AGENDA
TOWN OF AMHERST
AMHERST PLANNING BOARD MEETING
January 21, 2021
6:30 PM

In accordance with the Governor's Executive Order 202.1 and for public health and safety concerns related to COVID-19, the Planning Board meeting on January 21, 2021 will be held via Zoom. **The public will have an opportunity to view and participate in the meeting live.** The Public may view and participate via video or audio call in - Join the Zoom Meeting at 6:30 pm:

Zoom Meeting Computer/Visuals Link: https://us02web.zoom.us/j/84974232982?pwd=QmRWUHo3U0hleG0wUGMrZFZTUXVSUT09

Call-In Instructions:
1-646-558-8656
Meeting ID: 849 7423 2982
Password: 143584

Residents and other members of the public are encouraged to provide comments or questions in writing, by email, or by telephone to the Planning Department prior to the meeting. Questions and comments must be received by January 20 to be forwarded to Planning Board members in time for the meeting. Comments and questions may be sent to:

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

OR

Email:
acarrato@amherst.ny.us
Phone:(716) 631-7051
Fax: (716) 631-7153

The Planning Board will hold a public work session at 6:00 PM via Zoom.

This meeting is being video recorded.

The plans and documents that are available below for each Planning Board hearing item were submitted by the project applicant and are intended to provide general information about the proposal.

The official, complete sets of submittal documents and materials that provide more detailed information about the projects are available in the Planning Department, which is located in Amherst Town Hall, 5583 Main Street, Williamsville, NY 14221. Hours are 9 am to 5 pm, Monday through Friday. If you have any questions, please contact the Planning Department at (716) 631-7051.
Revised plans are submitted on an ongoing basis throughout the review process to address comments on the project. Every effort will be made to post the most recent version of the plans and application materials in a timely manner.

ROLL CALL

	Chmiel	Gelber	Gill	Gilmour	Giuliani	Penberthy	Raffaele
Present							
Absent							

Note: There will be no public hearing or opportunity to speak for the projects listed under the Unfinished Business section of this agenda.

Please note the following time limits for speakers at Planning Board hearings:

- **Presentation by Petitioner: 15 minutes**
- **Rebuttal by neighborhood/resident spokesperson: 15 minutes**
- **Individual speakers: 3 minutes**

PUBLIC HEARINGS

SITE PLANS & RELIEF FROM CONDITIONS OF SITE PLANS

1. PROPOSED SOLAR DEVELOPMENT, SP-2020-14
   595 Schoelles Road
   Amherst Solar LLC, Petitioner

2. THE FOLLOWING ITEM HAS BEEN POSTPONED AT THE PETITIONER'S REQUEST: PROPOSED AUTOMOTIVE DEALERSHIP BUILDING AND VEHICLE STORAGE EXPANSION, SP-2013-08B; AND UNIFIED DEVELOPMENT WITH SP-1988-57C, 2619-2635 MILLERSPORT HIGHWAY
   Property located at 2601 Millersport Highway
   West Herr Automotive, Petitioner

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

3. PRELIMINARY PLAT FOR 26-LOT HEIM ROAD SUBDIVISION, SUB-2020-03PP
   Property located at 775 Heim Road
   Essex Homes, Petitioner

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

4. PROPOSED AMENDMENT #73 TO THE AUDUBON NEW COMMUNITY DEVELOPMENT PLAN TO RECLASSIFY 2.35± ACRES OF LAND FROM NCD-SA TO NCD-ND, Z-2020-06
   2160 and 2170 North Forest Road (NCD)
   Coromandel Estates Amherst, LLC, Petitioner

5. PROPOSED REZONING FROM R-3 TO CF, Z-2020-10
   Property located at 39 Getzville Road
   Daemen College, Petitioner

MISCELLANEOUS

None

OTHER COMMUNICATIONS

None

All public hearings are completed and closed at the termination of public discussion for each agenda item unless otherwise specified by the Chair.

UNFINISHED BUSINESS

Note: All public hearings have been completed. There will be no public hearings for items listed under this section.

SITE PLANS & RELIEF FROM CONDITIONS OF SITE PLANS

None

SUBDIVISIONS & RELIEF FROM CONDITIONS OF SUBDIVISIONS

None

REZONING & RELIEF FROM CONDITIONS OF REZONINGS

None

MISCELLANEOUS

None

OTHER COMMUNICATIONS

None

DIRECTOR'S REPORT

MINUTES APPROVAL

ADJOURNMENT

The next Regular meeting is scheduled for February 18, 2021.

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 01/21/21 06:30 PM
Department: Planning
Category: Site Plan and Relief from Conditions of Site Plan
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 22538

ADOPTED

PLANNING BOARD ITEM (ID # 22538)

Proposed Solar Development, Sp-2020-14

595 Schoelles Road
Amherst Solar LLC, Petitioner

ATTACHMENTS:

- SP-2020-14_application reports 012121(PDF)
- SP-2020-14_drawings 012121 (PDF)
- SP-2020-14_draft_neg_dec_012121 (PDF)
- SP-2020-14_draft_resolution_012121 (PDF)
- Z-2020-14_signed neg dec_012121 (PDF)
- Z-2020-14_signed resolution_012121 (PDF)

NEW REQUIREMENT

A *SINGLE* PDF OF THE SITE PLAN, SURVEY, AND LANDSCAPE PLAN MUST BE SUBMITTED WITH YOUR APPLICATION. PLANS WILL NOT BE TRANSMITTED WITHOUT THIS PDF. THIS ALSO APPLIES TO REVISED PLAN SUBMITTALS.

TOWN OF AMHERST PLANNING BOARD
MAJOR SITE PLAN REVIEW AND APPROVAL PROCEDURE

This application package includes the following:

- Application Procedures
- Application Form & Checklist
- Stormwater Pollution Prevention Plan Checklist
- Appendix A Town of Amherst EAF Addendum
- Appendix B Criteria for Required 8½" x 11" Sketches
- Appendix C Erie Sewer District No. 5 – Commercial / Industrial New & Existing Buildings Requirements

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- IMPORTANT-

1. **A pre-submittal consultation with Planning Department staff is *strongly recommended* prior to submitting an application. The pre-submittal meeting gives the applicant an opportunity to discuss with staff such items as:**
   - **classifying the action as a major site plan, minor site plan, or minor adjustment;**
   - **determining what specific information will be required to be submitted with the application;**
   - **identifying and discussing issues that must be addressed as part of the SEQR review.**

   An appointment is required for all meetings with Staff.

2. **This site plan petition is subject to the requirements of 6 NYCRR Part 617, State Environmental Quality Review Act (SEQR) and Chapter 104 of the Town of Amherst Code, as amended. The Planning Board cannot make a SEQR determination unless a complete Environmental Assessment Form (EAF), including Town of Amherst EAF Addendum, and submittal of any required supplementary information such as traffic impact studies, archaeological reports, wetland delineations or geotechnical reports is submitted. SEQR issues may be discussed with Planning Department staff at a recommended pre-submittal meeting. Unlisted Actions require a Short**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

EAF; Type I Actions require a Full EAF. The following is a link to the NYSDEC website and fillable forms with instructions: *http://www.dec.ny.gov/permits/6191.html*.

3. **The application shall be executed or consented to in writing by the owner of the property.**

4. **Any variances that must be approved by the Zoning Board of Appeals, or any decision that is required by the Town Board (e.g. removal of deed restrictions), must be obtained prior to action on a Site Plan application.**

5. **Submittal of an application grants permission to Town staff and the Planning Board to access the parcel(s) under consideration.**

6. **All site plan drawings must be prepared by a Registered Architect, Professional Engineer, Landscape Architect, or Land Surveyor (as applicable) licensed to practice in New York State.**

7. **If you wish to include a Coordinated Sign Plan application with the site plan petition, a separate application must be completed. Contact the Planning Department for a copy of a Coordinated Sign Plan application package.**

8. **All drawings should be no larger than 24 in. x 36 in. in size. If certain site characteristics warrant larger plan sheets, they may be accepted subject to Planning Department concurrence.**

APPLICATION PROCEDURES

1. Applicant secures application package from the Planning Department, 5583 Main Street, Williamsville, NY 14221. (716) 631-7051. Forms are also available online at: www.amherst.ny.us, keyword "Planning Department".

2. Applicant prepares information as required on the Site Plan Submittal Checklist, attached. NOTE: Some proposals may not require all items on the checklist; please verify with the Planning Department.

3. Applicant schedules an application review appointment with the Planning Department.

4. At the review appointment, the applicant submits the following:

   - one (1) complete set of plan drawings (no larger than 24" x 36" in size)
   - Environmental Assessment Form (EAF)
   - any supporting reports and materials
   - verification from the Town Assessor that the address is correct

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

5. Applicant schedules an application submittal appointment with the Planning Department. NO SITE PLAN WILL BE ACCEPTED FOR REVIEW WITHOUT A PRE-SET SUBMITTAL APPOINTMENT.

6. At the submittal appointment, the applicant must provide thirteen (13) complete and collated sets of drawings and application information to the Planning Department **(materials will not be accepted unless folded into 9" x 12" in size),** including**:**
   - application form
   - Environmental Assessment Form (EAF) and supporting materials
   - complete set of site plan drawings (**at least one (1) set of drawings must bear a raised or wet seal and signature of the design professional** that prepared the plans; the remaining review copies may be submitted with a facsimile of the seal and signature)

7. After approval for filing by the Planning Department, the applicant shall pay all necessary fees to the Town Clerk. **(See Schedule of Fees on first page of application and make checks payable to: Town of Amherst.)**

   The Planning Department transmits remaining twelve (12) copies of the application and data for a review by:
   - Assessor
   - Commissioner of Building
   - Town Engineer
   - Superintendent of Highways
   - Traffic/Safety Board
   - Fire Chiefs' Association
   - Plumbing Division
   - Right-of-Way Agent
   - Police Department (if applicable)
   - Other agencies, as applicable

   Within 30 days of its receipt of the complete application for Site Plan approval, each agency shall complete its review and notify the Planning Department in writing of its comments or recommendations as required by Ordinance.

8. The applicant may be required to submit revised plans, reports, or materials to address review agency comments. The procedures for submittal of revised plans are as follows:

   - A cover letter addressing all comments received to date is required.
   - "Highlight" the area of change on the drawings and provide a notation describing the change.
   - Ten (10) complete sets of the revised materials are required. Recommend that Planning staff be contacted to determine if fewer sets are needed.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

9. The Planning Board reviews the environmental assessment to determine whether a Draft Environmental Impact Statement (EIS) is required. The petitioner will be advised in the event that a draft EIS is required and afforded the opportunity to prepare it. If the petitioner declines, the Planning Board will prepare the draft EIS at the petitioner's expense. The public hearing will be held on the EIS concurrently with the Planning Board hearing on the application.

10. Planning Board Meeting Procedures:

    The applicant or his / her representative must present the project at the public hearing before the Planning Board and be available to answer any questions at the meeting. The Planning Board may take any of the following actions:

    - Adjourn the hearing to a future Planning Board meeting.
    - Close the hearing and table action on the site plan to the next Planning Board meeting. (The Planning Board may remove the item from their agenda until such time as all required information is provided).
    - Close the public hearing and make a decision on the site plan.

    All determinations on matters before the Board are made after all public hearings on that meeting's agenda are completed.

11. A copy of the Planning Board's determination will be forwarded to the applicant, his / her representative, the Building Commissioner and the Town Clerk.

12. When the Planning Department has determined that all conditions of the Planning Board's approval have been satisfactorily addressed, **seven (7) additional copies** of all site plan drawings, including landscape, utility and grading and drainage plans must be submitted with and folded into 9" x 12". **All 7 sets must have original wet seals.** These drawings will be stamped and signed "Approved" by the Planning Director and transmitted to Town Departments.

    An electronic copy of final plans must be sent to the Senior Fire Inspector at randrews@amherst.ny.us.

13. A building permit will not be issued prior to approval of the Site Plan by the Planning Board and issuance of approved site plan drawings by the Planning Director.

NOTE: The last day to file a Site Plan review submittal with the Town Clerk is approximately 30 days prior to the next Planning Board meeting. Please check with the Planning Department to determine the exact deadline date. Due to the public hearing notice requirements and department reviews, no site plan application will be placed on the Planning Board agenda after the deadline for filing has closed. Agenda scheduling may be delayed if an application is incomplete or due to the number of other matters previously scheduled for Board action.

Town of Amherst Planning Department, 5583 Main Street Williamsville New York 14221
(716) 631-7051 Fax (716) 631-7153 Web www.amherst.ny.us

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Major Site Plan Review

For Official Use

File #: _____ **Acreage** _____ **Fee $** _____

Address Verified by Assessor's Office _____ VERIFIED BY _____ DATE

Site Plan Review

		Fill In Applicable Fees
1 acre or less	$1,250.00	_____
Each Additional acre or fraction thereof	$ 650.00/acre	_____
Amendments to Site Plans	$1,200.00	_____
Request for Relief of / or Change to Conditions of Site Plan Approval	$1,200.00	_____
Request for Extension of Site Plan Approval	$ 450.00	_____

Stormwater Pollution Prevention Plan

1-4.99 Acres	$ 500.00	_____
5-10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____

Affidavit Fee for Public Hearing $ 15.00 _____

TOTAL FEE: $_____

Materials Received by Planning Department _____ RECEIVED BY _____ DATE

Materials Accepted by Town Clerk & Fee Paid _____ ACCEPTED BY _____ DATE

To Be Completed By Applicant

Petitioner: Name: Amherst Community Solar, LLC

Address: 412 South 13th Street

Unit 607

Philadelphia (city) PA (state) 19147 (zip code)

Phone: 914-420-5803 Fax: _____ E Mail: eschecter@ourgeneration.dev

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney):

Name: Greenman-Pedersen, Inc.

Address: 4950 Genesee Street Suite 100

Buffalo NY 14225
city state zip code

Phone: 716-633-4844 Fax: 716-633-4940

E Mail: jasonburford@gpinet.com

Project Location (must be verified by Town Assessor's Office):

Address: 595 Schoelles Road

Amherst, NY

SBL No(s): 28-1-1.11

Project Name: Amherst Solar Farm

Project Description: Development of a solar energy farm on a parcel of approximately 21.5 acres. Solar panels to be post mounted, plus an access driveway, fencing, and landscape plantings as required. Equipment to be located on pads in approximately 3 locations around the site. No ground disturbance (soil stripping) as considered by the NYSDEC except for access driveway and equipment pads (3).

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

If this petition is an amendment to a previously approved site plan, please describe the proposed changes (include type and size of existing structures and number of existing parking spaces):

not applicable

	existing	proposed	total
Gross Floor Area (non-residential):	n/a		
Number of Residential Units:	n/a		
Number of Parking Spaces:	n/a		

Acreage of Parcel: 21.5

Frontage on Public Roads: 690 feet

Existing Zoning District(s) SA - suburban agricultural

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Site Plan Submittal Requirements and Checklist

The following checklist outlines the information required by the Planning Department to accept a Site Plan application for review. ***It is strongly recommended that you make an appointment with Planning Staff to determine which items apply to your application***.

Item No.	Item	Submitted	Official use
I	**Drawing Information**		
1.0	**Drawing size not to exceed 24" x 36"**		
2.0	**Title of Drawing**		
3.0	**Name and address of Applicant**		
4.0	**Name of person preparing drawing**		
5.0	**Wet seal/raised seal and signature of NYS licensed architect, engineer, landscape architect, or surveyor (as applicable)**		
6.0	**Project address**		
7.0	**Zoning of subject property and adjacent parcels**		
8.0	**North point, scale, date, and revision date(s)**		
II	**Structures, Paved Areas, & Open Space**		
1.0	**Existing and Proposed Streets**		
1.1	Names of all existing and proposed streets		
1.2	Width and radii of proposed curb-cuts		
1.3	Existing curb-cuts on adjacent and opposite properties		
1.4	Show ROW width, pavement dimensions, lane widths, pavement markings, and proposed signage on proposed streets		
1.5	Show proposed ROW consistent with planned NYSDOT, Erie County, or Town road projects (if applicable)		
1.6	Show location of proposed cross access to adjacent parcels along with a draft easement		
1.7	Designation of Fire Lanes (if applicable)		
1.8	Fire apparatus access roads		
1.9	Label any proposed roads as public or private		
1.10	Location and dimensions of sidewalks		
1.11	Typical cross sections and profiles of proposed streets, pedestrian walkways, and bikeways		
2.0	**Proposed Structures**		
2.1	Location and complete dimensions of proposed structures		
2.2	Setback dimensions of structure(s) to all property lines		
2.3	Proposed use of structures		
2.4	Gross square feet area of each structure		
2.5	Location of all building entrances		
2.6	Indicate type of roof construction/materials		
2.7	Location, height, and design detail of existing and proposed fences and walls		
2.8	Location of light standards and building mounted lights		
2.9	Location of dumpster and detail of dumpster enclosure with gate		
2.10	Layout and dimensions of the lot(s) proposed for development		

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Item No.	Item	Submitted	Official use
II Structures, Paved Areas, & Open Space (cont'd)			
3.0	**Floor Plans with individual rooms and spaces labeled** (fully dimensioned)		
4.0	**Building elevations with height dimensions from finished grade to the highest point of the roof and to midpoint of gable or hip of a pitched roof.** (fully dimensioned)		
4.1	Show screening of mechanical equipment		
5.0	**Parking/Loading/Stacking Areas**		
5.1	Location and complete dimensions of all paved areas		
5.2	Setback dimensions of all paved areas to property lines		
5.3	Dimension of typical parking space and drive aisles		
5.4	Location and layout of handicapped parking spaces & access aisles		
5.5	Detail of vertical signage for handicapped parking and access aisles		
5.6	Indicate minimum parking requirement & number of spaces provided		
5.7	Proposed signage for directing and guiding traffic		
5.8	Curb cut permits from NYS, Erie County, or Town (if applicable)		
6.0	**Location and proposed development of all open spaces, including parks, playgrounds, and open reservations**		
III Utilities and Drainage			
1.0	**Engineers Report**		
1.1	Stamped/sealed and signed by NYS licensed architect or professional engineer		
1.2	Proposed water service sizing calculations		
1.3	Proposed sanitary sewer facility load calculations (avg. & peak flows)		
1.4	Proposed storm drainage facility calculations (see information included with this application)		
2.0	**Grading Plan**		
2.1	Existing and proposed grades indicated		
3.0	**Water Service**		
3.1	Location, size and material of existing and proposed facilities		
3.2	Location of existing and proposed fire hydrant location(s)		
3.3	Indicate use of sprinklers, location of Fire Department connection, and proposed fire protection systems		
3.4	Existing and proposed meter/RPZ size and location		
3.5	Applicable construction details		
4.0	**Sanitary Sewers**		
4.1	Locations, sizes, slopes, inverts, and materials of all existing and proposed facilities		
4.2	Applicable construction details		
4.3	Proposed water/oil/grease interceptor sizing calculations by a professional engineer (if applicable)		
5.0	**Storm Drainage**		
5.1	Locations, sizes, slopes, inverts, and materials of existing and proposed storm drainage facilities		

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
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Item No.		Submitted	Official use
III Utilities and Drainage (cont'd)			
5.2	Connection of roof drains to proposed drainage system		
5.3	Applicable construction details		
5.4	Existing and proposed swales and ditches		
5.5	Detention area cross-section and high-level elevations		
5.6	County and State approval for tie-in to existing sewers		
6.0	**Stormwater Pollution Prevention Plan (SWPPP) as applicable. See attached checklist.**		
7.0	**Natural Gas Service**		
8.0	**Location of transformers, generators and other mechanical equipment; include detail drawings (if applicable)**		
IV Lighting Plan			
1.0	**Photometric plan showing light spread in foot candles at property lines**		
1.1	Detail of all light standards, including dimension of height from finished grade		
1.2	Detail of all exterior lighting fixtures		
V Landscape Plan			
1.0	**Wet/raised seal and signature of a licensed Landscape Architect**		
2.0	**Provide a calculation of the total Parking area and a calculation of interior parking area in square feet and as a percentage**		
3.0	**Indicate location, size, number and type of proposed landscape materials**		
4.0	**Indicate location, type and size of all existing trees 4" caliper or larger and indicate which will be removed or retained**		
VI Other Required Information/General Requirements			
1.0	**Complete boundary survey that includes all existing structures, acreage, legal description with reference to a property line, street, or other known feature, and easements plotted to scale by a NYS licensed land surveyor**		
2.0	**Topographic Survey with a 30 ft. buffer outside all property lines by a NYS licensed land surveyor**		
3.0	**Draft of any deed restrictions, covenants, provisions for home associations and common ownership, and reciprocal easement agreements (as applicable).**		
4.0	**For assessment purposes, state intent to apply for condominium status (if applicable).**		
5.0	**Completed and signed Environmental Assessment Form**		
5.1	Soil boring report and geotechnical report prepared by a qualified Professional Engineer (if applicable)		
5.2	Traffic Impact Study (if applicable)		
5.3	Archaeological survey (if applicable		
5.4	Wetland Delineation report (if applicable)		

