proposed Warehouse

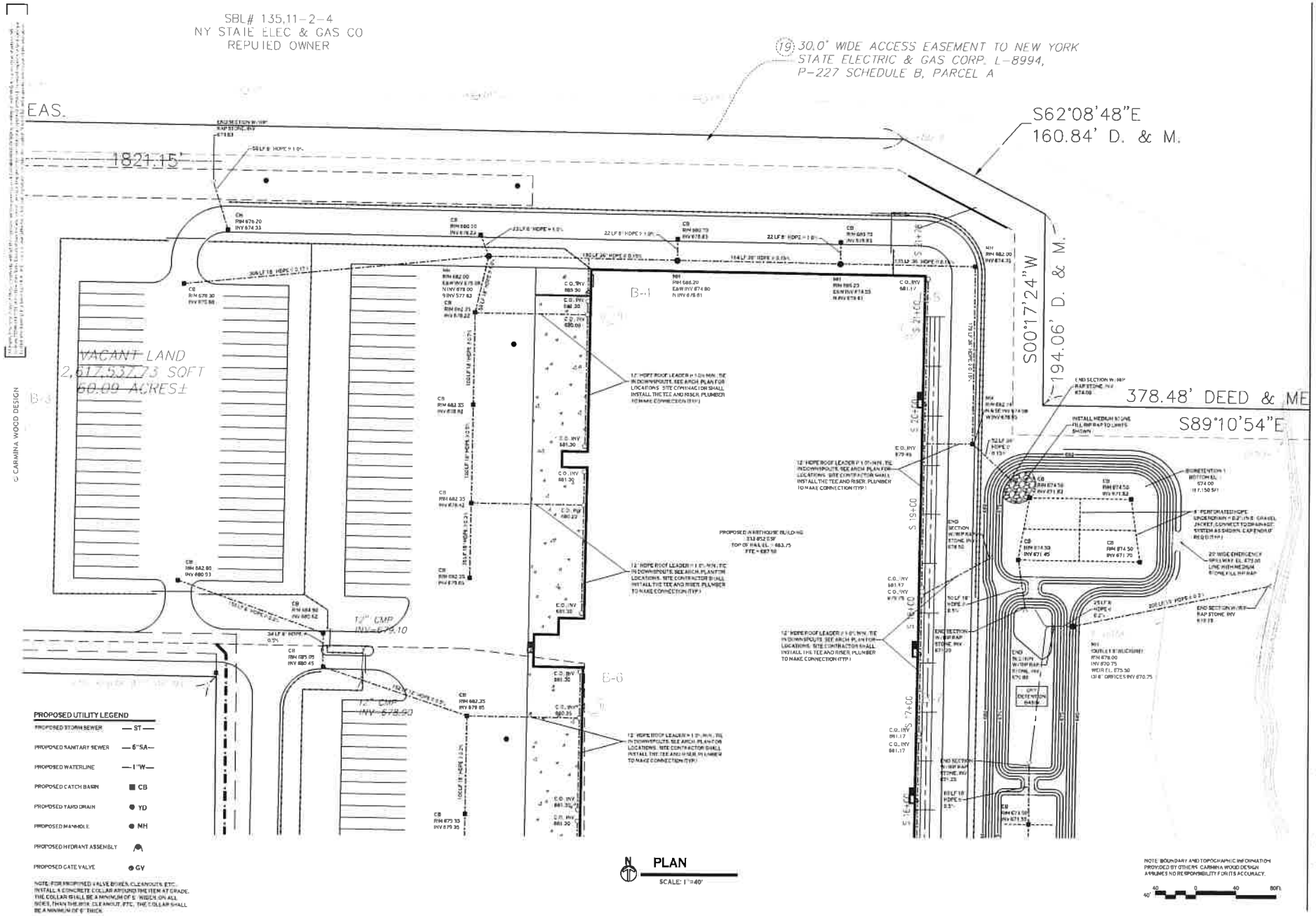
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Storm Drainage Plan

DRAWING NO.
C-300

Project No: 22.117



CARMINA WOOD DESIGN

Proposed Warehouse
North America Drive
West Seneca, New York

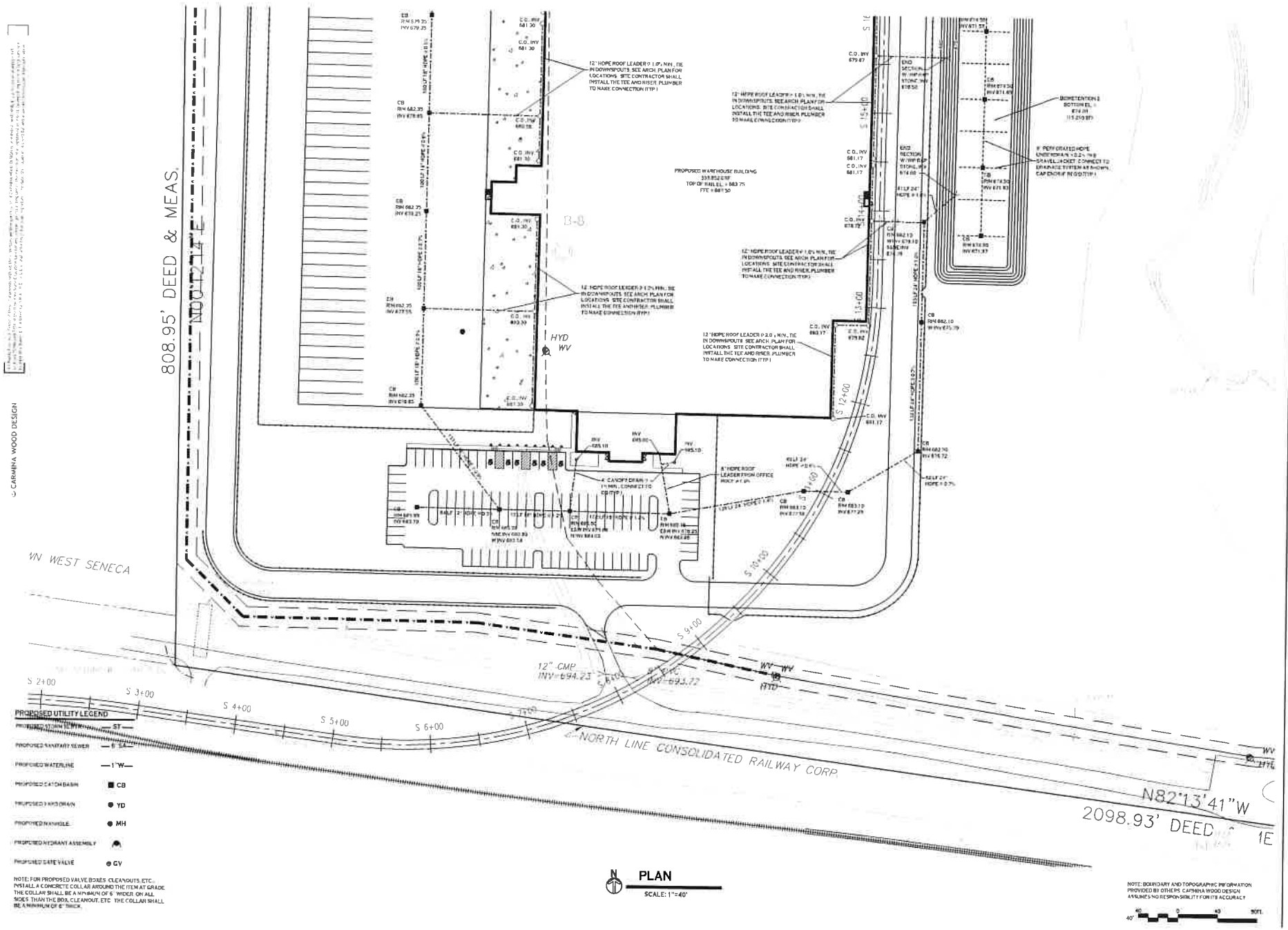
PRELIMINARY

DRAWING NAME:
Storm Drainage Plan - North

Date: 9.12.22
Drawn By: L. Wood
Scale: as noted

DRAWING NO.
C-301

Project No: 22.117



PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	S
PROPOSED WATERLINE	W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER ON ALL SIDES THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

N

PLAN

SCALE: 1"=40'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY

40' 0 40 80FT.

CARMINA WOOD DESIGN
181 Main Street, Suite 202
Buffalo, New York 14203
Phone: (716) 940-1145

Proposed Warehouse

North America Drive
West Seneca, New York

No.	Description	Date

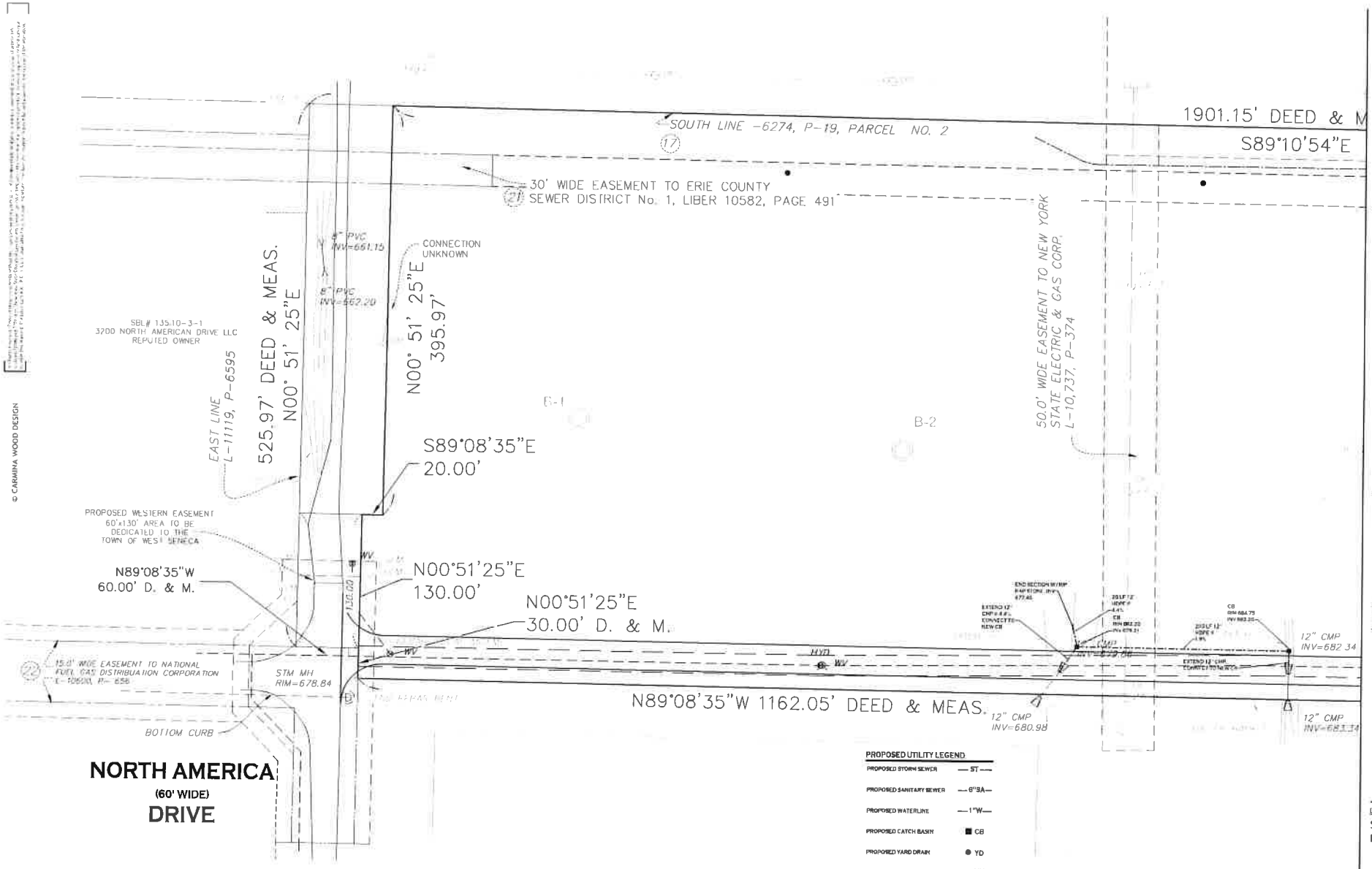
PRELIMINARY

DRAWING NAME:
Storm Drainage Plan - South

Date: 9.12.22
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-302

Project No: 22.117



PLAN
SCALE: 1"=40'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	— ST —
PROPOSED SANITARY SEWER	— 6"SA —
PROPOSED WATERLINE	— 1"W —
PROPOSED CATCH BASIN	■ CB
PROPOSED YARD DRAIN	● YD
PROPOSED MANHOLE	● MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	● GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC. INSTALL A CONCRETE COLLAR AROUND THE ITEM AT GRADE THE COLLAR SHALL BE A MINIMUM OF 6" WIDER ON ALL SIDES THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY

40' 0 40 80Ft

CARMINAWOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

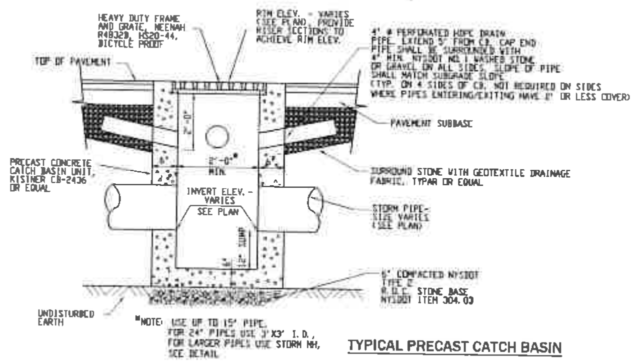
PRELIMINARY

DRAWING NAME:
Storm Drainage Plan - West

Date: 9.11.22
Drawn By: E. Wood
Scale: As Noted

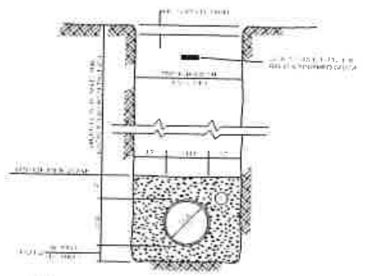
DRAWING NO.
C-303

Project No: 22.117



*NOTE: USE UP TO 15" PIPE. FOR 24" PIPES USE 3'X3' I.D. FOR LARGER PIPES USE STORM MH, SEE DETAIL

TYPICAL PRECAST CATCH BASIN



MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

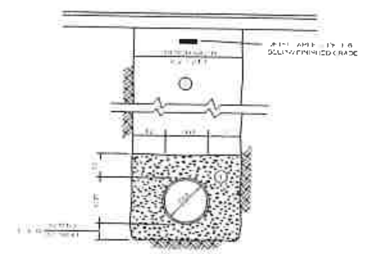
① NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

③ NO.2 RUN OF CRUSHER STONE OR NO.2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6"LIFTS TO 90% DENSITY)

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ① AND ③

UTILITY TRENCH SECTION
IN UNPAVED AREAS



MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

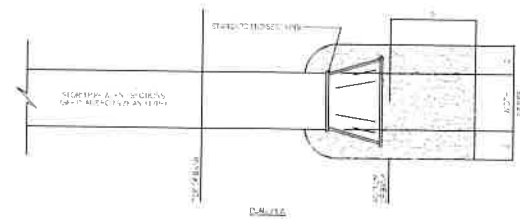
① NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

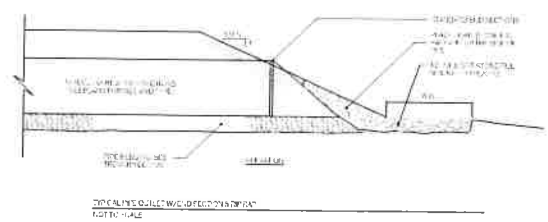
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

③ NO.2 RUN OF CRUSHER STONE OR NO.2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6"LIFTS TO 90% DENSITY)

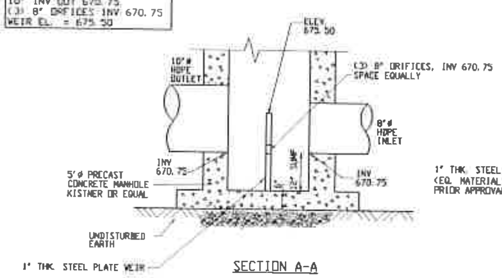
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ① AND ③

UTILITY TRENCH SECTION
IN PAVED AREAS

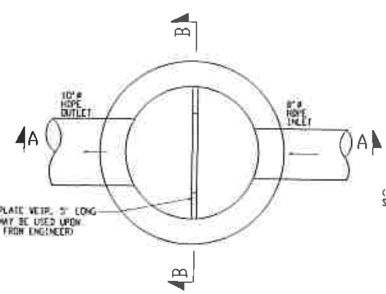




OUTLET STRUCTURE
(5' Ø MANHOLE)
RIM 678.00
8" INV IN 670.75
10" INV OUT 670.75
(3) 8" ORIFICES INV 670.75
WEIR EL. = 675.50

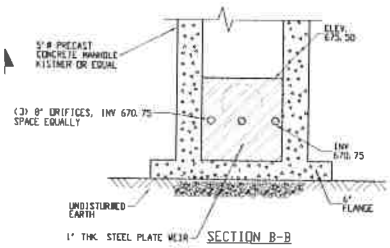


SECTION A-A



PLAN

OUTLET CONTROL STRUCTURE



SECTION B-B

© CARMINA WOOD DESIGN

CARMINA WOOD DESIGN

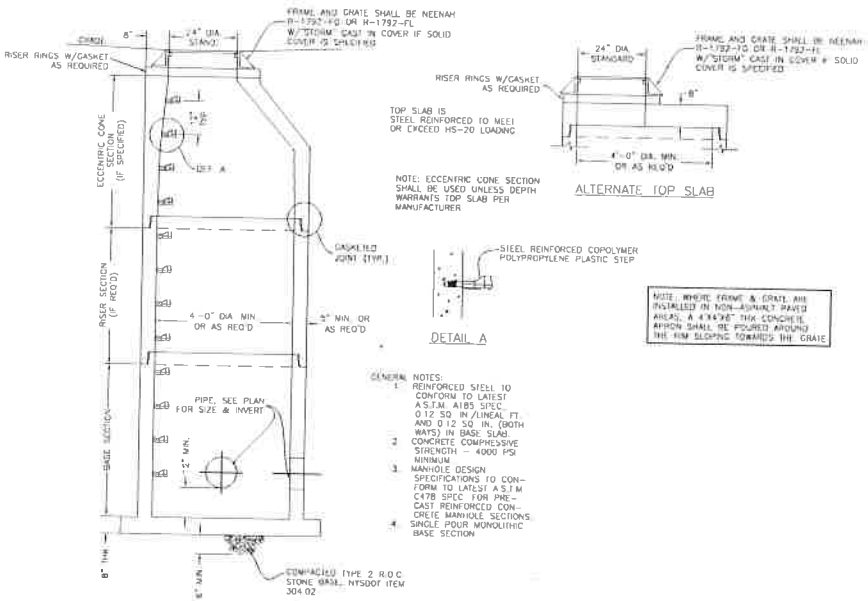
Proposed Warehouse
North America Drive
West Seneca, New York

PRELIMINARY

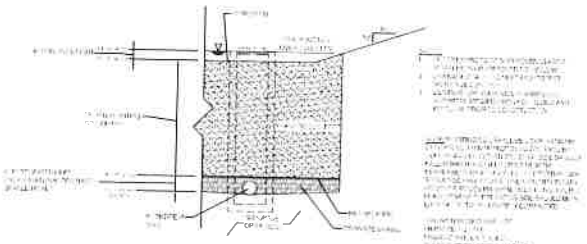
DRAWING NAME:
Storm Drainage Details

DRAWING NO.
C-304

Project No: 22.117



TYPICAL STORM MANHOLE DETAIL



BIORETENTION AREA 1 & 2 - TYPICAL SECTION

CARMINAWOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

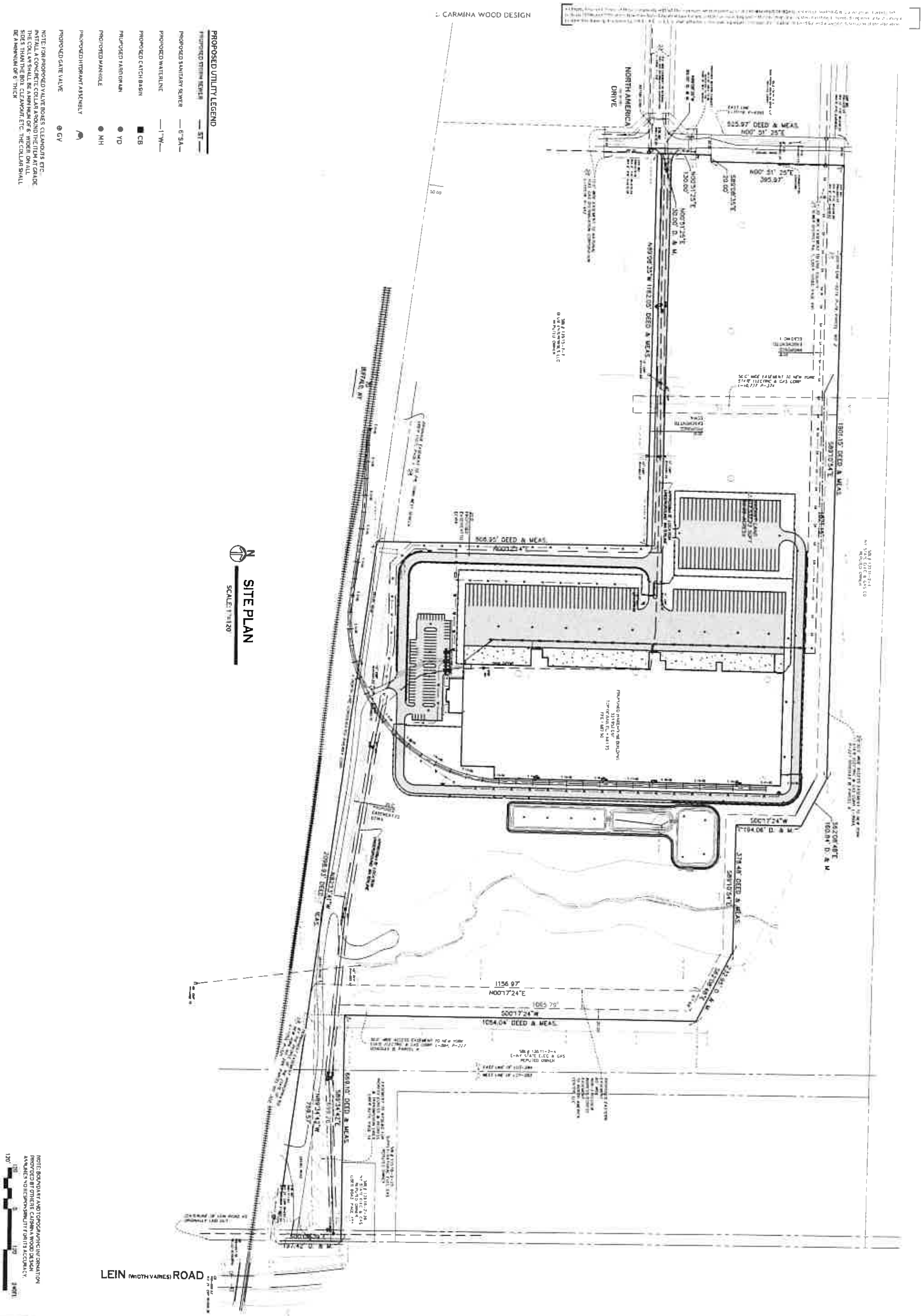
PRELIMINARY

DRAWING NAME:
Storm Drainage Details

Date
Drawn By
Chk'd

DRAWING NO.
C-305

Project No: 22.117


PROPOSED UTILITY LEGEND
PROPOSED STORM SEWER — ST —
PROPOSED SANITARY SEWER — 6"SA—
PROPOSED WATERLINE — 1"W—
PROPOSED CATCH BASIN ■ CB
PROPOSED YARD DRAIN ● YD
PROPOSED MANHOLE ● MH
PROPOSED HYDRANT ASSEMBLY
PROPOSED GATE VALVE ⊗ GV
NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC. INSTALL A CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER ON ALL SIDES THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK
© CARMINA WOOD DESIGN
NORTH AMERICA DRIVE
525.97' DEED & MEAS.
N00° 51' 25"E
N00° 51' 25"E
395.97'
N00°51'25"E
130.00'
N00°51'25"E
30.00' D. & M.
N89°08'35"W 1182.05' DEED & MEAS.
1801.15' DEED & MEAS.
S89°10'54"E
506.95' DEED & MEAS.
N00°21'24"E
SITE PLAN
SCALE: 1"=120'
S62°08'48"E
160.84' D. & M.
S00°17'24"W
194.06' D. & M.
378.48' DEED & MEAS.
S89°10'54"E
2098.93' DEED & MEAS.
1156.97'
N00°17'24"E
1065.79'
S00°17'24"W
1054.04' DEED & MEAS.
669.10' DEED & MEAS.
S89°34'42"E
N89°34'42"W
799.57'
LEIN (WIDTH VARIES) ROAD
NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

PRELIMINARY

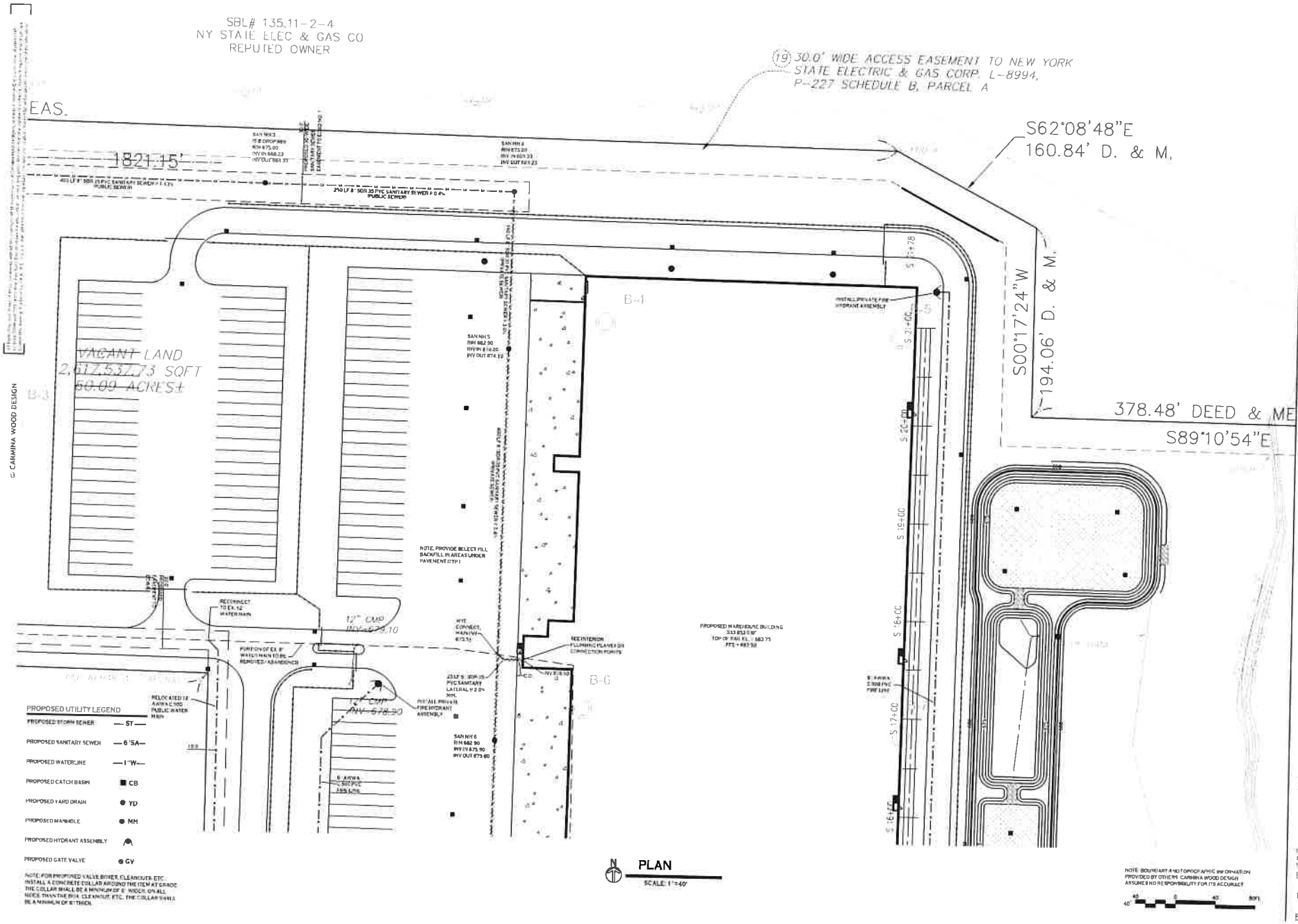
Proposed Warehouse
North America Drive
West Seneca, New York