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
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Item No.		Submitted	Official use
VI Other Required Information/General Requirements (cont'd)			
6.0	Show existing zoning(s) of both the subject property and adjacent parcels on the Site Plan and the Landscape Plan		
7.0	Location of NYSDEC wetlands (including buffer area) and/or federal wetlands; indicate jurisdictional status		
8.0	Location of Floodway and floodplain (if applicable)		
9.0	Documentation pertaining to any conditions of zonings, including copies of required deed restrictions; indicate date of rezoning and the parcel address under which it was rezoned (if applicable)		
10.0	Documentation related to any required variances granted by the ZBA		
11.0	For residential site plans, provide a statement from the appropriate school district that adequate school sites and facilities are available.		
12.0	8 1/2" X 11" reduction of primary site plan drawing (see appendix "B" of application package for specifications)		
13.0	A CD containing a PDF of all site plan drawings (Must also be provided with revised drawings)		

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Town of Amherst
SWPPP Review Checklist

Reviewed by: _____ Date: _____
Project Name: _____
TOA Job No.: _____ Applicant: _____
Project Address: _____

Required Documents and Notifications			
Acceptability			
Yes	No	N/A	
			Notice of Intent (filed with NYSDEC)
			Owner's contact information
			Contact information for co-permittees (operators or contractors)
			Owner certification and signature
			Anticipated date of construction commencement

SWPPP Contents			
Acceptability			
Yes	No	N/A	
			Identification of contractor
			Certification statement by contractor
			Requirement for all sub-contractors to sign certification statement
			Statement that SWPPP will be kept on site during all phases of construction
			"SWPPP Manager" identified by name, title, company (contact information)
			Legal description of site (including address)
			Description of on-site activities
			Total acreage of site identified
			Total acreage of are to be disturbed identified
			Runoff coefficient of site after construction completion
			Inspection and maintenance schedule identified, including responsible parties
			Existing soils data
			Receiving waters and ultimate receiving waters identified
			Quantitative stormwater discharge data
			SITE MAP
			Vicinity map and site map (includes North arrow)
			Existing and proposed topography (contours & critical spot elevations)
			Drainage pattern identified (temporary and permanent) (including off-site drainage)
			Approximate slopes after major grading activities
			Areas of soil disturbance identified & consistent with verbiage
			Locations of major structural and non-structural control plans
			Surface waters (including wetlands)
			Location of stormwater discharge to surface water
			Equipment and materials storage areas

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Acceptability			
Yes	No	N/A	
			Upstream diversions, downslope and sideslope perimeter controls installed prior to land disturbing activities
			Description of intended sequence of activities (Phasing plan with 5 acre threshold limits shown)
			Street profiles, utility locations, property boundaries and easement delineations shown
			Construction site parking identified
			Stabilized construction entrance(s) include details
			Other traffic controls identified
			Construction materials storage
			Washout area controls (including specs)
			Equipment fueling areas identified (including specs)
			Cover or stabilize disturbed areas (methods & timing)
			Construction timing to limit impact on seasonal weather changes
			Infiltration/filtration methods used
			Statement of areas disturbed for more than 14 days to be stabilized
			Existing vegetation preserved where appropriate
			Description of stabilization methods (including quantities of materials and specs, seeding rates, mulch material rates, etc.)
			Soil stockpile stabilization methods and timing
			Description of construction site waste disposal methods
			Sanitary waste disposal methods
			Structural Controls (circle methods used)
			Silt fences, earth dikes, brush barriers, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforce soil retaining systems, gabions, temporary or permanent sediment basins, rolled erosion control products (RECP's)
			Detailed specifications provided for all above methods
			Max created slope no steeper than 2' horizontal to 1' vertical
			Sediment basins provide at least 3,600ft^3 of storage per acre
			Positive drainage maintained
			Flow grades stabilized
			Permanent Stormwater Management Controls
			Description of post-construction controls
			Retention ponds, detention ponds, infiltration measure, sequential systems, vegetated swales, natural depressions (including calcs)
			Velocity dissipation devices
			Other Comments

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM

1. For each applicable category of proposed new structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

no new structures

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

_____ Geotechnical report attached _____ Not applicable

3. Is your property located: On Youngs Road between Dodge and Klein Roads? ☐ Yes ☒ No
On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? ☐ Yes ☒ No

If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? ☐ Yes ☒ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
none

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: ☐ Yes ☒ No

Describe_____

(Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per hour upon completion of project n/a
Source: _____

8. Will blasting occur during construction? ☐ Yes ☒ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? ☐ Yes ☒ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:

_____ average flow _____ peak flow.

(Please note that average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

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APPENDIX "B"

CRITERIA FOR THE REQUIRED 8½" X 11" REQUIRED DRAWING REDUCTIONS

Graphic Standards:

- This BLACK and WHITE drawing will be used as an overhead presentation displayed during the Planning Board's monthly meeting as well as copied for distribution to each Planning Board member, and filed for public review. Clarity and legibility of this graphic are essential.
- Two (2) copies of an 8½" x 11" Concept or Site Plan are required for **ALL** Site Plan, Subdivision, and Open Development Area submittals in addition to the standard size copies of plans required by the application.
- Site Plan submittals shall also include 8½" x 11" reductions of the Landscape Plan and building elevations.
- Each time a revision is made to standard size Concept or Site Plan drawings submitted for approval, two (2) revised 8½" x 11" graphics must also be submitted.
- Two (2) copies of an 8½" x 11" Concept Plan are required for Rezoning submittals which include standard size Concept Plans.
- The Town of Amherst Planning Department reserves the right to require additional information or modify the submitted drawing for presentation purposes.
- Each submitted drawing becomes the property of the Town of Amherst.
- Illegible 8½" x 11" graphics may result in rejection of the submittal by the Planning Department or may result in removal from the Planning Board agenda.

Information to be provided and clearly labeled:

- ALL labels, dimensions, and other notations must be clear and legible at 8 ½ x 11" size.
- ALL existing and proposed building footprints.
- Significant natural and man-made site and building features.
- ALL existing and proposed street names.
- Property lines.
- North arrow, date of preparation, and latest revision date for each sheet.
- Retention/Detention ponds.
- State and Federal wetlands.
- Berms

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Additional information to be provided but not labeled:

- Parking, loading, and stacking layouts (directional arrows – optional).
- Curb cuts for developed properties on opposite sides of street.
- Landscaping should be included in a manner not to interfere with presentation clarity.
- ALL existing and proposed sidewalks, paths, and bikeways.

Information NOT to be provided on 8½" x 11" graphic unless specifically requested:

- Utility information/data.
- Contour lines/elevation data.
- Dimension lines.
- Shading for any site feature(s).
- Site data/calculations.
- Plant lists.
- Building elevations, drainage profiles, sign graphics, etc.

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TOWN OF AMHERST
ENGINEERING DEPARTMENT
ERIE COUNTY, NEW YORK

PAUL M. BOWERS, P.E., TOWN ENGINEER

September 24, 1999

TO: TECHNICAL STAFF

FROM: Paul M. Bowers, P.E.

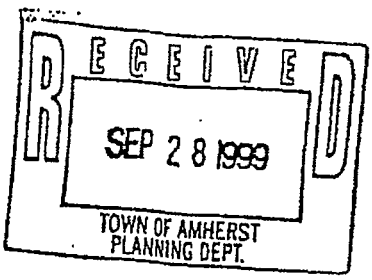
RE: ERIE SEWER DISTRICT NO. 5 – COMMERCIAL/INDUSTRIAL NEW AND EXISTING BUILDINGS

Attached is a copy of the letter from ECSD #5 regarding the above subject. This would apply to all site plan reviews and construction which might occur on the Amherst side of ECSD #5.

The essence of their request is to make sure that petitioners apply as early as possible (earliest rezoning stage), but certainly as early as the site plan review stage, to the Erie County's Division of Sewerage Management (DSM). By submitting building and plumbing plans early in the review process to the County (DSM), petitioners will not be denied nor delayed in seeking access while current reviews are being held.

If you review any rezonings and site plans for those areas along Transit Road within ECSD #5, petitioners should be advised that early submittal (of building and plumbing plans) to the DSM is necessary.

PMB:rb
Att.
Cc & Att: Thomas C. Ketchum, P.E., Building Commissioner
Richard Gillert, Planning Director



ENGINEERING OFFICE • SEWER MAINTENANCE
110 N. FOREST ROAD
WILLIAMSVILLE, NY 14221

WASTEWATER TREATMENT FACILITY • ENVIRONMENTAL CONTROL
455 TONAWANDA CREEK ROAD
AMHERST, NY 14228

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TOWN OF AMHERST
ENGINEERING
DEPARTMENT
JUL 12 2 04 PM '99

County of Erie

DENNIS T. GORSKI
COUNTY EXECUTIVE

DEPARTMENT OF ENVIRONMENT AND PLANNING

RICHARD M. TOBE
COMMISSIONER

CHARLES J. ALESSI, P.E.
DEPUTY COMMISSIONER
Sewerage Management

July 9, 1999

Amherst Town Board
5583 Main Street
Williamsville, New York 14221

RE: Erie County Sewer District No. 5
Commercial/Industrial New and Existing Building
Construction and Change in Existing Establishments

Honorable Town Board:

This letter is written to remind you that any new commercial and/or industrial buildings or a change in use of an existing building within your service area requires the submittal of an Industrial Waste Survey (IWS), complete with detailed plans, to Erie County's Division of Sewerage Management (DSM) for review and approval.

Your community, as a member of the Erie County Sewer District No. 5 (ECSD #5), is required to participate in the District's EPA Approved Pretreatment Program. This program, mandated under federal law, requires review and inventory of all new non-residential facilities in the service area to determine if they fall under the pretreatment program. This review will also determine if the new facilities require an Industrial Wastewater Discharge Permit. Furthermore, as part of ECSD #5, your community must comply with The Rules and Regulations for Erie County Sewer Districts. These Rules and Regulations include additional requirements for non-residential facilities connecting to the sanitary sewer within the service area. The review of the plans for new facilities will insure compliance.

While there has not been a problem with new buildings incorporating new sewer connections, it is becoming more of a problem with existing commercial establishments that have changed ownership, expanded, and/or been renovated for a different use, without any review by the DSM. This includes such projects as: (a) where a building is demolished and a new facility is built at

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the same location; and (b) establishments that change their use such as a store turned into a bakery or a gas station turned into a restaurant.

A specific problem that tends to reoccur is the question of grease traps. The District requires all food serving establishments to have exterior grease traps installed. Some Towns only require the under the sink traps. However, the District has found them to be generally inadequate in most situations.

The District suggests that in the future, completion of the Industrial Waste Survey and review of plans be done by the DSM prior to approval and issuance of building permits for non-residential buildings. Currently, there is no fee required by the DSM for this review. The review is vital for the District's Industrial Waste section to maintain the proper inventory of non-residential facilities in the service area pursuant to federal regulations. Failure to do so could result in substantial costs to property owners to bring their facilities into compliance if construction occurs prior to plan approval.

In a related matter, it is extremely important that where existing sewer laterals are not being reused, they are properly capped and sealed. It has been our experience that if the old sewers are not properly capped, it allows excessive inflow and infiltration into the sewers and unwanted debris. This can cause problems such as unnecessary surcharging and/or plugging of sewers and flooded basements or the undermining of paved areas such as sidewalks, roads and parking areas. Proper capping of sanitary sewer laterals is also required under the District's Rules and Regulations. If the existing sewer laterals are to be reused by a new building, they need to be inspected and tested to see that they are still structurally sound.

It is the District's hope that by working in a cooperative manner, the integrity of the entire sewerage system will ultimately improve, thereby reducing inflow and infiltration, and thus saving money for both your community and the District.

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If you have any questions, please feel free to contact me at 858-7537.

Very truly yours,

Charles J. Alessi, P.E.
Deputy Commissioner

CJA/ss
cc: ECSD #5 Board of Managers
Susan Grelick, Supervisor, Amherst
Paul Bower, Tn. Engineer, Amherst
Town of Amherst Building Inspector
L. Pohl
G. Absolom
G. Devlin/L. Sedita/File
SS006

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Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Amherst Solar Farm		
Project Location (describe, and attach a general location map): 595 Schoelles Road, Amherst, NY (SBL 28.0-1-1.11)		
Brief Description of Proposed Action (include purpose or need): Construction of new solar farm for generation of electricity to be supplied to the public grid. Approximate area of panels to be 15 acres.		
Name of Applicant/Sponsor: OurGeneration LLC	Telephone: 914-420-5803 E-Mail: eschecter@ourgeneration.dev	
Address: 412 South 13th Street, Unit 607		
City/PO: Philadelphia	State: PA	Zip Code: 19147
Project Contact (if not same as sponsor; give name and title/role): Jason Burford, Project Manager at Greenman-Pedersen, Inc.	Telephone: 716-989-3336 E-Mail: jasonburford@gpinet.com	
Address: 4950 Genesee Street, Suite 100		
City/PO: Buffalo	State: NY	Zip Code: 14225
Property Owner (if not same as sponsor): Cimato Enterprises Inc.	Telephone: 716-688-3536 E-Mail: cimatoenterprises5647@gmail.com	
Address: 9220 Transit Road		
City/PO: East Amherst	State: NY	Zip Code: 14051

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B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	Amherst Town Board Special Use Permit	
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Amherst Planning Board Site plan approval	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC SPDES permit approval	
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYS Heritage Areas:West Erie Canal Corridor

No disturbance anticipated to Heritage Area.

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

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C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
SA - Suburban Agricultural

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Williamsville School District

b. What police or other public protection forces serve the project site?
Town of Amherst Police and Emergency Services

c. Which fire protection and emergency medical services serve the project site?
Getzville Fire Protection

d. What parks serve the project site?
Dann Lake Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? commercial

b. a. Total acreage of the site of the proposed action? 21.5 acres
b. Total acreage to be physically disturbed? 15.0 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.0 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

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f. Does the project include new residential uses? ☐Yes ☑No

1.a

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☑Yes ☐No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑Yes ☐No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): non-regulated federal wetlands identified during the course of this development design scattered on the site

_____

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ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
post mounted solar arrays not considered an action requiring permitting or mitigation

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No
If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No
If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

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- Do existing sewer lines serve the project site? ☐Yes ☐
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

_____

_____

- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☑No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

None

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

Construction equipment only

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

None

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7 am - 5 pm
- Saturday: 7 am - 2 pm
- Sunday: none
- Holidays: none

ii. During Operations:

- Monday - Friday: inspections as needed only
- Saturday: none
- Sunday: none
- Holidays: none

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m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Heavy equipment only during construction

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

1.a

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☑ Rural (non-farm)
☐ Forest ☑ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.00	.09	+.09
• Forested	0.00	0.00	0.00
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	21.5	21.41	-.09
• Agricultural (includes active orchards, field, greenhouse etc.)	0.00	0.00	0.00
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.00	0.00	0.00
• Wetlands (freshwater or tidal)	0.00	0.00	0.00
• Non-vegetated (bare rock, earth or fill)	0.00	0.00	0.00
• Other Describe: _____			

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

1.a

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No
If Yes,
i. Identify Facilities:
_____
_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:
_____
_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No
If Yes:
i. Has the facility been formally closed? ☐ Yes ☐ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:
_____
_____
iii. Describe any development constraints due to the prior solid waste activities: _____
_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:
_____
_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No
☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____
_____
_____
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):
_____
_____

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Lamson very fine sandy loam	51.4 %
Minoa very fine sandy loam	48.6 %
	%

d. What is the average depth to the water table on the project site? Average: 1 feet

e. Drainage status of project site soils:

☐	Well Drained:	% of site
☐	Moderately Well Drained:	% of site
☑	Poorly Drained	100 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	100 % of site
☐	10-15%:	% of site
☐	15% or greater:	% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500-year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

1.a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

m. Identify the predominant wildlife species that occupy or use the project site: successional

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:
i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:
i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☑ Yes ☐ No
If Yes, provide county plus district name/number: ERIE017

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Elie Schecter, Amherst Community Solar, LLC Date 11/16/2020

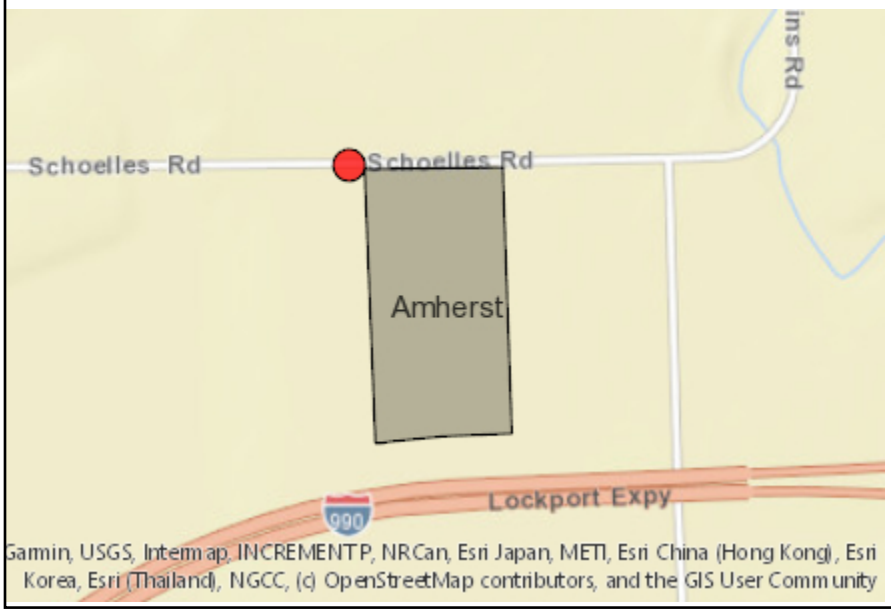
Signature _____ Title Managing Member

PRINT FORM

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

EAF Mapper Summary Report

Tuesday, August 18, 2020 4:28 P...



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



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	ERIE017
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Cimato Enterprises, Inc.
9220 Transit Road
East Amherst, NY 14051
716 688-3536
cimatoenterprises5647@gmail.com

November 16, 2020

Town of Amherst Planning Department
5583 Main Street
Williamsville, NY 14221

Ref: Amherst Solar Farm
595 Schoelles Road
Town of Amherst

Ms. Ellen Kost:

Cimato Enterprises, Inc., as owner of the above referenced property, authorizes Amherst Community Solar, LLC to apply for Site Plan Review and other applicable review requirements for development of the above Amherst Solar Farm project.

Authorized Signer

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Special Use / Temporary Use /Administrative Appeal

Town of Amherst – Planning Department

Procedure

Section 8-1-3E of the Town of Amherst Zoning Ordinance authorizes the Zoning Board of Appeals (ZBA) to hear requests for special use permits, temporary use permits, administrative appeals and appeals of NYS Town Law section 280-a(3). Requests for special use permits are only for those special uses listed in the Zoning Ordinance use tables. A special use permit allows certain uses that have increased potential for incompatibility within a zoning district to be carefully reviewed based on fixed standards, and whether their establishment on any given site should be permitted with conditions. A temporary use permit may be authorized by the ZBA for not more than (2) two years for uses which are of a temporary nature and do not involve the erection or construction of any permanent structure.

1. Applicant shall schedule an appointment with the Planning Department confirming that a Special Use Permit/Temporary Use Permit or an appeal before the Zoning Board of Appeals is necessary.

2. Complete the Special Use/Temporary Use/ Administrative Appeal Application Form and attach the information listed below.

3. Deliver ten (10) collated copies of the completed Application Form with attachments to the Planning Department, 5583 Main Street, Williamsville, NY 14221 prior to the application deadline.

4. Planning Staff will review the Application and determine if it is complete.
   An application is complete if:
   a. All questions on the Application Form and EAF form have been fully answered.
   b. Relevant materials listed on the reverse page have been attached.

5. Once the application is determined complete, the applicant will be directed to deliver the application to the Town Clerk's office for payment.

6. Applicant shall attend the public hearing, present your request to the Zoning Board of Appeals, and be prepared to answer questions related to your request. The meeting will be recorded live and streamed on the Town web site for public viewing.

7. After the public hearing is closed, the Zoning Board of Appeals has up to 62 days to approve, approve with modifications, or deny the application. Once the Zoning Board of Appeals has made a decision, a written notice will be sent to the applicant within 5 business days.

For assistance with the special use/temporary use or administrative appeal application, please contact Brian Andrzejewski,P.E., Zoning Enforcement Officer bandrzejewski@amherst.ny.us or Daniel J. Ulatowski, AICP, Principal Planner dulatowski@amherst.ny.us at 716-631-7051.

Fee

The filing as set by the Town Board, currently $115 (including $ 15 affidavit fee) ($1,515 for telecom.) payable to the Town of Amherst is required at time of application.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Special Use / Temporary Use /Administrative Appeal

Town of Amherst – Planning Department

Information to be provided with application

All submitted documents larger than 8.5" x 11" MUST be accompanied by one (1) copy reduced to 8.5" x11" for use with projection equipment.