CARMINA WOOD
DESIGN

DRAWING NAME:
Utility
Plan

DRAWING NO.
C-400

Project No: 22.117



CARMINAWOOD DESIGN

Proposed Warehouse
North America Drive
West Seneca, New York

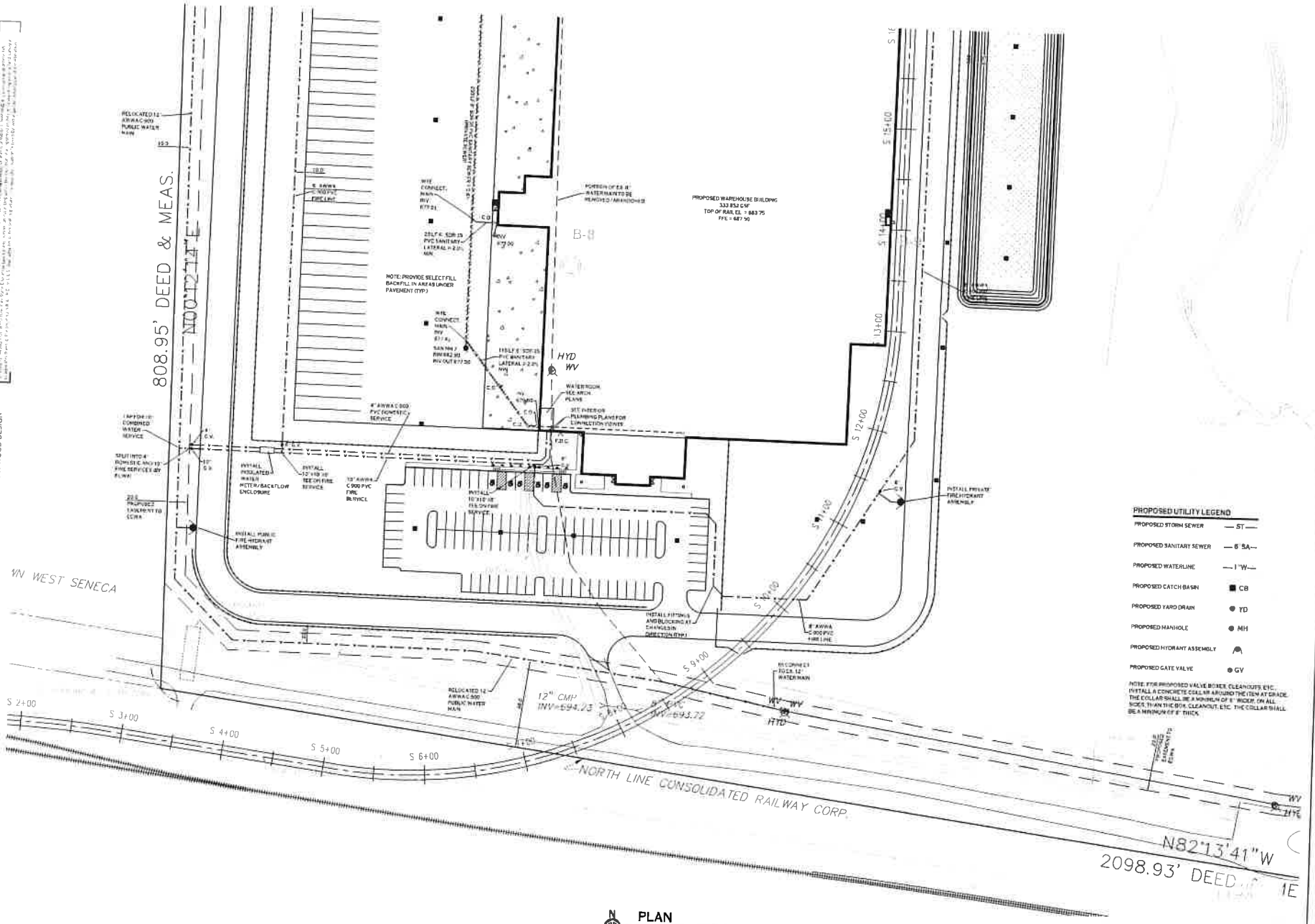
PRELIMINARY

DRAWING NAME:
Utility Plan - North

Date: 9.12.22
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-401

Project No: 22.117



PLAN
SCALE: 1"=40'

CARMINA WOOD DESIGN

Proposed Warehouse

North America Drive
West Seneca, New York

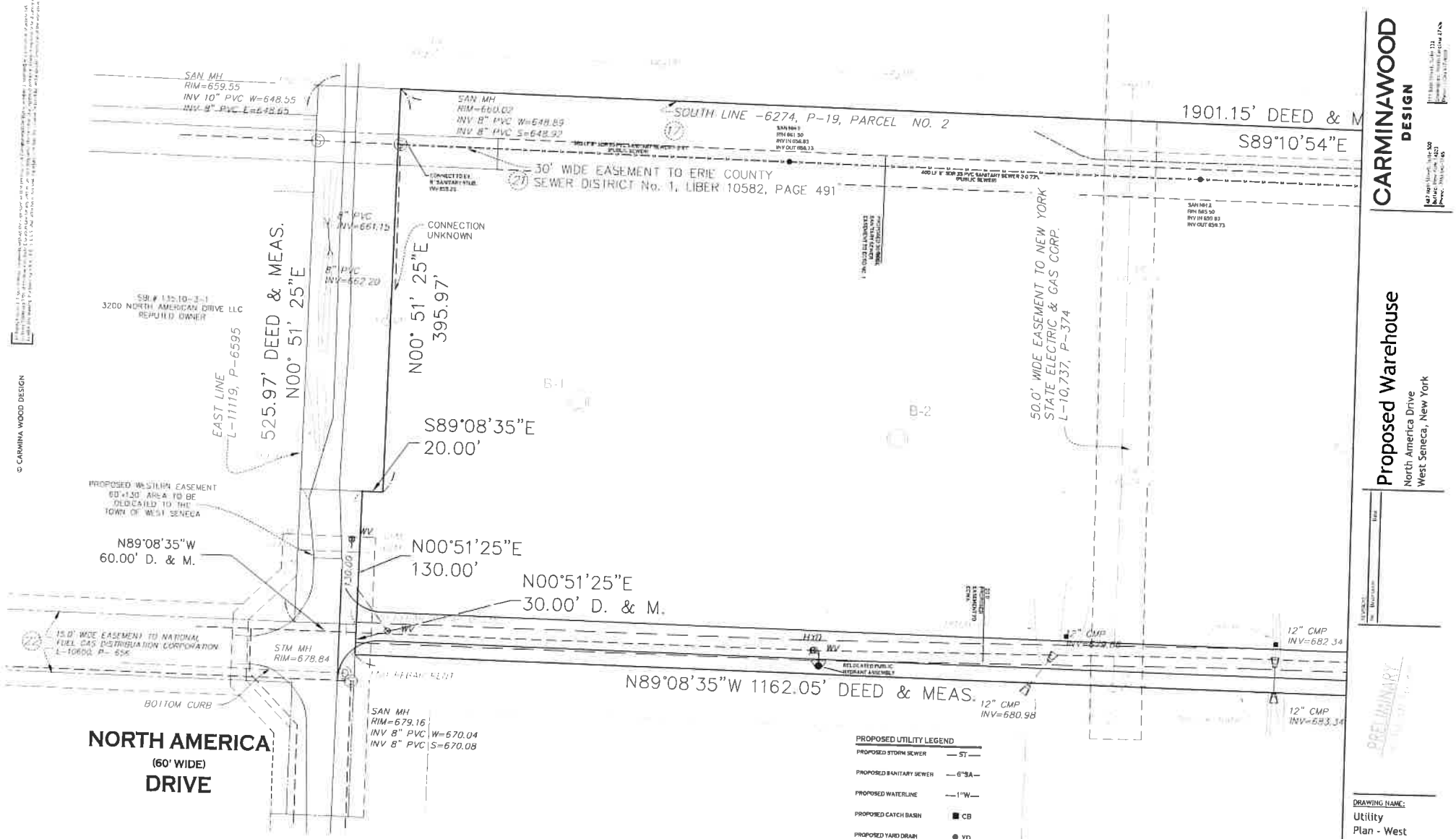
PRELIMINARY

DRAWING NAME:
Utility Plan - South

Date: 9.12.22
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-402

Project No: 22.117



PLAN
SCALE: 1"=40'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	—ST—
PROPOSED SANITARY SEWER	—6"SA—
PROPOSED WATERLINE	—1"W—
PROPOSED CATCH BASIN	■ CB
PROPOSED YARD DRAIN	● YD
PROPOSED MANHOLE	● MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	● GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER ON ALL SIDES THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

CARMINA WOOD DESIGN

Proposed Warehouse
North America Drive
West Seneca, New York

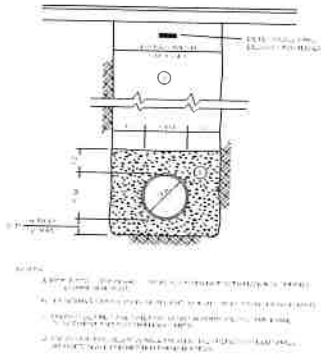
PRELIMINARY

DRAWING NAME:
Utility
Plan - West

Date: 9-9-22
Drawn By: E. Wood
Scale: 1"=40'

DRAWING NO.
C-403

Project No: 22.117



MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

① NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 8" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

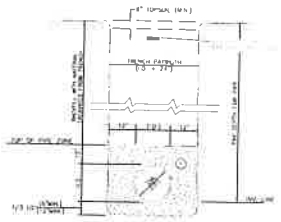
TRENCH MATERIAL BACKFILL (NYSDOT LATEST EDITION)

② NO.2 RUN OF CRUSHED STONE OR NO.2 RUN OF CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 8"LIFTS TO 90% DENSITY) NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ① AND ②

UTILITY TRENCH SECTION IN PAVED AREAS

UNSHEETED TRENCH DETAIL

(JANUARY 2012)



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

B. DIMENSIONS (EXCEPTING SHALL INCLUDE ALL ALLOWABLE OVEREXCAVATION).

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MINIMUM PAY LIMITS.

D. AN OSHA APPROVED REMOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

① NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 8" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

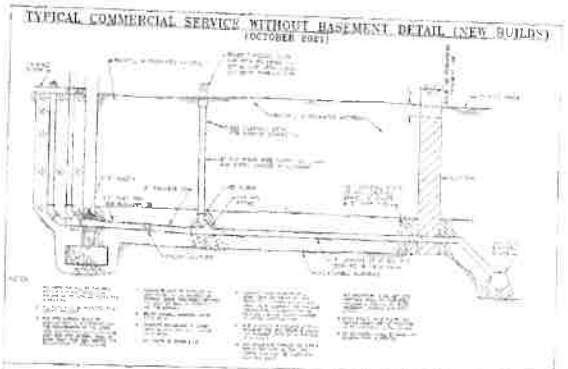
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ①

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

1

TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL (NEW BUILDS)

(OCTOBER 2012)

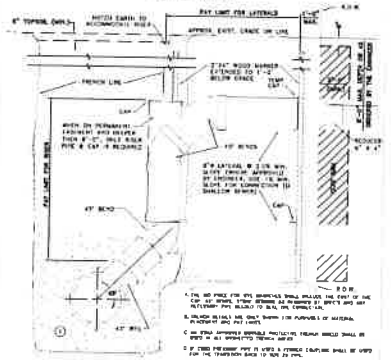


ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

22

RISER DETAIL - SDR35 (MAIN LINE LATERAL CONNECTION)

(JANUARY 2012)



MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

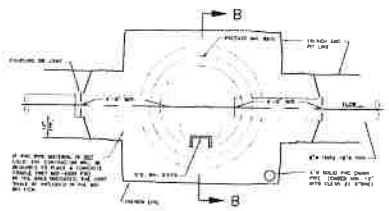
① NO. 1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 8" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER. NO SLAG WILL BE ALLOWED

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

27

MONOLITHIC PRECAST BASE MANHOLES 4'-0" DIA. BASE FOR 15"Ø SEWERS OR LESS

(JANUARY 2012)



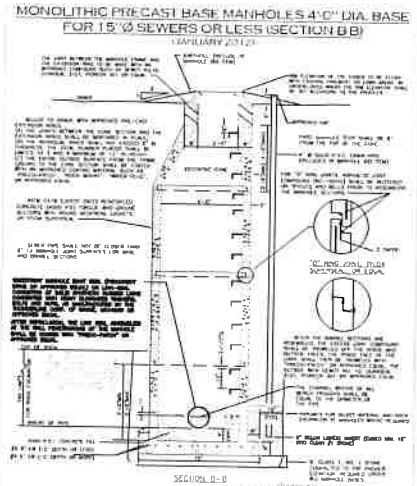
PLAN

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

10

MONOLITHIC PRECAST BASE MANHOLES 4'-0" DIA. BASE FOR 15"Ø SEWERS OR LESS (SECTION B-B)

(JANUARY 2012)



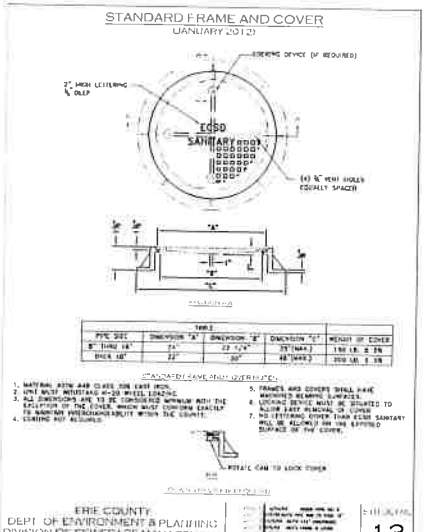
SECTION B-B

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

11

STANDARD FRAME AND COVER

(JANUARY 2012)



PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	25" (MAX.)	150 LBS. ± 5%
OVER 18"	32"	30"	48" (MAX.)	300 LBS. ± 5%

STANDARD FRAME AND COVER NOTES:

1. MATERIAL ASTM A48 CLASS 30B CAST IRON.
2. UNIT MUST WITHSTAND H-20 WHEEL LOADING.
3. ALL DIMENSIONS ARE TO BE CONSIDERED MINIMUM WITH THE EXCEPTION OF THE COVER, WHICH MUST CONFORM EXACTLY TO MAINTAIN INTERCHANGEABILITY WITHIN THE COUNTY.
4. COATING NOT REQUIRED.
5. FRAMES AND COVERS SHALL HAVE MACHINED BEARING SURFACES.
6. LOCKING DEVICE MUST BE SITUATED TO ALLOW EASY REMOVAL OF COVER.
7. NO LETTERING OVER THAN ECSD SANITARY WILL BE ALLOWED ON THE EXPOSED SURFACE OF THE COVER.

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

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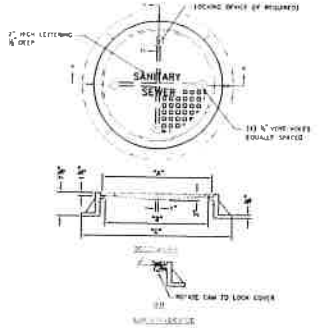
STANDARD FRAME AND COVER (PRIVATE SEWER)

(JANUARY 2012)



PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	25" (MAX.)	150 LBS. ± 5%
OVER 18"	32"	30"	48" (MAX.)	300 LBS. ± 5%

STANDARD FRAME AND COVER NOTES:

1. MATERIAL ASTM A48 CLASS 30B CAST IRON.
2. UNIT MUST WITHSTAND H-20 WHEEL LOADING.
3. ALL DIMENSIONS ARE TO BE CONSIDERED MINIMUM WITH THE EXCEPTION OF THE COVER, WHICH MUST CONFORM EXACTLY TO MAINTAIN INTERCHANGEABILITY WITHIN THE COUNTY.
4. COVER WEIGHT 310 LBS. (MAX)
5. COATING NOT REQUIRED.
6. FRAMES AND COVERS SHALL HAVE MACHINED BEARING SURFACES.
7. LOCKING DEVICE MUST BE SITUATED TO ALLOW EASY REMOVAL OF COVER.
8. NO COMMERCIAL BRAND NAME LETTERING WILL BE ALLOWED ON THE EXPOSED SURFACE OF THE COVER.

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

13P

CARMINA WOOD DESIGN
447 Main Street, Suite 512
Buffalo, New York 14203
Phone: (716) 847-1165

Proposed Warehouse
North America Drive
West Seneca, New York

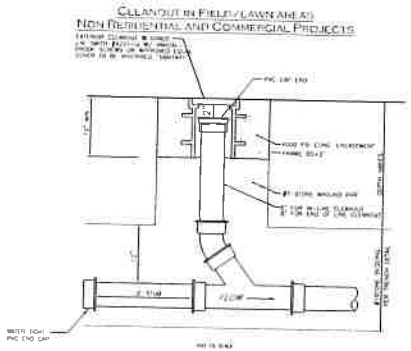
PRELIMINARY

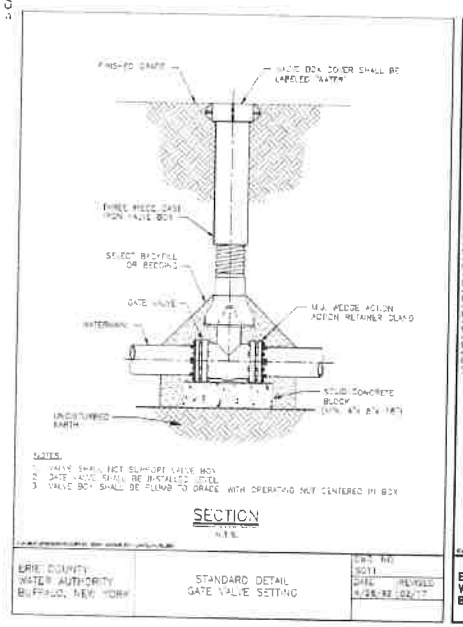
DRAWING NAME:
Utility Details

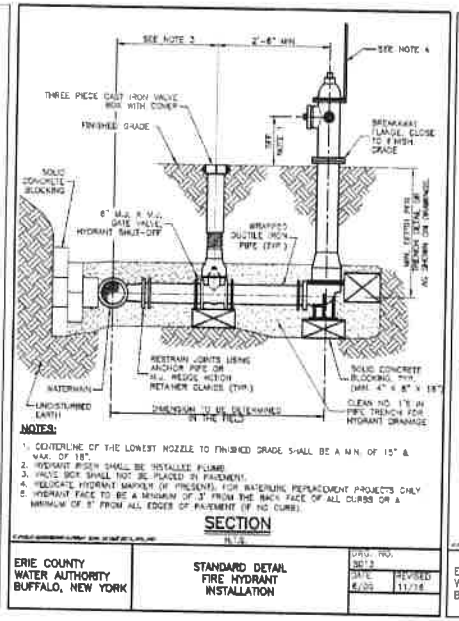
Date: 3/12/12
Drawn by: K. Wood
Scale: As noted

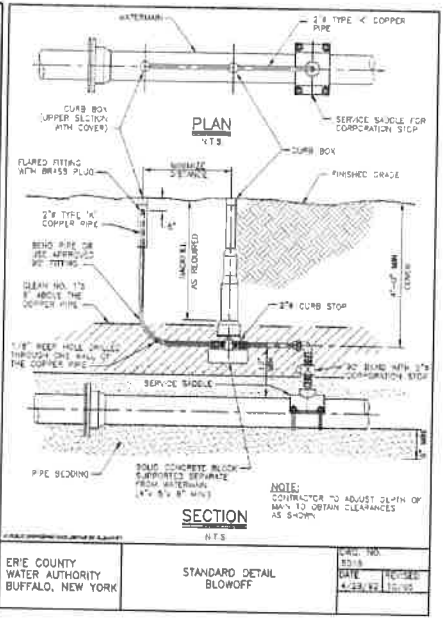
DRAWING NO.
C-404

Project No: 22-117









CARMINAWOOD
DESIGN

Proposed Warehouse
North America Drive
West Seneca, New York

PRELIMINARY

DRAWING NAME:
Utility
Details

DRAWING NO.
C-405

PROJECT No: 22.117

SENECA NOTES FOR SANITARY SEWER CONSTRUCTION

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED BY LAW FOR THE PROPER EXECUTION OF THE WORK.

2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST REGULATIONS OF THE DEPARTMENT OF LABOR, BUREAU OF INDUSTRIAL HYGIENE.

3. ALL MATERIALS USED FOR THE CONSTRUCTION OF THE SANITARY SEWER SHALL BE NEW AND OF GOOD QUALITY AND SHALL BE INSTALLED IN A WORKMANLIKE MANNER.

4. BEFORE ANY WORK IS DONE ON THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN CHARGE OF THE WORK AT LEAST 24 HOURS IN ADVANCE OF THE START OF CONSTRUCTION.

5. ALL TRENCHES SHALL BE SHEETED AND BRACED AS REQUIRED BY THE LATEST RULES AND REGULATIONS OF THE NEW YORK STATE INDUSTRIAL CODE RULE 23 AND ALL OTHER APPLICABLE LAWS, RULES AND REGULATIONS.

6. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF APPROPRIATE AUTHORITIES REGARDING TRAFFIC CONTROL AND PROTECTION OF THE PUBLIC DURING CONSTRUCTION.

7. WHERE SUCH DIVISIONS SHOWN OR THE SPECIFICATIONS REQUIRE THE CONTRACTOR TO NOTIFY OTHERS, IT SHALL BE HIS DUTY TO DO SO AND HE SHALL NOT PROCEED WITH THE WORK UNTIL HE HAS NOTIFIED ALL PARTIES CONCERNED.

8. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THEM. HE SHALL NOTIFY ALL UTILITIES AT LEAST 48 HOURS BEFORE EXCAVATING NEAR THEIR FACILITIES.

9. THE CONTRACTOR IS TO PROVIDE ALL TEMPORARY SHEETING, BRACING, SUPPORTS, ETC. AS MAY BE REQUIRED BY THE CONDITIONS OF THE WORK AND BY LAWS, RULES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

10. ANY EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING SHALL BE REMOVED FROM THE SITE AS DIRECTED BY THE ENGINEER.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PROPERTY AND SHALL MAKE GOOD ALL DAMAGE TO THE SATISFACTION OF THE OWNER.

12. THE CONTRACTOR SHALL BE AWARE OF ALL OVERHEAD OBSTRUCTIONS AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID CONTACT WITH THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIS EQUIPMENT OR OPERATIONS TO OVERHEAD WIRES AND SHALL BEAR ALL COSTS INCIDENTAL TO REPAIRING SUCH DAMAGE.

13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE SANITARY FACILITIES FOR THE USE OF HIS EMPLOYEES IN ACCORDANCE WITH THE REGULATIONS OF THE DEPARTMENT OF HEALTH.

14. THE CONTRACTOR SHALL KEEP THE STREETS AND SIDEWALKS CLEAN AT ALL TIMES AND SHALL REMOVE ALL DEBRIS AND EXCESS MATERIAL RESULTING FROM HIS OPERATIONS.

15. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE BARRICADES, LIGHTS AND WARNING SIGNS AS REQUIRED TO PROTECT THE PUBLIC AND WORKMEN.

16. ALL EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED AS SOON AS POSSIBLE AFTER THE PIPE IS LAID. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.

17. ALL EXCAVATED MATERIAL SHALL BE PLACED SO AS NOT TO OBSTRUCT THE FLOW OF WATER IN GUTTERS OR DRAINAGE STRUCTURES.

18. ALL PAVEMENT, CURBS, SIDEWALKS AND OTHER IMPROVEMENTS DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER.

19. ALL TRAFFIC SIGNS, MARKINGS AND SIGNALS AFFECTED BY THE CONSTRUCTION SHALL BE MAINTAINED OR TEMPORARILY RELOCATED AS DIRECTED BY THE ENGINEER AND THE APPROPRIATE AUTHORITY.

20. ALL EXCAVATIONS SHALL BE PROTECTED BY SUITABLE BARRICADES AND LIGHTS AT NIGHT.

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100 ABILITY TO INSPECTION AND INSTALLATION OF EXCAVATION REQUIREMENTS

A. REQUIREMENTS

1. ALL EXCAVATIONS SHALL BE INSPECTED BY THE CONTRACTOR IN THE PRESENCE OF THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE BEFORE ANY BACKFILLING IS DONE. ALL TRENCHES SHALL BE INSPECTED AT LEAST ONCE EACH DAY.

2. THE FOLLOWING TESTS SHALL BE PERFORMED ON ALL SEWERS:

A. AIR TEST
B. INFILTRATION (LAMPING & INTERNAL)
C. SAG TEST (WHERE APPLICABLE)
D. DEFLECTION TEST (15" DIA AND SMALLER)

3. NOTWITHSTANDING THE FOREGOING, THE CONTRACTOR SHALL NOT BE REQUIRED TO PERFORM MORE THAN ONE OF THE FOLLOWING TESTS ON ANY SECTION OF SEWER BETWEEN MANHOLES: AIR TEST, INFILTRATION TEST, OR EXFILTRATION TEST.

4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF THE TIME HE INTENDS TO PERFORM ANY TEST. NO TEST SHALL BE PERFORMED UNLESS THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE IS PRESENT.

5. ALL TESTING EQUIPMENT SHALL BE SUPPLIED BY THE CONTRACTOR. THE ENGINEER OR HIS REPRESENTATIVE MAY REQUIRE PROOF OF THE CALIBRATION OF ANY TESTING EQUIPMENT. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

A. STOP WATCH GRADUATED IN TENTHS OF A SECOND
B. CERTIFIED SCALE (50 TO 100 LB CAPACITY)
C. PLUMB BOB (10 LB)
D. APPROPRIATELY SIZED TAPE OR STEEL RULE
E. PRESSURE GAUGE (0 TO 5 PSI GRADUATED IN 1/10 PSI OR LESS)
F. MANOMETER
G. TWO 3/8" DIAMETER TEST PLUGS

B. VISUAL INSPECTION

1. ALL SEWERS SHALL BE INSPECTED BY THE CONTRACTOR PRIOR TO BACKFILLING. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LIGHTS, AND PERSONNEL NECESSARY FOR THE INSPECTION. THE ENGINEER OR HIS REPRESENTATIVE SHALL BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF THE INSPECTION.

2. ALL PIPES 24" IN DIAMETER AND LARGER SHALL BE VISUALLY INSPECTED BY THE ENGINEER PRIOR TO INSTALLATION. ALL CRACKED, DEFECTIVE, OR IMPROPERLY MANUFACTURED PIPES SHALL BE REJECTED. THE CONTRACTOR SHALL REMOVE REJECTED PIPES FROM THE SITE IMMEDIATELY.

3. AFTER THE SEWER HAS BEEN INSTALLED AND BACKFILLED TO THE TOP OF THE PIPE, THE ENGINEER OR HIS REPRESENTATIVE SHALL WALK THROUGH THE SEWER FROM MANHOLE TO MANHOLE. ANY DEFECTS, SUCH AS CRACKED PIPE, OPEN JOINTS, OR MISALIGNMENT, SHALL BE REPORTED TO THE CONTRACTOR FOR CORRECTION.

C. VISUAL INSPECTION

1. ALL SEWERS SHALL BE INSPECTED BY THE CONTRACTOR IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE. THE INSPECTION SHALL BE MADE FROM MANHOLE TO MANHOLE. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LIGHTS, AND PERSONNEL NECESSARY FOR THE INSPECTION. THE ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF THE INSPECTION.

2. ALL PIPES 24" IN DIAMETER AND LARGER SHALL BE VISUALLY INSPECTED BY THE ENGINEER PRIOR TO INSTALLATION. ALL CRACKED, DEFECTIVE, OR IMPROPERLY MANUFACTURED PIPES SHALL BE REJECTED. THE CONTRACTOR SHALL REMOVE REJECTED PIPES FROM THE SITE IMMEDIATELY.

3. AFTER THE SEWER HAS BEEN INSTALLED AND BACKFILLED TO THE TOP OF THE PIPE, THE ENGINEER OR HIS REPRESENTATIVE SHALL WALK THROUGH THE SEWER FROM MANHOLE TO MANHOLE. ANY DEFECTS, SUCH AS CRACKED PIPE, OPEN JOINTS, OR MISALIGNMENT, SHALL BE REPORTED TO THE CONTRACTOR FOR CORRECTION.

D. INFILTRATION TEST (APPLICABLE ONLY IF GROUNDWATER IS ABOVE PIPE)

1. THIS TEST SHALL BE PERFORMED ON EACH REACH OF SEWER BETWEEN MANHOLES.

2. THE CONTRACTOR SHALL INSTALL A TEMPORARY PLUG IN THE DOWNSTREAM MANHOLE. THE PLUG SHALL BE WATERTIGHT AND SHALL BE CAPABLE OF WITHSTANDING THE HYDROSTATIC PRESSURE DUE TO A HEAD OF WATER EQUAL TO THE DEPTH OF THE MANHOLE.

3. THE CONTRACTOR SHALL INSTALL A WEIR OR OTHER DEVICE IN THE DOWNSTREAM MANHOLE TO MEASURE THE FLOW OF WATER. THE WEIR SHALL BE CALIBRATED AND SHALL BE CAPABLE OF MEASURING FLOWS AS LOW AS 0.1 GPM.

4. THE INFILTRATION TEST IS INTENDED TO MEASURE THE GROUNDWATER THAT ENTERS THE SEWER THROUGH DEFECTIVE JOINTS AND CRACKS. THE TEST SHALL BE PERFORMED WHEN THE GROUNDWATER LEVEL IS AT LEAST 2 FEET ABOVE THE TOP OF THE PIPE.

5. THE INFILTRATION TEST SHALL BE PERFORMED AFTER THE TRENCH HAS BEEN BACKFILLED TO THE FINISHED GRADE AND AFTER ALL OTHER WORK THAT MIGHT AFFECT THE GROUNDWATER LEVEL HAS BEEN COMPLETED. THE TEST SHALL BE PERFORMED AT A TIME WHEN THE GROUNDWATER LEVEL IS AT ITS HIGHEST NORMAL LEVEL.

6. THE CONTRACTOR SHALL MEASURE THE FLOW OF WATER THROUGH THE WEIR AT REGULAR INTERVALS OF NOT MORE THAN 15 MINUTES. THE TEST SHALL BE CONTINUED UNTIL THE FLOW HAS STABILIZED AND IS NOT INCREASING OR DECREASING BY MORE THAN 10% FROM ONE READING TO THE NEXT.

7. THE INFILTRATION RATE SHALL BE CALCULATED BY DIVIDING THE TOTAL FLOW MEASURED BY THE LENGTH OF SEWER TESTED. THE RESULT SHALL BE EXPRESSED IN GALLONS PER MINUTE PER 100 LINEAR FEET OF SEWER.

8. THE INFILTRATION RATE SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF SEWER PER 24 HOURS. FOR EXAMPLE, AN 8" SEWER SHALL NOT EXCEED 200 GALLONS PER MILE PER DAY.

9. IF THE INFILTRATION RATE EXCEEDS THE ALLOWABLE RATE, THE CONTRACTOR SHALL LOCATE AND REPAIR THE DEFECTIVE JOINTS OR CRACKS AND RETEST THE SEWER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH THE REPAIR AND RETESTING OF THE SEWER.

E. EXFILTRATION TEST

1. THIS TEST SHALL BE PERFORMED ON EACH REACH OF SEWER BETWEEN MANHOLES WHERE THE GROUNDWATER LEVEL IS BELOW THE TOP OF THE PIPE. THE TEST SHALL BE PERFORMED AFTER THE TRENCH HAS BEEN BACKFILLED TO THE FINISHED GRADE AND AFTER ALL OTHER WORK THAT MIGHT AFFECT THE GROUNDWATER LEVEL HAS BEEN COMPLETED. THE TEST SHALL BE PERFORMED AT A TIME WHEN THE GROUNDWATER LEVEL IS AT ITS HIGHEST NORMAL LEVEL.

2. THE CONTRACTOR SHALL INSTALL A TEMPORARY PLUG IN THE UPSTREAM MANHOLE. THE PLUG SHALL BE WATERTIGHT AND SHALL BE CAPABLE OF WITHSTANDING THE HYDROSTATIC PRESSURE DUE TO A HEAD OF WATER EQUAL TO THE DEPTH OF THE MANHOLE.

3. THE CONTRACTOR SHALL FILL THE SEWER WITH WATER AND ALLOW IT TO STAND FOR AT LEAST 24 HOURS TO ALLOW THE PIPE TO ABSORB WATER. THE SEWER SHALL THEN BE REFILLED TO THE TOP OF THE MANHOLE.

4. THE CONTRACTOR SHALL MEASURE THE DROP IN WATER LEVEL IN THE MANHOLE OVER A PERIOD OF AT LEAST 4 HOURS. THE TEST SHALL BE CONTINUED UNTIL THE DROP IN WATER LEVEL IS NOT INCREASING OR DECREASING BY MORE THAN 10% FROM ONE READING TO THE NEXT.

5. THE EXFILTRATION RATE SHALL BE CALCULATED BY DIVIDING THE TOTAL DROP IN WATER LEVEL MEASURED BY THE LENGTH OF SEWER TESTED. THE RESULT SHALL BE EXPRESSED IN GALLONS PER MINUTE PER 100 LINEAR FEET OF SEWER.

6. THE EXFILTRATION RATE SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF SEWER PER 24 HOURS. FOR EXAMPLE, AN 8" SEWER SHALL NOT EXCEED 200 GALLONS PER MILE PER DAY.

7. WHEN A SECTION OF THE SEWER CONTAINS MANHOLES OR CHAMBERS OF DIFFERENT DIAMETERS, THE EXFILTRATION SHALL BE DETERMINED BY THE SECTION OF THE CONSTRUCTION HAVING THE LARGEST DIAMETER MANHOLE OR CHAMBER.

8. IF THE EXFILTRATION RATE EXCEEDS THE ALLOWABLE RATE, THE CONTRACTOR SHALL LOCATE AND REPAIR THE DEFECTIVE JOINTS OR CRACKS AND RETEST THE SEWER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH THE REPAIR AND RETESTING OF THE SEWER.

F. DEFLECTION TEST

A FLEXIBLE PIPE CONSTRUCTED OF THERMOPLASTIC MATERIAL SHALL BE TESTED FOR DEFLECTION AFTER THE TRENCH IS BACKFILLED AND COMPACTED. THE TEST SHALL BE PERFORMED NOT LESS THAN 30 DAYS AFTER THE PIPE IS INSTALLED. THE TEST SHALL BE PERFORMED BY PULLING A MANDREL OR A GO/NO-GO GAUGE THROUGH THE PIPE. THE DIAMETER OF THE MANDREL SHALL BE EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. IF THE MANDREL CANNOT BE PULLED THROUGH THE PIPE BY HAND, THE PIPE IS DEFLECTED BEYOND ACCEPTABLE LIMITS AND SHALL BE REPLACED.

G. REINSPECTION AND RETESTING OF SYSTEMS FOUND TO BE DEFECTIVE

IF ANY SECTION OF THE SEWER SYSTEM IS FOUND TO BE DEFECTIVE AS A RESULT OF THE INSPECTION OR TESTING, THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS AND SHALL REINSPECT AND RETEST THE SECTION UNTIL IT IS FOUND TO BE ACCEPTABLE. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH THE REINSPECTION AND RETESTING.

200 SEPARATION OF WATER MAINS AND SEWERS

A. GENERAL

1. REQUIRED TO COMPLY WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) 10 NYCRR SUBPART 75-A.

2. ALL SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE APPLICANT MAY REQUEST A VARIANCE FROM THE DEPARTMENT. A VARIANCE MAY BE CONSIDERED IF THE SEWER IS CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS AND THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

3. WHERE IT IS NOT POSSIBLE TO OBTAIN THE REQUIRED HORIZONTAL SEPARATION, THE SEWER SHALL BE LAID IN A SEPARATE TRENCH, WITH THE BOTTOM OF THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE TRENCH SHALL BE EXCAVATED SO THAT THE UNDISTURBED EARTH BETWEEN THE TWO TRENCHES IS AT LEAST 10 FEET WIDE. IF THE SEWER IS LAID IN THE SAME TRENCH AS THE WATER MAIN, THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

4. WHERE A SEWER CROSSES UNDER A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

5. WHERE A SEWER CROSSES OVER A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE SEWER IS AT LEAST 18 INCHES ABOVE THE TOP OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES ABOVE THE TOP OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES ABOVE THE TOP OF THE WATER MAIN.

B. HORIZONTAL SEPARATION

1. SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE APPLICANT MAY REQUEST A VARIANCE FROM THE DEPARTMENT. A VARIANCE MAY BE CONSIDERED IF THE SEWER IS CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS AND THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

A. THE LAID IN A SEPARATE TRENCH, WITH THE BOTTOM OF THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN AND THE UNDISTURBED EARTH BETWEEN THE TWO TRENCHES AT LEAST 10 FEET WIDE. IF THE SEWER IS LAID IN THE SAME TRENCH AS THE WATER MAIN, THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

C. IN THE SAME TRENCH AS THE WATER MAIN, WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN AND THE UNDISTURBED EARTH BETWEEN THE TWO TRENCHES AT LEAST 10 FEET WIDE. IF THE SEWER IS LAID IN THE SAME TRENCH AS THE WATER MAIN, THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE LAID ON A SHELF EXCAVATED AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.

C. VERTICAL SEPARATION

1. SEWER CROSSINGS WHERE SEWERS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHETHER THE WATERMAIN IS LAID ABOVE OR BELOW THE SEWER. WHERE IT IS IMPOSSIBLE TO OBTAIN THIS MINIMUM VERTICAL DISTANCE, THE SEWER SHALL BE CONSTRUCTED AND THE WATERMAIN RELOCATED AS DIRECTED BY THE ENGINEER. THE CROSSING SHALL BE SUCH THAT ONE FULL LENGTH OF WATER MAIN PIPE IS LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHERE A WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATERMAIN.

D. UNAVOIDABLE SEPARATION

1. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS: BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS. ADDITIONAL PRESSURE TESTING OF THE SEWER MAY BE REQUIRED BY THE ENGINEER. THE SEWER SHALL BE TESTED FOR LEAKAGE AT A PRESSURE OF 10 PSI GREATER THAN THE MAXIMUM PRESSURE IN THE WATER MAIN, BUT NOT LESS THAN 50 PSI. THE TEST SHALL BE CONDUCTED FOR A PERIOD OF 10 MINUTES. THE SEWER SHALL BE CONSIDERED ACCEPTABLE IF THE LEAKAGE DOES NOT EXCEED 10 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF SEWER PER 24 HOURS.

CARMINAWOOD DESIGN
337 Bay Road, Suite 332
Osterville, Massachusetts 02655
Phone: (774) 487-1933

Proposed Warehouse
North America Drive
West Seneca, New York

REVISIONS	DATE
No. Description	

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:
Utility Notes

Date: 9.12.22
Drawn By: C. Wood
Scale: AS NOTED

DRAWING NO.
C-406

Project No: 22.117

Appendix H

Soils Information

WMA ENGINEERING DPC|DBA
EMPIRE GEO TECHNICAL
ENGINEERING SERVICES

CORPORATE/
BUFFALO OFFICE
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

ALBANY OFFICE
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Ballston Spa, NY 12020

5 Knabner Road
Mechanicville, NY 12118
Phone: (518) 899-7491
Fax: (518) 899-7496

CORTLAND OFFICE
60 Miller Street
Cortland, NY 13045
Phone: (607) 758-7182
Fax: (607) 758-7188

ROCHESTER OFFICE
535 Summit Point Drive
Henrietta, NY 14467
Phone: (585) 359-2730
Fax: (585) 359-9668

February 9, 2021
Project No. WB-20-181
Ref. SJB Project No.: BE-20-181

WM Schutt & Associates, P.C.
37 Central Avenue
Lancaster, New York 14086

Attention: Mr. William E. Schutt, P.E.

Re: Geotechnical Evaluation Report for
Proposed Warehouse / Distribution Complex
North America Drive
West Seneca, New York

Dear Mr. Schutt:

Empire Geotechnical Engineering Services (Empire) is pleased to submit the enclosed geotechnical evaluation report to WM Schutt & Associates, P.C. (Schutt) on behalf of SJB Services, Inc., with regard to the proposed West Seneca Warehouse / Distribution Complex planned. One (1) hard copy and an electronic copy (pdf file format) of this report has been submitted for use and distribution, as appropriate.

Please contact me should you have any questions regarding the information presented in this report or if you would like to discuss any project development or design issues. Thank you for considering SJB/Empire for this work and we look forward to working with you through completion of this project.

Sincerely,

EMPIRE GEOTECHNICAL ENGINEERING SERVICES

Wanda M. Allen, P.E.
Senior Geotechnical Engineer

Enc.: Geotechnical Evaluation Report (1 Copy)

WMA ENGINEERING DPC|DBA
EMPIRE GEO TECHNICAL
ENGINEERING SERVICES

☐ CORPORATE/
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Geotechnical Evaluation Report for Proposed Warehouse / Distribution Complex North America Drive West Seneca, New York

Prepared For:

WM Schutt Associates, P.C.
37 Central Avenue
Lancaster, New York 14086

Prepared By:

WMA Engineering, DPC dba
Empire Geotechnical Engineering Services
5167 South Park Avenue
Hamburg, New York 14075

2/9/21

Project No. WB-20-181
Ref. SJB Project No.: BE-20-181
February 2021

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1.00 INTRODUCTION

1.10 GENERAL

This report presents the findings and recommendations of the geotechnical engineering evaluation completed by Empire Geotechnical Engineering Services (Empire) for the proposed Warehouse / Distribution Complex planned in West Seneca, New York.

The geotechnical engineering evaluation work was completed at the request of and as authorized by SJB Services, Inc. (SJB), our affiliated drilling and testing company, who was retained by WM Schutt Associates, P.C. (Schutt) to complete this work. Our evaluation is based on nine (9) test borings completed at the project site by SJB.

On this basis, Empire prepared this report, which summarizes the subsurface conditions encountered and presents geotechnical recommendations for design and construction of the building foundations, slab-on-grade floor and pavement construction, along with the associated site preparation work.

1.20 SITE AND PROJECT DESCRIPTION

The proposed project includes development of an approximate 61 acre property located at the easterly end of North America Drive in West Seneca, Erie County, New York. The approximate location of the project site is shown on Figure 1. The site consists generally of an undeveloped, overgrown lot with numerous scattered trees. The existing site conditions and the exploration locations are shown on Figure 2.

The proposed project will include construction of four (4) warehouse buildings with truck docks/access and asphaltic concrete access drives and automobile/SUV or delivery truck parking lots. The buildings are planned to be supported on a shallow spread foundation system with concrete slab on grade floor construction. The column and wall loads, including the finish floor grades have not yet been established at this time. The proposed site development and the exploration locations are shown on Figure 3.

For the purpose of this report, Empire has designated the proposed warehouse buildings as Bldg 1 through Bldg. 4, as shown on Figure 3. The existing site grades near Bldgs 1 through 3 appear to range from about elevation (El.) 680 feet to El. 664 feet, based on the site plan provided by Schutt. These are estimated, as a full contour map of the project site was not provided to Empire for preparation of this report. The site grades slope downwards, towards the north. Within the footprint of Bldg 4, the site grades also slope downwards, towards the north from about El. 694 feet to El. 670 feet. Accordingly, it is anticipated the site will generally be balanced in support of the proposed construction, with site grade cuts/fills on the order of about 8 to 12 feet. However, the actual cuts and fills at each building are expected to vary and will be determined once the finish floor grades are established.

2.00 SUBSURFACE EXPLORATION

The subsurface exploration program consisted of nine (9) test borings, designated as B-1 through B-9, drilled by SJB between December 30, 2020 and January 13, 2021. The locations of the test borings were established on a site plan provided by Schutt. SJB then staked the boring locations in the field using a handheld global positioning system (gps) instrument, based on GPS coordinates obtained from Google Earth. Empire plotted their locations using the coordinates along with a Google Earth™ aerial photograph of the site, as shown on Figure 2. Figure 3 illustrates the approximate exploration locations and the proposed site development. Table 1 presents the GPS coordinates.

Ground surface elevations were measured and recorded by SJB at the test boring locations using laser survey level techniques. The ground surface elevations were referenced to rim of the storm manhole located at the southwest corner of the property, near the end of North America Drive, as shown on Figure 3. The benchmark has a reported elevation of 678.84 feet, as determined from the site survey provided to SJB.

The test borings were located within the proposed building structures and where drilled to depths varying from 32 feet to 70.1 feet. The test borings were drilled with a Central Mine Equipment model 550X all-terrain tire mounted drill rig, using hollow stem auger and split spoon sampling techniques. Split spoon samples and Standard Penetration Tests (SPTs) were taken continuously from the ground surface to a depth of 12 feet and then in intervals of five feet or less below the zone of continuous sampling until boring completion. The split spoon sampling and SPT's were completed in general accordance with *ASTM D 1586 - "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils"*.

SJB's geologist prepared the test boring logs based on visual observation of the recovered soil samples and review of the driller's field notes. The soil samples were described based on a visual/manual estimation of the grain size distribution, along with characteristics such as color, relative density, consistency, moisture, etc. The test boring logs are presented in Appendix A, along with general information and a key of terms and symbols used to prepare the logs.

3.00 SUBSURFACE CONDITIONS

The general soil stratigraphy encountered at the test boring locations consisted of surface topsoil, underlain by indigenous sand, gravel and silty clay soil deposits. Man-placed fill soils were not encountered at any of the test boring locations. However, it should be expected that fill soils and/or possible reworked indigenous soils will be encountered near the adjacent, previously developed properties. In addition, it is expected the fill near these areas will vary and will be dependent on the original native site topography prior to site development. Bedrock was not encountered within the depths explored at the boring locations. The soil stratigraphy encountered, and the groundwater conditions observed are described in more detail below and on the test boring logs in Appendix A.

The driller noted topsoil at the ground surface of the test borings. The indigenous soils encountered at the boring locations consisted of varying proportions of intermixed fine to coarse gravel, sand and silty clay soil deposits. The indigenous soils are classified as GP, GC-GM, SP-SW, SC-SM and CL group soils using the Unified Soil Classification System (ASTM D2488). Standard Penetration

Test (SPT) "N" values obtained within the indigenous soil deposits ranged from 3 to greater than 50, indicating the cohesive soils vary from a soft to hard consistency, while the generally low to non-plastic gravel and sand soils vary from a loose to very compact relative density. The softer and loose soils were generally encountered above a depth of 2 feet to 4 feet at the boring locations. However, medium clay and loose gravel soils were also encountered between depths of about 35 feet and 47 feet at boring location B-8.

Freestanding water measurements were made in the test borings immediately following the completion of overburden drilling and soil sampling. Freestanding water was measured at depths varying from about 10 feet to 40 feet at borings B-2, B-3, B-5, B-8 and B-9, corresponding to elevations varying from El. 643.2 feet and 667.4 feet. No freestanding water was encountered in the remaining test holes immediately following the completion of overburden drilling and soil sampling.

At test borings B-1, B-5, B-8 and B-9, the test holes were left open overnight or over the weekend. At boring B-1, no freestanding water was present the next day. At borings B-5, B-8 and B-9, freestanding water was measured at depths of 25 feet (El. 649.2 feet), 20 feet (El. 671.8 feet) and 3.0 feet (El. 691.8 feet), respectively, after the hole was left open. At boring location B-9, the shallow water level measurement may actually be perched groundwater conditions, as the augers were only in the test hole at a depth of 10 feet, and it is possible the perched water did not have time to dissipate. In all cases, groundwater may not have had sufficient time to accumulate or fully stabilize in the test holes within the time that had elapsed from the completion of soil drilling and sampling and the time of these observations / measurements.

As noted, some zones of perched or trapped groundwater could be present at various times and locations in the upper more permeable soils, which overlie less permeable or more compact/hard indigenous soil deposits. Perched groundwater conditions can be particularly more prevalent following heavy or extended periods of precipitation and during seasonally wet periods.

The installation of groundwater observation wells would help to better define the groundwater conditions present on the site, as well as their stabilized levels. It should be expected that groundwater conditions can vary with location and with changes in soil conditions, precipitation and seasonal conditions, including site drainage conditions.

4.00 GEOTECHNICAL CONSIDERATIONS AND RECOMMENDATIONS

4.10 GENERAL

It is Empire's opinion that the indigenous soil conditions encountered by the test borings are suitable for supporting the proposed buildings using a conventional spread foundation system and slab-on-grade floor, as currently proposed. The geotechnical issues, which must be addressed, include the removal of all topsoil, organics, any fill and any soft, wet or disturbed indigenous soils where present beneath proposed foundation bearing grades, along with the proper preparation of the foundation bearing grades and the subgrades for the slab-on-grade construction.

Based on the proposed site grading plan, excavations and fill installation up to about 8 to 12 feet are currently anticipated within the limits of the proposed building structures. The on-site indigenous

soils excavated from the cut portions of the site, could be used for filling beneath the building area as currently proposed, provided the on-site material can be properly placed and compacted in a controlled manner and to a stable well engineered condition. It is noted that it may be difficult to obtain acceptable compaction and maintain stable fill subgrades (i.e. free of rutting and pumping conditions) using this material during wet weather and seasonally inclement periods, as well as due to the presence of the inherent finer grained type soils present (silt/clay noted within the gravel/sand soils).

Earthwork should commence with the complete removal of all trees, stumps, brush, topsoil, vegetation, organic soils, and any other deleterious or unsuitable soils within the areas of cut and fill. Upon completion of the stripping, the fill area subgrades should be proof rolled and examined by geotechnical personnel prior to any fill placement. It is noted that the upper soil conditions (above a depth of about 2 feet) were in a generally in a softer and loose condition and contained trace amounts of organics. Therefore, it should be anticipated that stripping of the site beyond the surface topsoil may be necessary in some areas, to remove the softer/loose soils and organics, particularly where trees are present, prior to placement of site grade fill.

The site filling should be performed in a controlled manner and should be completed at least one month in advance of the spread foundation construction, in order to help limit post construction settlement. The fill should be installed along benches, cut into the existing slope, to limit the potential for establishing a slip surface along the interface of the new fill and existing slope, where applicable.

Site preparation and grading plans should also address planned future development areas of the site (i.e. for building additions and parking lot expansion) where filling is required to establish the currently proposed final site grades. Placement of un-suitable or non-engineered fill materials in these areas will not be suitable for future construction. Accordingly, where filling is required in the future development areas, the subgrades should be properly prepared (i.e. stripped and proof-rolled) and suitable subgrade fill materials should be properly placed, compacted, and tested, as well as documented. Accordingly, fill containing topsoil, and un-suitable and/or un-compacted soils should not be placed in these areas.

Following site filling and grading, it is Empire's opinion that the proposed building areas should be generally suitable for the planned building construction using a conventional spread foundation design and slab-on-grade construction. Spread foundations may be constructed over site subgrade fills consisting of indigenous soil material, provided that the general subgrade fill is properly compacted and stable and is free of rutting and surface deflections under the weight and operation of the rollers used for compaction and proof rolling.

Consideration of placing a Structural Fill layer beneath the foundations following excavation in both the cut and fill areas could be considered. The structural fill layer will: provide a more uniform and stable bearing subgrade; dissipate a portion of the foundation pressures acting on the soils; and help protect the bearing grade soils prior to construction of the foundations. Once the final cut/fill areas have been established within the slab on grade and pavement areas, placement of a layer of Structural fill should also be considered to protect the subgrade soils. If the foundation bearing grades and the floor slab/pavement area subgrades are not protected and degrade, they must be undercut/removed accordingly.

More detailed recommendations to assist in planning for site development and design of building foundations, floor slabs and pavement are provided in the following report sections.

4.20 SPREAD FOUNDATIONS

As described above, spread foundations can be used to support the proposed building structures, following proper site preparation and site filling, as described in Section 4.80.3. Spread foundations or site grade fill in the areas of the proposed foundation structures, should be placed on suitable, relatively undisturbed, indigenous soil subgrades. Suitable indigenous soil bearing grades should consist of generally very stiff, silty clay and firm to compact, gravel and sand soil deposits, which are free of topsoil, fill, organics, loose, soft, wet, "mucky" or otherwise deleterious conditions.

Suitable indigenous bearing subgrades at the test boring locations were generally encountered at depths of about 2 to 4 feet below existing site grades. The upper 2 feet of soil at all of the boring locations was in a soft or loose condition, while the upper 4 feet was softer/looser at a few locations. Therefore, it should be anticipated that the upper softer/loose soils will need to be undercut and removed prior to placement of the site grade fill or the foundation structure.

Subsurface conditions away from the test boring locations, in some cases, may vary and require adjustments in the suitable subgrade elevation based on actual conditions encountered at the time of construction. Accordingly, close inspection of the foundation bearing grades, by qualified geotechnical personnel, is recommended at the time of construction.

If Structural Fill is used beneath foundations, it should extend out horizontally a distance equal to at least 0.5 times the thickness of the Structural Fill layer beneath the foundation. Excavations, therefore, will need to be planned and sized accordingly. Recommendations for Structural Fill material and its placement and compaction are provided in Appendix B of this report.

As an alternative, flowable backfill material can be used beneath the foundations. If used, the flowable backfill material should be a non-swelling type material and should have a minimum 28-day compressive strength (f'c) of 250 pounds per square inch (psi). The flowable backfill should extend at least 12 inches horizontally beyond the foundation limits for its entire depth.

Spread foundations constructed on over suitable indigenous soil bearing grades, or over properly installed fill soils, in conjunction with the above recommendations, can be sized based on a maximum net allowable bearing pressure of 3,000 pounds per square foot (psf). It is estimated that spread foundations sized and properly constructed in accordance with these recommendations will undergo a total settlement of about ¾-inch to 1 inch.

In all cases, it is recommended that continuous footings be at least 2.0 feet in width and column/individual footings be at least 3.0 feet in width to develop adequate bearing capacity and/or to limit bearing/shearing failure. The actual foundation widths, however, will need to be sized based on the actual wall and column loads, as determined by the designer.

Exterior foundations should be embedded a minimum of 4.0 feet below finished exterior grades for frost protection. Interior foundations should be embedded a minimum of 2.0 feet below finished interior floor grades to develop adequate bearing capacity. All foundations, however, must bear on suitable bearing subgrades in accordance with the recommendations above.

4.30 SLAB-ON-GRADE FLOOR DESIGN

The building floor slabs can be constructed as slab-on-grade over the indigenous soil subgrades following proper subgrade preparation and site filling as outlined in Section 4.80.3 below. A minimum of 8 inches of Subbase Stone (Structural Fill), as described in Appendix B, is recommended beneath lightly loaded floors (i.e. office space, etc.). The subbase stone should be increased to 15 inches where heavier loading conditions are anticipated (i.e. warehouse floors, storage areas, etc.).

The floor slabs may be designed as a slab-on-grade using a modulus of subgrade reaction of 175 pounds per cubic inch (pci) at the top of the subbase layer. It is recommended that the slab-on-grade floors be constructed such that they float on the subbase and subgrades and are not structurally connected to, or resting directly on, perimeter walls or column footings in order to limit potential differential settlement effects, unless the slab / wall or column interface is designed with sufficient reinforcement to bridge potential differential settlement effects at these interfaces.

It is noted that the above subbase stone thicknesses are not designed for carrying construction vehicle loads. Therefore, it may be desirable for the Contractor to temporarily increase the Subbase thickness within the building pad to provide a suitable working surface to stage the construction, carry construction vehicle loads and protect the underlying subgrades. This will be particularly important if construction proceeds during seasonally wet periods. The additional subbase stone material can then be removed in preparation for the actual floor construction and re-used as foundation backfill, pavement subbase, etc.

A moisture barrier does not appear to be necessary where the floor slabs are constructed above the final site grades, unless otherwise recommended by the finished flooring manufacturer. A suitable moisture barrier is recommended beneath below grade floor areas to reduce the potential for dampness. In addition, it is recommended that the below grade walls be damp proofed.

4.40 LATERAL EARTH PRESSURES FOR LOADING DOCK WALLS

The design of earth retaining walls should be based on lateral earth pressures caused by the load of backfill against the wall and the surcharge effects from any permanent or temporary loads. In addition, perimeter exterior foundation drains, and interior foundation drains at any elevated loading dock walls, as discussed in Section 4.50 below, should be incorporated in the design where the walls are designed for relieved hydrostatic pressures (i.e. drained conditions).

The design of earth retaining foundation walls should be designed to resist "at rest" lateral earth pressures generated by the earth backfill and any temporary or permanent surcharge loads, based on the following soil parameters. Walls, which are allowed to yield (i.e. cantilevered earth retaining walls), can be designed on the basis of "active" lateral earth pressures. The lateral earth pressures

can be computed using the following soil parameters where the wall backfill is a Structural Fill or Suitable Granular Fill, as described in Appendix B.

Recommended Soil Parameters for Below Grade Wall Design

- Coefficient of At-Rest Lateral Earth Pressure – 0.47
- Coefficient of Active Lateral Earth Pressure – 0.31
- Coefficient of Passive Lateral Earth Pressure – 2.75
- Angle of Internal Friction – 32 Degrees
- Total Unit Weight of Soil – 135 pcf
- Submerged Unit Weight of Soil – 73 pcf
- Surcharge Load Lateral Coefficient – 0.50

Water should not be allowed to collect against the backfilled wall section unless the wall is designed for the additional hydrostatic pressure. If the earth retaining structure is designed for full hydrostatic pressures, the walls should be designed to resist the hydrostatic pressures as well as the lateral earth pressures acting the walls. In this case, the lateral earth pressure should be computed based on a submerged soil unit weight below the design groundwater level. Submerged soil conditions should be assumed below the anticipated maximum high water level (i.e. flood level).

4.50 FOUNDATION WALL DRAINAGE

Where earth retaining walls are designed for relieved hydrostatic pressures (i.e. drained conditions), foundation drains should be provided to intercept groundwater and relieve potential hydrostatic pressures. The drainage system must be properly designed, installed and maintained for long-term performance. The design should include such features as clean-outs to properly maintain the system in the drained condition. The foundation drainage system should drain to a sump(s) and pump system or a suitable gravity drainage system. The foundation drainpipes along the earth retaining foundation walls should be set at a minimum depth of 1.0 foot below the floor/bottom grade or lowest adjacent grade.

The foundation drainage system should include a geotextile, selected considering drainage and filtration, installed around drainage stone surrounding a slotted under-drainpipe. The drainage stone should be sized in accordance with the pipe slotting or perforations. A crushed aggregate conforming to NYSDOT Standard Specifications Section 703-02, Size Designation No. 1 (½-inch washed gravel or stone) is generally acceptable for slotted under-drainpipe. The foundation drainage stone and surrounding drainage geotextile (i.e. Mirafi 160N or suitable equivalent) should extend above the drainpipe a minimum of 2 feet.

A pervious granular backfill or a suitable geosynthetic drainage composite (i.e. Grace Hydroduct, Miradrain, Delta MS or suitable equivalent) should be placed against the foundation wall, above the drainage system, to allow infiltration to the drainage system.

Concrete Sand, which meets the minimum requirements of NYSDOT Standard Specifications Section 703-07 (100 percent passing 3/8 inch sieve to maximum of 3 percent passing a No. 200 sieve), is generally acceptable as pervious granular backfill. Structural Fill is also acceptable provided the Structural Fill is well graded to prevent infiltration of the adjacent soils and has a permeability of 1×10^{-3} cm/sec or greater when placed and compacted.

If a pervious granular backfill drainage media is used against the wall, it should be a nominal 2 feet in width and should extend up to the bottom of the Subbase Stone layer beneath adjacent slabs and pavements, and should extend up to about 1 to 2 feet below the finished grade in landscape areas, where it may be capped off with the foundation backfill material. The site grades surrounding the building structure should graded as such to provide positive surface water drainage away from the building.

It is recommended the below grade walls and floors be damp proofed where suitable foundation drainage is provided. If depressed structures are designed to withstand full hydrostatic pressure, then the below grade walls and floors must be properly waterproofed.