A. Property Survey.

B. Site plan showing proposed use of property and any proposed mitigation

C. Part one of a short Environmental Assessment Form (EAF) as required by SEQR and found by the following link https://www.dec.ny.gov/docs/permits_ej_operations_pdf/seafpartone.pdf

D. Letter of permission from the land owner if the applicant is not the land owner.

Conflict Disclosure

Section 809 of the NYS General Municipal Law requires an applicant to disclose any potential conflicts of interest with the members of a decision making body. Thus, allowing such conflicted member(s) to abstain from all deliberations and/or decisions.

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
   a) is the applicant, or
   b) is an officer, director, partner or employee of the applicant, or
   c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
   d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such application, petition or request.

3. Ownership of less than five percent of the stock of a corporation whose stock is listed on the New York or American Stock exchanges shall not constitute an interest for the purposes of this section.

4. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Special Use / Temporary Use /Administrative Appeal

Town of Amherst – Planning Department

Type of Request

- [x] Special Use Permit (SUP)
- [ ] Temporary Use Permit
- [ ] Appeal under Section 280-a(3) of NYS Town Law
- [ ] Telecommunications Facility (SUP)
- [ ] Type 2 Home Occupation (SUP)
- [ ] Dormitory, fraternity or sorority house (SUP)
- [ ] Auxiliary Housing Unit (SUP)
- [ ] Raising Chickens (SUP) Section 6-8-9
- [ ] Restricted Parking Lots (SUP) Section 7-1-9B(2)(b)
- [ ] Bed & Breakfast (SUP)
- [ ] Public Utility Service Structure or Facility (SUP)
- [ ] Administrative Appeal

Applicant Information

Property Owner Name(s): Cimato Enterprises Inc.

Phone Number: 716-688-3536 Email: cimatoenterprises5647@gmail.com

Address: 9220 Transit Road City: East Amherst State: NY Zip: 14150

Applicant Name(s): Amherst Community Solar, LLC

Phone Number: 914-420-5803 Email: eschecter@ourgeneration.dev

Address: 412 South 13th Street City: Philadelphia State: PA Zip: 19147

Property Information

Assessed Address: 595 Schoelles Road

SBL No.: 28-1-1.11 Zoning District: SA - Suburban Agricultural

☐ I have the following conflicts pursuant to section 809 of the General Municipal Law as follows (see conflict disclosure on back of instruction page)

Office Use Only

The applicant is appealing the decision of the Zoning Enforcement Officer to not approve a

TOWN CLERK USE
DATE: _____
TIME: _____
REC'D BY: _____

Appl. No. _____

Date Filed: _____ Mtg. Date _____ Accepted By: _____

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Special Use / Temporary Use /Administrative Appeal

Town of Amherst – Planning Department

Special Use /Appeal Request

A. **Justification for Special Use/Temporary Use.** Provide justification for why the special or temporary use is appropriate at the subject property (will be compatible with the existing uses adjacent and near the property; will not tend to depreciate the value of adjacent property; will not create a hazard to health, safety or the general welfare and why the use will not alter the essential character of the neighborhood) (attach additional sheets as necessary):

required for solar energy facility in the SA zoning district

B. **Justification for Appeal.** Describe in detail why you believe that any order, requirement, decision, interpretation or determination made by the Town's administrative official should be overturned (attach additional sheets is necessary):

Disclosure Affidavit

I maintain that the information provided in this application is true and accurate to the best of my knowledge:

Property owner or applicant name (print): **Amherst Community Solar, LLC**

Property owner or applicant signature:

Date: 11/16/2020

☑ If the applicant is not the property owner, has a letter of permission allowing the applicant to file this application been provided.

STATE OF NEW YORK COUNTY OF ERIE
On the 16th day of November in the year 2020 before me, The above individual personally appeared, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she/they executed the same for the purposes therein stated.

WITNESS my hand and official seal:

Signature of Notary Public

Print Name

JASON L. BURFORD
Notary Public, State of New York
Qualified in Erie County
Commission Expires 1/5/2023

Office Use Only

☐ SEQR is not required. ☐ 239M is applicable

☐ The applicant is also seeking a _____ which is attached.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

November 17, 2020

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-**2020-01247**

Earth Dimensions, Inc.
Attn: Thomas Somerville
1091 Jamison Road
Elma, New York 14059
Email: tsomerville@earthdimensions.com

Dear Mr. Somerville:

I have reviewed your request for an approved jurisdictional determination (JD) for the 21.51-acre subject parcel located at 595 Schoelles Road, in the City of Amherst, Erie County, New York.

Enclosed is an approved JD which verifies the limits of waters of the U.S. within the subject parcel as depicted on Sheet 3 of 3. This approved JD will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the approved JD before the expiration date. At the end of this period, a new aquatic resource delineation and JD will be required.

I have determined that the following aquatic resources are excluded waters as defined in the Navigable Waters Protection Rule as noted on the attached Interim Approved Jurisdictional Determination Form: Wetlands 1, 2, 3, 4, 5, 6, 7, and 8. Therefore, these aquatic resource(s) are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Department of the Army authorization is not required if you propose work or propose a discharge of dredged or fill material in these aquatic resources.

Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in your 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 United States Department of Agriculture (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.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01247

If you object to this determination, 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:

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 16, 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 716-879-4240, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: shaina.r.souder@usace.army.mil

Sincerely,

Shaina Souder

Shaina R. Souder
Biologist

Enclosures

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01247

CC:
Earth Dimensions, Inc
Scott Livingstone
1091 Jamison Road
Elma, New York 14095
Email: slivingstone@earthdimensions.com

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 11/17/2020
ORM Number: LRB-2020-01247
Associated JDs: N/A
Review Area Location[1]: State/Territory: New York City: Amherst County/Parish/Borough: Erie
Center Coordinates of Review Area: Latitude 43.04977 N Longitude -78.74606 W

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
LRB-2020-01247 Wetlands W1 (0.84 acre), W2 (0.57 acre), W3 (0.17 acre), W4 (0.99 acre), W5 (0.90 acre), W6 (0.52 acre), W7 (0.25 acre), W8 (0.05 acre)	4.29	acre(s)	(b)(1) Non-adjacent wetland.	Wetlands 1, 2, 3, 4, 5, 6, 7, and 8 do not meet the definition of an (a)(1), (a)(2), (a)(3), or (a)(4) water. Wetland 1 does meet the definition of a wetland, but does not abut an (a)(1)-(a)(3) water, is not separated from an (a)(1)-(a)(3) water by a natural berm or barrier, and is not separated from another water by a man made feature that has an engineered mechanism for water exchange in a typical year. The general landscape of the area is topographically flat with little slope resulting in little surface water flow/movement. Specifically, through the review of the submitted water resources report titled "Wetland and Waterbodies Delineation Report for Amherst Solar – 595 Schoelles Road, in the Town of Amherst, New York," dated August 24, 2020, the wetland boundaries on-site are surrounded by uplands with no surface water connections observed. Wetlands 1, 2, 4, 5, 6, and 7 extend off-site and based on in-office resource review the wetland boundaries off-site are also surrounded by upland area with no surface water connections. The nearest possible water is a possible (a)(2) tributary located approximately 1205 linear feet to the west of the subject parcel. That water is separated by a utility roadway between that location and the subject parcel, and there is no evidence of any of the wetlands abutting or exchanging water with this tributary. The wetland and surrounding uplands do not show any evidence of flood waters connecting the wetland, nor was it separated with a natural or artificial barrier preventing flows. Furthermore, there are borrow/stormwater detention ponds located off-site just to the south of Wetland 5. Based on the in-office resource review, Wetland 5 may abut these ponds, although they appear to be excluded stormwater features (b)(10) under the Navigable Waters Protection Rule. Therefore, it has been determined that Wetlands 1, 2, 3, 4, 5,

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
				6, 7, 8 are (b)(1) non-adjacent wetlands.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: A submitted water resources report from Earth Dimensions, Inc. titled "Wetland and Waterbodies Delineation Report for Amherst Solar – 595 Schoelles Road, in the Town of Amherst, New York," dated August 24, 2020.

This information is sufficient for purposes of this AJD.

Rationale: The report included details needed to make a jurisdictional determination and were concurred with during the 30SEP2020 Site Visit

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).

☒ Photographs: Aerial and Other: Aerials and oblique imagery from https://explorer.pictometry.com/index.php – dates 25APR2020 and 21NOV2019.

☒ Corps site visit(s) conducted on: 30SEP2020.

☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).

☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.

☒ USDA NRCS Soil Survey: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx – accessed on 29SEP2020 and included in waters report.

☒ USFWS NWI maps: https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/ - accessed 29SEP2020 and included in waters report.

☒ USGS topographic maps: https://livingatlas.arcgis.com/topoexplorer/index.html – accessed 17NOV2020. Reviewed USGS topographics from 1965 and 1980 (Quad:NY – Clarence Center)

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	N/A

B. Typical year assessment(s): The APT pulls precipitation data from NOAA's Daily Global Historical Climatology Network. The APT evaluates normal precipitation conditions based on the three 30-day periods preceding the observation date. For each period, a weighted condition value is assigned by determining whether the 30-day precipitation total falls within, above, or below the 70th and 30th percentiles for totals from the same date range over the preceding 30 years. The APT then makes a determination of "normal," "wetter than normal," or "drier than normal" based on the condition value sum. The APT also displays results generated via the Palmer Drought Severity Index and the University of Delaware WebWIMP.

Latitude Longitude Date PDSI Value PDSI Class Season ARC Score Antecedent Precip Condition

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

43.04977	-78.74606	8/24/2020 (Delineation Date)	-0.61	Incipient drought	Dry Season 9	Drier than Normal
43.04977	-78.74606	9/30/2020 (Site Visit Date)	-1.32	Mild drought	Wet Season 9	Drier than Normal
43.04977	-78.74606	4/25/2020 (Oblique Imagery)	-0.17	Normal	Wet Season 13	Normal Conditions
43.04977	-78.74606	11/21/2019 (Aerial/Oblique Imagery)	3.11	Severe wetness	Wet Season 15	Wetter than Normal

Based on the ATP report, the site visits in 2020 were conducted in a time when the area was drier than normal in the Wet and Dry seasons. The 25APR2020 oblique imagery shows normal conditions in the wet season and the 21NOV2019 aerial/oblique imagery shows wetter than normal conditions in the wet season. Since all of these dates did not reflect any surface flow conditions to/from the wetlands to/from any other waters amongst all conditions (drier than normal, normal, and wetter than normal), this supports that the wetlands are non-adjacent wetlands that do not contribute flow or exchange flow within a typical year.

C. Additional comments to support AJD: Based on the in-office resource review, including aerial imagery, USGS resources, among others stated above, the waters and wetlands delineation submitted by Earth Dimensions, Inc. dated 24AUG2020, and the site inspection on 30SEP2020, it has been determined that Wetlands 1, 2, 3, 4, 5, 6, 7, and 8 are (b)(1) non-adjacent wetlands.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

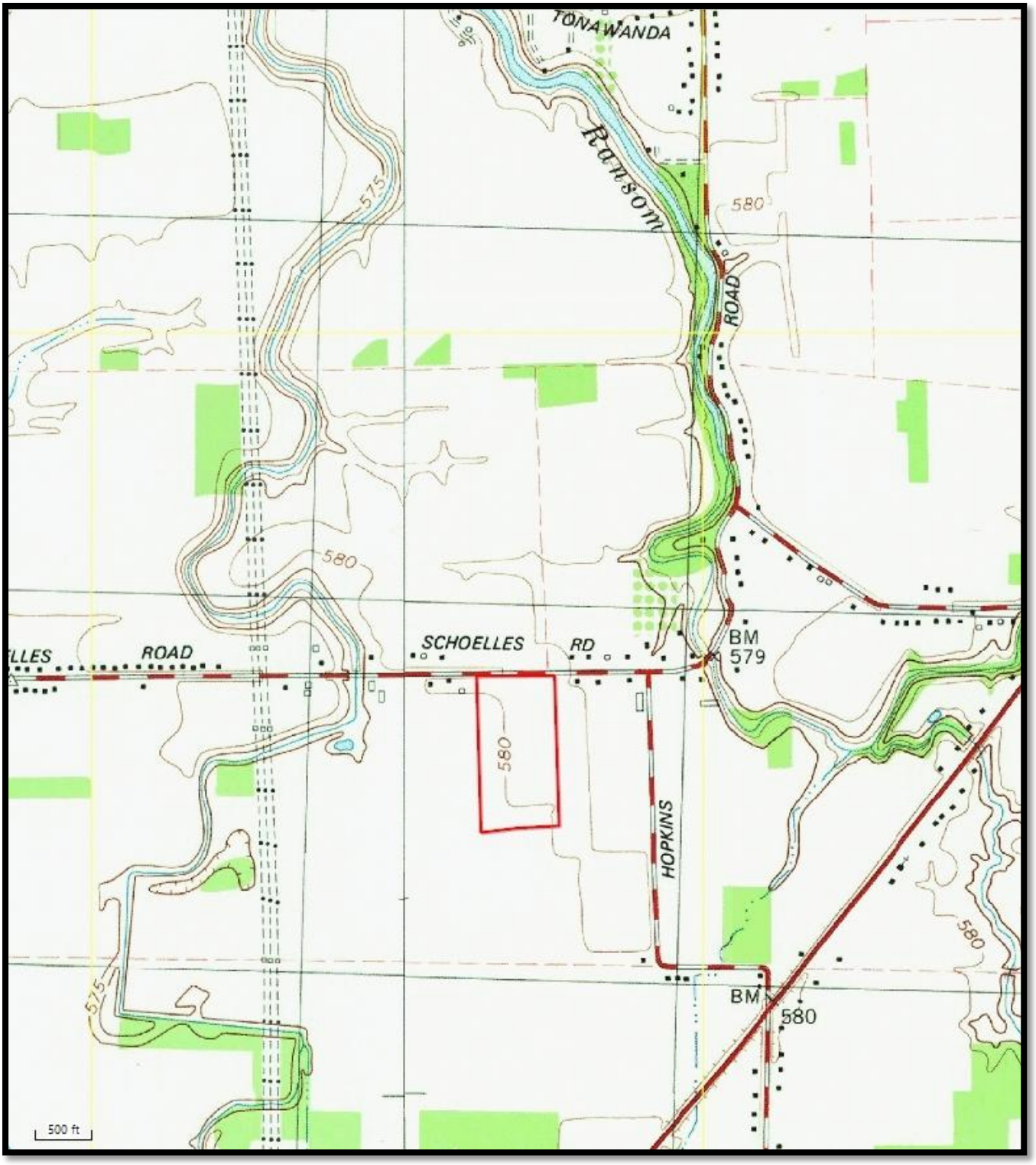


FIGURE 7: DRAINAGE MAP

Clarence Center Quadrangle / 2002 DeLorme

Amherst Solar

Town of Amherst, Erie County, New York

Greenman-Pederson, Inc.
LRB-2020-01247
Erie County, New York
Quad: Clarence Center
Sheet 1 of 3

EARTH DIMENSIONS, INC.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

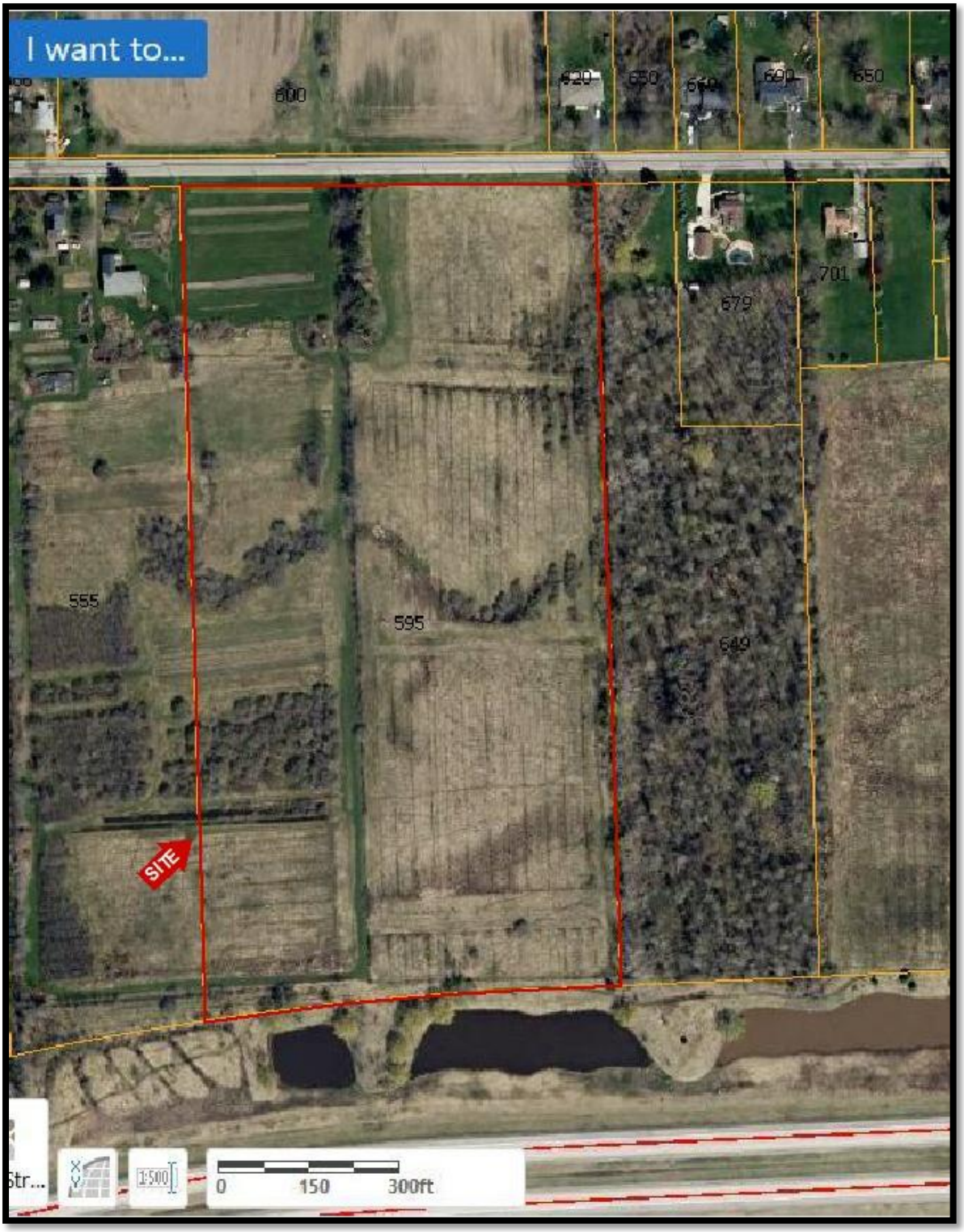


FIGURE 8: SITE AERIAL PHOTOGRAPH

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Greenman-Pederson, Inc.
LRB-2020-01247
Erie County, New York
Quad: Clarence Center
Sheet 2 of 3

EARTH DIMENSIONS, INC.

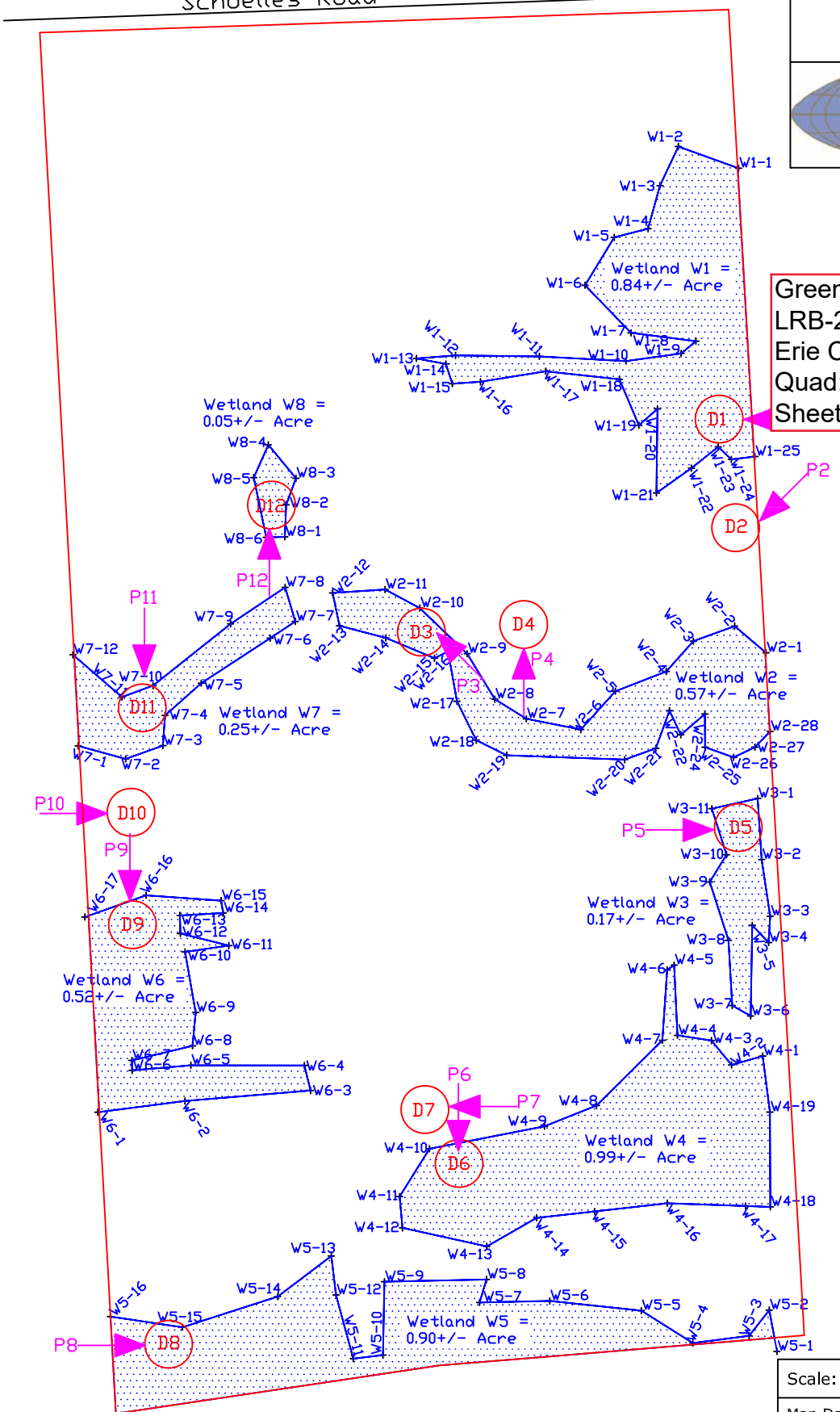
Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com

Greenman-Pederson, Inc.
LRB-2020-01247
Erie County, New York
Quad: Clarence Center
Sheet 3 of 3



Amherst Solar
LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale: 0 100' 200'

Map Date: August 21, 2020/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X GPS

File Name: Delineation map.dwg

EDI Project Code: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Greenman Pederson, Inc	File Number: LRB-2020-01247	Date: 11/17/2020
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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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:
Shaina R. Souder U.S. Army Corps of Engineers 1776 Niagara Street Buffalo, New York 14207 716-879-4240 Shaina.r.souder@usace.army.mil	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.		