4.60 SEISMIC DESIGN CONSIDERATIONS

Based on the subsurface conditions encountered in the test borings, the proposed project site can be classified as Seismic Site Class "D" in accordance with ASCE 7, Table 20.3-1, as referenced in the Building Code of New York State (2020 Edition). The soil conditions encountered in the test borings are not considered to be susceptible to potential liquefaction in the case of a seismic event. Therefore, seismic design for the proposed building structures can be based on this site classification and the seismic design information presented herein.

The spectral response accelerations at the project site were obtained by Empire using the SEAOC / OSHPD web site application https://seismicmaps.org/. Using the site location, the spectral response accelerations are 0.166g for the short period (0.2 second) response (S_S) and 0.045g for the one second response (S_1). For design purposes, these spectral response accelerations must be adjusted for the Seismic Site Class "D" soil profile determined for the project site.

The adjusted spectral response accelerations for Site Class "D" are as follows:

- Short Period Response (S_{MS}) - 0.266g
- 1 Second Period Response (S_{M1}) - 0.107g

The corresponding five percent damped design spectral response accelerations (S_{DS} and S_{D1}) are as follows:

- S_{DS} - 0.177g
- S_{D1} - 0.072g

4.70 PAVEMENT DESIGN

The proposed asphalt pavement areas can be constructed over the indigenous soil subgrades following proper subgrade preparation and site filling as outlined in Section 4.80.3. Asphalt pavement design recommendations are provided for both a Heavy Duty Pavement (i.e. for use in the main entrance access drive), Moderate-Heavy Duty Pavement (i.e. for use in truck loading/unloading dock and staging areas) and for a Light Duty Pavement (i.e. for use in automobile only parking lot areas).

The recommended pavement sections were analyzed using a computer program developed by Empire based on the design analyses presented in the NYSDOT Thickness Design Manual for New

and Reconstructed Pavement, published in October 1994. An effective roadbed Soil Resilient Modulus (Mr) of 4,000 psi was used in the analysis as being representative of the existing subgrade soil conditions and site grade fill consisting of on-site soils (i.e. estimated CBR value of approximately 3.5 to 4.5).

It is noted that the recommendations are based on the subgrade soil conditions encountered at the test boring locations completed within the proposed building areas. Borings were not completed in the areas of the proposed pavement areas, and therefore, it should be anticipated that the subgrade soil conditions within the proposed pavement areas may vary from the conditions encountered at the building boring locations. In either case, the recommendations assume that the subgrades will be prepared as discussed in Section 4.80.3 below. In addition, a stabilization/separation geotextile is recommended beneath the subbase course of the pavement sections.

Based on the truck traffic information provided by Schutt for the access drive lanes, Empire has estimated approximately 2.5 Million ESALs or less over a design life of 20 years. The moderate-heavy duty pavement section recommended below for the truck loading/unloading dock and staging areas is estimated to provide approximately 1.2 Million ESALS to over its service life. It is our opinion that approximately 50,000 to 75,000 ESALs for use in the automobile/SUV only asphalt pavement parking lot areas would be appropriate for this project. Accordingly, our pavement design recommendations presented below are based on these ESAL ranges.

Incorporating Geogrid reinforcement at the bottom of the Subbase Course can effectively decrease the required subbase thickness by about 25% +/-. However, it is recommended that the Subbase Course not be reduced to less than 10-inches, in order to provide adequate subbase drainage. Geogrid, if incorporated should be a triaxial geogrid product manufactured from stress resistant polypropylene, having properties equivalent to Tensar TX5 Geogrid, as a minimum. If Geogrid is incorporated, then the recommended stabilization / separation geotextile beneath the subbase layer can be eliminated, as determined at the time of construction.

Recommended Asphalt Pavement Sections:

Heavy Duty Asphalt Concrete Pavement

- 1.5 inches – Top Course
- 2.5 inches – Binder Course
- 3.5 inches – Base Course
- 15 inches – Subbase Course*
- Geotextile
- Prepared Subgrade

Moderate-Heavy Duty Asphalt Concrete Pavement

- 1.5 inches – Top Course
- 3.5 inches – Binder Course
- 18 inches – Subbase Course*
- Geotextile
- Prepared Subgrade

Light Duty Asphalt Concrete Pavement

- 1.5 inches – Top Course
- 2.0 inches – Binder Course
- 10 inches – Subbase Course*
- Geotextile
- Prepared Subgrade

* It may be necessary to increase the subbase course thickness in some areas to improve the subgrade conditions and to promote drainage to underdrains or drainage swales, etc. as described below. In addition, due to the upper loose/soft and organic soils, it should be expected that some undercutting will be necessary to develop a firm and stable subgrade condition for pavement construction.

Materials for the above pavement structure components should consist of the following:

A. Asphalt Concrete Top Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 9.5 F2 or F3 Top Course.

B. Asphalt Concrete Binder Course - NYSDOT Standard Specifications, Hot Mix Asphalt, 19 F9 Binder Course.

C. Asphalt Concrete Bituminous Base Course - NYSDOT Standard Specifications - Hot Mix Asphalt, Type 2 F9 Asphalt Treated Permeable Base Course.

D. Subbase Course – Should comply with NYSDOT Standard Specifications, Item 304.12 – Type 2 Subbase or Item 304.12 – Type 2 Subbase, as described in Appendix B.

E. Geotextile - Woven polypropylene stabilization/separation geotextile (i.e., Mirafi 500X or approved suitable equivalent).

F. Prepared Subgrade – As recommended in Section 4.80.3.

Proper grading and drainage of the pavement structure is recommended to help limit potential frost action and improve pavement structure life and performance. Accordingly, the installation of underdrains and/or edge drains are recommended to drain the pavement subbase course and subgrades in order to limit the potential for frost action and improve pavement structure performance and design life. This is particularly important as the upper subgrade conditions encountered are considered to have generally "poor" drainage characteristics.

Alternatively, the pavement subbase course should be allowed, as a minimum, to daylight/drain to an adjacent perimeter drainage swale or other drainage relief point. Accumulation of water on pavement subgrades should be avoided by grading the subgrade to a slope of at least 2 percent to allow drainage to the edge drains or drainage swale.

4.80 SITE PREPARATION AND CONSTRUCTION

4.80.1 Construction Dewatering

Construction dewatering will be required for surface water control and for excavations, which may encounter groundwater conditions. Surface water should be diverted away from and prevented from accumulating on exposed soil subgrades. The exposed soil subgrades will be susceptible to strength degradation in the presence of excess moisture.

Based on the groundwater level measurements and the soil conditions encountered, it appears once the final site grades are established, that the foundation and utility excavations should not encounter a general site groundwater condition. However, some localized perched groundwater may be encountered, where more pervious soils overlie less permeable soils, particularly following heavy or extended precipitation and during seasonally wet periods. The amount of perched groundwater that may be encountered will depend on location, depth, and soil permeability, along with site drainage and precipitation conditions at the time of construction.

Dewatering should be implemented in conjunction with excavation work such that the work generally proceeds in the dry. The use of diversion berms, proper site grading, cut off trenches, and sump and pump methods of dewatering should generally be sufficient to control surface water and perched groundwater conditions, if encountered.

4.80.2 Excavation and Foundation Construction

Excavation to the proposed bearing grades for foundation construction should be performed using a method which reduces disturbance to the bearing grade soils, such as a backhoe equipped with a smooth blade bucket. Any loose, disturbed or otherwise deleterious soil beneath proposed foundation bearing subgrades should be removed. The indigenous soil bearing grades should be observed and evaluated by qualified geotechnical personnel, prior to placement of the site grade fill, Structural fill and/or foundations. Placement and compaction of site grade fill and Structural Fill beneath foundations should also be observed and tested by qualified personnel.

All soil bearing grades for foundation construction should be protected from precipitation and surface water. Water should not be allowed to accumulate on the soil bearing grades and the bearing grades should not be allowed to freeze, either prior to or after construction of foundations. If bearing grades are not protected and degrade, they must be undercut/removed accordingly.

Foundation excavations should be backfilled as soon as possible and prior to construction of the superstructure. It is recommended that foundation excavations, within slab on grade areas and adjacent pavement areas be backfilled with a Structural Fill or Suitable Granular Fill, as recommended in Appendix B.

4.80.3 Subgrade Preparation for Slab-on-Grade and Pavement Construction

The site preparation work should be performed during dry periods to minimize potential degradation of the subgrade soils and undercuts which may be required to establish a stable base for construction. It should be understood that the existing subgrade soils will be sensitive and can be

expected to degrade and lose strength when they are wet and disturbed by construction equipment traffic.

Accordingly, efforts should be made to maintain the subgrades in a dry and stable condition at all times and minimize construction traffic directly over these soils. These efforts should include installation of drainage swales and underdrains (i.e. "French drains") to intercept and divert surface runoff and groundwater away from the construction areas, proper grading and sloping of the subgrade and "sealing" of the surface, at the end of each day or when rain is anticipated, with a smooth drum roller to promote runoff, and restricting construction equipment traffic from traveling directly over the subgrade surfaces, especially when they are wet.

All trees, stumps, tree root matter, vegetation, topsoil, and any other deleterious materials within the proposed slab-on-grade and pavement areas should be removed. It is noted that the upper surface soils (i.e. generally above a depth of about 2 feet) are relatively loose/soft. In addition, organics were noted within the upper soil samples. Therefore, it should be anticipated that stripping the site beyond the topsoil layer will be necessary to remove the soft/wet and/or organic soils present. As noted, the site preparation work should be performed during seasonal dry periods to minimize potential degradation of the subgrade soils and undercuts which may be required to establish a stable base for construction. In addition, the surface soils are considered to have generally poor drainage characteristics, and therefore, proper grading of the project site should be considered during the development of the project.

Following stripping of the surface materials and excavation to the proposed subgrades, the exposed subgrades should be proof-rolled. The proof-rolling should be performed just prior to the geotextile and subbase placement, or prior to placement of site grade fill, using either a smooth steel drum roller weighing at least 10 tons, a loaded dump truck or other suitable method as determined acceptable by Empire. The subgrade proof-rolling should be done under the guidance of, and observed by, qualified geotechnical personnel. It may be necessary to waive the proof-rolling requirement if wet subgrades are present. Any undercuts, which may be required as the result of the proof-rolling, should be performed based on guidance and evaluation of the conditions of qualified geotechnical personnel.

The placement of an initial lift of oversized stone fill material (i.e. "6-inch minus crusher run stone", No.3 & No.4 Stone, etc.), encased in stabilization geotextile (i.e. Mirafi 500X or suitable equivalent) top and bottom, as appropriate, can also be used to help stabilize subgrades prior placement of site grade fil or subbase material, if any of the existing subgrades are found to be in a soft/wet condition.

Subgrade fill placement may proceed following preparation and acceptance of the existing subgrades. The majority of the site filling and grading necessary to establish the building pad and pavement areas should be performed in advance of the foundation and utility construction. As mentioned above, it is recommended that the fill required to raise site grades in the proposed building areas proceed a month or so prior to the foundation construction. This would allow the settlement associated with the site grade increases to occur prior to the foundation construction and thus minimize post construction foundation settlement. Suitable Granular Fill or Structural Fill, as described in Appendix B can be used as subgrade fill to raise the site grades, beneath the Subbase Stone course for slab-on-grade and pavement construction.

In general, depending on the time of year (predominantly summer months), the on-site soils can be used for constructing the fills for establishing the building pad and pavement areas, provided they can be properly placed and compacted in a controlled manner and to a stable well engineered condition. However, it should be expected that the use of the fine grained on-site soils for site filling will be difficult to work with (i.e. dry for proper compaction), versus an imported Suitable Granular Fill, particularly during seasonally inclement or wet weather, which could delay construction. On-site soils used for filling within the building pad area and pavement areas must be free of all organics, and any soft, wet or otherwise deleterious material. All fill placement and compaction should be closely monitored and tested on a "full-time" basis by qualified geotechnical personnel.

Subgrade fill placed to establish the building pad and parking lot areas, using the on-site soil, should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor moisture-density relationship (ASTM D 1557). The subgrade fill should be placed in horizontal lifts that do not exceed a maximum loose lift thickness of 8 to 10 inches. The loose lift thickness should be reduced in conjunction with the compaction equipment used so that the required density is attained. On-site soil material used for subgrade fill should have a moisture content within – 3 % to +1 % of the optimum moisture content (determined by ASTM D 1557) when it is placed and compacted.

In all cases, subgrade fill should be placed to a stable condition and should not "pump" or show signs of movement or significant deflection (i.e. unstable conditions) as it is being constructed. The contractor should take precautions to limit construction traffic over the subgrades. Any subgrades, including existing soil subgrades or new subbase, which become damaged, rutted or unstable should be undercut and repaired as necessary prior to placement of the subbase course or new pavement. The fill subgrades should also be properly graded, drained and protected from moisture and frost. Placement of fill over wet, soft, snow covered, or frozen subgrades is not acceptable. Efforts should be made to maintain the subgrades in a dry and stable condition at all times, and limit construction traffic directly over these soils, particularly if they become wet.

4.80.4 Pavement Construction

Placement of the pavement Subbase course can proceed, following proper subgrade preparation and subgrade filling as described in Section 4.80.3. Installation of adjacent geotextile panels should have minimum overlap of 12 to 18 inches. The Subbase Stone should be placed and compacted in accordance with the recommendations presented in Appendix B for Structural Fill. As mentioned above, underdrains/edge drains or adjacent drainage swales should be considered to drain the pavement subbase and subgrades in order to improve pavement performance. Construction of the Asphalt Concrete Pavement should be performed in accordance with NYSDOT Standard Specification Section 400. The Binder and Top Course compaction / evaluation should comply with NYSDOT Standard Specifications – 80 Series Compaction procedures, as a minimum, or as otherwise required by the jurisdictional agency. In addition, placement of asphalt concrete courses should not be permitted on wet or snow covered surfaces or when the subgrade surface is less than 40° F.

5.00 CONCLUDING REMARKS

This report was prepared to assist in the design and construction of the proposed Warehouse / Distribution Complex planned in West Seneca, New York. The report has been prepared for the

exclusive use of WM Schutt Associates, P.C. and other members of the design team, for specific application to this site and this project only.

The project information and recommendations presented in this report were prepared based on Empire's understanding of the proposed project and the subsurface exploration work completed by SJB Services, Inc. as described herein, and through the application of generally accepted soils and foundation engineering practices. Empire should be consulted with any questions regarding the interpretation of the findings of our work, and/or the geotechnical considerations and recommendations presented. In addition, the recommendations presented are provided as guidance to the designer and should not be considered a project specification. No warranties expressed or implied are made regarding the subsurface conditions present, or by the conclusions, opinions, recommendations or services provided.

Empire should be informed of any changes to the planned building and pavement construction so that it may be determined if any modifications to the information presented in this report are necessary. Empire and/or its designated representative should also be retained to review final plans and specifications and to monitor the foundation and site work construction to verify that the recommendations were properly interpreted and implemented.

Additional information regarding the use and interpretation of this report is presented in Appendix C.

Respectfully Submitted:

WMA Engineering, DPC dba
EMPIRE GEOTECHNICAL ENGINEERING SERVICES

Wanda M. Allen, P.E.
Senior Geotechnical Engineer

TABLE

TABLE 1

PROPOSED WAREHOUSE / DISTRIBUTION COMPLEX
NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

EXPLORATION LOCATIONS & GROUND SURFACE ELEVATIONS

Test Boring Locations - GPS Coordinates			Ground Surface Elevation (ft)
Exploration Location	Latitude	Longitude	
B-1	42° 50' 37.8"	-78° 43' 24.0"	667.7
B-2	42° 50' 37.6"	-78° 43' 19.8"	672.2
B-3	42° 50' 37.6"	-78° 43' 13.9"	677.4
B-4	42° 50' 38.8"	-78° 43' 5.9"	670.7
B-5	42° 50' 38.8"	-78° 43' 1.7"	674.2
B-6	42° 50' 34.9"	-78° 43' 6.2"	683.4
B-7	42° 50' 34.7"	-78° 43' 1.8"	687.8
B-8	42° 50' 31.4"	-78° 43' 6.0"	691.8
B-9	42° 50' 31.5"	-78° 43' 2.0"	694.6

WMA Engineering, DPC dba
Empire Geotechnical Engineering Services
5167 South Park Avenue
Hamburg, New York

FIGURES

APPROXIMATE LIMITS OF PROJECT SITE

N

NOTE:
SITE LOCATION PLAN DEVELOPED FROM BING MAPS - MICROSOFT CORPORATION

WMA ENGINEERING DPC|DBA
EMPIRE GEO TECHNICAL ENGINEERING SERVICES

PROPOSED WAREHOUSE / DISTRIBUTION COMPLEX
NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

SITE LOCATION PLAN

DR BY: WMA	SCALE: NTS	PROJECT NO.: WB-20-181
CHKD BY: WMA	DATE: 02/01/2021	FIGURE NO: 1

LEGEND:

B-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORING.

NOTE:

FIGURE DEVELOPED FROM GOOGLE EARTH

WMA ENGINEERING DPC|DBA
EMPIRE GEOTECHNICAL ENGINEERING SERVICES

PROPOSED WAREHOUSE / DISTRIBUTION COMPLEX
NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

SUBSURFACE EXPLORATION PLAN (EXISTING SITE CONDITIONS)	DR BY: WMA	SCALE: NTS	PROJECT NO.: WB-20-181
	CHKD BY: WMA	DATE: 02/01/2021	FIGURE NO: 2

LEGEND:

B-1 INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORING.

BM BENCHMARK: RIM OF STORM MANHOLE. REPORTED ELEVATION = 678.84 FEET.

NOTE:

FIGURE DEVELOPED FROM "CONCEPTUAL SITE PLAN" DATED NOVEMBER 19, 2020 PREPARED BY WM SCHUTT ASSOCIATES, P.C.

200 0 200
SCALE FEET

N

WMA ENGINEERING DPC|DBA
EMPIRE GEOTECHNICAL ENGINEERING SERVICES

PROPOSED WAREHOUSE / DISTRIBUTION COMPLEX
NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

SUBSURFACE EXPLORATION PLAN (PROPOSED SITE DEVELOPMENT)	DR BY: WMA	SCALE: 1" = 200'	PROJECT NO.: WB-20-181
	CHKD BY: WMA	DATE: 02/01/2021	FIGURE NO: 3

APPENDIX A

SUBSURFACE EXPLORATION LOGS

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface condition between adjacent borings or between the sampled intervals. The data presented of the Subsurface Logs together with the recovered samples provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and recovered samples must be performed by qualified professionals. The following information defines some of the procedures and terms used of the Subsurface Logs to describe the conditions encountered, consistent with the numbered identifiers shown on the Key opposite this page.

1. The figures in the Depth column define the scale of the Subsurface Log.
2. The Samples column shows, graphically, the depth range from which a sample was recovered. See Table I for descriptions of the symbols used to represent the various types of samples.
3. The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.
4. Blows on Sampler – shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches is recorded. The first 6 inches of penetration is considered a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N.
5. Blows on Casing – Shows the number of blows required to advance the casing a distance of 12 inches. The casing size, hammer weight, and length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log. Alternatively, sample recovery may be shown in this column or other data consistent with the column heading.
6. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist, or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification System group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet, and saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.
7. Rock description is based on review of the recovered rock core and the driller's notes. Frequently used rock classification terms are included in Table VI.
8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines convey a lesser degree of certainty with respect to either a change in soil type or where such change may occur.
9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that any drill water used to advance the boring may have influenced the observations. The ground water level will fluctuate seasonally, typically. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or groundwater observation wells.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total length of pieces of NX core exceeding 4 inches divided by the core run. The size core barrel used is also noted in the Method of Investigation at the bottom of the Subsurface Log.

DATE

STARTED _____

FINISHED _____

SHEET ____ OF ____

SJB SERVICES, INC.
SUBSURFACE LOG

PROJ. No. _____

HOLE No. _____

SURF. ELEV. _____

G.W. DEPTH _____

PROJECT _____ LOCATION _____

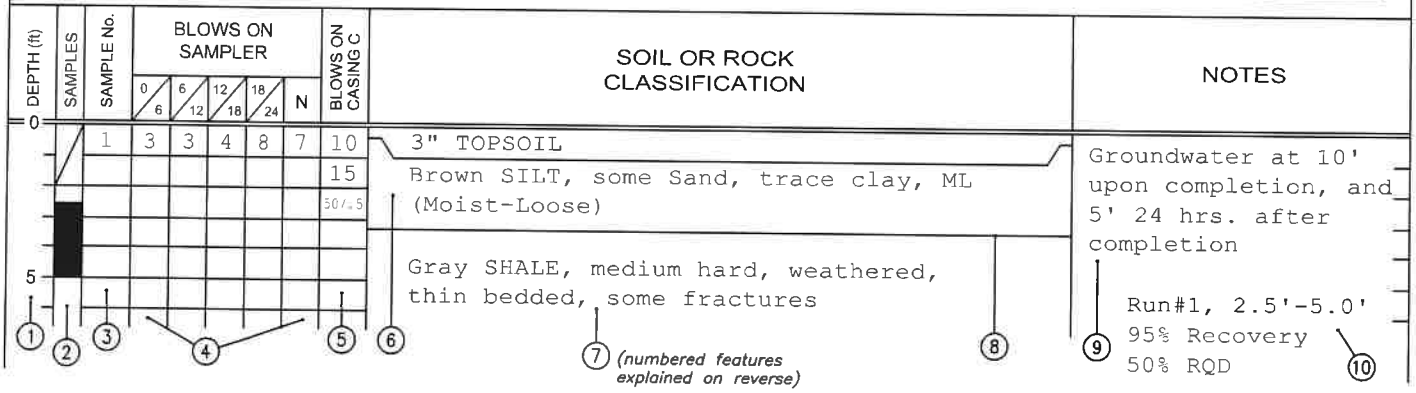

TABLE I

- Split Spoon Sample
- Shelby Tube Sample
- Geoprobe Macro-Core
- Auger or Test Pit Sample
- Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	Coarse Grained (Granular)
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	Fine Grained
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:

Granular Soils		Cohesive Soils	
Term	**Blows per Foot, N**	**Term**	**Blows per Foot, N**
Very Loose	0 - 4	Very Soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Firm	10 - 30	Medium	4 - 8
Compact	30 - 50	Stiff	8 - 15
Very Compact	>50	Very Stiff	15 - 30
		Hard	>30

(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term		Meaning
Hardness	- Soft	Scratched by fingernail
	- Medium Hard	Scratched easily by penknife
	- Hard	Scratched with difficulty by penknife
	- Very Hard	Cannot be scratched by penknife
Weathering	- Very Weathered	Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.
	- Weathered	
	- Sound	

Rock Classification Term		Meaning	
Bedding	- Laminated	(<1")	Natural breaks in Rock Layers
	- Thin Bedded	(1" - 4")	
	- Bedded	(4" - 12")	
	- Thick Bedded	(12" - 36")	
	- Massive	(>36")	

(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)

DATE:
START 1/4/2021
FINISH 1/5/2021
SHEET 1 OF 1

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-1
SURF. ELEV 667.7'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	WOH/1.0				TOPSOIL	Driller noted Topsoil at the surface
		3	5		3	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist, soft, CL)	
	2	4	4				
		5	6		9	Brown f-c SAND, some fine Gravel, little Silty Clay (moist-wet, loose, SC-SM)	WOH - Weight of Hammer and Rods
5	3	7	13				
		21	31		34	Brown fine GRAVEL, some f-c Sand, little Silty Clay (wet, compact, GC-GM)	
	4	49	50/0.4		REF		S-4: No Recovery
	5	11	21			Contains some Silty Clay, little f-c Sand (moist)	REF = Sample Spoon Refusal
10		19	21		40		
	6	25	25			(v. compact)	
		26	32		51		
15	7	29	23			Brown Silty CLAY, some fine Gravel, little f-c Sand (moist-wet, hard, CL)	
		15	19		38		
20	8	8	7			Brown fine GRAVEL, some Silty Clay, little f-c Sand (wet, firm, GC-GM)	
		8	11		15		
25	9	4	7			(compact)	
		24	21		31		
30	10	9	15			Contains some f-c Sand, little Silty Clay (moist-wet)	
		19	17		34		
35						Boring Complete at 32.0'	No Free Standing Water encountered after being left open overnight
							No Free Standing Water encountered at boring completion
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/6/2021
FINISH 1/8/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-2
SURF. ELEV 672.2'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	1	3			TOPSOIL	Driller noted Topsoil at the surface
		3	5		6	Brown f-c SAND, some Silty Clay, little fine Gravel, tr. organics (moist-wet, loose, SC-SM)	
	2	6	6			(firm)	
		5	6		11		
5	3	5	8			Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, firm, GC-GM)	
		16	21		24	(v. compact)	
	4	21	25				REF = Sample Spoon Refusal
		50/0.4			REF		
	5	13	27			(wet, compact)	
10		16	16		43		
	6	13	17				
		16	23		33		
15							
	7	5	10			(firm)	
		13	14		23		
20							
	8	3	6				
		7	9		13		
25							
	9	10	9			Contains some Silty Clay, little f-c Sand	
		9	10		18		
30							
	10	3	7			Contains some f-c Sand, little Silty Clay	
		8	10		15		
35							
	11	38	50/0.4		REF		S-11: No Recovery
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/6/2021
FINISH 1/8/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-2
SURF. ELEV 672.2'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	30	50/0.3		REF	Dark Gray-Brown f-c SAND, some f-c Gravel, tr. clayey silt (wet, v. compact, SP-SW)	REF = Sample Spoon Refusal
45	13	50/0.2			REF	Brown f-c SAND, some fine Gravel, little Silty Clay (moist-wet, v. compact, SC-SM)	
50	14	50/0.3			REF		S-14 and S-15: No Recovery
55	15	50/0.2			REF		
60	16	50/0.1			REF	Dark Brown fine GRAVEL, some f-c Sand, little Silty Clay (wet, v. compact, GC-GM)	
65	17	50/0.0			REF		S-17: No Recovery
70	18	50/0.1			REF	Contains some Silty Clay, little f-c Sand	
75						Boring Complete at 70.1' with Sample Spoon Refusal	Free Standing Water recorded at 20' at boring completion
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/6/2021
FINISH 1/6/2021

SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-3
SURF. ELEV 677.4'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	WOH	1			TOPSOIL	Driller noted Topsoil at the surface
		3	5		4	Brown Silty CLAY, little f-c Sand, tr. gravel, tr. organics (moist, medium, CL)	
	2	6	9			Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, firm, GC-GM)	WOH - Weight of Hammer and Rods
		12	14		21		
5	3	5	7				
		12	15		19		
	4	14	23			(compact)	
		20	50/0.2		43		
	5	18	33			Contains some Silty Clay, little f-c Sand (v. compact)	
10		23	20		56		
	6	17	21				
		19	22		40		
15							
	7	4	12			(firm)	
		15	14		27		
20							
	8	5	9			(wet)	
		12	13		21		
25							
	9	7	10				
		10	12		20		
30							
	10	4	7				
		8	7		15		
35							
	11	3	4			Brown Silty CLAY, little f-c Sand, tr. gravel (wet, stiff, CL)	
		7	11		11		
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/6/2021
FINISH 1/6/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-3
SURF. ELEV 677.4'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	4	5			Brown fine GRAVEL, some f-c Sand, little Silty Clay (wet, firm, GC-GM)	
		6	6		11		
45	13	9	14			Dark Gray-Brown f-c SAND, little fine Gravel, tr. clayey silt (moist-wet, v. compact, SP-SW)	Driller noted "running sand" below a depth of about 40'
		43	39		62		
	14	10	28			Contains 'and' fine Gravel (wet)	
50		40	35		68		
						Boring Complete at 50.0'	Free Standing Water recorded at 10' at boring completion
55							
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/12/2021
FINISH 1/12/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-4
SURF. ELEV 670.7'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	WOH	2			TOPSOIL	Driller noted Topsoil at the surface
		2	4		4	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist, medium, CL)	
	2	4	7			(v. stiff)	WOH - Weight of Hammer and Rods
		9	13		16		
5	3	4	7			Brown f-c SAND, some fine Gravel, little Silty Clay	
		16	23		23	(wet, firm, SC-SM)	
	4	5	10			Brown f-c GRAVEL, some f-c Sand, little Silty Clay	
		15	13		25	(moist-wet, firm, GC-GM)	
	5	4	7			Contains fine Gravel, some Silty Clay, little f-c Sand	
10		9	11		16		
	6	6	8				
		10	11		18		
15							
	7	4	7				S-7: Poor Recovery
		9	10		16		
20							
	8	5	9			Brown f-c SAND, some fine Gravel, little Silty Clay	
		13	17		22	(moist-wet, firm, SC-SM)	
25							
	9	7	11				
		10	14		21		
30							
	10	29	50/0.2		REF	Gray fine GRAVEL (moist, v. compact, GP)	S-10: Poor Recovery
35							
	11	50/0.2			REF	Contains tr. sand	
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/12/2021
FINISH 1/12/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-4
SURF. ELEV 670.7'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	50/0.4			REF	Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist, v. compact, GC-GM)	REF = Sample Spoon Refusal
45	13	18	28				
		50/0.4			REF		
	14	50/0.4			REF		
50						Boring Complete at 48.4' with Sample Spoon Refusal	No Free Standing Water encountered at boring completion
55							
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/12/2021
FINISH 1/13/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-5
SURF. ELEV 674.2'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	2	4			TOPSOIL	Driller noted Topsoil at the surface
		6	8		10	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist, stiff, CL)	
	2	6	7				
		7	10		14	Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, firm, GC-GM)	
5	3	5	8				
		14	20		22	Brown fine GRAVEL, some f-c Sand, tr. silty clay (moist, firm, GP)	
	4	50/0.4			REF	Contains little f-c Sand (v. compact)	REF = Sample Spoon Refusal
	5	7	12			Dark Gray fine GRAVEL, some f-c Sand, little Silty Clay (moist, firm, GC-GM)	
10		14	20		26		
	6	7	11				
		13	17		24		
15							
	7	50/0.4			REF	(v. compact)	S-7 to S-9: No Recovery Driller noted possible cobbles
20							
	8	50/0.4			REF		
25							
	9	8	32				
		50/0.4			REF		
30							
	10	12	24			(wet)	
		31	50/0.4		55		
35							
	11	26	39			(moist-wet)	
		50/0.2			REF		
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/13/2021
FINISH 1/13/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-5
SURF. ELEV 674.2'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	32	28			(wet)	
		50/0.2			REF		REF = Sample Spoon Refusal
45	13	34	50/0.4		REF	Gray f-c SAND, some Silty Clay, little fine Gravel (wet, v. compact, SC-SM)	
	14	50/0.4			REF	Brown fine GRAVEL, some f-c Sand, little Silty Clay (wet, v. compact, GC-GM)	
50						Boring Complete at 48.4' with Sample Spoon Refusal	Free Standing Water recorded at 25' after hole left open overnight with augers at 30'
55							Free Standing Water recorded at 31' at boring completion
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/11/2021
FINISH 1/11/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-6
SURF. ELEV 683.4'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	WOH	2			TOPSOIL	Driller noted Topsoil at the surface
		4	4		6	Brown Silty CLAY, some f-c Sand, little fine Gravel (moist-wet, medium, CL)	
	2	4	5				
		7	7		12	Contains some fine Gravel, little f-c Sand (moist-wet, stiff)	WOH - Weight of Hammer and Rods
5	3	3	13				
		17	22		30	Brown fine GRAVEL, some Silty Clay, little f-c Sand (moist-wet, firm, GC-GM)	
	4	9	11				
		15	20		26		
	5	5	11			Contains some f-c Sand, little Silty Clay	
10		13	22		24		
	6	8	13			Brown f-c SAND, some fine Gravel, little Silty Clay (moist, compact, SC-SM)	
		21	27		34		
15							
	7	3	9			(wet, firm)	
		13	19		22		
20							
	8	4	7			Contains some Silty Clay, little fine Gravel	
		12	12		19		
25							
	9	13	12			Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, firm, GC-GM)	
		16	19		28		
30							
	10	9	11			Brown Silty CLAY, some f-c Sand, little fine Gravel (moist-wet, v. stiff, CL)	
		14	18		25		
35							
	11	12	14				
		14	19		28		
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/11/2021
FINISH 1/11/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-6
SURF. ELEV 683.4'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	8	12				
		15	19		27		
45	13	12	15			Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, firm, GC-GM)	
		14	17		29		
	14	9	11			Brown f-c SAND, some fine Gravel, little Silty Clay (wet, firm, SC-SM)	
50		13	16		24		
						Boring Complete at 50.0'	No Free Standing Water encountered at boring completion
55							
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 1/11/2021
FINISH 1/11/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-7
SURF. ELEV 687.8'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	2	2			TOPSOIL	Driller noted Topsoil at the surface
		3	4		5	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist-wet, medium, CL)	
	2	9	11				
		13	16		24	Brown f-c SAND, some fine Gravel, little Silty Clay (moist-wet, firm, SC-SM)	
5	3	4	9				
		17	20		26	(moist)	
	4	8	10			Brown fine GRAVEL, some f-c Sand, little Silty Clay	
		14	22		24	(moist, firm, GC-GM)	
	5	16	18			Brown f-c SAND, some fine Gravel, little Silty Clay	
10		26	28		44	(moist, compact, SC-SM)	
	6	18	19			Contains some Silty Clay, little fine Gravel	
		23	28		42		
15							
	7	6	12			(firm)	
		15	13		27		
20							
	8	4	12			Brown fine GRAVEL, some f-c Sand, little Silty Clay	
		26	28		38	(moist-wet, compact, GC-GM)	
25							
	9	2	5			Brown Silty CLAY, some f-c Sand, little fine Gravel	
		13	17		18	(moist-wet, v. stiff, CL)	
30							
	10	5	8			Brown f-c GRAVEL, some Silty Clay, little f-c Sand	
		12	19		20	(wet, firm, GC-GM)	
35							
	11	8	11			Contains fine Gravel, some f-c Sand, little Silty Clay	
		12	15		23	(moist-wet)	
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 1/11/2021
FINISH 1/11/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-7
SURF. ELEV 687.8'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	10	13			Brown Silty CLAY, some f-c Sand, little fine Gravel	
		12	18		25	(moist-wet, v. stiff, CL)	
45	13	11	14			Contains some fine Gravel, little f-c Sand	
		16	15		30		
	14	8	12				
50		15	19		27		
						Boring Complete at 50.0'	No Free Standing Water encountered at boring completion
55							
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 12/30/2021
FINISH 12/31/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-8
SURF. ELEV 696.8'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	1	2			TOPSOIL	Driller noted Topsoil at the surface
		2	3		4	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist-wet, medium, CL)	
	2	6	10				
		22	24		32	Brown fine GRAVEL, some Silty Clay, little f-c Sand (moist, compact, GC-GM)	
5	3	11	27				
		34	37		61	Brown Silty CLAY, some fine Gravel, little f-c Sand (moist, hard, CL)	
	4	49	50/0.4		REF		REF = Sample Spoon Refusal
						Brown fine GRAVEL, little Silty Clay, little f-c Sand (moist, v. compact, GC-GM)	
	5	29	31				
10		30	30		61	Contains some Silty Clay	
	6	30	29				
		33	31		62		
15							
	7	4	7			Brown Silty CLAY, some fine Gravel, little f-c Sand (moist-wet, v. stiff, CL)	
		10	12		17		
20							
	8	3	11			Brown fine GRAVEL, some Silty Clay, little f-c Sand (moist-wet, firm, GC-GM)	
		9	9		20		
25							
	9	4	5			Brown Silty CLAY, some fine Gravel, little f-c Sand (moist, stiff, CL)	
		10	11		15		
30							
	10	5	6			(moist-wet, v. stiff)	
		11	13		17		
35							
	11	2	3			(medium)	
		5	6		8		
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 12/30/2021
FINISH 12/31/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-8
SURF. ELEV 691.8'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	2	3				
		3	5		6		
45	13	3	3			Brown fine GRAVEL, some f-c Sand, little Silty Clay (moist-wet, loose, GC-GM)	
		5	5		8		
50	14	6	8			(firm)	
		9	9		17		
55	15	3	9			Brown Silty CLAY, some f-c Sand, little fine Gravel (wet, hard, CL)	
		29	22		38		
60						Boring Complete at 57.0'	Free Standing Water recorded at 11' after hole left open overnight with augers at 30'
65							Free Standing Water recorded at 38' at boring completion
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE:
START 12/31/2021
FINISH 1/4/2021
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-9
SURF. ELEV 694.6'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	1	1			TOPSOIL	Driller noted Topsoil at the surface
		2	4		3	Brown Silty CLAY, some f-c Sand, little fine Gravel, tr. organics (moist-wet, soft, CL)	
	2	6	12				
		15	18		27	Brown fine GRAVEL, some Silty Clay, little f-c Sand (moist, firm, GC-GM)	
5	3	9	17				
		28	31		45	Brown Silty CLAY, some fine Gravel, little f-c Sand (moist, hard, CL)	
	4	24	34				
		49	50		83		
	5	41	37			Brown fine GRAVEL, some Silty Clay, little f-c Sand (moist, v. compact, GC-GM)	
10		25	22		62		
	6	30	30				
		42	38		72		
15							
	7	8	13			(moist-wet, firm)	
		15	18		28		
20							
	8	4	5				
		7	8		12		
25							
	9	8	38			Contains f-c GRAVEL (wet, v. compact)	
		21	21		59		
30							
	10	10	26			Contains fine GRAVEL, some f-c Sand, little Silty Clay (compact)	
		21	25		47		
35							
	11	8	12			Brown f-c SAND, some fine Gravel, little Silty Clay (moist-wet, firm, SC-SM)	
		12	10		24		
40							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 12/31/2021
FINISH 1/4/2021
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. B-9
SURF. ELEV 694.6'
G.W. DEPTH See Notes

PROJECT: WAREHOUSE / DISTRIBUTION COMPLEX
PROJ. NO.: BE-20-181
LOCATION: NORTH AMERICA DRIVE
WEST SENECA, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	SOIL OR ROCK CLASSIFICATION	NOTES
40	12	10	13			Brown Silty CLAY, some f-c Sand, little fine Gravel	
		15	12		28	(wet, v. stiff, CL)	
45	13	8	12				
		10	12		22		
	14	9	13			Brown fine GRAVEL, some f-c Sand, little Silty Clay	
50		10	14		23	(wet, firm, GC-GM)	
						Boring Complete at 50.0'	Free Standing Water recorded at 3' after hole left open overnight with augers at 10' Free Standing Water recorded at 40' at boring completion
55							
60							
65							
70							
75							
80							

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: T. MUMMERY

DRILL RIG TYPE: CME-550x

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

APPENDIX B

FILL MATERIAL AND EARTHWORK RECOMMENDATIONS

APPENDIX B

FILL MATERIAL AND EARTHWORK RECOMMENDATIONS

I. Material Recommendations

A. Structural Fill

Structural Fill, which is placed beneath foundations, should consist of a crusher run stone, free of clay, organics and friable or deleterious particles. As a minimum, the crusher stone should meet the requirements of New York State Department of Transportation, Standard Specifications, Item 304.12 – Type 2 Subbase, with the following gradation requirements.

Sieve Size Distribution	Percent Finer by Weight
2 inch	100
¼ inch	25-60
No. 40	5-40
No. 200	0-10

B. Subbase Stone

The subbase stone course placed as the aggregate course beneath slab-on-grade and pavement construction should conform to the same material requirements as Structural Fill, as stated above.

C. Suitable Granular Fill

Suitable soil material, well graded from coarse to fine and classified as GW, GP, GM, SW, SP and SM soils using the Unified Soil Classification System (ASTM D-2487) and having no more than 85- percent by weight material passing the No. 4 sieve, no more than 20- percent by weight material passing the No. 200 sieve and which is generally free of particles greater than 4 inches, will be acceptable as Suitable Granular Fill. It should also be free of topsoil, asphalt, concrete rubble, wood, debris, clay and other deleterious materials. Suitable Granular Fill can be used as foundation backfill and as subgrade fill to raise site grades beneath slab-on-grade and pavement construction.

Material meeting the requirements of New York State Department of Transportation, Standard Specifications, Item 203.07 – Select Granular Fill is acceptable for use as Suitable Granular Fill.

II. Placement and Compaction Requirements

All controlled fill placed beneath foundations, slab-on-grade and pavement construction and beneath utilities should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557). Fill placed in non-loaded grass areas can be compacted to a minimum of 90 percent of the maximum dry density (ASTM D1557).

Placement of fill should not exceed a maximum loose lift thickness of 6 to 9 inches with the exception of subbase courses beneath slab on grade and pavement construction, which can be placed in a single lift not exceeding 15 inches. The loose lift thickness should be reduced in conjunction with the compaction equipment used so that the required density is attained.

Engineered fill should have a moisture content within two percent of the optimum moisture content at the time of compaction and testing. Subgrades should be properly drained and protected from moisture and frost. Placement of fill on frozen subgrades is not acceptable. It is recommended that all fill placement and compaction be monitored and tested on a full time basis by a representative of Empire Geo-Services, Inc.

III. Quality Assurance Testing

The following minimum laboratory and field quality assurance testing frequencies are recommended to confirm fill material quality and post placement and compaction conditions. These minimum frequencies are based on generally uniform material properties and placement conditions. Should material properties vary or conditions at the time of placement vary (i.e. moisture content, placement and compaction, procedures or equipment, etc.) Then additional testing is recommended. Additional testing, which may be necessary, should be determined by qualified geotechnical personnel, based on evaluation of the actual fill material and construction conditions.

A. Laboratory Testing of Material Properties

- Moisture content (ASTM D-2216) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Grain Size Analysis (ASTM D-422) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Liquid and Plastic Limits (ASTM D-4318) 1 test per 4000 cubic yards or no less than 2 tests per each material type. Liquid and Plastic Limit testing is necessary only if appropriate, based on material composition (i.e. clayey or silty soils).
- Modified Proctor Moisture Density Relationship (ASTM D-1557) 1 test per 4000 cubic yards or no less than 1 test per each material type. A maximum/minimum density relationship (ASTM D-4253 and ASTM D-4254) may be an appropriate substitute for ASTM D-1557 depending on material gradation.

B. Field In-Place Moisture/Density Testing (ASTM D-3017 and ASTM D-2922)

- Backfilling along trenches and foundation walls - 1 test per 100 lineal feet per lift.
- Backfilling Isolated Excavations (i.e. column foundations, manholes, etc.) 1 test per lift.
- Filling in open areas for slab-on-grade and pavement construction - 1 test per 10,000 square feet per lift.

APPENDIX C

GEOTECHNICAL REPORT LIMITATIONS

GEOTECHNICAL REPORT LIMITATIONS

WMA Engineering DPC / DBA Empire Geotechnical Engineering Services (Empire) has endeavored to meet the generally accepted standard of care for the services completed, and in doing so is obliged to advise the geotechnical report user of our report limitations. Empire believes that providing information about the report preparation and limitations is essential to help the user reduce geotechnical-related delays, cost over-runs, and other problems that can develop during the design and construction process. Empire would be pleased to answer any questions regarding the following limitations and use of our report to assist the user in assessing risks and planning for site development and construction.

PROJECT SPECIFIC FACTORS: The conclusions and recommendations provided in our geotechnical report were prepared based on project specific factors described in the report, such as size, loading, and intended use of structures; general configuration of structures, roadways, and parking lots; existing and proposed site grading; and any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. *Accordingly, Empire cannot accept responsibility for problems which may develop if we are not consulted regarding any changes to the project specific factors that were assumed during the report preparation.*

SUBSURFACE CONDITIONS: The site exploration investigated subsurface conditions only at discrete test locations. Empire has used judgement to infer subsurface conditions between the discrete test locations, and on this basis the conclusions and recommendations in our geotechnical report were developed. It should be understood that the overall subsurface conditions inferred by Empire may vary from those revealed during construction, and these variations may impact on the assumptions made in developing the report conclusions and recommendations. *For this reason, Empire should be retained during construction to confirm that conditions are as expected, and to refine our conclusions and recommendations in the event that conditions are encountered that were not disclosed during the site exploration program.*

USE OF GEOTECHNICAL REPORT: Unless indicated otherwise, our geotechnical report has been prepared for the use of our client for specific application to the site and project conditions described in the report. *Without consulting with Empire, our geotechnical report should not be applied by any party to other sites or for any uses other than those originally intended.*

CHANGES IN SITE CONDITIONS: Surface and subsurface conditions are subject to change at a project site subsequent to preparation of the geotechnical report. Changes may include, but are not limited to, floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. *Empire should be informed of any such changes to determine if additional investigative and/or evaluation work is warranted.*

MISINTERPRETATION OF REPORT: The conclusions and recommendations contained in our geotechnical report are subject to misinterpretation. *To limit this possibility, Empire should review project plans and specifications relative to geotechnical issues to confirm that the recommendations contained in our report have been properly interpreted and applied.*

Subsurface exploration logs and other report data are also subject to misinterpretation by others if they are separated from the geotechnical report. This often occurs when copies of logs are given to contractors during the bid preparation process. *To minimize the potential for misinterpretation, the subsurface logs should not be separated from our geotechnical report and the use of excerpted or incomplete portions of the report should be avoided.*

OTHER LIMITATIONS: Geotechnical engineering is less exact than other design disciplines, as it is based partly on judgement and opinion. For this reason, our geotechnical report may include clauses that identify the limits of Empire's responsibility, or that may describe other limitations specific to a project. These clauses are intended to help all parties recognize their responsibilities and to assist them in assessing risks and decision making. Empire would be pleased to discuss these clauses and to answer any questions that may arise.

Appendix I

SHPO Information

Phase IA and IB (Phase I) Cultural Resource Investigations for the Proposed North America Drive Warehouse-Distribution Complex, Town of West Seneca, Erie County, New York

Prepared For

Burgio & Campofelice, Inc.
2721 Transit Road Suite 114
Elma, NY 14059

May 11, 2022

By

Powers Archaeology LLC
180 Avon Road
Rochester, NY 14625
Ph: (585) 266-4180
www.powersarchaeology.com

REPORT ACKNOWLEDGMENTS

Powers Archaeology LLC would like to thank Mr. Michael Lorenzo of Burgio & Campofelice, Inc. for his efficient contract administration and helpful communications concerning the details of the project.

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I. PHASE I MANAGEMENT SUMMARY

Project Name: Phase IA and IB (Phase I) Cultural Resource Investigations for the Proposed North America Drive Warehouse-Distribution Complex, Town of West Seneca, Erie County, New York.

Project Description: The proposed project encompasses the development of a warehouse and distribution complex along with associated parking, drainage, and utilities, within the Town of West Seneca, Erie County, New York. Approximately 44 acres / 17.8 hectares will be impacted by the proposed project and considered the Area of Potential Effect (APE).

Project Location: The proposed project is located at 6000 North America Drive, within the Town of West Seneca, Erie County, New York (042° 50' 35.04" N, 078° 43' 05.82" W). The project area can be accessed via North America Drive.

County: Erie County

Minor Civil Division Number: 02925 (Town of West Seneca)

USGS 7.5 Minute Quadrangle Map: 1969 USGS 7.5' Orchard Park, N.Y. Quadrangle

SEQR Review: Phase I Cultural Resource Investigations have been requested as part of a State Environmental Quality Review (SEQR).

Involved State and Federal Agencies: NYSDEC

Survey Area
Acreage: 44 acres / 17.8 hectares
Depth: Undetermined
Number of Acres Surveyed: 44 acres / 17.8 hectares

Archaeological Survey Overview
Number & Interval of Shovel Tests: 555 at 50-ft / 15-m intervals
Number & Size of Units: NA
Width of Plowed Strips: NA
Surface Survey Transect Interval: NA

Results of Archaeological Survey
Closest Previously Recorded Site(s) to the APE: 2925.000481 / NYSM 1706, 1112-ft / 339-m from APE
Native American Burials Less Than 1/4-Mile from APE: 0
Number & Name of Prehistoric Sites Identified: 0
Number & Name of Historic Sites Identified: 0
Number & Name of Sites Recommended for Phase II / Avoidance: 0

Results of Architectural Survey
Number of Buildings / Structures / Cemeteries Within Project Area (APE): 0
Number of Buildings / Structures / Cemeteries Adjacent Project Area (APE): 0

SRHP/NRHP Historical Review
Number of Previously Determined NR Listed or Eligible Buildings / Structures / Cemeteries / Districts: 0
Number of Identified Buildings / Structures / Cemeteries / Districts: 0

Recommendations of Phase I Cultural Resource Investigations: These Phase I Cultural Resource Investigations were performed only for the 44 acres / 17.8 hectares that were considered the Area of Potential Effect for the Proposed North America Drive Warehouse-Distribution Complex. All work was conducted in the Town of West Seneca, Erie County, New York. While the physiographic context of the APE seems to suggest that Native American habitation was possible, Phase I investigations yielded no evidence of prehistoric occupation. Neither Native American sites nor Euro-American sites were identified within the APE. Therefore, no sites were designated. Consequently, Powers Archaeology LLC believe that current development plans should be allowed to proceed, and that no further archaeological work is warranted.

Date of Report: May 11, 2022

Report Prepared By

Mr. Paul Powers

SCALE 1:3500

0 100 200 300 400 500 600 700 800
Feet

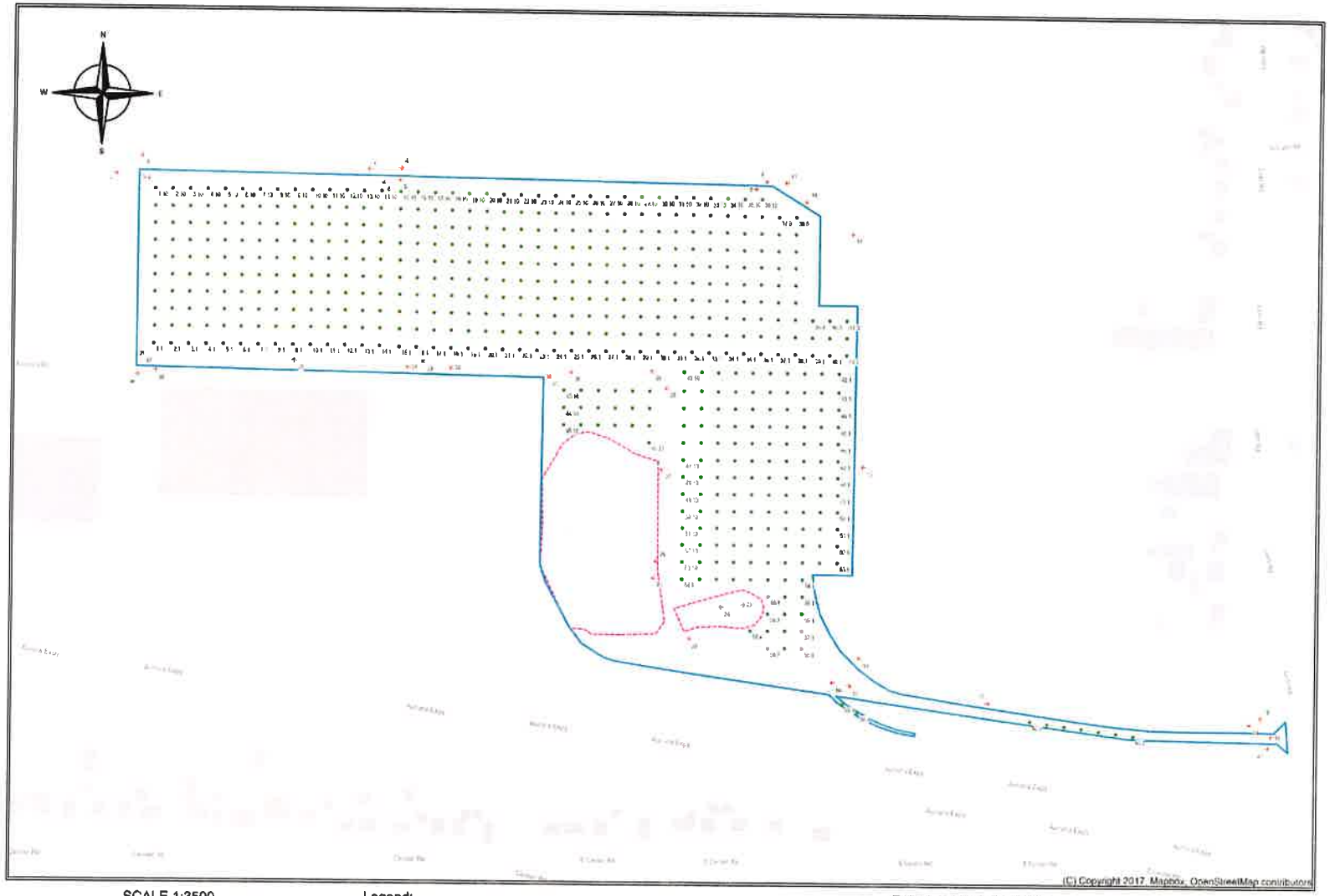
0 100 200
Meters

Legend:

- APE Boundary
- Disturbed (Cut / Fill)
- Negative Shovel Test
- Photograph Location

Powers Archaeology LLC
Phase IA and IB (Phase I) Cultural Resource Investigations for the Proposed North America Drive Warehouse-Distribution Complex, Town of West Seneca, Erie County, New York

Map #1
Project on 2019 USGS Aerial Photograph



SCALE 1:3500

0 100 200 300 400 500 600 700 800
Feet

0 100 200
Meters

Legend:

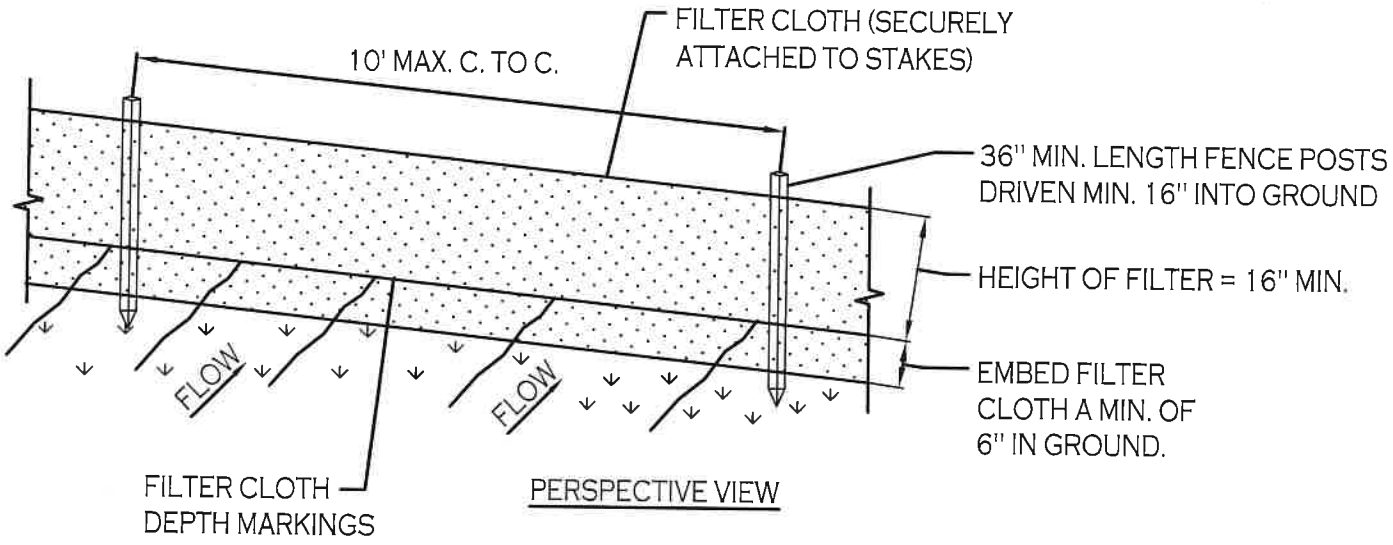
- APE Boundary
- Disturbed (Cut / Fill)
- Negative Shovel Test
- Photograph Location

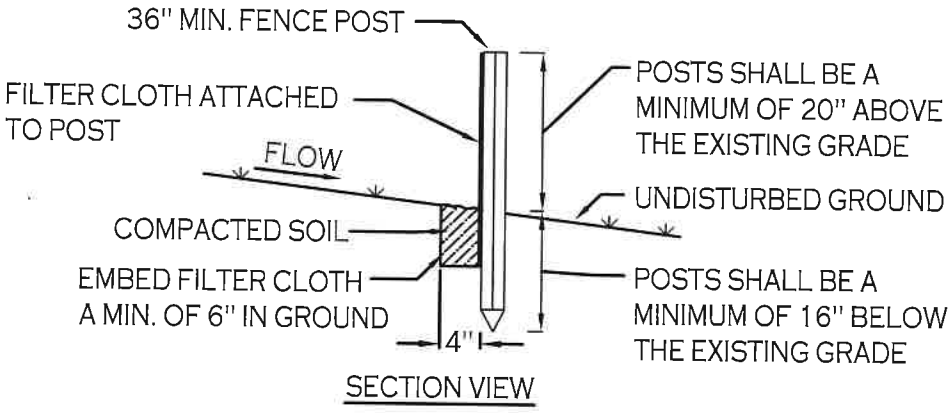
Powers Archaeology LLC
Phase IA and IB (Phase I) Cultural Resource Investigations for the Proposed North America Drive Warehouse-Distribution Complex, Town of West Seneca, Erie County, New York

Map #2
Project on Terrain Navigator Base Map

Appendix J

Standard Erosion Control Details





CONSTRUCTION SPECIFICATIONS

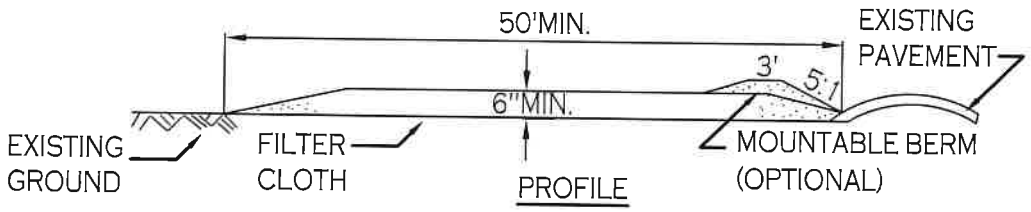
1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.

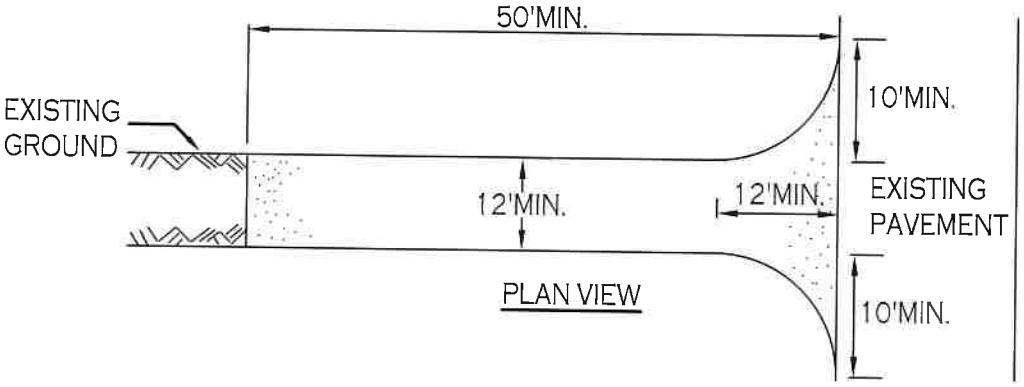
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.