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Wetland and Waterbodies Delineation Report

for

AMHERST SOLAR

595 Schoelles Road

Town of Amherst

Erie County, New York

for

Greenman-Pederson, Inc.



August 24, 2020
EDI Project Code: **W2H20a**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

REPORT SUMMARIZING
THE RESULTS OF
A WETLAND DELINEATION SURVEY OF

AMHERST SOLAR

595 Schoelles Road

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:

JASON BURFORD
GREENMAN-PEDERSON, INC.
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225

REPORT DATE: August 24, 2020

EDI PROJECT CODE: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

PROJECT INFORMATION

Project Name	Amherst Solar
Street Address	595 Schoelles Road
SBL Number	28.00-1-1.11
Town	Amherst
County	Erie
State	New York
Latitude/Longitude (NAD83)	43.04977°N, 78.74606°W
Investigation Area	21.51± Acres
USGS 7.5 Minute Topographical Map	Clarence Center Quadrangle
Waterway	N/A
Hydrologic Unit Code	04120104
Date of Delineation	August 20, 2020
Consultant	Earth Dimensions, Inc. 1091 Jamison Road Elma, New York 14059
Point of Contact	Scott Livingstone (716)655-1717 slivingstone@earthdimensions.com
Engineer	Greenman-Pederson, Inc.
Property Owner	Cimato Enterprises, Inc.
Authority	Section 404
Permit/Letter Being Requested	Jurisdictional Determination

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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EXECUTIVE SUMMARY

Greenman-Pederson, Inc. has proposed the development of a solar energy facility on a 21.51± acre parcel located along the south side of Schoelles Road in the Town of Amherst, County of Erie, and State of New York. Greenman-Pederson, Inc. 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 NRCS map indicates the potential for wetlands under federal 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 eight (8) wetland areas totaling 4.29± acres within the investigation area. No drainage features or open water areas were identified during the investigation. 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	43.05103	78.74505	W1-1 through W1-25	0.84±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 2	43.04996	78.74493	W2-1 through W2-28	0.57±	PEM1B	Emergent Marsh	Non-Jurisdictional
Wetland 3	43.04937	78.74487	W3-1 through W3-11	0.17±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 4	43.04875	78.74508	W4-1 through W4-19	0.99±	PEM1B	Emergent Marsh	Non-Jurisdictional

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Wetland 5	43.04823	78.74647	W5-1 through W5-16	0.90±	PEM/SS1B	Emergent Marsh	Non-Jurisdictional
Wetland 6	43.04920	78.74706	W6-1 through W6-17	0.52±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 7	43.04990	78.74719	W7-1 through W7-12	0.25±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 8	43.05050	78.74659	W8-1 through W8-6	0.05±	PSS1B	Scrub-shrub	Non-Jurisdictional
Total Wetland Acreage:				4.29±			

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SECTION I: INTRODUCTION

Greenman-Pederson, Inc. has proposed the development of a 21.51± acre parcel at 595 Schoelles Road in the Town of Amherst, County of Erie, and State of New York. The project has been given the name Amherst Solar and is located on USGS 7.5 minute quadrangle map indexed as Clarence Center/2002 DeLorme (Figure 1). The field work was completed on August 20, 2020 using a Trimble Geo 7X GPS to locate wetland and drainage boundaries.

Greenman-Pederson, Inc. 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 Amherst Solar project site.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SECTION II: SITE DESCRIPTION

The Amherst Solar project area is comprised of a 21.51± acre rectangular shaped investigation area on the south side of Schoelles Road, west of Hopkins Road and east of Campbell Boulevard, and is outlined on Figure 1 and depicted on the Wetland Delineation Map included in Appendix A (Figure 6). The southern limits of the site are bound by the Interstate 990 right-of-way.

The natural topography of the Amherst Solar site is flat to gently sloping. The upland within the investigation area consisted of a successional old field community. The wetland areas were found to consist of shallow emergent marsh and scrub-shrub swamp communities. The vegetative communities of the investigation area are described according to *Ecological Communities of New York State* (Edinger et al. 2014).

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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 Amherst Solar project site on the Clarence Center/2002 DeLorme quadrangle map. The figure depicts the flat to gently sloping topography of the site. No drainage features are depicted within 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 no wetlands within the investigation area.

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?
Lc	Lamson very fine sandy loam	Hydric Soil
Mh	Minoa very fine sandy loam	Inclusions Possible

Lamson Series: The Lamson series consists of very deep, poorly drained and very poorly drained soils formed in glacio-fluvial, glacio-lacustrine and deltaic deposits. They are level and nearly level soils in low areas on glacial lake plains. Slope ranges from 0 to 3 percent but is mostly less than 2 percent. Saturated hydraulic conductivity is moderately high through high in the mineral soil. Mean annual air temperature is 49°F and mean annual precipitation is 37 inches.

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Minoa Series: The Minoa series consists of very deep, somewhat poorly drained soils formed in deltaic sediments. They are nearly level or gently sloping soils on lowland lake plains. Permeability is moderate in the solum, and moderate or moderately rapid in the substratum. Slope ranges from 0 to 8 percent, mean annual temperature is about 49°F and mean annual precipitation is about 39 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. Lamson is a hydric soil 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.

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 hydric soils and soils with possible inclusions depicted within the project area as shown on the NRCS map (Figure 3). 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.

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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 41ºF. 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, twelve (12) data points were used to characterize the site.

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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.

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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.

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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 were labeled W1-1 through W1-25, W2-1 through W2-28, W3-1 through W3-11, W4-1 through W4-19, W5-1 through W5-16, W6-1 through W6-17, W7-1 through W7-12 and W8-1 through W8-6.

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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.

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SECTION V: RESULTS AND CONCLUSIONS

Earth Dimensions, Inc. (EDI) has completed a wetland delineation study at the Amherst Solar site located in the Town of Amherst, 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 eight (8) wetlands totaling 4.29± acres present within the Amherst Solar site. No drainage features or open waterbodies were identified within the investigation area.

Figure 5 depicts the vegetative communities as they existed at the time of the investigation. The uplands within the investigation area were comprised of a successional old field community. The wetland areas were found to consist of shallow emergent marsh and scrub-shrub swamp 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: eastern cottonwood (*Populus deltoides*), white ash (*Fraxinus americana*), green ash (*Fraxinus pennsylvanica*), Kentucky bluegrass (*Poa pratensis*), stickywilly (*Galium aparine*), Timothy (*Phleum pratense*), Queen Anne's lace (*Daucus carota*), Canada goldenrod (*Solidago canadensis*) and orchardgrass (*Dactylis glomerata*).

Wetland W1 is a 0.84± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), pussy willow (*Salix discolor*), broom sedge (*Carex scoparia*) and fox sedge (*Carex vulpinoidea*). Soils within wetland W1 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR4/1 with 10% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/8 mottles. The texture is loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W1 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W1 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W2 is a 0.57± acre emergent marsh dominated by green ash (*Fraxinus pennsylvanica*), Indianhemp (*Apocynum cannabinum*) and creeping bentgrass (*Agrostis stolonifera*). Soils within wetland W2 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR4/1 with 7%

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10YR5/8 mottles and a subsoil color of 10YR6/1 with 3% 10YR5/8 mottles. The texture is loam and silty clay. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W2 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W2 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W3 is a 0.17± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), creeping bentgrass (*Agrostis stolonifera*), broom sedge (*Carex scoparia*) and poison ivy (*Toxicodendron radicans*). Soils within wetland W3 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 8% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/6 mottles. The texture is loam and very fine sandy loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W3 included Water-Stained Leaves (B9). Wetland W3 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W3 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W4 is a 0.99± acre emergent marsh dominated by green ash (*Fraxinus pennsylvanica*), Indianhemp (*Apocynum cannabinum*) and purple loosestrife (*Lythrum salicaria*). Soils within wetland W4 are mapped as Lamson very fine sandy 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 and loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W4 included inundation visible on aerial imagery (B7) and Water-Stained Leaves (B9). Wetland W4 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W4 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W5 is a 0.90± acre emergent marsh/scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), pussy willow (*Salix discolor*), purple loosestrife (*Lythrum salicaria*) and reed canarygrass (*Phalaris arundinacea*). Soils within wetland W5 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/2 with 20% 10YR5/6 mottles. The texture is loam and very fine sandy loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W5 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W5 is not Federally jurisdictional

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under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W6 is a 0.52± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), pussy willow (*Salix discolor*), creeping bentgrass (*Agrostis stolonifera*) and tall goldenrod (*Solidago gigantea*). Soils within wetland W6 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 10% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/6-5/8 mottles. The texture is silt loam and loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W6 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W6 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W7 is a 0.25± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), pussy willow (*Salix discolor*), calico aster (*Symphyotrichum lateriflorum*), fowl mannagrass (*Glyceria striata*) and jumpseed (*Polygonum virginianum*). Soils within wetland W7 are mapped as Minoa very fine sandy 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 loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W7 included Water Marks (B1) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W7 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W8 is a 0.05± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), purple loosestrife (*Lythrum salicaria*), calico aster (*Symphyotrichum lateriflorum*) and fowl mannagrass (*Glyceria striata*). Soils within wetland W8 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR6/1 with 15% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W8 included Water Marks (B1) and Water-Stained Leaves (B9). Wetland W8 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W3 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

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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.

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SECTION VI: RECOMMENDATIONS

Eight (8) wetland areas 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 none of the wetlands identified are connected to an intermittent or perennial drainageway and therefore are not regulated by the USACE under Section 404 of the Clean Water Act. USACE approaches their regulatory analyses by first considering avoidance of wetlands and minimization of wetland losses. EDI recommends the following:

(1) Submit this report to USACE with a request for a wetland boundary confirmation and jurisdictional determination.

(2) If no impacts are proposed to federally regulated wetlands based on the outcome of the jurisdictional determination, it is the professional opinion of EDI that the project may proceed without the need for a Section 404 Permit.

(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 and Section 401 Water Quality Certification.

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AMHERST SOLAR

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX A - FIGURES

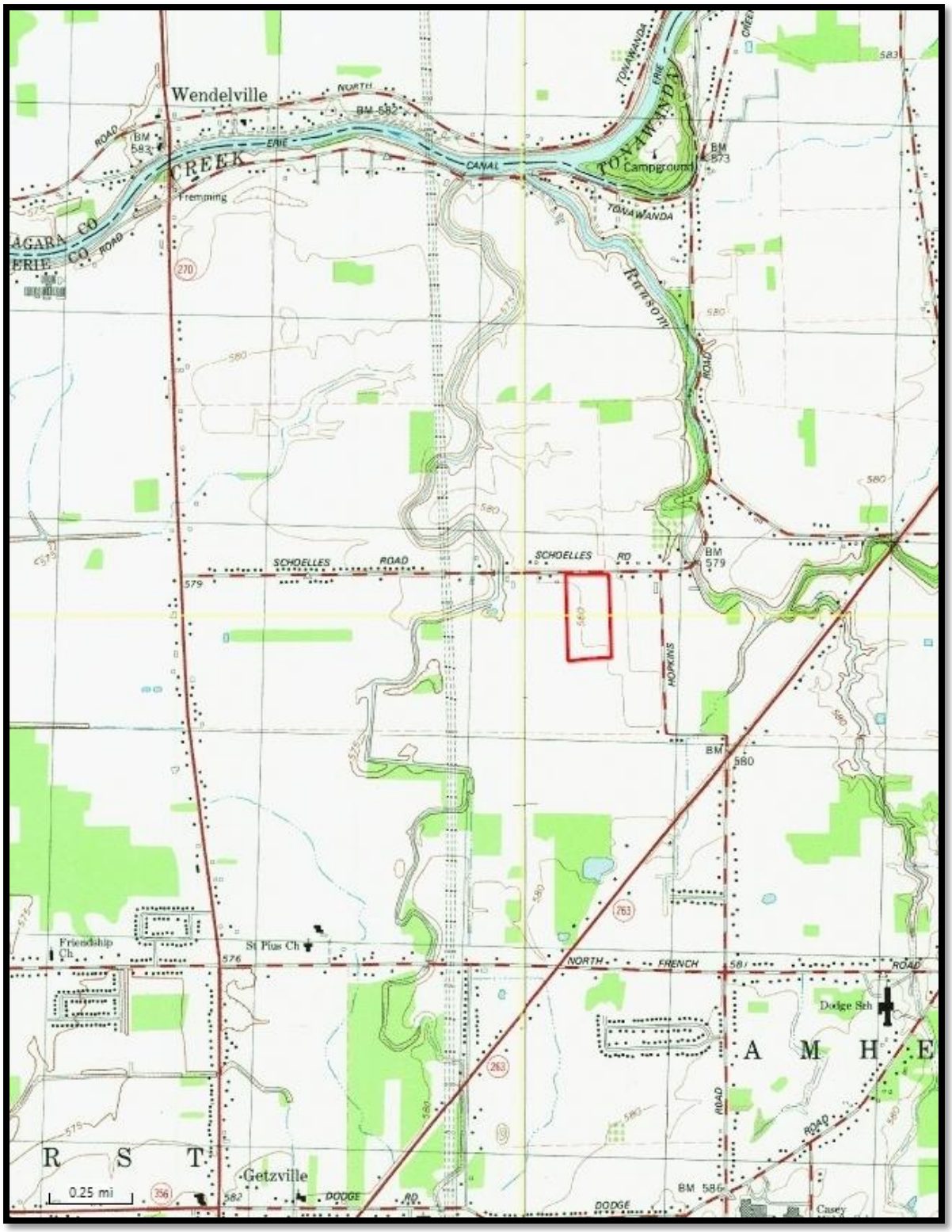


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / 2002 DeLorme

Amherst Solar

Town of Amherst, Erie County, New York

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FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

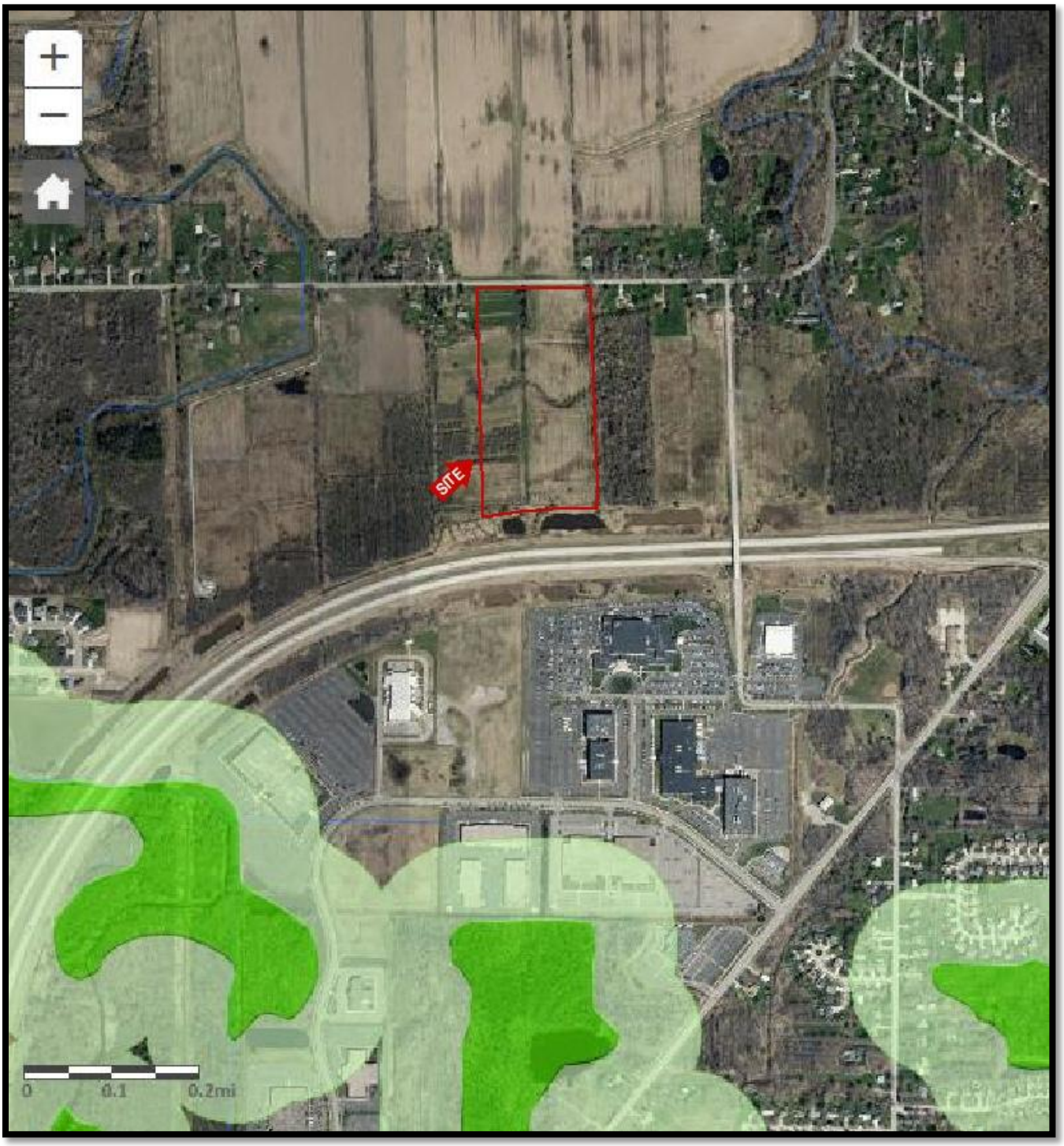


FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

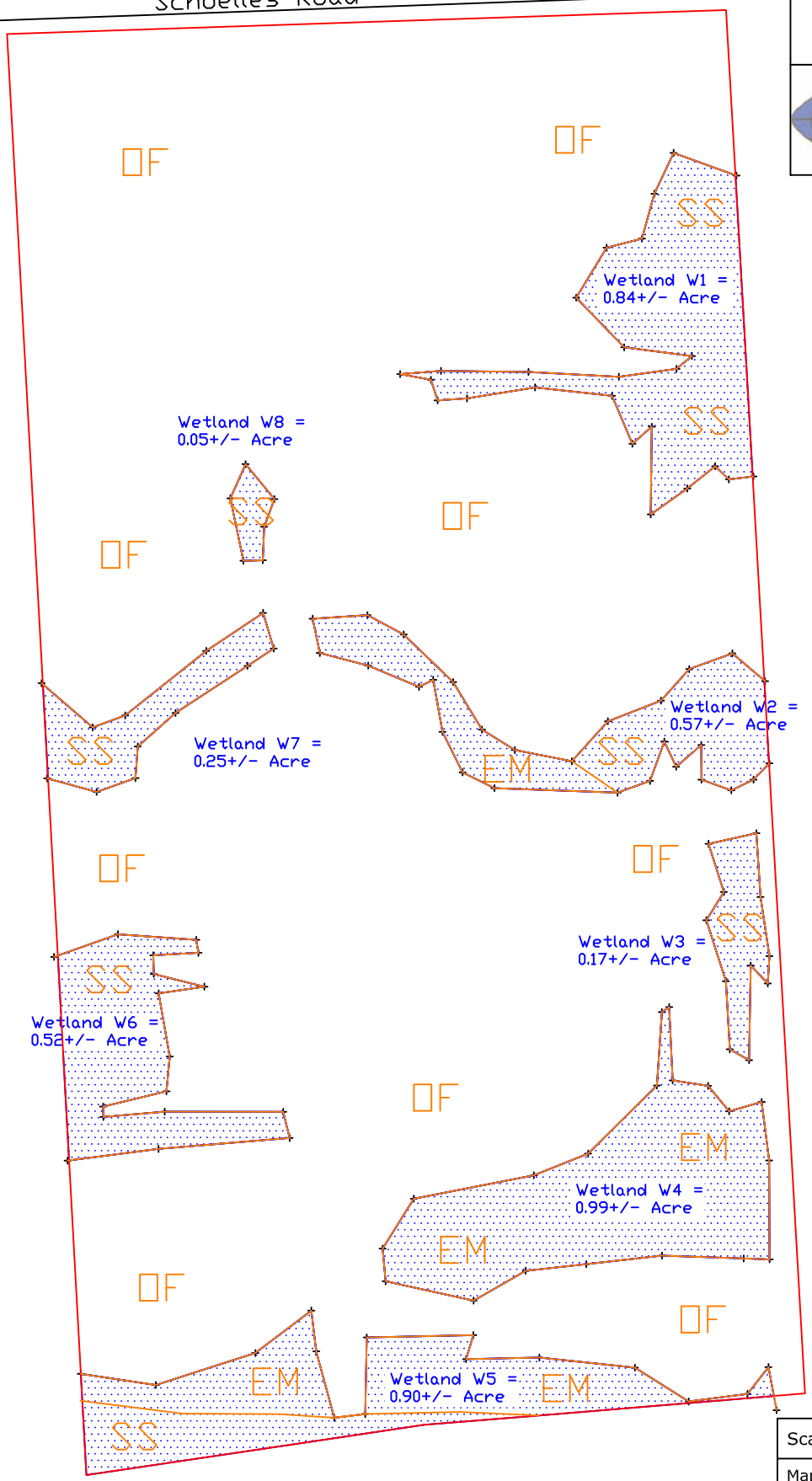
Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Schoelles Road