3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE





CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.

5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

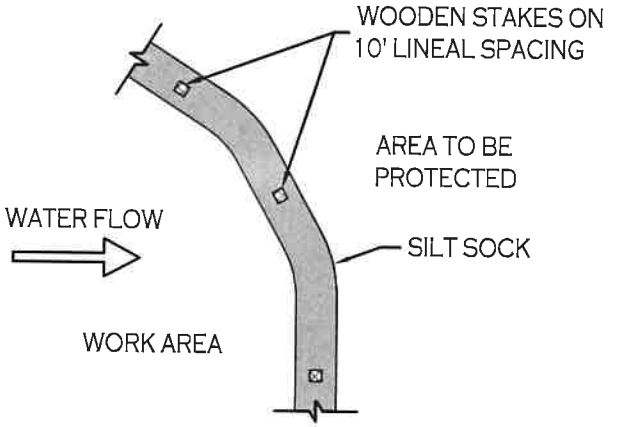
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

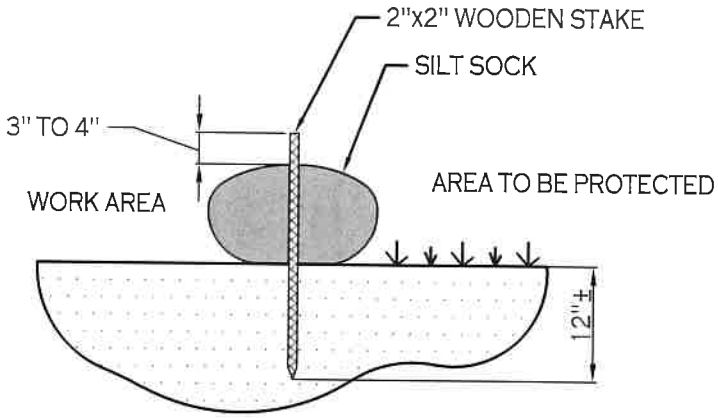
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



PLAN VIEW



SECTION VIEW

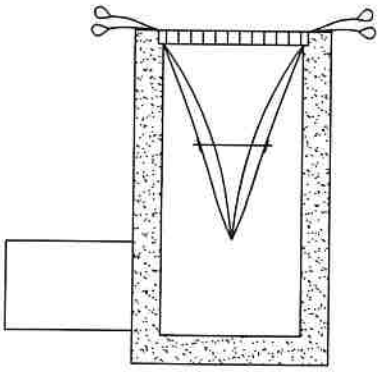
NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

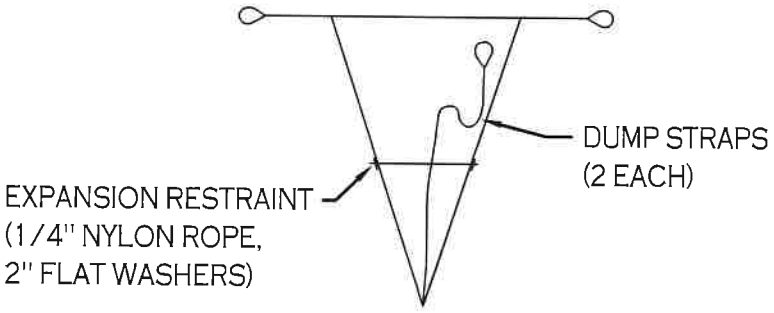
CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED $\frac{1}{2}$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK DETAIL

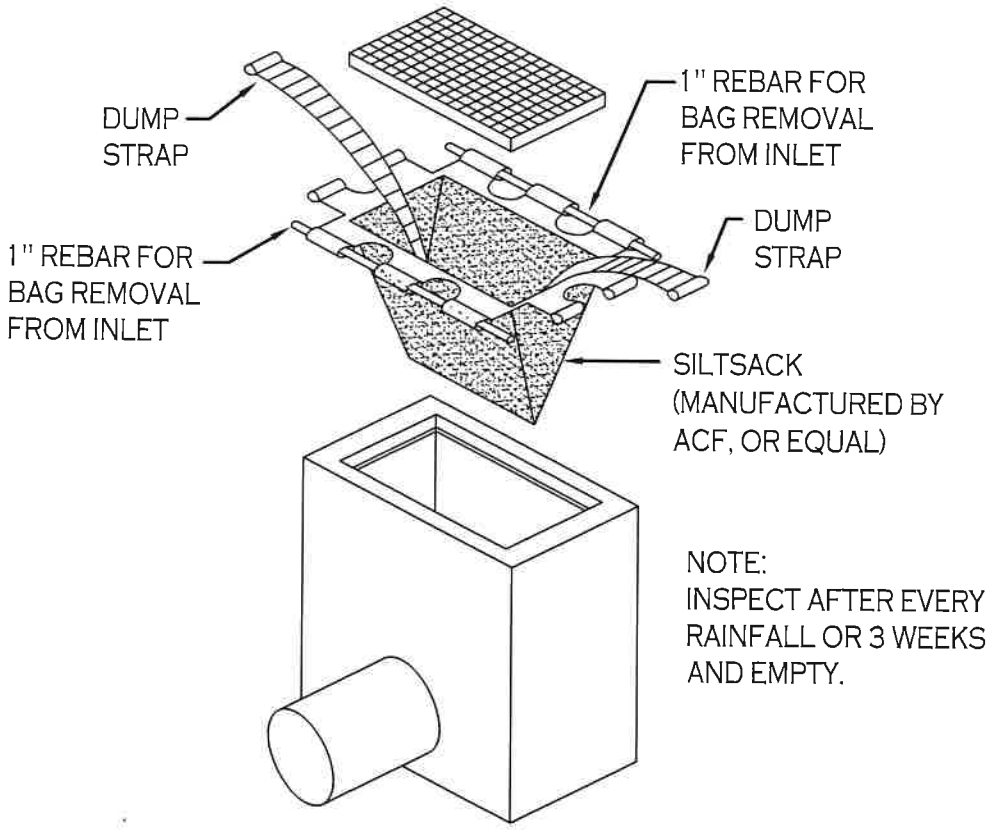
NOT TO SCALE



INSTALLATION DETAIL



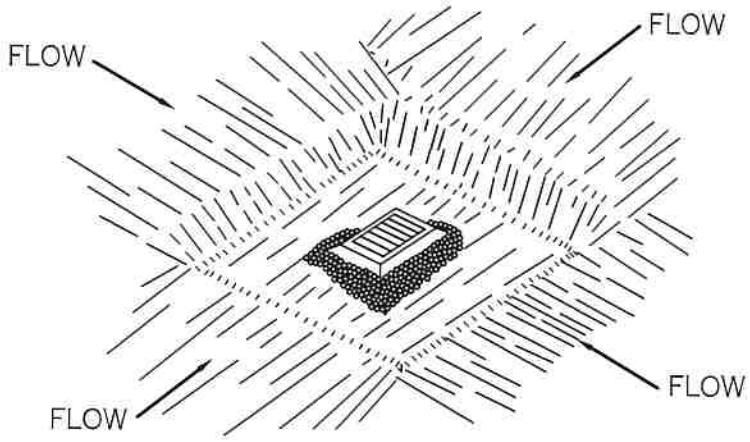
BAG DETAIL

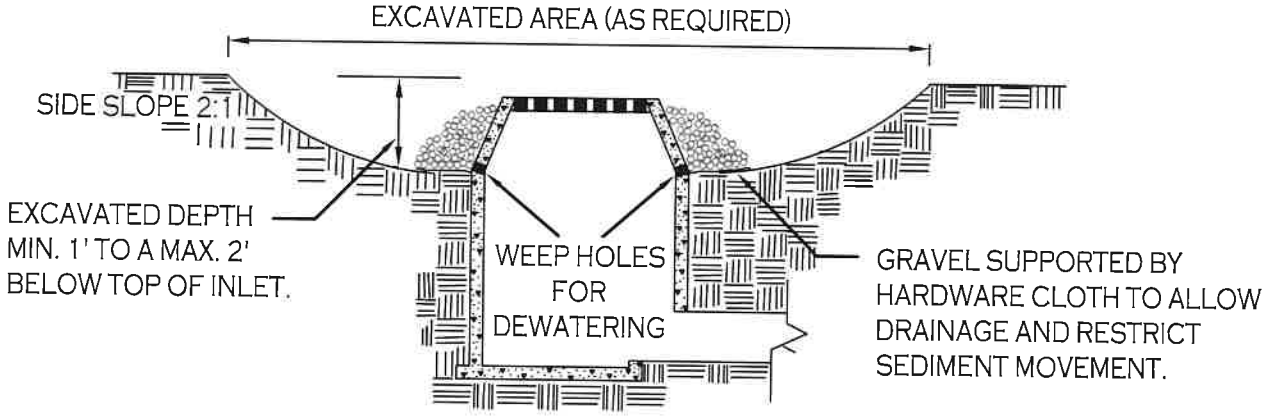


NOTE:
INSPECT AFTER EVERY RAINFALL OR 3 WEEKS AND EMPTY.

SILT SACK DETAIL

NOT TO SCALE





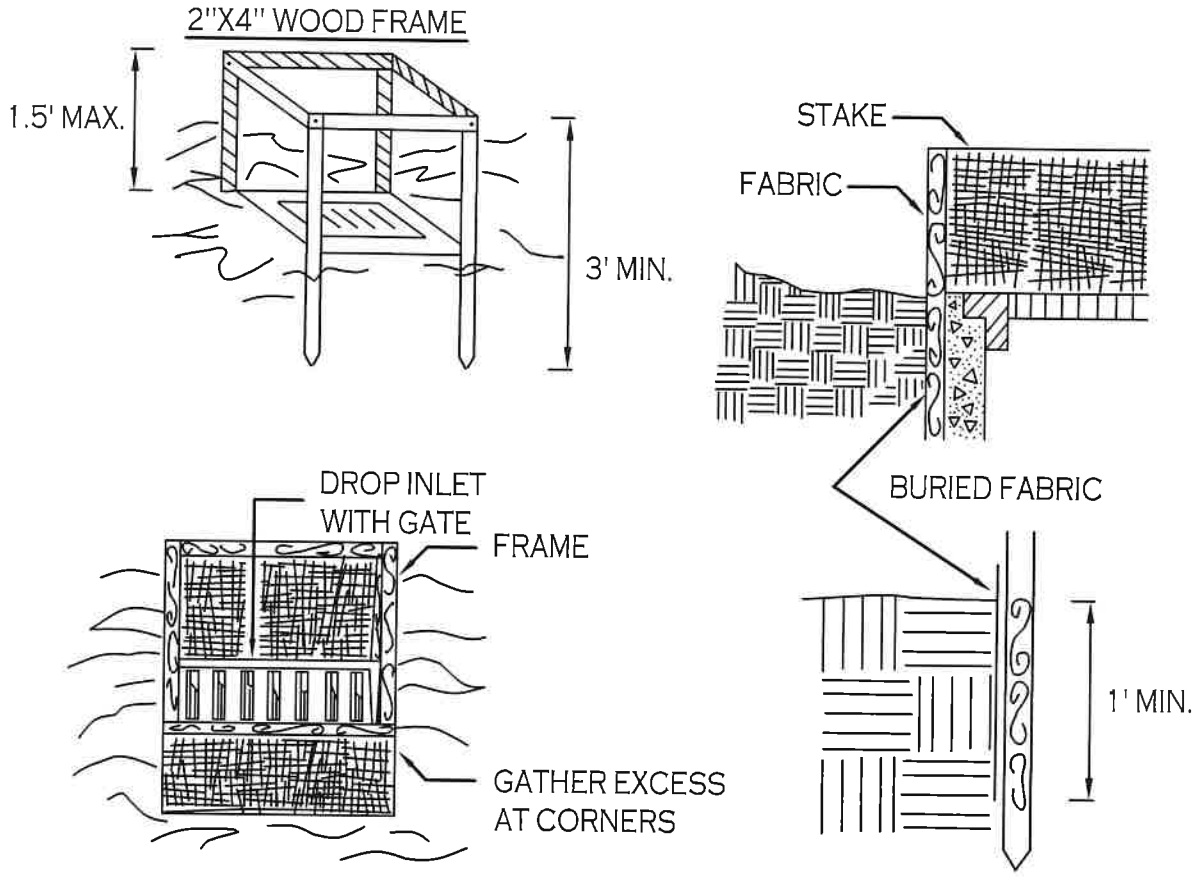
CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.

2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.

3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.

4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.

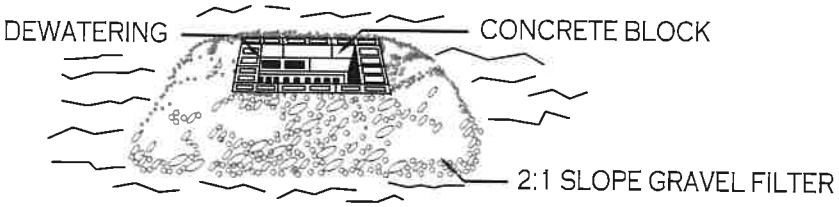
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.

6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

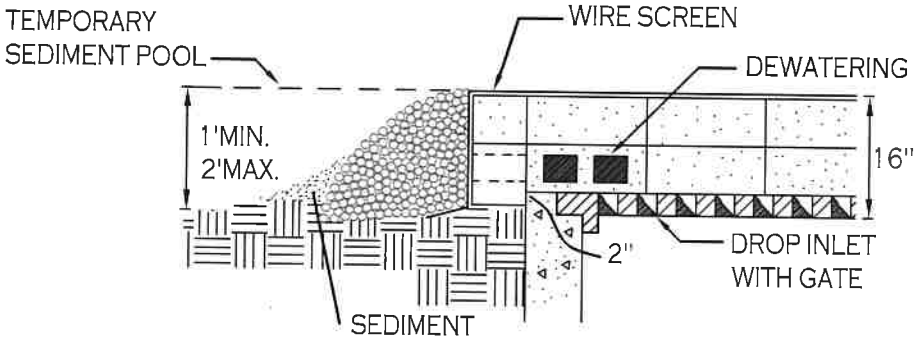
MAXIMUN DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2

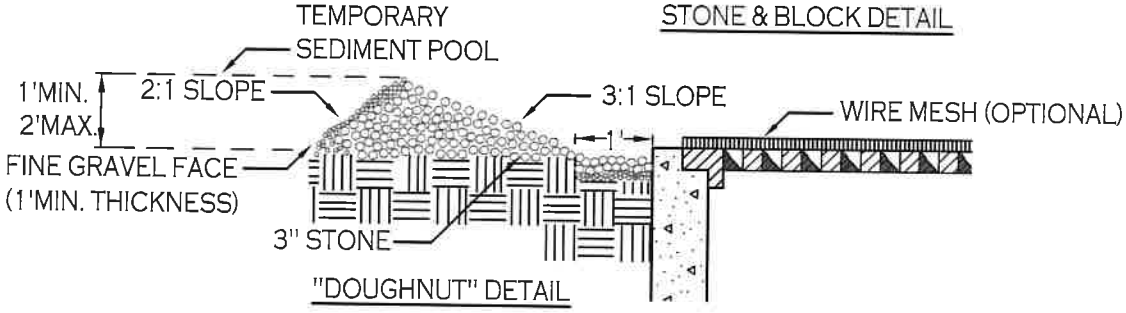
NOT TO SCALE



STONE & BLOCK PLAN VIEW



STONE & BLOCK DETAIL



"DOUGHNUT" DETAIL

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.

2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.

3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.

4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3

NOT TO SCALE

EXISTING TREE PROTECTION FENCE

MATERIALS

MATERIALS FOR TEMPORARY PLASTIC BARRIER FENCES SHALL MEET THE FOLLOWING REQUIREMENTS:

- FENCE: HIGH-DENSITY POLYETHYLENE MESH, ULTRAVIOLET-STABILIZED MIN. 2 YEARS; MINIMUM HEIGHT 4.0 FEET. COLOR: HIGH-VISIBILITY ORANGE OR GREEN. WHEN USED TO PROTECT TREES OR OTHER VEGETATION, COLOR SHALL BE HIGH-VISIBILITY ORANGE.
- POSTS: RIGID METAL OR WOOD POSTS, MINIMUM LENGTH 6.0 FEET.
- TIES: STEEL WIRE, #14 GAUGE OR NYLON CABLE TIES.
- WARNING SIGNS: SHEET METAL, PLASTIC OR OTHER RIGID, WATERPROOF MATERIAL, 1.5 FEET BY 2.0 FEET WITH 4 INCH BLACK LETTERS ON A WHITE BACKGROUND. TEXT SHALL BE: "PROTECTED SITE - KEEP OUT" UNLESS OTHERWISE SPECIFIED.

DETAILS

FENCES SHALL BE ERECTED PRIOR TO MOVING CONSTRUCTION EQUIPMENT ONTO ANY AREA DESIGNATED FOR PROTECTION.

THE LINE OF FENCES SHALL BE STAKED OR MARKED OUT ON THE GROUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER BEFORE ANY FENCE IS INSTALLED. WHERE USED FOR PROTECTION OF INDIVIDUAL TREES, FENCE SHALL BE PLACED AT THE DRIP LINE (EXTENT OF CANOPY). IF NOT POSSIBLE, PLACEMENT SHALL BE AS CLOSE TO THE DRIP LINE AS POSSIBLE AND IN NO CASE LESS THAN 5.0 FEET AWAY FROM THE TREE TRUNK.

ON APPROVAL OF THE STAKEOUT, POSTS SHALL BE SECURELY DRIVEN ON 6.0 FOOT-MAXIMUM CENTERS, NORMAL TO THE GROUND, TO A DEPTH 1/3 OF THE TOTAL POST LENGTH. PLASTIC BARRIER FENCE SHALL BE PLACED ALONG THE SIDE OF ALL POSTS. ENDS OF FENCING SEGMENTS SHALL OVERLAP A DISTANCE OF AT LEAST ONE HALF THE FENCE HEIGHT.

FENCING SHALL BE SECURED TO POSTS WITH WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF POST. FASTENER SHALL BE TIGHT ENOUGH TO PREVENT THE FENCING FROM SLIPPING DOWN. OVERLAPS SHALL ALSO BE SECURELY FASTENED.

BARRIER FENCE WHICH IS NOT ORANGE IN COLOR SHALL BE FLAGGED AT 6.0 FOOT INTERVALS WITH RED OR ORANGE FLORESCENT TAPE. WARNING SIGNS SHALL BE MOUNTED ON THE FENCE AT NO MORE THAN 100 FOOT INTERVALS.

MAINTENANCE SHALL COMMENCE IMMEDIATELY AFTER ERECTION OF THE FENCE AND CONTINUE UNTIL ONE WEEK PRIOR TO ACCEPTANCE OF THE CONTRACT, AND SHALL CONSIST OF: REPLACING DAMAGED POST(S) AND FENCING; RE-FASTENING AND TIGHTENING FENCING; AND RESTORING FENCE TO ITS INTENDED HEIGHT.

FENCING USED FOR TREE OR OTHER VEGETATION PROTECTION SHALL NOT BE TEMPORARILY REMOVED TO ALLOW EQUIPMENT ACCESS OVER A PROTECTED AREA, EXCEPT AS REQUIRED FOR ITEMS OF WORK SPECIFICALLY SHOWN ON THE PLANS AND APPROVED BY THE ENGINEER IN WRITING.

Appendix K

Wetland Delineation Report by Earth Dimensions dated 10/30/19 &

JD Letter

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BUFFALO DISTRICT
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

November 10, 2020

Regulatory Branch

SUBJECT: Jurisdictional Determination, Department of Army Processing No. LRB-2020-00814

Rob Savarino
Nanco Associates LLC
8940 Main Street
Clarence, New York 14031

Dear Mr. Savarino:

This pertains to your recent request for a jurisdictional determination for the 128 acre parcel of land located at the east terminus within the Town of West Seneca North America Business Park, Erie County, New York

Section 404 of the Clean Water Act (CWA) establishes Corps of Engineers jurisdiction over the discharge of dredged or fill material into waters of the United States, including wetlands, as defined in 33 CFR Part 328.3.

I am hereby verifying the Federal wetland/waters boundaries as shown on the attached wetland delineation map dated October 29, 2019. This verification will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the delineation before the expiration. At the end of this period, a new wetland delineation will be required if a project has not been completed on this property or additional impacts are proposed for WOUS. Further this delineation/determination has been conducted to identify the limits of the Corps CWA jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

Based upon my review of the submitted delineation and on-site observations, I have determined that aquatic resources Stream 1 and Wetland 12 on the subject parcel are waters of the United States as noted on the attached Jurisdictional Determination (JD) form. Therefore, the resources are regulated under Section 404 of the CWA. Department of the Army authorization is required if you propose a discharge of dredged or fill material in these areas.

In addition, I have determined that the areas identified as Wetlands 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16 and Stream 2 on the parcel are excluded waters as defined in the Navigable

Waters Protection Rule. Therefore, these waters are not regulated under Section 404 of the CWA. Accordingly, you do not need Department of the Army authorization to commence work in these areas.

I encourage you to contact the appropriate state and local governmental officials to ensure that the proposed work complies with their requirements.

Finally, this letter contains an approved JD for the subject parcel. If you object to this JD, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above JD, you must submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

Suzanne Chubb
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: 513-684-7261 Fax: 513-684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by January 9, 2021.

It is not necessary to submit an RFA to the Division office if you do not object to the determination in this letter.

Questions pertaining to this matter should be directed to me at (716) 879-4279 by writing to the following address: U.S. Army Corps of Engineers Regulatory Branch 1776 Niagara Street, Buffalo, New York 14207 or by e-mail at: joseph.m.rowley@usace.army.mil

Sincerely,

Joseph Rowley
Physical Scientist

Enclosures
cc: Scott Livingstone of EDI

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Nanco Associates LLC		File Number: LRB-2020-00814	Date: November 10, 2020
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
	APPROVED JURISDICTIONAL DETERMINATION		D
X	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Joseph Rowley U.S. Army Corps of Engineers 1776 Niagara Street Buffalo, New York 14207 Joseph.M.Rowley@usace.army.mil (716) 879-4279	Suzanne Chubb Regulatory Appeals Review Officer US Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10-714 Cincinnati, Ohio 45202-3222 Phone: 513-684-7261 Fax: 513-684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • EDI@earthdimensions.com

Project Code: W11I18a

June 25, 2020

Mr. Steven Metivier
New York Section Chief
Buffalo District U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

RE: North America Park
Town of West Seneca
Erie County, New York

Dear Mr. Metivier:

On behalf of our client, Nanco Associates LLC, Earth Dimensions, Inc. (EDI) is submitting the attached wetland delineation report for the above referenced 128.41± acre project site located at the east terminus of North America Drive in the Town of West Seneca, Erie County, New York. EDI identified sixteen (16) wetlands totaling 20.81± acres. We are requesting a jurisdictional determination and wetland boundary confirmation.

Please contact our office after you review the attached to schedule a site visit in order to move forward with the jurisdictional determination and wetland boundary confirmation for this project.

If you have any questions or require further information, please contact our office at (716) 655-1717 or email tsomerville@earthdimensions.com

Very truly yours,
Earth Dimensions, Inc.

Thomas Somerville
Ecologist

encl.
cc: Rob Savarino, Nanco Associates LLC

Wetland and Waterbodies Delineation Report

for

NORTH AMERICA PARK

Town of West Seneca

Erie County, New York

for

Nanco Associates LLC

EARTH DIMENSIONS, INC.

Soils Investigations • Wetland Delineations

October 30, 2019
EDI Project Code: **W11I18a**

REPORT SUMMARIZING
THE RESULTS OF
A WETLAND DELINEATION SURVEY OF

NORTH AMERICA PARK

Prepared for Submission to:

U.S. ARMY CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207

Prepared By:

EARTH DIMENSIONS, INC.
1091 JAMISON ROAD
ELMA, NEW YORK 14059

Prepared For:

ROB SAVARINO
NANCO ASSOCIATES LLC
8940 MAIN STREET
CLARENCE, NEW YORK 14031

REPORT DATE: October 30, 2019

EDI PROJECT CODE: W11118a

PROJECT INFORMATION

Project Name	North America Park
Street Address	0 North America Drive
SBL Numbers	135.11-1-1 & 135.11-2-5.12
Town	West Seneca
County	Erie
State	New York
Latitude/Longitude (NAD83)	42.84534°N, 78.72009°W
Investigation Area	128.41± Acres
USGS 7.5 Minute Topographical Map	Orchard Park Quadrangle
Waterway	Buffalo Creek
Hydrologic Unit Code	04120103
Date of Delineation	October 9 & 11, 2019
Consultant	Earth Dimensions, Inc. 1091 Jamison Road Elma, New York 14095
Point of Contact	Scott Livingstone (716)655-1717 slivingstone@earthdimensions.com
Engineer	N/A
Property Owner	North America Park
Authority	Section 404, Article 15
Permit/Letter Being Requested	Jurisdictional Determination

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Nanco Associates LLC has proposed the development of a 128.41± acre project located at the east terminus of North America Drive in the Town of West Seneca, County of Erie, and State of New York. Nanco Associates LLC has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation report that would allow the U.S. Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) to determine their jurisdictional authority over the investigation area, pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

A preliminary review of available information pertaining to vegetation, soils, and hydrology in the project area was implemented prior to conducting a field investigation at the site. Sources of information included the United States Geological Survey (USGS), Natural Resources Conservation Service (NRCS), National Wetland Inventory (NWI), and NYSDEC Freshwater Wetland maps. The USGS, NRCS and NWI maps indicate the potential for wetlands under federal jurisdiction. The NYSDEC map indicates the potential for streams under state jurisdiction.

EDI applied methodology specified by the Corps of Engineers Wetlands Delineation Manual (January 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012) to perform a delineation of Federal jurisdictional wetlands within the site. EDI identified sixteen (16) wetland areas totaling 20.81± acres within the investigation area. An unnamed tributary to Buffalo Creek flows northerly through the eastern portion of investigation area. The identification number of the wetlands, their acreage and boundary flags are as follows:

TABLE 1: WETLAND SUMMARY

Wetland Identification #	Geographic Center (NAD83)		Boundary Flag #	Total Acreage On-site	Wetland Type (Cowardin)	Wetland Type (Reschke)	Jurisdictional Determination
	Latitude	Longitude					
Wetland 1	42.84332	78.71664	W1-1 through W1-6	0.10±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 2	42.84371	78.71662	W2-1 through W2-8	0.14±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 3	42.84484	78.71904	W3-1 through W3-50	2.68±	PEM1B	Emergent Marsh	Jurisdictional
Wetland 4	42.84127	78.71856	W4-1 through W4-4	0.01±	PEM1B	Emergent (Invasive	Non-Jurisdictional

						Species) Marsh	
Wetland 5	42.84127	78.71882	W5-1 through W5-6	0.05±	PEM1B	Emergent (Invasive Species) Marsh	Non-Jurisdictional
Wetland 6	42.84290	78.71917	W6-1 through W6-8	0.11±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 7	42.84450	78.72318	W7-1 through W7-40	2.94±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 8	42.84361	78.71895	W8-1 through W8-13	0.32±	PEM1B	Emergent Marsh	Non-Jurisdictional
Wetland 9	42.84587	78.42432	W9-1 through W9-47	2.68±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 10	42.84680	78.72363	W10-1 through W10-12	0.66±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 11	42.84754	78.72396	W11-1 through W11-23	1.11±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 12	42.84841	78.72313	W12-1 through W12-21	1.58±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 13	42.84778	78.72170	W13-1 through W13-24	0.75±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 14	42.84702	78.72190	W14-1 through W14-13	0.27±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 15	42.84771	78.72005	W15-1 through W15-29	1.40±	PSS1B	Scrub-shrub	Jurisdictional
Wetland 16	42.84605	78.72186	W16-1 through W16-58	6.01±	PSS1B	Scrub-shrub	Jurisdictional
Total Wetland Acreage:				20.81±			

TABLE 2: STREAM & DRAINAGE SUMMARY

Stream Identification #	Waterway	DEC Class	Linear Feet On-site	Highwater Width (Ft)	Flow Regime	Substrate	Classification (Cowardin)	Jurisdictional Determination
Stream 1	UNT to Buffalo Creek	B	1350 feet	5 feet	Perennial	Cobble	R4SB6	Jurisdictional
Stream 2	UNT to Buffalo Creek	N/A	198 feet	1 foot	Ephemeral	silt, detritus	R4SBC	Jurisdictional

SECTION I: INTRODUCTION

Nanco Associates LLC has proposed the development of a 128.41± acre project at the eastern terminus of North America Drive in the Town of West Seneca, County of Erie, and State of New York. The project has been given the name North America Park and is located on USGS 7.5 minute quadrangle map indexed as Orchard Park/2002 DeLorme (Figure 1). The field work was completed on October 9 & 11, 2019 using a Trimble Geo 7x GPS to locate wetland and drainage boundaries.

Nanco Associates LLC has retained Earth Dimensions, Inc. (EDI) to complete a wetland delineation study at this site. The investigation was designed to facilitate a determination of the extent of USACE and NYSDEC jurisdiction over the project area pursuant to Section 404 of the Clean Water Act and Articles 15 (Protection of Waters) and 24 (Freshwater Wetlands) of the New York State Environmental Conservation Law.

EDI has performed a wetland delineation study at the site under guidelines specified by the *Corps of Engineers Wetlands Delineation Manual*, dated January 1987 (referred to hereafter as the Corps Manual) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region version 2.0* (January 2012) (referred to hereafter as the Northcentral and Northeast Regional Supplement). The purpose of this report is to present EDI's methods, results, conclusions and recommendations with respect to the North America Park project site.

SECTION II: SITE DESCRIPTION

The North America Park project area is comprised of a 128.41± acre irregular shaped investigation area at the eastern terminus of North America Drive, south of Seneca Creek Road and north of NYS Route 400, and is outlined on Figure 1 and depicted on the Wetland Delineation Map included in Appendix A (Figure 6). The project area consists of two individual parcels and a 150-foot wide transmission line corridor between the parcels. The northern parcel is 60.13± acres and the southern parcel is 61.75± acres, with the utility line corridor making up 6.53± acres of the investigation area.

The natural topography of the North America Park site is flat to gently sloping. An incised area is present in the southeast portion of the investigation area associated with the unnamed tributary to Buffalo Creek. The upland within the investigation area consisted of successional old field, successional northern hardwood, conifer plantation and brushy cleared land communities. The wetland areas were found to consist of shallow emergent marsh, scrub-shrub swamp and invasive species marsh communities. The vegetative communities of the investigation area are described according to *Ecological Communities of New York State* (Edinger et al. 2014).

SECTION III: PRELIMINARY DATA REVIEW

A. SUMMARY OF FINDINGS

Several sources of information may be reviewed to facilitate the completion of a wetland delineation study. In some cases it is even possible to make a preliminary office wetland determination based upon available vegetation, soils, and hydrologic information for a project area. EDI completed a preliminary review of several data sources at the onset of this study. The results of the review are summarized as follows:

1. USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Figure 1 depicts the North America Park project site on the Orchard Park/2002 DeLorme quadrangle map. The figure depicts the flat to gently sloping topography of the site. The steeper area surrounding the unnamed tributary to Buffalo Creek is depicted in the southeastern portion of the investigation area.

2. USFWS NATIONAL WETLANDS INVENTORY MAP

The National Wetlands Inventory (NWI) map obtained from the USFWS Wetland Mapper http://www.fws.gov/wetlands/Data/Mapper.html displays three (3) wetlands, PSS1Bd, PFO1Bd and R4SBC within the investigation area. The wetlands can be decoded as:

[P] Palustrine, [SS] Scrub-shrub, [1] Broad leaved-deciduous, [B] Saturated,
[d] Partially drained/ditched

[P] Palustrine, [FO] Forested, [1] Broad leaved-deciduous, [B] Saturated, [d] Partially drained/ditched

[R] Riverine, [4] Intermittent, [SB] Streambed, [C] Seasonally Flooded

3. NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP

Figure 3 presents the project area outlined on a copy of the Erie County Soil Survey map from the National Cooperative Soil Survey. As shown on that figure, the site has the following soil types:

Soil Conservation Service Legend

Map Unit Symbol	Map Unit Name	Hydric Soil/Inclusions?
Cc	Canandaigua silt loam	Hydric Soil
CfB	Cayuga silt loam, 3 to 8% slopes	Inclusions Unlikely

Fu	Fluvaquents & Udifluvents	Inclusions Possible
Nh	Niagara silt loam, till substratum	Inclusions Possible

Canandaigua Series: The Canandaigua series consists of very deep, poorly and very poorly drained soils formed in silty glacio-lacustrine sediments. These soils are on lowland lake plains and in depressional areas on glaciated uplands. Slope ranges from 0 to 3 percent. Mean annual temperature is 49°F and mean annual precipitation is 39 inches.

Cayuga Series: The Cayuga series consists of very deep, moderately well drained soils formed in clayey lacustrine deposits overlying till. These soils are on undulating to hilly till plains where a veneer of lake-laid deposits overlie the till. Slope ranges from 2 to 25 percent. The mean annual temperature is 48°F and the mean annual precipitation is 35 inches.

Fluvaquents & Udifluvents: These are nearly level to gently sloping, poorly drained to well drained soils that formed in recent stream deposits. These soils consist mainly of silty, sandy, or loamy alluvial sediments and varying amount of small stone fragments. They are subject to frequent flooding.

Niagara Series: The Niagara series consists of very deep, somewhat poorly drained soils formed in silty glacio-lacustrine deposits. These soils are in level to slightly concave areas on lake plains and in valleys. Slope ranges from 0 to 15 percent. The mean annual air temperature is 48°F and mean annual precipitation is 37 inches.

The U.S. Department of Agriculture's National Technical Committee for Hydric Soils Criteria has developed a list of soils that often display hydric soil characteristics. Hydric soil typically forms in places of the landscape where surface water periodically collects for some time and/or where groundwater discharges sufficient to create waterlogged or anaerobic soils. Such anaerobic soils can support the growth and survival of hydrophytic vegetation that is tolerant of such conditions. Canandaigua and fluvaquents are hydric soils and therefore may support wetland vegetation. Wetland hydrologic conditions, hydric soils, and hydrophytic vegetation are the three criteria of a wetland.

4. NYSDEC Freshwater Wetlands Map

The NYSDEC Freshwater Wetlands map obtained from the online NYSDEC Environmental Resource Mapper displays no state jurisdictional Freshwater Wetlands within or adjacent to the investigation area. NYSDEC, thus currently has no jurisdiction over any wetlands at this site. A Class B stream (Unnamed tributary to Buffalo Creek) is depicted in the eastern portion of the site.

B. RESULTS OF AGENCY INFORMATION REVIEW

The preliminary data review revealed that the Corps may have jurisdiction over wetlands at the project location. The evidence consisted of potential federally regulated wetlands on the NWI map (Figure 2) and hydric soils and soils with possible inclusions depicted within the project area as shown on the NRCS map (Figure 3). The preliminary data review indicated that NYSDEC may have jurisdiction over streams on site as depicted on the NYSDEC Resource Mapper (Figure 4). Therefore, it was considered necessary to perform a field investigation at the site in order to confirm the presence of federal and state protected wetlands. The methods specified in the Corps of Engineers Wetlands Delineation Manual (January 1987) and Northcentral and Northeast Regional Supplement Version 2.0 (January 2012) were employed during the field investigation. Procedures, results, and conclusions of the wetland delineation study are presented in the remainder of this report.

SECTION IV: FIELD INVESTIGATION PROCEDURES

WETLANDS:

Step 1

EDI applied methodology specified by the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region to perform a delineation of Federal jurisdictional wetlands within the site. EDI used the Level 2 Routine Determination method (on-site inspection necessary) since insufficient information was available for making a determination for the entire project area. This methodology is consistent with Part IV, Section D of the Corps Manual.

Step 2

EDI's initial evaluation of the project area revealed that no atypical situations existed. If an atypical situation had existed, EDI would have used methodology outlined in Part IV, Section F of the Corps manual and/or Section 5 of the Northcentral and Northeast Supplement.

Step 3

EDI made the determination that normal environmental conditions were present, as the area was not lacking hydrophytic vegetation or hydrologic indicators due to annual, seasonal or long-term fluctuations in precipitation, surface water, or groundwater levels. The Northcentral and Northeast Supplement defines the growing season as beginning when one of the following indicators of biological activity are evident in a given year: (1) above-ground growth and development of vascular plants and/or (2) soil temperature measured at 12" below ground surface reaches 41°F. The end of the growing season is defined as the point at which deciduous species lose their leaves or the last herbaceous plants cease flowering and their leaves become dry or brown, whichever comes latest.

Step 4

In order to accurately identify the limits of various vegetative communities and extent of wetlands on-site, a routine determination method was used. As depicted in Appendix A and included in Appendix B, thirty (30) data points were used to characterize the site.

Step 5

The plant community inhabiting each observation point was characterized in accordance with methods specified in the Northcentral and Northeast Regional Supplement. Dominant plant species were identified within four vegetative strata (i.e. herb, sapling/shrub, tree and liana (woody vines) at each sampling point. The Northcentral and Northeast Regional Supplement defines the vegetative strata in the following manner:

Herb – A non-woody individual of a macrophytic species. Seedlings of woody plants (including vines) that are less than 3.28 feet in height are considered to be herbs.

Sapling/Shrub – A layer of vegetation composed of woody plants < 3.0 inches in diameter at breast height but greater than 3.28 feet in height, exclusive of woody vines.

Tree – A woody plant > 3.0 inches in diameter at breast height, regardless of height (exclusive of woody vines)

Liana – A layer of vegetation in forested plant communities that consist of woody vines greater than 3.28 feet in height.

As outlined in the manual, the quadrant sizes used for the vegetative strata were (i) a 3.28-foot radius for herbs; (ii) a ten-foot radius for saplings/shrubs and woody vines; and (iii) a 30-foot radius for trees. Dominant plant species were estimated using aerial coverage methods. Dominant species are defined in the Corps Manual as the most abundant plant species that when ranked in descending order of abundance and cumulatively totaled immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure.

The wetland indicator status (OBL, FACW, FAC, FACU, or UPL) listed for each identified species by the U.S. Fish and Wildlife Service in the National List of Plant Species that Occur in Wetlands: Northeast (Region 1) was recorded. The U.S. Fish and Wildlife wetland indicator status listings are defined as follows:

OBL – Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability < 1 percent) in nonwetlands.

FACW – Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in nonwetlands.

FAC – Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring in both wetlands and nonwetlands.

FACU – Plants that occur sometimes (estimated probability 1 percent to <33 percent) in wetlands, but occur more often (estimated probability >67 percent to 99 percent) in nonwetlands.

UPL – Plants that occur rarely (estimated probability < 1 percent) in wetlands, but occur almost always (estimated probability >99 percent) in nonwetlands under natural conditions.

The plant community data was summarized on the data forms provided in the Northcentral and Northeast Regional Supplement included in this report as Appendix B.

Step 6

Plant data from each observation point were tested against the hydrophytic vegetation criterion specified in the Corps Manual and Northcentral and Northeast Regional Supplement. The Northcentral and Northeast Regional Supplement identifies a four-tiered approach for making a determination of whether or not the hydrophytic vegetation criteria is met for a sample plot. Indicator 1 (Rapid Test for Hydrophytic Vegetation) was first applied to determine if all dominant species across all strata are rated OBL and/or FACW. If Indicator 1 did not meet the hydrophytic vegetation criteria, Indicator 2 was then applied (dominance test); if greater than 50% of all plant species across all strata were rated OBL, FACW, or FAC, the hydrophytic vegetation criteria was considered met. In rare cases, when Indicators 1 and 2 did not meet the hydrophytic vegetation criteria but soils and hydrology criteria were met, Indicators 3 (Prevalence Index) and 4 (Morphological Adaptations) were used to make a final determination. All observation points that met the hydrophytic vegetation criterion were considered potential wetlands. Soils were then characterized.

Step 7

The Corps Manual specifies that soils need not be characterized (and are assumed hydric soils) at sampling points meeting the hydrophytic vegetation criterion if: (i) all dominant plant species have an indicator status of OBL, or (ii) all dominant species have an indicator status of OBL and/or FACW, and the wetland boundary is abrupt (at least one dominant OBL species must be present). All observation points sampled during this field investigation were examined directly for soil and hydrologic characteristics.

Step 8

At observation points requiring a soil evaluation, soil borings were performed by an EDI Soil Scientist using methods specified in the Northcentral and Northeast Regional Supplement. Soil pits were dug using a tile spade. Testpits were generally dug to a depth of 20 inches below ground surface. Soils were examined for any of the hydric soil indicators, as outlined in the Field Indicators of Hydric Soils in the United States. A determination was made as to whether or not the hydric soil criterion was met. Soils data was recorded on the data forms included in Appendix B of this report.

Step 9

EDI's Soil Scientist examined hydrologic indicators using methods specified by the Northcentral and Northeast Regional Supplement at each observation point. The wetland hydrology criterion was met if: (i) one or more primary field indicators was materially present, (ii) available hydrologic records provided necessary evidence, or (iii) two or more secondary indicators were present. Results were recorded on data forms taken from the Corps Manual and are included in this report as Appendix B.

Step 10

A wetland determination was made for every observation point. If a sample plot met the hydrophytic vegetation, hydric soil, and wetland hydrology criteria, the area was considered to be wetland.

Step 11

Based on the results of the transected data, wetland boundaries were established for each identified wetland using survey ribbon labeled "wetland delineation" and numbered consecutively along each wetland boundary. As outlined in the Corps Manual, the placement of flags was based on the limits of areas where all three parameters were met. Wetland flags are identified in Table 1.

STREAMS & DRAINAGES:

The federally regulated Ordinary High Water (OHW) mark of streams within the Project area were delineated utilizing the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial,

intermittent, or ephemeral, as defined by the USACE. The Ordinary High Water (OHW) mark for each stream is surveyed using the Trimble Geo 7X GPS. Each stream is assigned a letter designation, and survey points are numbered consecutively. Substrate characteristics and water depth are noted. Streams classified as AA, A, B, C, C(t), C(ts) and D in the State of New York are regulated by NYSDEC under Article 15 Use and Protection of Waters. Streams are given classifications which designate the level of protection afforded to each waterbody. Class AA and A are assigned to sources of drinking water. Class B streams are best suited for swimming and other contact recreation, but not drinking water. Class C streams identify waters that support fishing and non-contact activities. A classification with (t) designated a stream with the potential to support trout populations. A classification of (ts) identifies waters that may support trout spawning. Class D waters are the lowest classification, and are often highly imperiled.

SECTION V: RESULTS AND CONCLUSIONS

Earth Dimensions, Inc. (EDI) has completed a wetland delineation study at the North America Park site located in the Town of West Seneca, County of Erie, and State of New York. A field investigation was conducted by a Soil Scientist and a Wetland Ecologist from EDI. The wetland delineation study identified sixteen (16) wetlands totaling 20.81± acres and two (2) streams present within the North America Park site. No waterbodies were identified within the investigation area.

Figure 5 depicts the vegetative communities as they existed at the time of the investigation. The upland within the investigation area consisted of successional old field, successional northern hardwood, conifer plantation and brushy cleared land communities. The wetland areas were found to consist of shallow emergent marsh, scrub-shrub swamp and invasive species marsh communities. The vegetative communities of the investigation area are described according to Ecological Communities of New York State (Edinger et al. 2014).

The successional old field community was dominated by the following species: spotted knapweed (*Centaurea stoebe*) and common plantain (*Plantago major*). This community had been brush-hogged prior to the site visit.

The successional northern hardwood community was dominated by the following species: black cherry (*Prunus serotina*), northern red oak (*Quercus rubra*), eastern cottonwood (*Populus deltoides*), Tatarian honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), European buckthorn (*Rhamnus cathartica*), apple (*Malus spp.*), tall hairy agrimony (*Agrimonia gryposepala*), Allegany blackberry (*Rubus alleghaniensis*), Virginia strawberry, Canada thistle (*Cirsium arvense*) and summer grape (*Vitis aestivalis*).

The conifer plantation community was dominated by the following species: Norway spruce (*Picea abies*), gray dogwood (*Cornus racemosa*), white ash (*Fraxinus americana*) and Alleghany blackberry (*Rubus alleghaniensis*).

The brushy cleared land community had been brush-hogged prior to the site visit. Species were still identifiable from stems and debris. Dominant species included: Tatarian honeysuckle (*Lonicera*

tatarica), red maple (*Acre rubrum*), European privet (*Ligustrum vulgare*), gray dogwood (*Cornus racemosa*), red pine (*Pinus resinosa*), common pear (*Pyrus communis*), cockspur hawthorn (*Crataegus crus-galli*), white ash (*Fraxinus americana*), European buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), tall hairy agrimony (*Agrimonia gryposepala*), Virginia strawberry (*Fragaria virginiana*), Alleghany blackberry (*Rubus alleghaniensis*), garlic mustard (*Alliaria petiolata*), Kentucky bluegrass (*Poa pratensis*), Canada goldenrod (*Solidago canadensis*), summer grape (*Vitis aestivalis*) and poison ivy (*Toxicodendron radicans*).

Wetland W1 is a 0.10± acre scrub-shrub swamp dominated by green ash (*Fraxinus americana*), gray dogwood (*Cornus racemosa*), tall hairy agrimony (*Agrimonia gryposepala*) and flat-top goldenrod (*Euthamia graminifolia*). Soils within wetland W1 are mapped as Cayuga Silt Loam and had a topsoil color of 10YR3/1 with 3% 10YR5/8 mottles and a subsoil color of 10YR5/2 with 10% 10YR5/8 mottles. The texture is silt loam and silty clay loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W1 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W1 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W2 is a 0.14± acre scrub-shrub swamp dominated by green ash (*Fraxinus americana*), gray dogwood (*Cornus racemosa*) and creeping bentgrass (*Agrostis stolonifera*). Soils within wetland W2 are mapped as Cayuga Silt Loam and had a topsoil color of 10YR3/1 with 2% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 3% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W2 included surface water (A1), high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W2 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W3 is a 2.68± acre emergent marsh (maintained utility line ROW) dominated by gray dogwood (*Cornus racemosa*), nodding beggartick (*Bidens cernua*) and common rush (*Juncus effusus*). Soils within wetland W3 are mapped as Niagara Silt Loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 15% 10YR5/8 mottles. The texture is silt loam and silty clay loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W3 included surface water (A1), high water table (A2), saturation (A3) and water-

stained leaves (B9). It is EDI's professional opinion that Wetland W3 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W4 is a 0.01± acre emergent (Invasive Species) marsh dominated by common reed (*Phragmites australis*). Soils within wetland W4 are mapped as Niagara Silt Loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR6/1 with 10% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W4 included surface water (A1), high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W4 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W5 is a 0.05± acre emergent (Invasive Species) marsh dominated by common reed (*Phragmites australis*). Soils within wetland W5 are mapped as Niagara Silt Loam and had a soil color of 10YR3/1 with 7% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W5 included surface water (A1), high water table (A2) and saturation (A3). It is EDI's professional opinion that Wetland W5 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W6 is a 0.11± acre scrub-shrub swamp dominated by eastern cottonwood (*Populus deltoides*), pussy willow (*Salix discolor*) and purple loosestrife (*Lythrum salicaria*). Soils within wetland W6 are mapped as Cayuga Silt Loam and had a soil color of 10YR3/1 with 2% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F6 indicator (Redox Dark Surface). Hydrology indicators present in Wetland W6 included saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W6 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W7 is a 2.94± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), pussy willow (*Salix discolor*), creeping bentgrass (*Agrostis stolonifera*) and sensitive fern (*Onoclea sensibilis*). Soils within wetland W7 are mapped as Cayuga Silt Loam and had a soil color of 10YR4/1 with 5% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F6 indicator (Redox Dark Surface). Hydrology indicators present in Wetland W7 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's

professional opinion that Wetland W7 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W8 is a 0.32± acre emergent marsh dominated by pussy willow (*Salix discolor*) and common reed (*Phragmites australis*). Soils within wetland W8 are mapped as Cayuga Silt Loam and had a topsoil color of 10YR3/1 with 3% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 5% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W8 included surface water (A1), high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W8 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W9 is a 2.68± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), tall hairy agrimony (*Agrimonia gryposepala*) and sensitive fern (*Onoclea sensibilis*). Soils within wetland W9 are mapped as Canandaigua Silt Loam and had a soil color of 10YR3/1 with 3% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F6 indicator (Redox Dark Surface). Hydrology indicators present in Wetland W9 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W9 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W10 is a 0.66± acre scrub-shrub swamp dominated by eastern cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), tall hairy agrimony (*Agrimonia gryposepala*) and sensitive fern (*Onoclea sensibilis*). Soils within wetland W10 are mapped as Canandaigua Silt Loam and had a topsoil color of 10YR3/1 with 2% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 3% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W10 included surface water (A1), high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W10 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W11 is a 1.11± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), silky dogwood (*Cornus amomum*) and common rush (*Juncus effusus*). Soils within wetland W11 are mapped as Niagara Silt Loam and had a topsoil

color of 10YR3/1 with 3% 10YR5/8 mottles and a subsoil color of 10YR6/1 with 20% 10YR5/6 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W11 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W11 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W12 is a 1.58± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), reed canarygrass (*Phalaris arundinacea*) and sensitive fern (*Onoclea sensibilis*). Soils within wetland W12 are mapped as Canandaigua Silt Loam and had a topsoil color of 10YR4/1 with 2% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 15% 10YR5/8 mottles. The texture is silt loam and silty clay loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W12 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W12 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W13 is a 0.75± acre scrub-shrub swamp dominated by gray dogwood (*Cornus racemosa*), glossy buckthorn (*Frangula alnus*), silky dogwood (*Cornus amomum*), devil's beggartick (*Bidens frondosa*) and common rush (*Juncus effusus*). Soils within wetland W13 are mapped as Canandaigua Silt Loam and had a soil color of 10YR3/1 with 4% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F6 indicator (Redox Dark Surface). Hydrology indicators present in Wetland W13 included surface water (A1), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W13 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W14 is a 0.27± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), silky dogwood (*Cornus amomum*), common rush (*Juncus effusus*) and creeping bentgrass (*Agrostis stolonifera*). Soils within wetland W14 are mapped as Candaigua Silt Loam and had a topsoil color of 10YR4/1 with 5% 10YR5/6 mottles and a subsoil color of 10YR5/1 with 30% 10YR5/6 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W14 included saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W14 is Federally non-jurisdictional due to the lack of connectivity to a traditionally navigable water.

Wetland W15 is a 1.40± acre scrub-shrub swamp dominated by gray dogwood (*Cornus racemosa*) and green bulrush (*Scirpus atrovirens*). Soils within wetland W15 are mapped as Niagara Silt Loam and had a topsoil color of 10YR4/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 35% 10YR5/6 mottles. The texture is silt loam and silty clay loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W15 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W15 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Wetland W16 is a 6.01± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*) and broom sedge (*Carex scoparia*). Soils within wetland W16 are mapped as Canandaigua Silt Loam and had a topsoil color of 10YR3/1 with 7% 10YR5/8 mottles and a subsoil color of 10YR5/2 with 20% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W16 included high water table (A2), saturation (A3) and water-stained leaves (B9). It is EDI's professional opinion that Wetland W16 is Federally jurisdictional due to the apparent off-site connectivity to Buffalo Creek, a traditionally navigable water.

Stream 1 is identified as an unnamed tributary to Buffalo Creek and flows northerly through the southeastern portion of the site. This perennial channel is identified as a Class B stream by NYSDEC standards. The substrate consists of cobble, with moderately dense woody vegetation along the banks. Within the project area, Stream 1 is approximately 5 feet wide (8 feet at top of bank) with an average water depth of 6 inches. Stream 1 flows off-site to the northwest and enters Buffalo Creek approximately 2 miles northwest of the project area.

Stream 2 is identified as an unnamed tributary to Buffalo Creek and flows westerly in the western portion of the site. This ephemeral channel is not identified by NYSDEC standards. The substrate consists of silt and detritus, with moderately dense herbaceous vegetation along the banks. Within the project area, Stream 2 is approximately 1 foot wide with an average water depth of 3 inches. Stream 2 flows off-site to the west and enters Stream 1 approximately 1,000 feet northwest of the project area.

A map which depicts the site boundaries and the location of all observation points established during the field survey is included as Figure 6 in Appendix A of this report. Data forms are included as Appendix B. Appendix C includes representative photographs of the project area. Appendix D notes the references used during the preparation of this report and during the field investigation. Appendix E provides the names, addresses and phone numbers of the survey personnel involved in the wetland delineation study.

SECTION VI: RECOMMENDATIONS

Sixteen (16) wetland areas and two (2) streams were identified during the course of a field investigation based upon the three parameter technique (vegetation, soils, and hydrology) outlined in the Corps Manual and Northcentral and Northeast Regional Supplement. It is EDI's professional opinion that wetlands W3, W7, W9, W10, W11, W12, W13, W15 and W16 and Stream 1 and 2 are regulated by the USACE under Section 404 of the Clean Water Act per the Rapanos decision. It is EDI's professional opinion that wetlands W1, W2, W4, W5, W6, W8 and W14 are isolated and non-jurisdictional under Section 404 due to the apparent lack of connectivity to a traditionally navigable water. It is also EDI's opinion that Stream 1 would be regulated by NYSDEC under Article 15 of the New York Conservation Law. USACE and NYSDEC approach their regulatory analyses by first considering avoidance of wetlands and minimization of wetland losses. EDI recommends the following:

(1) Submit this report to USACE and NYSDEC with a request for a wetland boundary confirmation and jurisdictional determination.

(2) If no impacts are proposed to federally regulated wetlands or state regulated streams based on the outcome of the jurisdictional determination, it is the professional opinion of EDI that the project may proceed without the need for Section 404 or Article 15 Permits.

(3) If any federally jurisdictional wetland impacts are proposed, it is EDI's recommendation that a Joint Application for Permit and supporting documentation be submitted to the USACE and NYSDEC with a request for a Section 404 Permit, Section 401 Water Quality Certification and/or Article 15 Permit.

NORTH AMERICA PARK

APPENDIX A - FIGURES

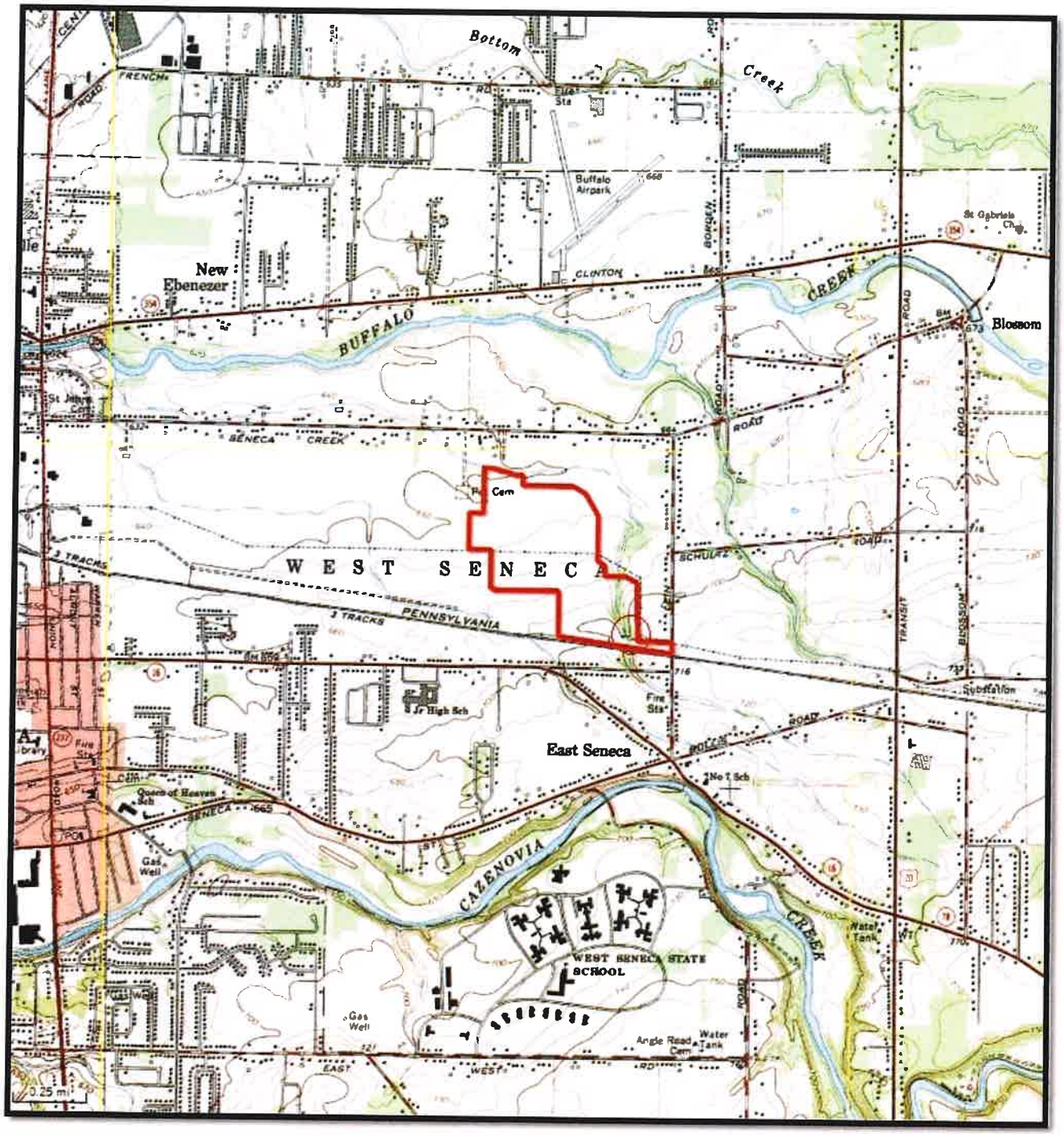


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Orchard Park Quadrangle / 2002 DeLorme

North America Park

Town of West Seneca, Erie County, New York

FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 10/29/19)