Figure 5 - General Vegetation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com



N
W E
S

Amherst Solar

LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- EM Emergent Marsh
- SS Scrub-shrub

Scale: 0 100′ 200′

Map Date: August 21, 2020/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X GPS

File Name: Delineation map.dwg

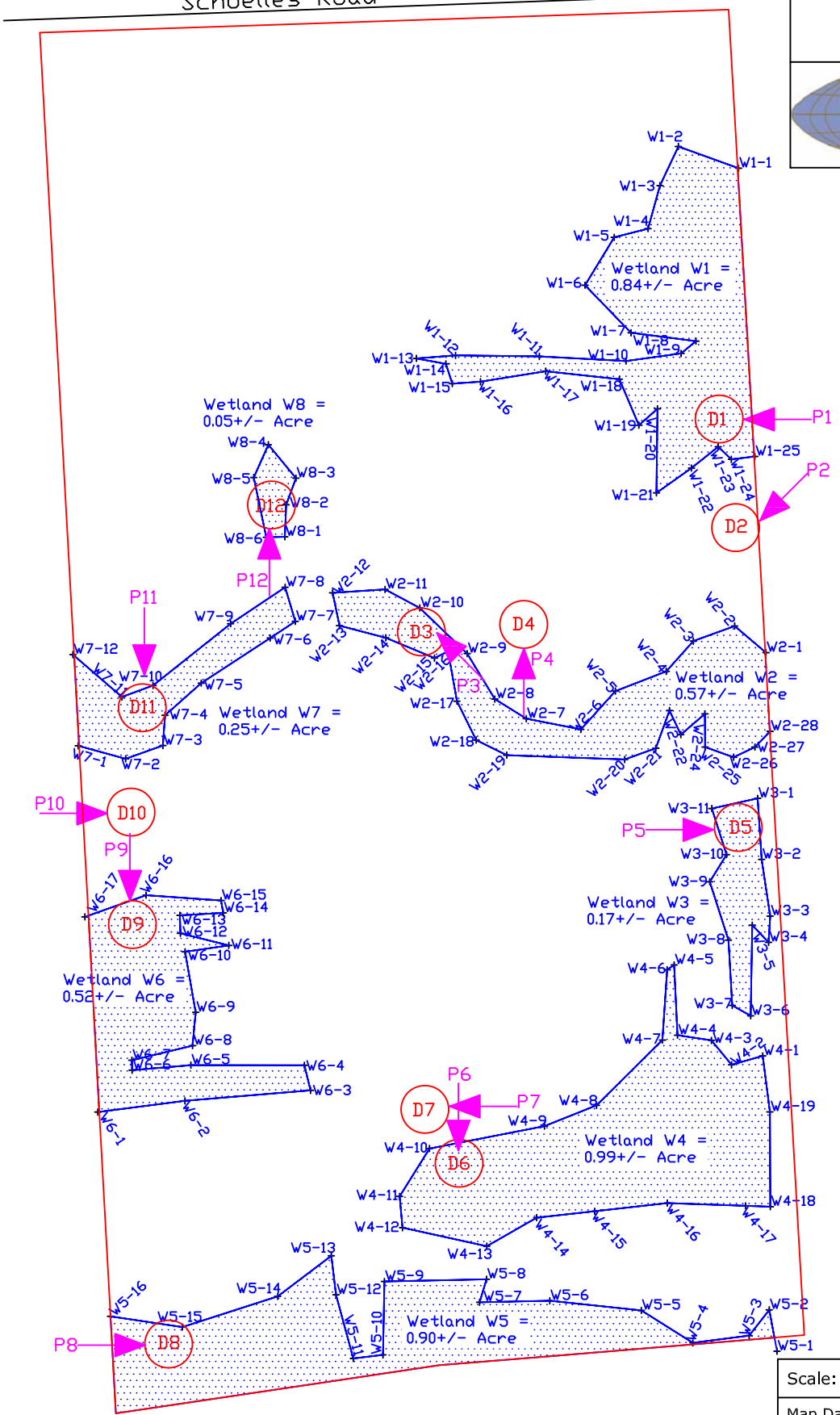
EDI Project Code: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

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(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com



Amherst Solar

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale: 0 100' 200'

Map Date: August 21, 2020/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X GPS

File Name: Delineation map.dwg

EDI Project Code: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

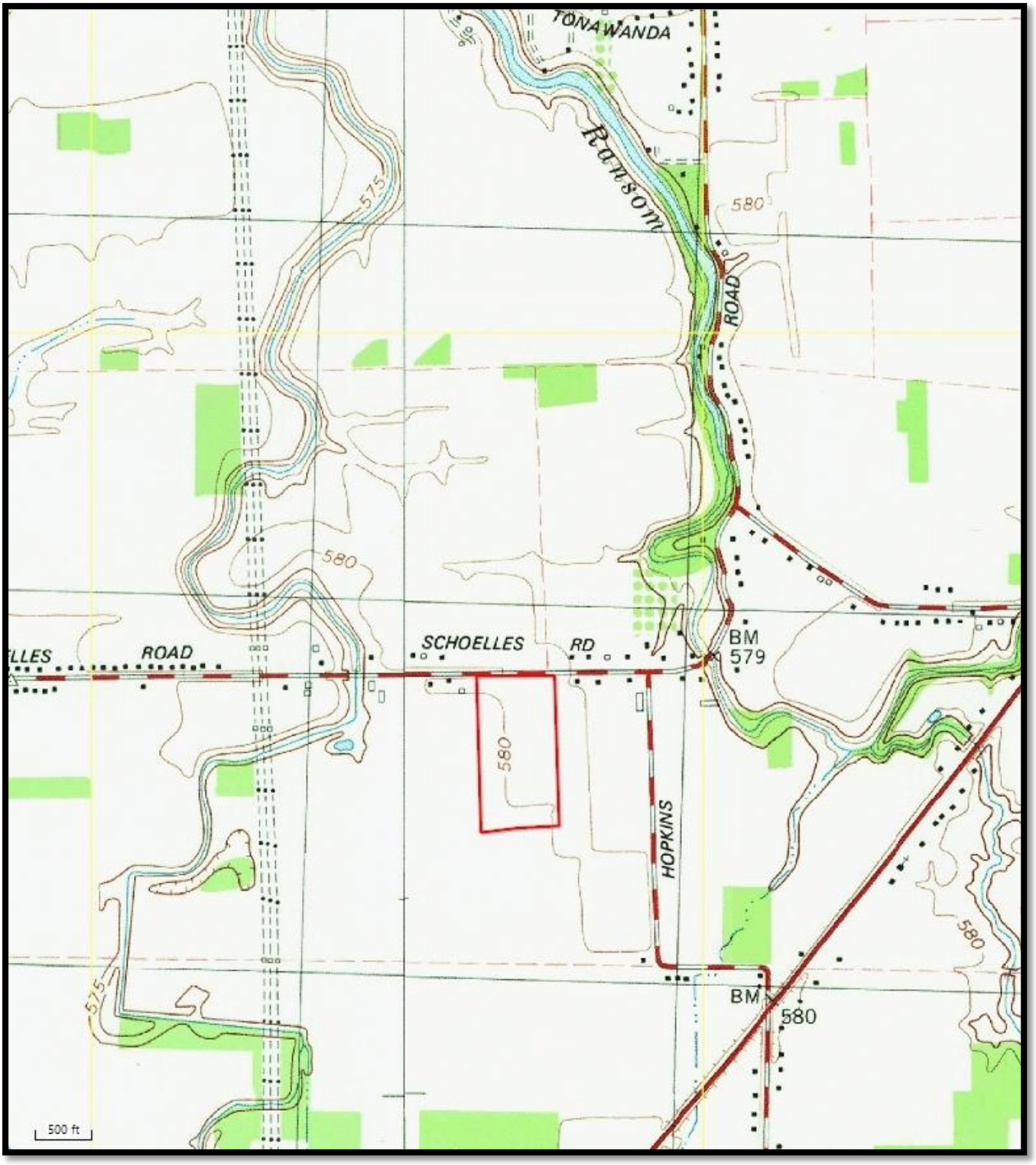


FIGURE 7: DRAINAGE MAP

Clarence Center Quadrangle / 2002 DeLorme

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

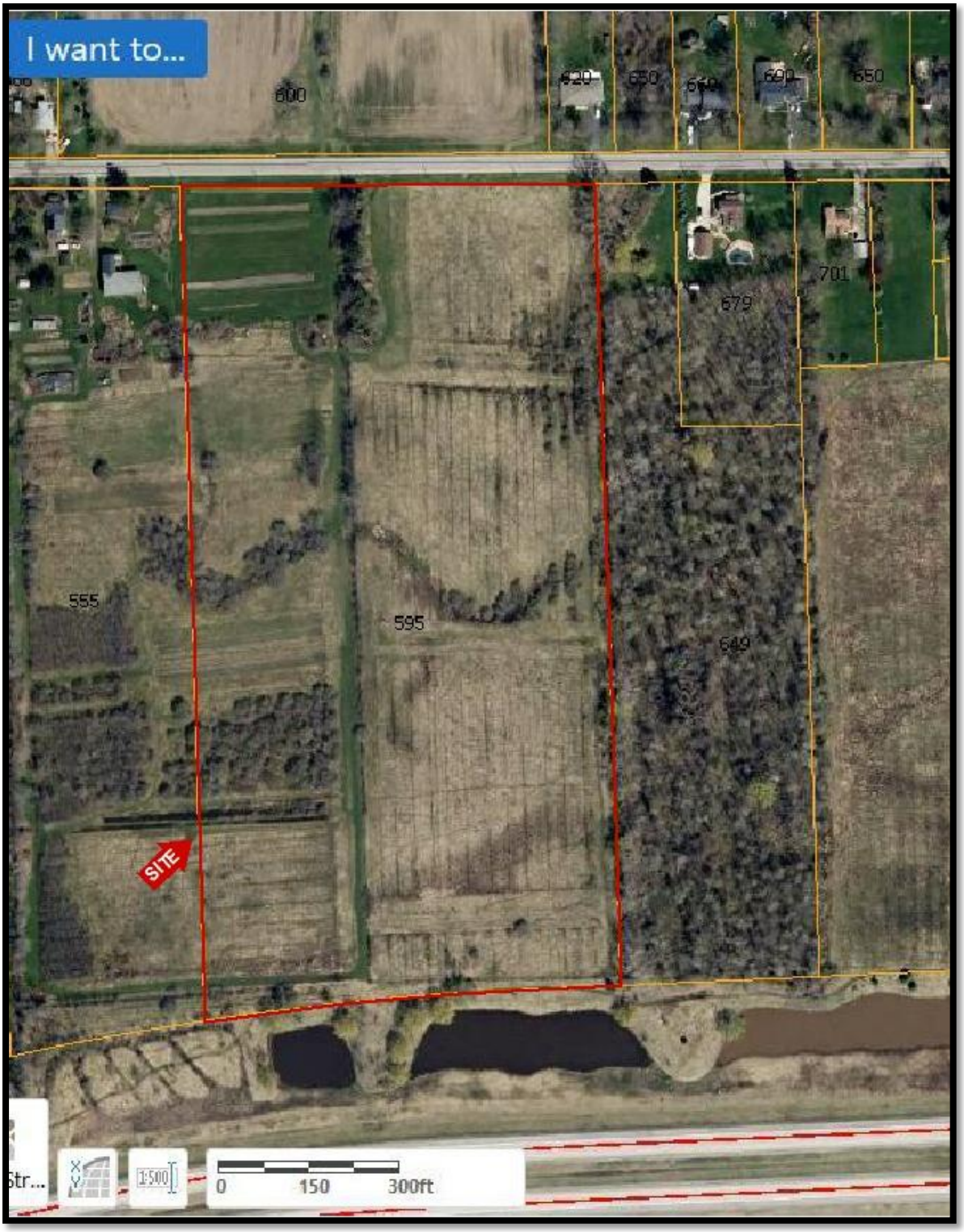


FIGURE 8: SITE AERIAL PHOTOGRAPH

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

AMHERST SOLAR

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX B – DATA SHEETS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D1

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): NONE Slope (%): 2-1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)

- W1-1- W1-26 (CLOSED)
- PHOTO 1 FACING NORTH

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants. Sampling Point: D1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix bebbiana	40	Y	FACW
2. Salix discolor	20	Y	FACW
3. Fraxinus pennsylvanica	8	N	FACW
4. Cornus amomum	5	N	FACW
5. Quercus palustris	4	N	FACW
6.			
7.			
	77 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Carex Scoparia	30	Y	FACW
2. Carex vulpinoidea	15	Y	OBL
3. Poa palustris	10	N	FACW
4. Symphyotrichum lateriflorum	8	N	FAC
5. Euthamia graminifolia	7	N	FAC
6. Juncus effusus	5	N	OBL
7. Anthoxanthum odoratum	5	N	FACU
8. Prunella vulgaris	3	N	FAC
9. Lycopus americana	2	N	OBL
10. Glyceria striata	1	N	OBL
11.			
12.			
	96 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [X] 1 - Rapid Test for Hydrophytic Vegetation
- [ ] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is < 3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-shrub PSS1B

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P1 **Direction of Photo** West

Wetland W1

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	90	10YR 5/8	10	C	M	L	
8-16	10YR 5/1	80	10YR 5/8	20	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: DZ

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season W ater Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	9	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	9 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus americana	25	Y	FACU
2. Populus deltoides	5	N	FAC
3. Salix discolor	4	N	FACW
4.			
5.			
6.			
7.			
	34 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Poa pratensis	40	Y	FACU
2. Galium aparine	15	Y	FACU
3. Phleum pratense	12	N	FACU
4. Solidago juncea	10	N	FACU
5. Solidago canadensis	7	N	FACU
6. Daucus carota	7	N	FACU
7. Taraxacum officinale	5	N	FACU
8. Ranunculus acris	2	N	FAC
9.			
10.			
11.			
12.			
	98 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P2 **Direction of Photo** Southwest

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR4/2	100					l	
7-16	10YR5/4	85	10YR5/6	15	C	M	vfsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes ____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D3

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W2

Remarks: (Explain alternative procedures here or in a separate report.)

• W2-1 - W2-28 (CLOSED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Apocynum Cannabinum	30	Y	FAC
2. Agrostis Stolonifera	20	Y	FACW
3. Asclepias incarnata	15	N	OBL
4. Scirpus Cyperinus	6	N	OBL
5. Lythrum Salicaria	5	N	FACW
6. Fraxinus pennsylvanica	5	N	FACW
7. Lycopus americana	4	N	OBL
8. Carex vulpinoidea	3	N	OBL
9. Carex tribuloides	3	N	FACW
10. Daucus Carota	2	N	FACU
11. Vicia americana	1	N	FACU
12.			
	94 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEMZB

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P3 **Direction of Photo** North west

Wetland W2

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR4/1	93	10YR5/6	7	C	M	L	
10-16	10YR6/1	97	10YR5/6	3	C	M	SiC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D4

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

- UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season W ater Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	10	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	25	Y	FACU
2. Phleum pratense	20	Y	FACU
3. Daucus carota	14	Y	FACU
4. Asclepias syriaca	12	N	UPL
5. Festuca rubra	10	N	FACU
6. Galium mollugo	10	N	FACU
7. Solidago canadensis	6	N	FACU
8. Symphyotrichum ericoides	3	N	FACU
9. Carex tribuloides	2	N	FACW
10. Taraxacum officinale	2	N	FACU
11. Solidago juncea	2	N	FACU
12. Euthamia graminifolia	1	N	FAC
	107 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P4 **Direction of Photo** North

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR4/2	100					l	
7-16	10YR5/3	80	10YR5/6	10	C	M	SiL	
			10YR5/1	10	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D5

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W3

Remarks: (Explain alternative procedures here or in a separate report.)

- W3-1 – W3-14 (CLOSED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: DS

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix bebbiana	45	Y	FACW
2. Fraxinus pennsylvanica	15	N	FACW
3. Salix discolor	10	N	FACW
4. Spiraea alba	8	N	FACW
5. Frangula alnus	8	N	FAC
6.			
7.			
	86 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Agrostis stolonifera	15	Y	FACW
2. Carex scoparia	12	Y	OBL
3. Eutthamia graminifolia	10	N	FAC
4. Lythrum salicaria	8	N	FACW
5. Solidago gigantea	4	N	FACW
6. Ranunculus acris	3	N	FAC
7. Daucus carota	1	N	FACU
8. Prunella vulgaris	1	N	FAC
9.			
10.			
11.			
12.			
	54 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. Toxicodendron radicans	8	Y	FAC
2.			
3.			
4.			
	8 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub Shrub PSS 2B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P5 **Direction of Photo** East

Wetland W3

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Project Code: W2H20a

1.a

SOIL

Sampling Point: B5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR3/1	92	10YR5/8	8	C	M	L	
5-16	10YR5/1	80	10YR5/6	20	C	M	vFSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D6

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depressio Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W4

Remarks: (Explain alternative procedures here or in a separate report.)

CLOSED SCRUB/SHRUB WETLAND (ISOLATED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants. Sampling Point: D6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	7	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	7 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Apocynum Cannabinum	40	Y	FAC
2. Lythrum Salicaria	25	Y	FACW
3. Agrostis Stolonifera	15	N	FACW
4. Carex vulpinoidea	10	N	OBL
5. Euthamia graminifolia	6	N	FAC
6. Carex Scoparia	6	N	OBL
7. Symphyotrichum lateriflorum	4	N	FAC
8. Juncus effusus	3	N	OBL
9. Phleum pratense	2	N	FACU
10. Solidago gigantea	2	N	FACW
11. Carex tribuloides	2	N	FACW
12.			
	115 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEM1B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P6 **Direction of Photo** South

Wetland W4

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL Sampling Point: D6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR3/1	95	10YR5/8	5	C	PL	SiL	
10-16	10YR6/1	90	10YR5/8	10	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D7

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D7

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5')			
1. Poa pratensis	25	Y	FACU
2. Daucus Carota	18	Y	FACU
3. Phleum pratense	15	Y	FACU
4. Dactylis glomerata	10	N	FACU
5. Apocynum Cannabinum	7	N	FAC
6. Euthamia graminifolia	7	N	FAC
7. Lythrum Salicaria	5	N	FACW
8. Solidago juncea	5	N	FACU
9. Festuca rubra	5	N	FACU
10. Symphyotrichum ericoides	3	N	FACU
11. Ranunculus repens	2	N	FAC
12. Solidago nemoralis	2	N	FACU
	104	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P7 **Direction of Photo** West

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: DP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100					l	
8-16	10YR 5/6	95	10YR 5/8	5	C	M	vfsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D8

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PEM/SS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID: W5

Remarks: (Explain alternative procedures here or in a separate report.)