North America Park

Town of West Seneca, Erie County, New York

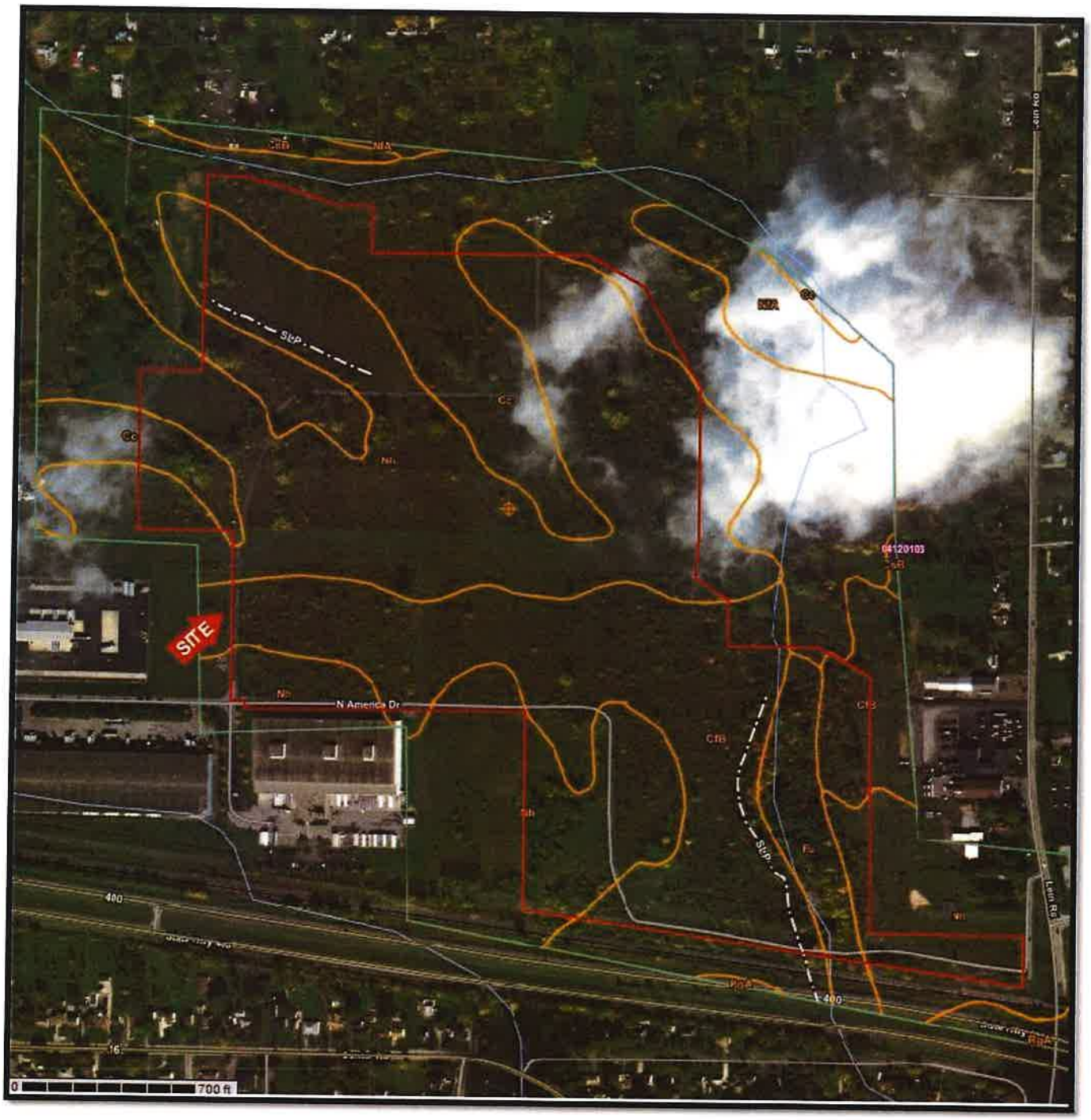


FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 10/29/19)

North America Park

Town of West Seneca, Erie County, New York

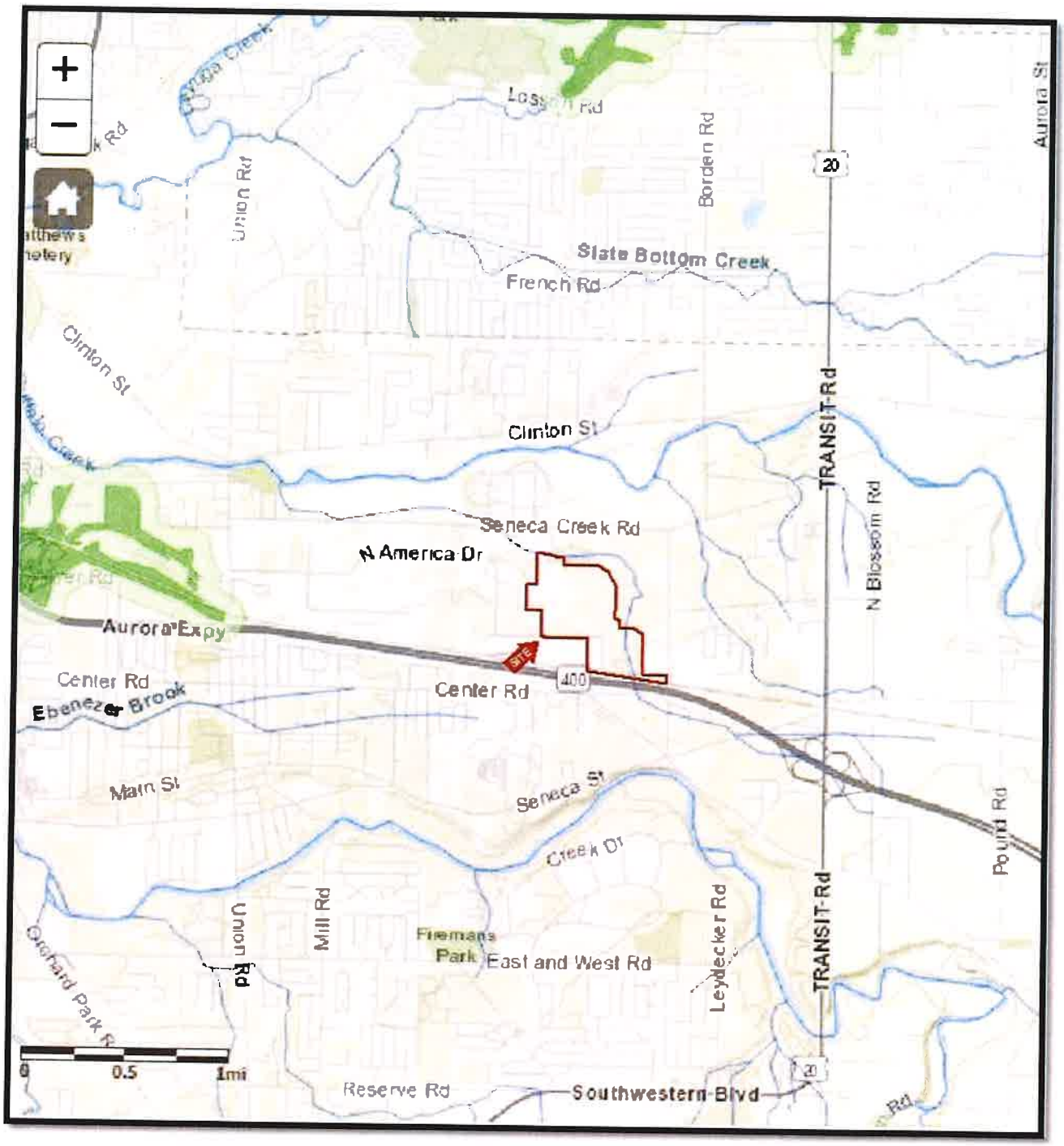


FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 10/29/19)

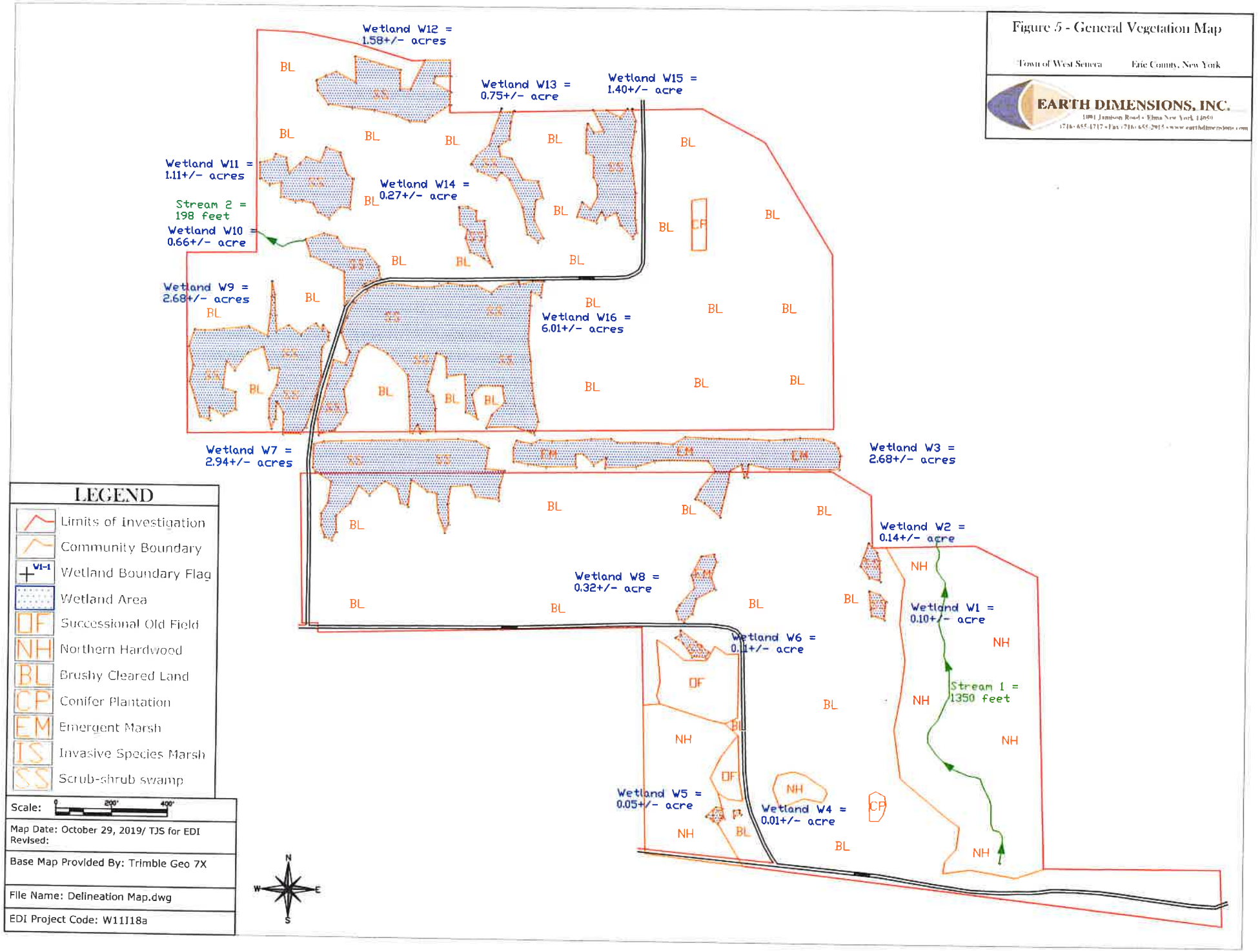
North America Park

Town of West Seneca, Erie County, New York

Figure 5 - General Vegetation Map

Town of West Seneca — Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2015 • www.earthdimensions.com



LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- NH Northern Hardwood
- BL Brushy Cleared Land
- CP Conifer Plantation
- EM Emergent Marsh
- IS Invasive Species Marsh
- SS Scrub-shrub swamp

Scale: 0 200' 400'

Map Date: October 29, 2019/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X

File Name: Delineation Map.dwg

EDI Project Code: W11I18a

N W E S

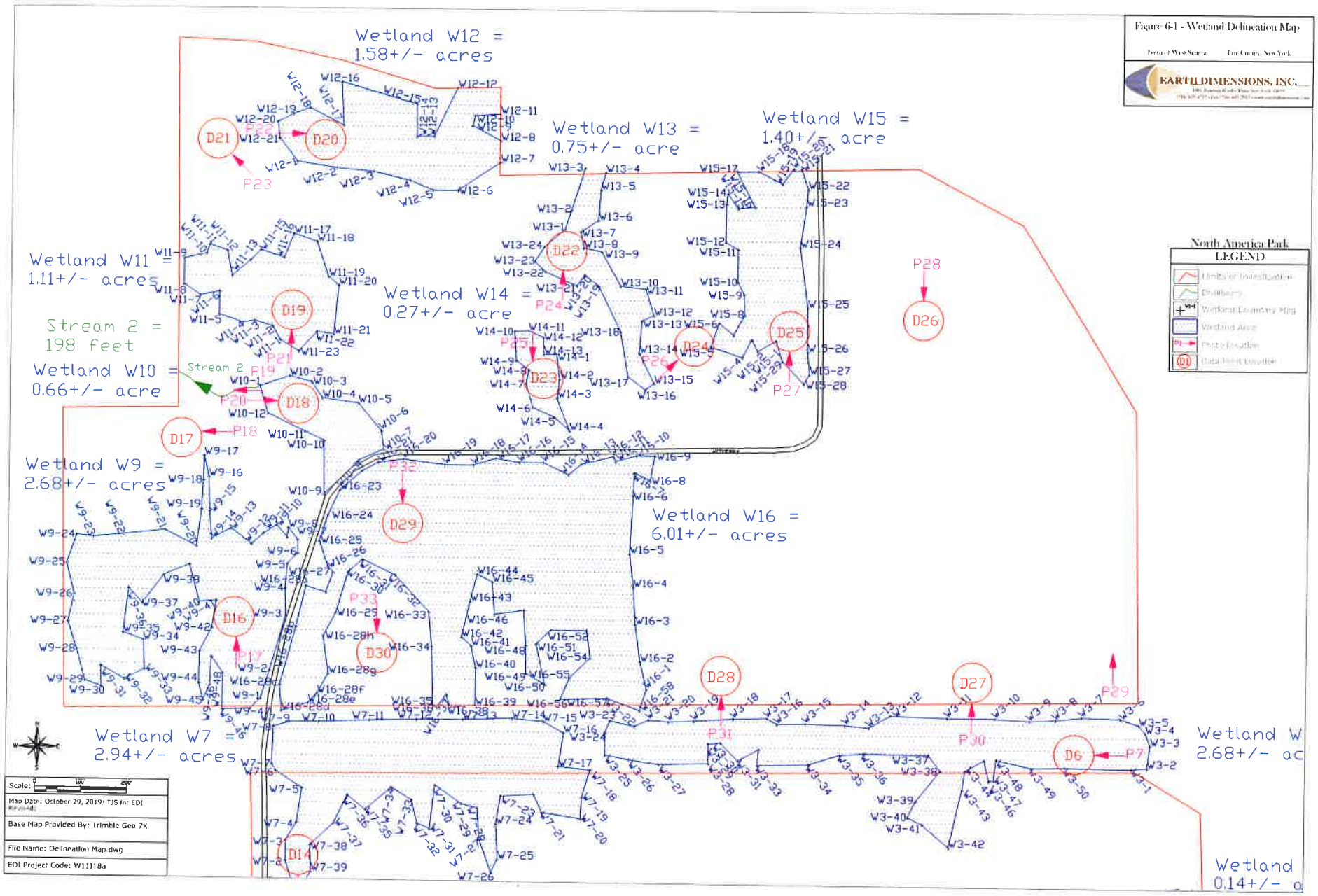


Figure 6-1 - Wetland Delineation Map
EARTHDIMENSIONS, INC.
Wetland W12 = 1.58+/- acres
Wetland W13 = 0.75+/- acre
Wetland W15 = 1.40+/- acre
Wetland W11 = 1.11+/- acres
Wetland W14 = 0.27+/- acre
Stream 2 = 198 feet
Wetland W10 = 0.66+/- acre
Wetland W9 = 2.68+/- acres
Wetland W16 = 6.01+/- acres
Wetland W7 = 2.94+/- acres
Wetland W 2.68+/- ac
Wetland 0.14+/- a
North America Park
LEGEND
Scale:
Map Date: October 29, 2019 TJS for EDI
Base Map Provided By: Trimble Geo 7X
File Name: Delineation Map.dwg
EDI Project Code: W11118a

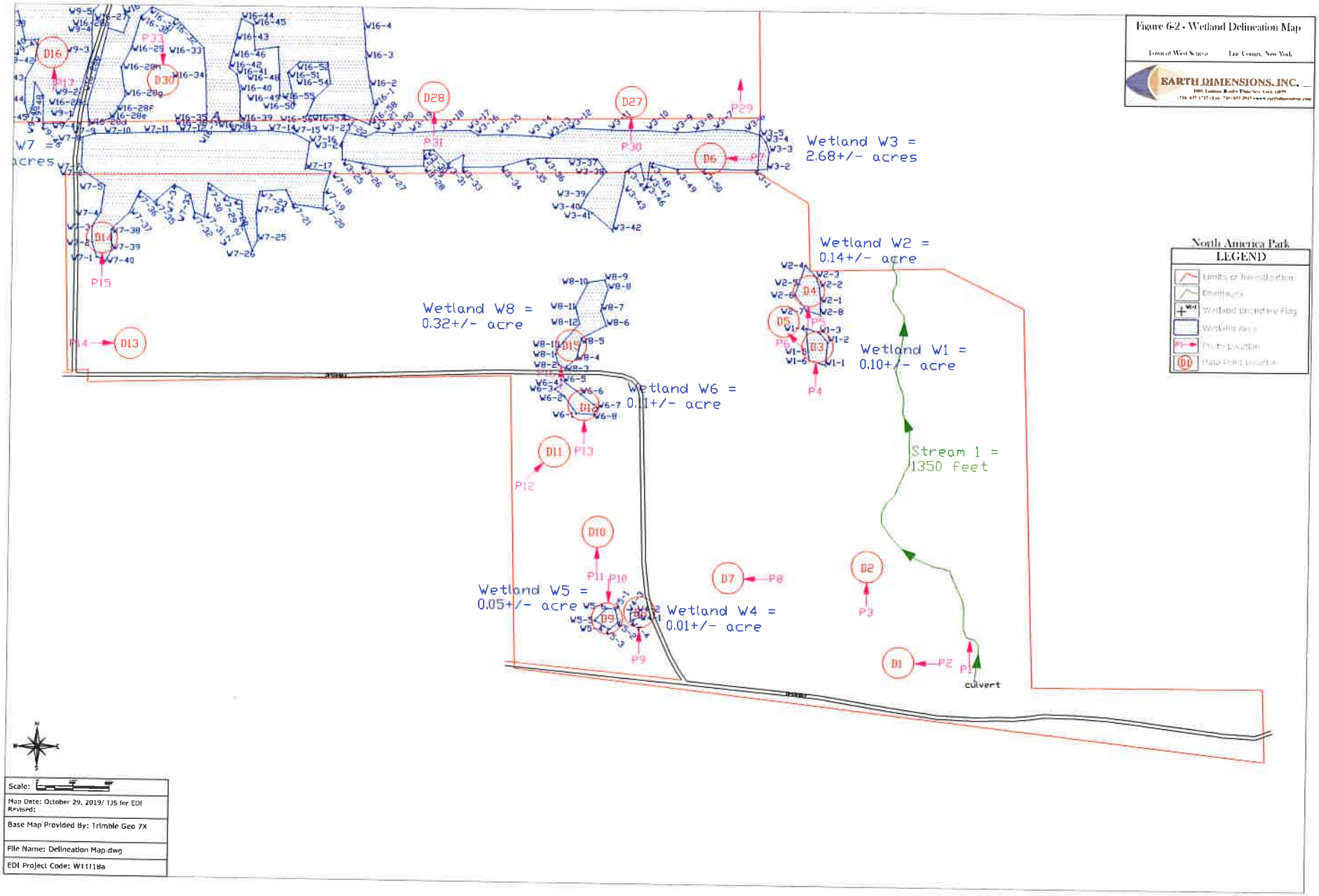


Figure 6-2 - Wetland Delineation Map
EARTH DIMENSIONS, INC.
Wetland W3 = 2.68+/- acres
Wetland W2 = 0.14+/- acre
Wetland W8 = 0.32+/- acre
Wetland W1 = 0.10+/- acre
Wetland W6 = 0.11+/- acre
Stream 1 = 1350 feet
Wetland W5 = 0.05+/- acre
Wetland W4 = 0.01+/- acre
culvert
North America Datum
LEGEND
Scale:
Map Date: October 29, 2019/ TJS for EDI
Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation Map.dwg
EDI Project Code: W1111Ba

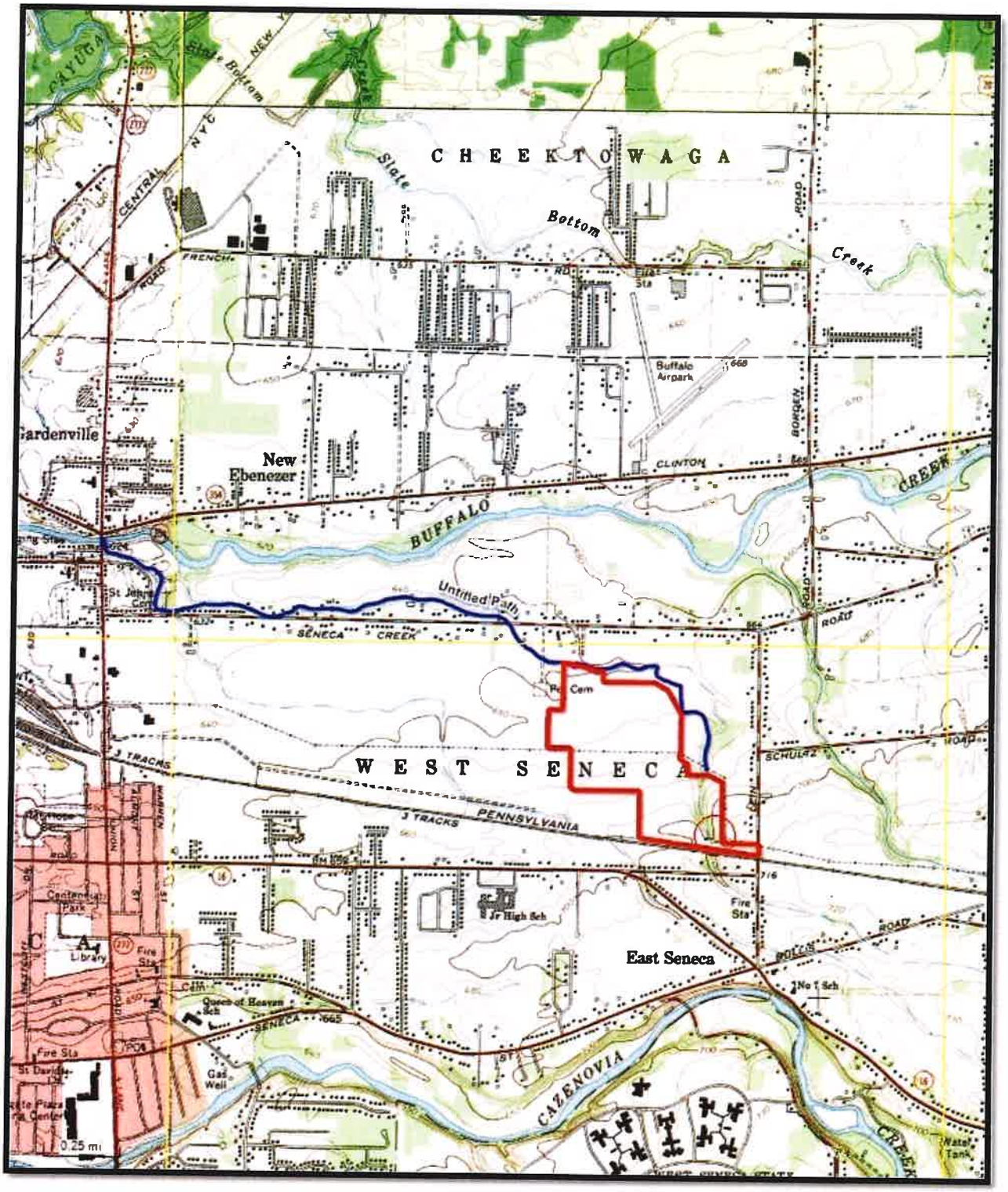


FIGURE 7: DRAINAGE MAP

Clarence Center Quadrangle / 2002 DeLorme

Waterford Bike Path

Town of Clarence, Erie County, New York

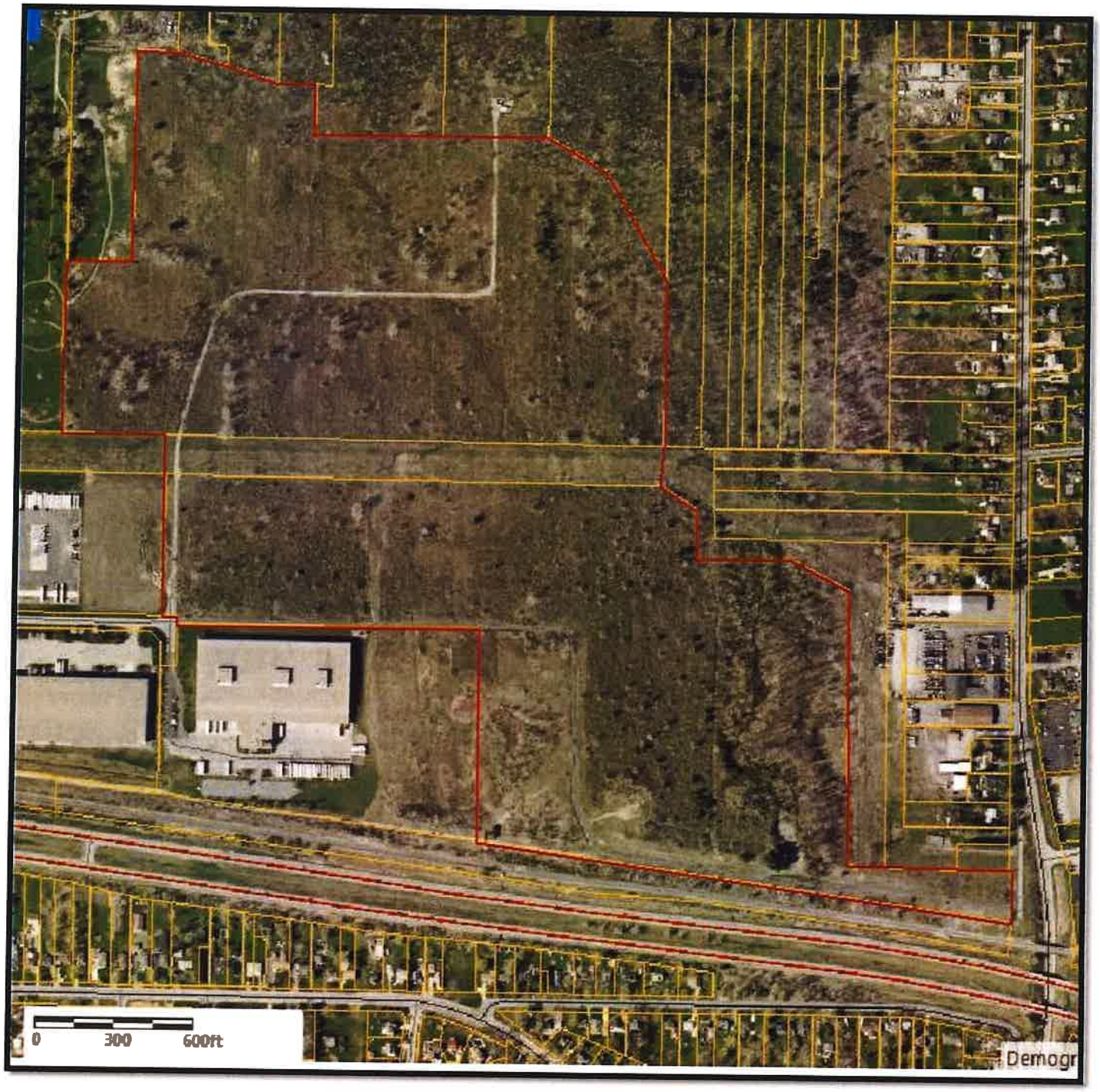


FIGURE 8: SITE AERIAL PHOTOGRAPH

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx (Visited 10/29/19)

North America Park

Town of West Seneca, Erie County, New York

Appendix L

Performance Criteria

Bioretetion Areas (F-5)

Description: Shallow stormwater basin or landscaped area which utilizes engineered soils and vegetation to capture and treat runoff. The practice is often located in parking lot islands, and can also be used to treat residential areas.

KEY CONSIDERATIONS

CONVEYANCE

- Provide overflow for the 10-year storm to the conveyance system.
- Conveyance to the system is typically overland flow delivered to the surface of the system, typically through curb cuts or over a concrete lip.

PRETREATMENT

- Pretreatment consists of a grass channel or grass filter strip, a gravel diaphragm, and a mulch layer, sized based on the methodologies described in Section 6.4.2.

TREATMENT

- Treatment area should have a four foot deep planting soil bed, a surface mulch layer, and a 6" ponding layer.
- Size the treatment area using equations provided in Chapter 6.

LANDSCAPING

- Detailed landscaping plan required.

MAINTENANCE

- Inspect and repair/replace treatment area components
- Stone drop (at least 6") provided at the inlet
- Remulch annually

STORMWATER MANAGEMENT SUITABILITY

- [X] Water Quality
- [ ] Channel Protection
- [ ] Overbank Flood Protection
- [ ] Extreme Flood Protection

Accepts Hotspot Runoff: *Yes*
(requires impermeable liner)

IMPLEMENTATION CONSIDERATIONS

- [M] Capital Cost
- [M] Maintenance Burden

Residential
Subdivision Use: *Yes*

High Density/Ultra-Urban: *Yes*

Drainage Area: *5 acres max.*

Soils: *Planting soils must meet specified criteria; No restrictions on surrounding soils*

Other Considerations:

- *Use of native plants is recommended*

	Key: **L**=Low **M**=Medium **H**=High **POLLUTANT REMOVAL** **G** Phosphorus **G** Nitrogen **G** Metals - Cadmium, Copper, Lead, and Zinc removal **F** Pathogens – Coliform, Streptococci, E.Coli removal Key: **G**=Good **F**=Fair **P**=Poor

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Appendix M

NYSDEC Letter of Acknowledgement

Appendix N

Engineering Report