W5-1- W5-16 (OPEN TO WEST)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres on Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- __ Surface Soil Cracks (B6)
- __ Drainage Patterns (B10)
- __ Moss Trim Lines (B16)
- __ Dry-Season W ater Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D8

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	18	Y	FACW
2. Salix discolor	15	Y	FACW
3. Cornus amomum	3	N	FACW
4.			
5.			
6.			
7.			
	36 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Lythrum Salicaria	30	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Euthamia graminifolia	16	N	FAC
4. Carex tribuloides	8	N	FACW
5. Solidago gigantea	5	N	FACW
6. Apocynum Cannabinum	3	N	FAC
7. Phleum pratense	3	N	FACU
8. Juncus effusus	2	N	OBL
9.			
10.			
11.			
12.			
	87 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is < 3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEM1/SS7B

Hydrophytic Vegetation Present? Yes X No __

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P8 **Direction of Photo** East

Wetland WS

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/1	95	10YR5/8	5	C	M	L	
8-16	10YR5/2	80	10YR5/6	20	C	M	VFSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes Y No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Project Code: W2H20a

1.a

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D9

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): C1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID:	WG

Remarks: (Explain alternative procedures here or in a separate report.)

- W6-1- W6-17 (OPEN TO WEST)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D9

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix discolor	30	Y	FACW
2. Salix bebbiana	30	Y	FACW
3. Cornus racemosa	10	N	FAC
4. Cornus amomum	8	N	FACW
5.			
6.			
7.			
	78 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Agrostis stolonifera	15	Y	FACW
2. Solidago gigantea	6	Y	FACW
3. Solidago rugosa	4	N	FACW
4. Carex scoparia	3	N	OBL
5. Lythrum salicaria	2	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is < 3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-Shrub PSS1B

Hydrophytic Vegetation Present? Yes X No __

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P9 **Direction of Photo** South

Wetland W6

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/1	90	10YR 5/8	10	C	M	SiL	
9-16	10YR 5/1	80	10YR 5/4-5/8	20	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D10

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

o UPLAND FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres on Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- __ Surface Soil Cracks (B6)
- __ Drainage Patterns (B10)
- __ Moss Trim Lines (B16)
- __ Dry-Season W ater Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D10

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus americana	8	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	8 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Solidago Canadensis	20	Y	FACU
2. Dactylis glomerata	15	Y	FACU
3. Poa pratensis	15	Y	FACU
4. Symphyotrichum ericoides	13	N	FACU
5. Daucus Carota	12	N	FACU
6. Phleum pratense	8	N	FACU
7. Solidago juncea	6	N	FACU
8. Anthoxanthum odoratum	3	N	FACU
9. Lythrum Salicaria	2	N	FACW
10. Carex vulpinoidea	2	N	OBL
11. Juncus effusus	1	N	OBL
12. Dipsacus fullonum	1	N	FACU
	98 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P10 **Direction of Photo** East

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: A10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR4/2	100					SiL	
8-16	10YR5/4	85	10YR5/6	15	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D11

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: Minoa very fine Sandy loam NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W7

Remarks: (Explain alternative procedures here or in a separate report.)

- W7-1 – W7-12 (OPEN TO WEST)
- WILLOWS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D11

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	8	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	8	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix discolor	60	Y	FACW
2. Fraxinus pennsylvanica	10	N	FACW
3. Cornus racemosa	6	N	FAC
4. Salix bebbiana	5	N	FACW
5.			
6.			
7.			
	81	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Symphyotrichum lateriflorum	12	Y	FAC
2. Glyceria striata	10	Y	OBL
3. Polygonum virginianum	8	Y	FAC
4. Euthamia graminifolia	6	N	FAC
5. Carex scoparia	5	N	OBL
6. Epilobium coloratum	4	N	OBL
7. Lythrum salicaria	2	N	FACW
8. Geum aleppicum	1	N	FAC
9.			
10.			
11.			
12.			
	48	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrb-shrb PSSZB

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P11 **Direction of Photo** South

wetland W7

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/1	95	10YR5/6	5	C	M	SiL	
6-16	10YR5/1	85	10YR5/8	15	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D12

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: WB

Remarks: (Explain alternative procedures here or in a separate report.)

WB-1 - WB-6 (CLOSED / ISOLATED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D12

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	65	Y	FACW
2. Cornus racemosa	10	N	FAC
3. Salix discolor	10	N	FACW
4.			
5.			
6.			
7.			
	85 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Lythrum Salicaria	12	Y	FACW
2. Symphyotrichum lateriflorum	6	Y	FAC
3. Glyceria striata	5	Y	OBL
4. Geum aleppicum	1	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	24 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-shrub PSS 7B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P12 **Direction of Photo** North

Wetland W8

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR3/1	95	10YR5/8	5	C	M	S.L	
5-16	10YR6/1	85	10YR5/8	15	C	M	S.L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

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AMHERST SOLAR

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APPENDIX C - SITE PHOTOGRAPHS



Photo 1: Facing west. Depicts the scrub-shrub swamp community of wetland W1 at data point D1.



Photo 2: Facing southwest. Depicts the successional old field community at data point D2.



Photo 3: Facing northwest. Depicts the emergent marsh community of wetland W2 at data point D3.



Photo 4: Facing north. Depicts the successional old field community at data point D4.



Photo 5: Facing east. Depicts the scrub-shrub swamp community of wetland W3 at data point D5.



Photo 6: Facing south. Depicts the emergent marsh community of wetland W4 at data point D6.

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Photo 7: Facing west. Depicts the successional old field community at data point D7.



Photo 8: Facing east. Depicts the emergent marsh community of wetland W5 at data point D8.



Photo 9: Facing south. Depicts the scrub-shrub swamp of wetland W6 at data point D9.



Photo 10: Facing east. Depicts the successional old field community at data point D10.



Photo 11: Facing south. Depicts the scrub-shrub swamp community of wetland W7 at data point D11.



Photo 12: Facing north. Depicts the scrub-shrub swamp community of wetland W8 at data point D12.

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AMHERST SOLAR

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX D - REFERENCES

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AMHERST SOLAR

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APPENDIX E - WETLAND INVESTIGATION PERSONNEL

Soils and Hydrology Sampling
Scott Livingstone, Senior Soil Scientist
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(716) 655-1717

Vegetation Sampling
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Report Preparation
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Surveyor of Flag Locations

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ENGINEER'S REPORT

Amherst Solar Farm
595 Schoelles Road

Town of Amherst

Prepared for:

Amherst Community Solar, LLC
412 South 13th Street
Unit 607
Philadelphia, PA 19147



Prepared by:

GPI
Greenman-Pedersen, Inc.
4950 Genesee Street, Suite 100
Buffalo, New York 14225

GPI No. WNY-2020071.00

November 2020

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EXHIBITS UNIQUE TO SOLAR DEVELOPMENT

Amherst Solar Decommissioning Plan including NYSERDA Fact Sheet

Maintenance Plan for Vegetation and Pollination

OTHER EXHIBITS

1. Site Location Map
2. Existing Site Conditions Map
3. Wetland and Waterbodies Delineation Report

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

ENGINEER'S REPORT
AMHERST SOLAR FARM
TOWN OF AMHERST

I. Introduction

The proposed development, Amherst Solar Farm, is located in the Town of Amherst as part of Lot 52, Township 13, Range 7, of the Holland Land Survey (SBL 28.00-1-1.11). The proposed development parcel is 21.5± acres and is bounded on the north by the south line of Schoelles Road right-of-way, bounded on the west by lands now or formerly owned by Luther Meyer, bounded on the south by the NYS Route 990 right-of-way, and on the east by lands now or formerly owned by The Uniland Partnership.

The development will consist of approximately 15.2 acres of ground mounted solar arrays, approximately 75 feet of stone access road, and various support items for the proper functioning of the energy collecting system.

The project is scheduled for a construction start in spring of 2021.

Due to no occupancy on the site, no water or sanitary sewer service will be required.

All temporary erosion & sediment control measures have been designed to reflect current NYSDEC and Town of Amherst standards.

The main text of this report summarizes the development of design. Supplemental information, forms, etc., are listed as exhibits and a full set of engineered plans have been provided separately for review and reference.

II. Discussion

A. Sanitary Service

None

B. Water Service

None

C. Stormwater Management

The proposed Amherst Solar Farm is located on the south side of Schoelles Road west of Hopkins Road in the Town of Amherst, Erie County, NY. Runoff from the site and contributing offsite areas sheet flow to an onsite shallow ditch located approximately in the center of the parcel that flows to existing stormwater ponds to the south. Stormwater ultimately discharges into Ransom Creek and then to Tonawanda Creek. No changes to the grading of the site are proposed, so there will be no changes necessary to the existing stormwater patterns. The separately prepared Storm Water Pollution Prevention Plan (SWPPP) provides further detail of the site and drainage characteristics.

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D. Project Narrative

As part of the quest for alternative forms of energy, the development of solar farms has continued increase across the country, the continent, and the world. This project is one of many currently being proposed in the Western New York area. Parcels of vacant land that are not suited for development due to environmental or other restrictions are becoming prime candidates for solar development due to the regulatory agencies that are now relaxing requirements or thresholds for such forms of development. Both federal and state agencies are encouraging amendments to local laws to support the development of solar projects as is being done in the Town of Amherst.

This particular development to be located at 595 Schoelles Road in the Town of Amherst will occupy approximately 16 acres and be in compliance with all set back requirements for the solar compound – 100 feet to the southern ROW of Schoelles Road, 50 feet to the eastern and western property lines, and 50 feet to the SR 990 Expressway to the south. A limited use stone/gravel access driveway is proposed to be located in the northwest corner of the property with a screening landscape berm to the west. Landscape plantings within the front yard set back have been designed to complement the rural characteristics while protecting as much existing plantings as possible. The view from the Lockport Expressway to the south is severely limited due to the 300 feet of vegetation between the roadside and the solar compound. The existing vegetation includes numerous large willow trees in excess of 75 feet in height and 40 feet in spread.

The solar compound is surrounded by a 6 foot high chain link fence with vinyl screening and painted black posts and hardware. The intent is to drastically reduce any view of the solar equipment from the surrounding properties. The majority of fence posts will be driven without the additional soil disturbance cause by concrete foundations.

As required by the Town, the connection to the utility grid will be limited to one upright utility pole with the majority of the equipment necessary to be ground mounted on a concrete pad – again drastically reducing the visual impact of the project. There will be 3 separate equipment locations within the compound for switchgear, etc. required for the operation of the solar facility. Some equipment will be located on concrete pads while others shall be directly driven foundations to limit the soil disturbance. The solar arrays themselves will be supported by a track mounted system that is mounted on directly driven posts without the need for concrete foundations and the additional soil disturbance. The non-jurisdictional wetlands recently delineated on the property will be unaffected by the solar project since the governing agency considers solar arrays as pervious as the existing conditions.

There is also no exterior lighting proposed for the facility. It is anticipated that inspection visits to the facility during operation will only occur as necessary and on a very limited basis. Site maintenance will occur on a regular basis as necessary to keep vegetation visually pleasing. The mix of grasses and vegetative cover along with the potential use of domestic animals for limited

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maintenance of such is addressed in the separate Maintenance Plan for Vegetation and Pollination found in the Exhibits attached hereto.

The decommissioning of the solar facility at the end of its useful life has been planned and clearly accounted for within the attached Exhibit entitled Amherst Solar Decommissioning Plan.

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EXHIBITS

UNIQUE TO SOLAR DEVELOPMENT

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Amherst Community Solar Decommissioning Plan

At the completion of the expected life of the Solar Energy Facility, the entire system will be removed by the applicant or the subsequent owner. The decommissioning process will include removing and restoring all solar facility equipment, equipment pads, underground wiring/conduits, fencing, and access roads to a depth of 4'.

The applicant will also meet the requirements of the Town of Amherst by providing either a decommissioning bond in a form satisfactory to the Town and Planning Board, or depositing funds into an escrow account.

The decommissioning process will be completed as follows:

- All items with resale value, including transformers and solar panels, will be removed from the site and sold for fair market value.
- All aluminum, steel, and other metal parts without resale value will be sold for scrap value
- All items with no resale or scrap value will be removed from the site, and recycled where applicable, and otherwise disposed of in accordance with all local laws and regulations.
- No hazardous materials will be used in the construction of the solar project, and there will be no hazardous waste to remove during the decommissioning process. The solar panels are manufactured from silicon crystalline technology, and include only the silicon-based cells, aluminum frame, glass coating, copper wire connections, plastic junction box, and rubberized backing material.

Note: It is widely believed that the resale value and scrap value alone will exceed the costs of system removal. Solar panels themselves, which carry a limited power warranty of >80% of their rated capacity after 25 years, may cover most, if not all, of the costs of decommissioning.

Based on NYSERDA's estimate of decommissioning costs for a 2 MW project (enclosed), this 3.5 MW-AC project would carry the following budgetary costs for decommissioning (see following page):

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Item	Estimated Cost	
Remove Rack Wiring	$	4,303.25
Remove Panels	$	4,287.50
Dismantle Racks	$	21,612.50
Remove Electrical Equipment	$	3,237.50
Breakup and Remove Concrete Pads	$	2,625.00
Remove Racks	$	13,650.00
Remove Cable	$	11,375.00
Remove Ground Screws and Power Poles	$	24,237.50
Remove Fence	$	8,662.50
Grading	$	7,000.00
Seed Disturbed Area	$	437.50
Truck to Recycling Center	$	3,937.50
Total	**$**	**105,365.75**
Total after 25 years (2.5% inflation rate)	**$**	**195,342.21**

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FACT SHEET

DECOMMISSIONING SOLAR PANEL SYSTEMS

NEW YORK STATE OF OPPORTUNITY. | NY-Sun

This fact sheet provides information to local governments and landowners on decommissioning of large-scale solar panel systems.

As local governments develop solar regulations and landowners negotiate land leases, it is important to understand the options for decommissioning solar panel systems and restoring project sites to their original status.

From a land use perspective, solar panel systems are generally considered large-scale when they constitute the primary use of the land, and can range from less than one acre in urban areas to 10 or more acres in rural areas. Depending on where they are sited, large-scale solar projects can have habitat, farmland, and aesthetic impacts. As a result, large-scale systems must often adhere to specific development standards.

Abandonment and decommissioning defined

Abandonment occurs when a solar array is inactive for a certain period of time.

- Abandonment requires that solar panel systems be removed after a specified period of time if they are no longer in use. Local governments establish timeframes for the removal of abandoned systems based on aesthetics, system size and complexity, and location. For example, the Town of Geneva, NY, defines a solar panel system as abandoned if construction has not started within 18 months of site plan approval, or if the completed system has been nonoperational for more than one year.[1]
- Once a local government determines a solar panel system is abandoned, and has provided thirty (30) days prior written notice to the owner it can take enforcement actions, including imposing civil penalties/fines, and removing the system and imposing a lien on the property to recover associated costs.

Decommissioning is the process for removing an abandoned solar panel system and remediating the land.

- When describing requirements for decommissioning sites, it is possible to specifically require the removal of infrastructure, disposal of any components, and the stabilization and re-vegetation of the site.

What is a decommissioning plan?

Local governments may require to have a plan in place to remove solar panel systems at the end of their lifecycle, which is typically 20-40 years. A decommissioning plan outlines required steps to remove the system, dispose of or recycle its components, and restore the land to its original state. Plans may also include an estimated cost schedule and a form of decommissioning security (see Table 1).

What is the estimated cost of decommissioning?

Given the potential costs of decommissioning and land reclamation, it is reasonable for landowners and local governments to proactively consider system removal guarantees. A licensed professional engineer, preferably with solar development experience, can estimate decommissioning costs, which vary across the United States. Decommissioning costs will vary depending upon project size, location, and complexity. Table 1 provides an estimate of potential decommissioning costs for a ground-mounted 2-MW solar panel system. Figures are based on estimates from the Massachusetts solar market. Decommissioning costs for a New York solar installation may differ. Some materials from solar installations may be recycled, reused, or even sold resulting in no costs or compensation. Consider allowing a periodic reevaluation of decommissioning costs during the project's lifetime by a licensed professional engineer, as costs could decrease and the required payment should be reduced accordingly.

Table 1: Sample list of decommisioning tasks and estimated costs

Tasks	Estimated Cost ($)
Remove Rack Wiring	$2,459
Remove Panels	$2,450
Dismantle Racks	$12,350
Remove Electrical Equipment	$1,850
Breakup and Remove Concrete Pads or Ballasts	$1,500
Remove Racks	$7,800
Remove Cable	$6,500
Remove Ground Screws and Power Poles	$13,850
Remove Fence	$4,950
Grading	$4,000
Seed Disturbed Areas	$250
Truck to Recycling Center	$2,250
Current Total	$60,200
Total After 20 Years (2.5% inflation rate)	$98,900

[1] *Town of Geneva, N.Y. CODE § 130-4(D)(5) (2016):*

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

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How can decommissioning be ensured?

Landowners and local governments can ensure appropriate decommissioning and reclamation by using financial and regulatory mechanisms. However, these mechanisms come with tradeoffs. Including decommissioning costs in the upfront price of solar projects increases overall project costs, which could discourage solar development. As a result, solar developers are sometimes hesitant to provide or require financial surety for decommissioning costs.

It is also important to note that many local governments choose to require a financial mechanism for decommissioning. Although similar to telecommunications installations, there is no specific authority to do so as part of a land use approval for solar projects (see Table 2). Therefore, a local government should consult their municipal attorney when evaluating financial mechanisms.

The various financial and regulatory mechanisms to decommission projects are detailed below.

Table 2: Relevant Provisions of General City, Town, and Village Laws Relating to Municipal Authority to Require Conditions, Waivers, and Financial Mechanisms

Site Plan Review	General City Law	Town Law	Village
Conditions	27-a (4)	274-a (4)	7-725-a (4)
Waivers	27-a (5)	274-a (5)	7-725-a (5)
Performance bond or other security	27-a (7)	274-a (7)	7-725-a (7)
Subdivision	**General City Law**	**Town Law**	**Village Law**
Waivers	33 (7)	277 (7)	7-730 (7)
Performance bond or other security	33 (8)	277 (9)	7-730 (9)
Special	**General City Law**	**Town Law**	**Village Law**
Conditions	27-b (4)	274-b (4)	7-725-b (4)
Waivers	27-b (5)	274-b (5)	7-725-b (5

Source: Referenced citations may be viewed using the NYS Laws of New York Online

Excerpts from these statutes are also contained within the "Guide to Planning and Zoning Laws of New York State," New York State Division of Local Governments Services, June 2011: **www.dos.ny.gov/lg/publications/Guide_to_planning_and_zoning_laws.pdf**

Financial mechanisms

Decommissioning Provisions in Land-Lease Agreements. If a decommission plan is required, public or private landowners should make sure a decommissioning clause is included in the land-lease agreement. This clause may depend on the decommissioning preferences of the landowner and the developer. The clause could require the solar project developer to remove all equipment and restore the land to its original condition after the end of the contract, or after generation drops below a certain level, or it could offer an option for the landowner to buy-out and continue to use the equipment to generate electricity. The decommissioning clause should also address abandonment and the possible failure of the developer to comply with the decommissioning plan. This clause could allow for the landowner to pay for removal of the system or pass the costs to the developer.

Decommissioning Trusts or Escrow Accounts. Solar developers can establish a cash account or trust fund for decommissioning purposes. The developer makes a series of payments during the project's lifecycle until the fund reaches the estimated cost of decommissioning. Landowners or third-party financial institutions can manage these accounts. Terms on individual payment amounts and frequency can be included in the land lease.

Removal or Surety Bonds. Solar developers can provide decommissioning security in the form of bonds to guarantee the availability of funds for system removal. The bond amount equals the decommissioning and reclamation costs for the entire system. The bond must remain valid until the decommissioning obligations have been met. Therefore, the bond must be renewed or replaced if necessary to account for any changes in the total decommissioning cost.

Letters of credit. A letter of credit is a document issued by a bank that assures landowners a payment up to a specified amount, given that certain conditions have been met. In the case that the project developer fails to remove the system, the landowner can claim the specified amount to cover decommissioning costs. A letter of credit should clearly state the conditions for payment, supporting documentation landowners must provide, and an expiration date. The document must be continuously renewed or replaced to remain effective until obligations under the decommissioning plan are met.[2]

Nonfinancial mechanisms

Local governments can establish nonfinancial decommissioning requirements as part of the law. Provisions for decommissioning large-scale solar panel systems are similar to those regulating telecommunications installations, such as cellular towers and antennas. The following options may be used separately or together.

- **Abandonment and Removal Clause.** Local governments can include in their zoning code an abandonment and removal clause for solar panel systems. These cases effectively become zoning enforcement matters where project owners can be mandated to remove the equipment via the imposition of civil penalties and fines, and/or by imposing a lien on the property to recover the associated costs. To be most effective, these regulations should be very specific about the length of time that constitutes abandonment. Establishing a timeframe for the removal of a solar panel system can be based on system aesthetics, size, location, and complexity. Local governments should include a high degree of specificity when defining "removal" to avoid ambiguity and potential conflicts.

[2] *See a letter of credit submitted to the Vermont Public Service Board by NextSun Energy, LLC. http://psb.vermont.gov/sites/psb/files/docketsandprojects/Solar/Exhibit%20Petitioner%20JL-7%20(Revised%20326.14).pdf*

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- **Special Permit Application.** A local government may also mandate through its zoning code that a decommissioning plan be submitted by the solar developer as part of a site plan or special permit application. Having such a plan in place allows the local government, in cases of noncompliance, to place a lien on the property to pay for the costs of removal and remediation.
- **Temporary Variance/Special Permit Process.** As an alternative to requiring a financial mechanism as part of a land use approval, local governments could employ a temporary variance/special permit process (effectively a re- licensing system). Under this system, the locality would issue a special permit or variance for the facility for a term of 20 or more years; once expired (and if not renewed), the site would no longer be in compliance with local zoning, and the locality could then use their regular zoning enforcement authority to require the removal of the facility.

What are some examples of abandonment and decommissioning provisions?

The New York State Model Solar Energy Law provides model language for abandonment and decommissioning provisions: **www.cuny.edu/about/resources/sustainability/reports/NYS_Model_Solar_Energy_LawToolkit_FINAL_final.pdf**

The following provide further examples that are intended to be illustrative and do not confer an endorsement of content:

- Town of Geneva, N.Y., § 130-4(D): **ecode360.com/28823382**
- Town of Olean, N.Y., § 10.25.5: **www.cityofolean.org/council/minutes/ccmin2015-04-14.pdf**

Is there a checklist for decommissioning plans?

The following items are often addressed in decommissioning plans requirements:[3]

- Defined conditions upon which decommissioning will be initiated (i.e., end of land lease, no operation for 12 months, prior written notice to facility owner, etc.).
- Removal of all nonutility owned equipment, conduit, structures, fencing, roads, and foundations.
- Restoration of property to condition prior to solar development.
- The timeframe for completion of decommissioning activities.
- Description of any agreement (e.g., lease) with landowner regarding decommissioning.
- The party responsible for decommissioning.
- Plans for updating the decommissioning plan.
- Before final electrical inspection, provide evidence that the decommissioning plan was recorded with the Register of Deeds.

Additional Resources

Template Solar Energy Development Ordinance for North Carolina (see Appendix G at pg. 21 for Sample Decommissioning Plan): **nccleantech.ncsu.edu/wp-content/uploads/Template-Solar-Ordinance_V1.0_12-18-13.pdf**

Land Use Planning for Solar: **training.ny-sun.ny.gov/images/PDFs/Land_Use_Planning_for_Solar_Energy.pdf**

Zoning Guide for Solar: **training.ny-sun.ny.gov/images/PDFs/Zoning_for_Solar_Energy_Resource_Guide.pdf**

Information on First Solar's recycling program for all of their modules: **www.firstsolar.com/en/Technologies-and-Capabilities/Recycling-Services**

PV Cycle: Europe's PV recycling program: **www.pvcycle.org/**

Solar Energy Industries Association (SEIA) information on solar panel recycling: **www.seia.org/policy/environment/pv-recycling**

Silicon Valley Toxics Coalition: **svtc.org/**

Silicon Valley Toxic Coalition Solar Scorecard: **www.solarscorecard.com/2015/2015-SVTC-Solar-Scorecard.pdf**

End-of-life PV: then what? - Recycling solar panels: **www.renewableenergyfocus.com/view/3005/end-of-life-pv-then-what-recycling-solar-pv-panels/**

NY-Sun, a dynamic public-private partnership, will drive growth in the solar industry and make solar technology more affordable for all New Yorkers. NY-Sun brings together and expands existing programs administered by the New York State Energy Research and Development Authority (NYSERDA), Long Island Power Authority (LIPA), PSEG Long Island, and the New York Power Authority (NYPA), to ensure a coordinated, well-supported solar energy expansion plan and a transition to a sustainable, self-sufficient solar industry.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

[3] *North Carolina Solar Center, NC Sustainable Energy Center. December 2013. Template Solar Energy Development Ordinance for North Carolina.* ***https://nccleantech.ncsu.edu/wp-content/uploads/Template-Solar-Ordinance_V1.0_12-18-13.pdf***

Amherst Community Solar Maintenance Plan for Vegetation and Pollination

During construction of the Solar Energy Facility, it is anticipated that limited disturbance of the existing soils will occur due to the limited amount of concrete foundations necessary and shallow trenching required for connection of the components for the facility.

As detailed in the design plans for this project, restoration of any soil disturbance shall be seeded with the following:

Ernst Solar Farm Seed Mix by Ernst Conservation Seeds, Inc. located in Meadville, PA. The intent of this particular mix is to limit the need for maintenance of the meadow area located within the solar array area specifically. It is comprised of a variety of fescue grasses, bluegrass, and white clover. Additional details can be obtained by visiting www.ernstseed.com.

The composition of the above seed mix makes the following potential maintenance steps possible:

- Use of smaller domestic grazing animals for maintaining the height of any grasses to a reasonable degree
- Use of pollinators (ie. Honeybees) and provision of habitat for such species
- Limited use of mechanical means to maintain vegetation

Obviously, it will be necessary for a period of transition to use of the above natural means of maintenance after completion of construction and progression of the vegetative growth.

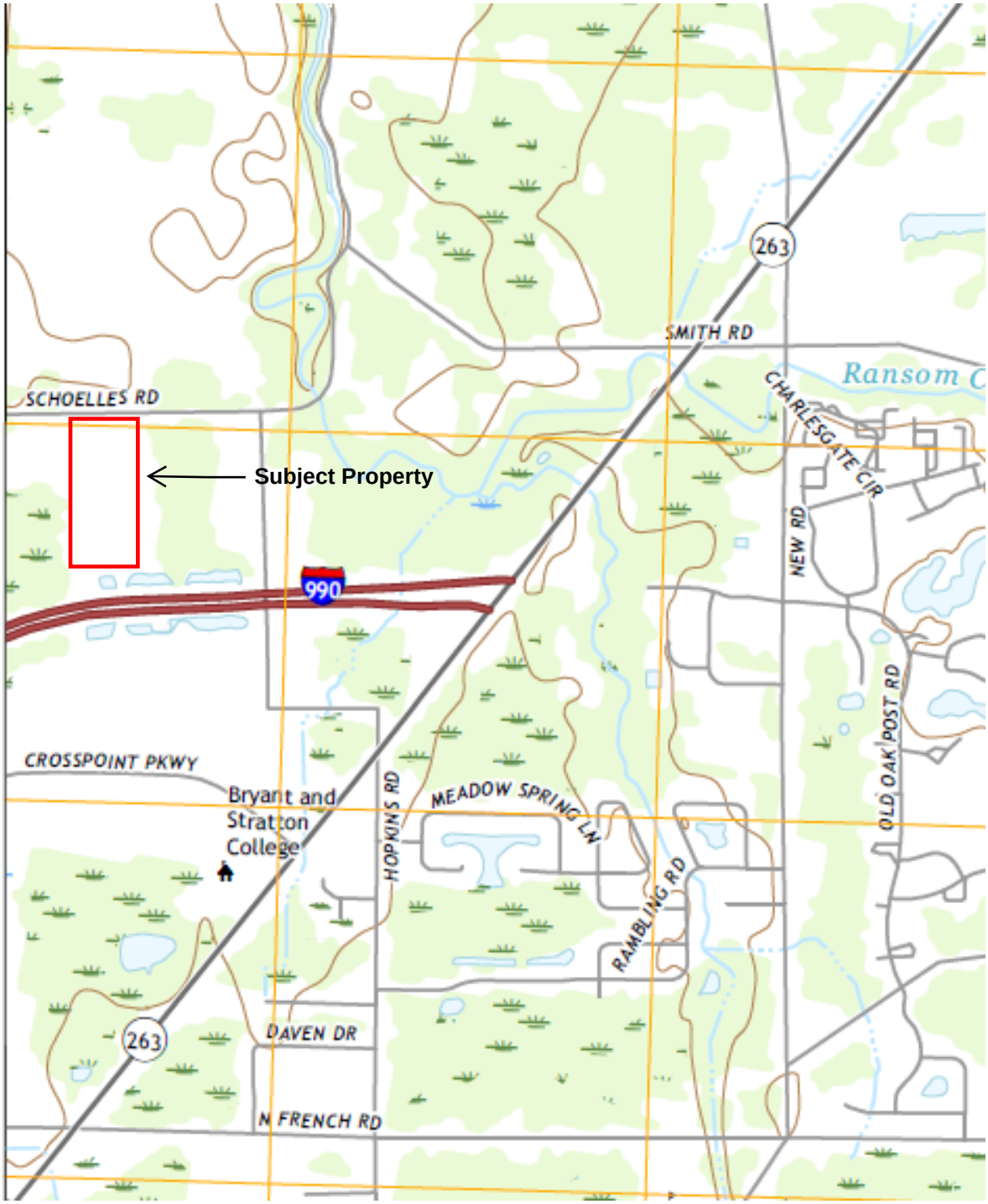
Additionally, agreements with acceptable terms and conditions will be necessary prior to the introduction of grazing animals to the facility to ensure that no damage would occur to the equipment or harm to the animals during the maintenance operations.

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EXHIBIT 1

SITE LOCATION MAP

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



SITE LOCATION MAP

GPI
Greenman-Pedersen, Inc.

595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14051

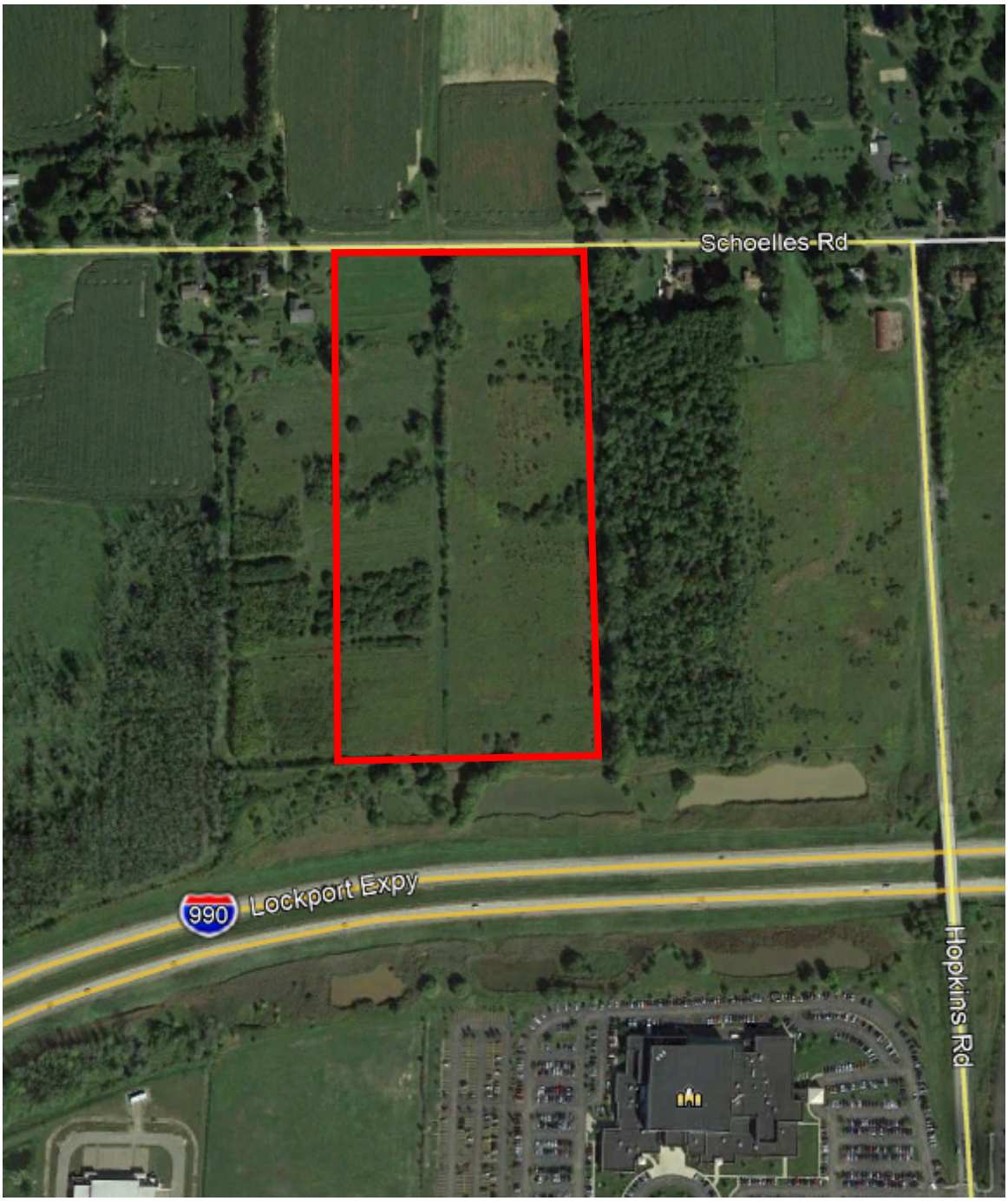
PROJECT No. **WNY-2020071.00**	SCALE: **NTS**	**NOVEMBER 2020**	FIGURE No. 1

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

EXHIBIT 2

EXISTING SITE CONDITIONS MAP

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



EXISTING SITE CONDITIONS MAP

- APPROXIMATE SITE BOUNDARIES

Greenman-Pedersen, Inc.

595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14051

PROJECT No. **WNY-2020071.00**	SCALE: NTS	**NOVEMBER 2020**	FIGURE No. 2

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

EXHIBIT 3

WETLAND AND WATERBODIES DELINEATION REPORT (BOUND SEPARATELY)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

GPI

Engineering | Design | Planning | Construction Management

Engineers Report

October 28th, 2020

STORMWATER POLLUTION PREVENTION PLAN

For

AMHERST SOLAR FARM

595 Schoelles Road
Town of Amherst,
Erie County
New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Owner/Developer: Amherst Community Solar, LLC
412 South 13th Street, Unit 607
Philadelphia, PA 19147

WARNING: The alteration of this material in any way, unless under the direction of a comparable professional, i.e. a Professional Engineer, is a violation of the New York State Education Law and/or Regulations and is a Class 'A' misdemeanor.

PREPARER OF THE SWPPP

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

Name: Ryan Trunko, P.E.

Title: Project Engineer

License No.: 093733

Date: October 28th, 2020



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for construction activities associated with the Amherst Solar Farm Project hereafter called "the project". The "project site" is located at 595 Schoelles Road in the Town of Amherst, Erie County, New York. This SWPPP includes elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. Implementation of this SWPPP must be initiated at the start of construction.

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity" General Permit Number GP-0-20-001, effective January 29, 2020 through January 28, 2025.

This SWPPP, the document titled "Hydraulic Analysis Report For Amherst Solar Farm", and the accompanying plans entitled "Amherst Solar Farm" have been submitted as a set to identify and detail stormwater conveyance, pollution prevention, and erosion and sediment control measures required for the project during and following construction. All engineering drawings, as well as the Hydraulic Analysis Report, are considered integral to the SWPPP and thus this SWPPP is only considered complete with their inclusion.

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

- Maintaining existing drainage patterns as much as possible while continuing the conveyance of upland watershed runoff;
- Controlling increases in the rate of stormwater runoff resulting from the proposed redevelopment, so as not to adversely alter downstream conditions; and,
- Mitigating potential stormwater quality impacts and preventing soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

1.1 Project Description

The project proposes the new construction of a 16.1± acre solar farm with single-axis tracker racking PV panels and associated transformers, inverts, switchgears and 7 utility poles. A new gravel access driveway, security fencing, and landscape plantings are also planned for site development. The existing vegetation will be maintained to the maximum extent possible and will be supplemented to buffer views into the site from an adjacent residential property and roadway. The proposed improvements will result in temporary green space disturbance within the security fence and gravel driveway with only negligible new impervious area from 3

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concrete equipment pads.

The proposed project is located at 595 Schoelles Road in the Town of Amherst, bound by adjacent parcels to the east and west, and the roads I-990 (Staff Sergeant William R. Wilson III Memorial Highway) to the south and Schoelles Road to the north (hereinafter referred to as the "subject site"). The project encompasses approximately 21.83 acres of land and is on Tax Map Parcel Number 28.00-1-1.11. The site is currently undeveloped tall grass meadows that are regularly mowed. A location map of the site has been provided in Appendix I of this report.

Solar arrays, while not explicitly included in Table 1 of appendix B of GP-0-20-001, are treated similarly to vegetated open space projects per NYSDEC Memorandum "Solar Panel Construction Stormwater Permitting/SWPPP Guidance" dated April 6, 2018. The anticipated soil disturbance will be limited to site clearing and drilling posts for the solar panels and fences. The project proposes no new impervious area other than 3 small equipment pads and will not change the existing drainage patterns. Therefore, this project requires a SWPPP with erosion and sediment controls only.

This project is located within the Town of Amherst regulated, traditional land use control extended Municipal Separate Stormwater Sewer System (MS4). Submission of this SWPPP to the MS4 for review and acceptance is required.

Project construction activities will consist primarily of the proposed solar panels, PV equipment, 7 new utility poles, minor site grading, installing of fencing, landscaping, a small gravel driveway access, and improvements to existing stormwater drainage features. Construction phase pollutant sources anticipated at the site are disturbed (exposed) soil, and vehicle fuels and lubricants,. Without adequate control, there is the potential for each type of pollutant to be transported by stormwater.

1.2 Stormwater Pollution Controls

The proposed measures outlined herein have been designed to provide water quality controls by treating and runoff prior to its discharge on site. These measures have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Stormwater Management Design Manual (January 2015).
- New York State Standards and Specifications for Erosion and Sediment Control (November 2016).

The existing stormwater collection system on the site consists of drainage swales to adequately collect and convey the stormwater to detention ponds south of the project site. The existing drainage swale will be improved or repaired in various sections for site to collect stormwater runoff wherever possible.

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The project does not require post construction stormwater management controls due to the nature of the proposed solar array. However, pre- and post-development surface runoff rates have been evaluated for the 10-and 25-year 24-hour storm events on behalf of the Town of Amherst's requirements for development within the floodplain. Comparison of pre- and post-development watershed conditions demonstrates that there is minimal impact to runoff rates from the project site, therefore the project will not have an impact on the adjacent or downstream properties.

Stormwater quality will be enhanced through the implementation of the proposed erosion and sediment control measures and maintenance practices outlined herein during construction.

1.3 Conclusion

This SWPPP has been prepared in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control and NYS Stormwater Management Design Manual. As such, GP-0-20-001 coverage will be effective five (5) business days from the date the NYSDEC receives the completed NOI.

It is our opinion that the proposed development will not adversely impact adjacent or downstream properties if the stormwater management facilities are properly constructed and maintained in accordance with the requirements outlined herein.

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2.0 SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved with compliance with the NYSDEC SPDES General Permit, GP-0-20-001 conditions are outlined in the subsequent sections. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-20-001 presented in Appendix A.

2.1 Definitions

1. ***General SPDES Permit -*** means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 authorizing a category of discharges.

2. ***Owner or Operator -*** means the person, persons, or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications. There may be occasions during the course of a project in which there are multiple Operators, all of which will need to file and maintain the appropriate SWPPP documents and plans, including without limitation, the Notice of Intent (NOI) and Notice of Termination (NOT).

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

   It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that an 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.

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4. ***Qualified Professional*** - means a person that is knowledgeable in the principals and practices of Stormwater management and treatment, such as a licensed Professional Engineer or 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 principals of hydrology, water quality management practice design, water quality control design, and, in many cases, the principals of hydraulics in order to prepare a SWPPP that conforms to the Department's technical standard. 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.

5. ***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 principals 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.

2.2 Owners or Operator's & Contractor's Responsibilities

1. Have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

2. Submit the signed NOI along with any required attachments to the following: (The Contractor will assist the Owner or Operator to submit the NOI to ensure coverage is in place prior to commencement of construction)

   A. Per GP 0-20-001 for review and acceptance by the MS4. The MS4 SWPPP Acceptance form must 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 to:

      Jeffrey Burroughs, Town Engineer – Engineering Department
      1100 N Forest Road
      Williamsville, NY 14221

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B. Signed NOI to:

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

3. Pay the required annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The annual fee is calculated as $100.00 per acre disturbed plus $600.00 per future impervious acre.

4. Retain the services of a "Qualified Professional", as defined under Section 2.1, to provide the services outlined in Section 2.3 "Operator's Engineer's Responsibilities".

5. Retain the services of an independent certified materials testing and inspection firm to perform regular tests, inspections, and certifications of the construction materials used in the construction of all post-construction stormwater management practices.

6. Prior to the commencement of construction activity, retain a qualified inspector who will assist to Owner or Operator to identify the contractor(s) and subcontractor(s) that will be responsible for implementing the erosion and sediment control measures and stormwater management practices described in this SWPPP. Have each of these contractors and subcontractors identify at least one "Trained Contractor", as defined under Section 2.1 that will be responsible for the implementation of the SWPPP. Ensure that the Contractor has at least one "Trained Contractor" on site on a daily basis when soil disturbance activities are being performed.

7. Schedule a pre-construction meeting which shall include the Operator's Qualified Professional, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

8. Require the Contractor to fully implement the SWPPP prepared for the site by the Operator's Professional to 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.

9. Forward a copy of the NOI Acknowledgement Letter received from the regulatory agency to the Operator's Engineer for project records, and to the Contractor for display at the job site.

10. Maintain a copy of the General Permit (GP-0-20-001), NOI, NOI Acknowledgement Letter, SWPPP, inspection reports, Spill Prevention, Countermeasures, and Cleanup ("SPCC") Plan, inspection records, and other required records on the job site so that they may be made available to the regulatory agencies. The Contractor and Qualified

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Inspector will assist the Owner or Operator with creating a binder to maintain required records.

11. Post at the site, in a publicly accessible location, a copy of the General Permit (GP-0-20-001), a signed copy of the NOI, the NOI Acknowledgement Letter, and on a monthly basis a summary of the site inspection activities.

12. The Contractor will prepare a written summary of projects status with respect to compliance with the general permit at a minimum frequency of every three months during which coverage under the permit exists. The summary is to address the status of achieving the overall goal of the SWPPP. The summary shall be maintained at the site in a publicly accessible location.

13. Prior to submitting a Notice of Termination, take the proper steps to ensure that the long-term operation and maintenance of the post-construction stormwater management practices will be performed. See GP-0-20-001 Part V for details.

14. The Contractor on behalf of the Owner or Operator will obtain Owner or Operator's signature and then Submit a Notice of Termination (NOT) form (see Appendix F) within 48 hours of receipt of the Operator's Professional's certification of final site stabilization to the following:

    Jeffrey Burroughs, Town Engineer – Engineering Department
    1100 N Forest Road
    Williamsville, NY 14221

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

15. Request and receive all SWPPP records from the Operator's Professional and archive those records for a minimum of five years after the NOT is filed.

16. Require the implementation of the Post-Construction Inspections and Maintenance procedures.

2.3 Operator's Qualified Professional Responsibilities

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

2. If requested, assist the Owner or Operator with submitting the SWPPP to the appropriate regulated MS4 for review and acceptance.

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3. Prepare the Notice of Intent (NOI) form (see Appendix B), sign the "SWPPP Preparer Certification" section of the NOI, and forward to the Owner or Operator for signature.

4. Assist as requested, the Owner or Operator and Contractor in providing copies of the SWPPP to the municipality having jurisdiction once all signatures and attachments are complete.

5. Participate at pre-construction meeting with the Operator, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. Enter Contractor's information in Section 2.5 "SWPPP Participants" once a Contractor is selected by the Owner or Operator.

7. Coordinate with the Owner and Operator to retain a construction phase Qualified Professional to complete on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Operator and appropriate contractor (or subcontractor) within one business day of the completion of the inspection, with any deficiencies identified. A sample inspection form is provided in Appendix D. Note that more than one Operator's Qualified Professional may exist for the project. Any individual or firm retained by the Owner or Operator to provide inspection will also be the Operator's Qualified Professional during the duration of construction.

   A. The Owner or Operators construction phase Qualified Professional shall review the Contractor's SWPPP records on a periodic basis to ensure compliance with the requirements for daily reports and inspections and maintenance logs.

   B. Maintain the construction Site Log Book throughout the duration of construction.

   C. Update the SWPPP each time there is a significant modification to the pollution prevention measures or a change of the principal Contractor working on the project who may disturb site soil.

   D. Review material testing and inspection reports prepared by an independent testing and inspection firm operating under the direction of a licensed Professional Engineer.

   E. Assist the Owner or Operator to hire a NYS Licensed Professional Land Surveyor to complete a topographic survey of completed post-construction stormwater management facilities completed and perform evaluations of the completed stormwater management systems to determine whether the facilities will function as designed.

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F. Conduct a final site assessment and prepare a certification letter to the Owner/Operator indicating that, upon review of the material testing and inspection reports prepared by the firm retained by the Owner/Operator, completion of the topographic survey, and evaluation of the completed stormwater management facilities, the stormwater management facilities have been constructed substantially in accordance with the contract documents and should function as designed.

G. Assist the Owner or Operator with completing and filing of the Notice of Termination (NOT). Sign the NOT Certifications VI (Final Stabilization) and VII (Post-construction Stormwater Management Practices) and forward the NOT to the Owner/Operator for signature of Certification VIII (Owner or Operator Certification).

H. Ensure the transfer the SWPPP documents, along with all NOI's, permit certificates, NOT's, construction Site Log Book, and written records required by the General Permit to the Operator for archiving.

2.4 Contractor's Responsibilities

1. Send all notifications required by SPDES General Permit Number GP-0-20-001 via certified mail with return receipt. Copies of mailing receipts shall be kept on record at the project site with the SWPPP and shall be considered part of the contract documents.

2. Sign the SWPPP Contractor's Certification Form contained within Appendix C and forward to the Operator's construction phase Qualified Professional for inclusion in the Site Log Book.

3. Identify at least one Trained Individual that will be responsible for implementation of this SWPPP. Ensure that at least one Trained Individual is on site on a daily basis when soil disturbance activities are being performed.

4. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with the major construction activities that will result in soil disturbance to identify at least one Trained Individual that will be on site on a daily basis when soil disturbance activities are being performed; and to sign a copy of the Contractor's Certification Form and forward to the Operator's construction phase Qualified Professional for inclusion into the Site Log Book. This information must be retained as part of the Site Log Book.

5. Prepare a Spill Prevention and Response Plan in accordance with requirements outlined in Section 5.4. This plan shall be provided to the Operator's construction phase Qualified Professional for inclusion in the Site Log Book.

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6. Participate in pre-construction meeting which shall include the Operator, Operator's construction phase Engineer, and all sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

7. If Contractor plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if Contractor plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site, Contractor shall submit appropriate documentation to the Owner and Operator's design Qualified Professional so that the SWPPP can be modified accordingly.

8. Implement site stabilization, erosion and sediment control measures, and other requirements of the SWPPP.

9. Conduct daily inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare, and retain written documentation of inspections as well as of all repairs/maintenance activities performed. This information must be retained as part of the site Log Book.

10. Maintain a record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated, until such time as the NOT is filed. A log for keeping such records is provided in Appendix E.

11. Provide monthly training sessions for all entities and subcontractors involved with installing, applying, performing, maintaining and inspecting measures outlined within this SWPPP.

12. Begin implementing corrective actions within one day of receipt of notification by the Qualified Inspector that deficiencies exist with the erosion and sedimentation control measures employed at the site. Corrective actions shall be completed within a reasonable time frame.

13. Comply with all site posting requirements identified herein and on the construction plans.

14. Maintain the site Log Book with all required documentation identified in the previous sections.

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SWPPP Participants

1. Design Engineer:
Mr. Ryan Trunko, P.E.
GPI/Greenman-Pedersen, Inc.
80 Wolf Rd, Suite 300
Albany, NY 12205
Phone: 518.453.9431

2. Construction Qualified[1] Professional: Name and Title: _____

Company Name: _____

Mailing Address: _____

_____

Phone: _____

Fax: _____

3. Operator:
Elisha Schecter – Managing Member
Amherst Community Solar, LLC
412 South 13th Street, Unit 607
Philadelphia, PA 19147

4. Contractor[2]: Name and Title: _____

Company Name: _____

Mailing Address: _____

_____

Phone: _____

Fax: _____

[1] Construction Phase Engineer information to be entered once selected and if different from design engineer.
[2] Contractor's information to be entered once the Contractor has been selected.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

3.0 SITE CHARACTERISTICS

The site is located at 595 Schoelles Road, in the Town of Amherst, Erie County, New York which lies between two existing residential properties to the east and west, Schoelles Road, and I-990 to the south. A site location map has been included in Appendix I as Figure 1 for clarification. Additional in-depth site characteristics can be found in the Historical, Cultural and Environmental Resources Report (Appendix H) associated with the Amherst Solar Farm project.

3.1 Land Use & Topography

The proposed project site encompasses one tax parcel that is ±21.8 acres, and ±16.1 acres of work area.

The land currently has existing tall-grass fields that are regularly maintained, shallow drainage ditches and some patches of denser vegetation. Surrounding adjacent properties are typically residential/agricultural in nature. The existing grading and features of the site will remain largely unchanged. The site also includes electrical utility features, intended to connect the local energy supply grid to the proposed work.

Existing grades for the Amherst Solar Farm are generally very flat, only sloping slightly toward drainage collection features around the site. Stormwater runoff generally ponds in slight depressions until it can sheet flow to a center drainage ditch that discharges to a series of detention ponds south of the site.

3.2 Soils & Groundwater

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey for Erie County was reviewed and identified surficial soil conditions for the study area. The SCS identified the presence of two primary series soil types, "Lc" on the southern portion of the site and "Mh" throughout the northern portion of the site. A summary of the soils from the USGS Web Soil Survey can be found in Appendix G.

The SCS defines the map unit "Lc - Lamson very fine sandy loam" as deep, very gently to non-sloping soils. Soils in this group are typically poorly drained glacial lakes and planes and does not include typical areas of the soil due to the miscellaneous pockets of this naturally formed soil. Typically Lamson sandy loam has a surface layer of very fine, dark brown sandy loam at 0"-9" and grayish brown fine sandy loams to a depth of 60" below the surface layer.

The SCS defines the map unit "Mh – Minoa very fine sandy loam" as deep, very gently to non-sloping soils. Soils in this group are typically somewhat poorly drained lake-laid deposits and are not include typical areas of the soil. Typically "Minoa sandy loam" has a surface layer of very fine, very dark grayish brown sandy loam at 0"-9" and brownish gray fine sandy loams to a depth of 70" below the surface layer.

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Table 1: Soil Data

Map Symbol & Description	Hydrologic Soil Group	Permeability (inches/hour)	Erosion Factor K	Depth to Water Table (feet)	Depth to Bedrock (feet)
Lc – Lamson very fine sandy loam	A/D	0.57 – 5.95*	0.32	0.0-0.5	>6.5
Mh – Minoa very fine sandy loam	B/D	0.57 – 1.98*	0.32	0.5-1.5	>6.5

*Infiltration tests have not been performed at the site and assumed to be zero for design purposes. The proposed bioretention area is designed as a filter practice only.

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

- Type A Soils: Soils having a high infiltration rate and low runoff potential when thoroughly wet. These soils consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a moderate rate of water transmission.
- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consisting mainly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately course textures. These soils have a moderate rate of water transmission.
- Type C Soils: Soils having a low infiltration rate when thoroughly wet and consisting chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine-to-fine texture. These soils have a low rate of water transmission.
- Type D Soils: Soils having a very low infiltration rate and high runoff potential when thoroughly wet. These soils consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high-water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very low rate of water transmission.

The soils onsite are said to behave as Type D soils when they become saturated. For construction and analysis purposes, the soils have been treated as Type D soils.

3.3 Watershed Designation

The project site is located in the Lower Tonawanda Creek watershed as identified by Erie County mapping available online. This watershed is not located in a restricted watershed identified in appendix C of GP-0-20-001 according to the NYSDEC's available online mapping information and is not included on the list of restricted watersheds.

3.4 Receiving Water Bodies

The project site discharges stormwater directly to a riverine known as Ransom Creek, a tributary to a river called the Tonawanda Creek. Stormwater from the site will outlet into

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stormwater ponds that ultimately outlet into Ransom Creek and therefore the Tonawanda Creek.

The site does not discharge into waters classified in the Section 303(d) list of impaired waters found in appendix E of GP-0-20-001.

3.5 Aquifer Designation

The project site is not located over a US EPA designated Sole Source aquifer; nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

3.6 Wetlands

There are wetlands located on-site and stormwater runoff discharges to the wetlands along two north-south running drainage ditches in the site. A wetland delineation for the site was confirmed by the Army Corps of Engineers (ACOE) to be isolated non-jurisdictional and that proposed development within the onsite wetlands would not require a permit. See ACOE determination letter in Appendix J.

3.7 Flood Plains

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) (Panel 80 of 807 for Erie County, New York, Map No. 36029C0086H) a majority of the project site lies within zone AE (the 100-year flood plain with known flood elevations). The flood elevation at the project site is approximately 579' above mean seal level for the 100-year flood event.

The proposed project proposes minimal grading since the PV panels will be mounted on posts. All equipment pads will be above the flood elevation. This project does not alter existing drainage patterns and should be impact the local floodplain.

3.8 Historic Places

In accordance with GP-0-20-001, the project was sent to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) Division for Historic Preservation for review. The project is still awaiting review which will be included in this report as Appendix H.

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4.0 CONSTRUCTION SEQUENCE

The project work area encompasses more than five acres of land while the relative disturbance within the work area is considerably less. Project work will be methodically progressed with continual stabilization behind the newly installed solar panels to minimize the construction footprint at any given time, and disturbance of additional off-site properties to facilitate construction is not anticipated, therefore written approval from NYSDEC allowing the disturbance of more than five acres of land at any one time is not required. If the Contractor's construction sequence requires the disturbance of more than five acres at any given time, written approval must be obtained from NYSDEC prior to disturbing more than five acres at once.

The "Erosion and Sediment Control Plan" in the accompanying drawings identify the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to begin is presented on the accompanying drawings, though each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner and Operator's Quality Professional overseeing the implementation of the SWPPP.

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

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

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5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

The SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-20-001 (effective January 29, 2020 through January 28, 2025)
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)

The SWPPP and accompanying plans outline the construction sequence for implementing the erosion and sediment control measures. The SWPPP and accompanying plans include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures.

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

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction-site discharges.
2. Preservation of existing vegetation as much as possible. Following the completion of construction activities in any portion of the site permanent vegetation shall be established on all exposed soils.
3. Site preparation activities shall be planned to minimize the area and duration of soil disruption.
4. Permanent traffic corridors shall be established and "routes of convenience" shall be avoided.

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access will be installed, as shown on the detail

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plan, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access. The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

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

5.1.2 Dust Control

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

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Sediment Control Barrier

Prior to the initiation of and during construction activities, a sediment control barrier (i.e.: silt fence, compost filter sock, etc.) will be established along the down slope perimeter of areas to be disturbed as a result of the construction which lie up gradient of watercourses or adjacent properties. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barriers. To facilitate effectiveness of the barriers, daily inspections and inspections immediately after significant storm events will be performed by site personnel. Maintenance of the barrier will be performed as needed.

5.1.5 Temporary Seeding

Areas undergoing clearing or grading and any areas disturbed by construction activities where work is delayed, suspended, or incomplete and will not be re-disturbed for 21 days or more shall be stabilized with temporary vegetative cover within 14 days after construction activity in that portion of the site has ceased.

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5.1.6 Check Dam

Check dams are used as temporary and permanent measures to limit erosion by reducing velocities in open channels that are degrading or subject to erosion, or where permanent stabilization is impractical. Check dams are small barriers or dams constructed of stone or gravel across a drainageway to reduce the intensity of erosion below the check dam.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Soil Restoration

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

The contractor shall implement soil restoration practices in accordance with Table 5.3 of the NYSDEC Stormwater Management Design Manual, included as Table 3 below.

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Table 2: Soil Restoration Requirements

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

*Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spike making indentations in the soil, or prongs which function like a mini-subsoiler.

**Per "Deep Ripping and De-compaction, DEC 2008"

5.2.2 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

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All areas at final grade must be seeded and mulched within 14 days after completion of the major construction activity. All seeded areas should be protected with mulch.

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

5.3 Other Pollutant Controls

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

5.3.1 Solid and Liquid Waste Disposal

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

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

5.3.2 Sanitary Facilities

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

5.3.3 Water Source

Non-stormwater components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site; such water can be retained in ponds until it infiltrates and/or evaporates.

5.4 Construction Housekeeping Practices

During the construction phase, the general Contractor will implement the following measures:

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5.4.1 Material Stockpiles

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

5.4.2 Equipment Cleaning and Maintenance

The general Contractor will designate areas for equipment cleaning, maintenance, and repair. The general Contractor and subcontractors will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.4.3 Detergents

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

5.4.4 Spill Prevention and Response

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

The plan shall include Material Safety Data Sheets (MSDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.4.5 Concrete Wash Areas

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site, but only in specifically designated diked and impervious washout areas which have been prepared to prevent contact between the concrete wash and storm water. Waste generated from concrete wash water shall not be allowed to flow into drainage ways, inlets, receiving waters or highway right of ways, or any location other than the designated Concrete Wash Areas. Proper signage designating the "Concrete Wash Areas" shall be placed near the facility. Concrete Wash Areas shall be located at minimum 100 linear feet from drainage ways, inlets and surface waters.

The hardened residue from the Concrete Wash Areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the wash area is to include removal of hardened concrete. Facility shall have sufficient volume to contain all the concrete waste resulting from washout and a minimum freeboard of 12 inches. Facility shall not be filled beyond 95% capacity and shall be cleaned out once 75% full unless a new facility is constructed. The Contractor will be responsible for seeing that these procedures are followed.

Saw-cut Portland Cement Concrete (PCC) slurry shall not be allowed to enter storm drains or

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watercourses. Saw-cut residue should not be left on the surface of pavement or be allowed to flow over and off pavement.

The Project may require the use of multiple concrete wash areas. All concrete wash 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 stormwater discharges.

5.4.6 Material Storage

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

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

5.5 Winter Shutdown Plan

The contractor shall implement the following procedures in order to stabilize the site against erosion during a period of winter shutdown. In areas where vegetation has not been established when the winter shutdown is to be implemented, the contractor shall implement one or more of the following devices.

- Jute/Coconut fiber blankets
- Geotextile
- Hay/straw or mulch
- Alternate method to be approved by the Design and Municipal Engineer

The project site needs to be fully stabilized by November 15th or winter stabilization requirements must be implemented.

Inspections shall proceed as outlined in the inspection section of this document. Inspections shall also be conducted after significant snowmelt has been documented. If damage has been documented during the inspection, the contractor shall provide repairs prior to the next scheduled inspection.

5.6 Winter Stabilization Requirements

Any construction activities with ongoing land disturbance and exposure, or project sites that have not been fully stabilized for winter shutdown, require additional erosion and sediment control measures during the winter season. Per New York State Standards and Specifications

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for Erosion and Sediment Control, the "winter season" is defined as the period from November 15th to the following April 1st. During this time, the standard inspection schedule shall continue as outlined in the inspection section of this document. The winter stabilization measures described in the following sections are included as part of the construction documents.

5.6.1 Snow Management

The contractor shall designate areas with adequate storage capacity for snow and control of melt water that does not affect ongoing construction activities. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams or debris from plowing operations that restrict the flow of runoff shall be removed.

5.6.2 Construction Access

The stabilized construction access shall be maintained and kept free from debris and snow. All construction access points shall be enlarged and stabilized to provide for snow management and stockpiling. The intent is to maintain the existing travel width and not restrict construction access. Stone paths shall be used to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. The stone paths shall be a minimum 10' wide or wider to accommodate equipment.

5.6.3 Sediment Barrier/Silt Fence

Sediment barriers must be installed at all appropriate perimeter and sensitive locations before the ground freezes. A minimum 25-foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes (min. 5' exposed) that are visible above the snow pack. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, spaced 5 feet apart, installed on the contour. Sediment barrier must be installed at least 15' from the toe of the soil stockpile to prevent soil migration.

5.6.4 Soil Stabilization

In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three days. Mulch used for stabilization shall be applied at double the standard rate. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper. Soil stockpiles must be protected by the use of vegetation establishment, anchored straw mulch, rolled stabilization matting, or other durable covering. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil shall be stabilized at the end of the workday unless work will resume within 24 hours in the same area and no precipitation is forecasted or the work is in an area that collects and retains runoff.

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6.0 POST-CONSTRUCTION HYDRAULIC ANALYSIS

Since the project is included in Table 1 of appendix B of GP-0-20-001, a SWPPP that includes only Erosion & sediment control is required so long as construction does not alter the hydrology from pre to post development. The Town of Amherst as the local MS4 Community also requires the analysis of pre verse post development for the 10- and 100-year storm event. A Hydraulic Analysis Report was completed which shows no change in runoff from the site as a result of the project.

Stormwater runoff from the proposed construction will be collected and conveyed by the existing open storm conveyance network. The existing onsite drainage ditches will continue to convey stormwater as in the existing conditions with the exception of some minor changes to the ground cover. While the solar array may appear visually different, it is not considered substantially different from the existing groundcover that is maintained below the array panels. Rainfall that lands on the array will only have about 8 feet of sheet flow from the panel prior to continuing the existing conditions flow path. A more in-depth breakdown of each type of component used in the design can be found in the Hydraulic Analysis Report (Appendix K).

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7.0 INSPECTION AND MAINTENANCE RESPONSIBILITIES

7.1 Inspection and Maintenance Requirements

7.1.1 MS4 Inspection

the Town of Amherst's MS4 coordinator and associated staff shall have the ability to enter the project site and conduct their own compliance inspections.

7.1.2 Temporary Suspension of Construction Activities

The Owner/Operator shall notify the MS4 Coordinator when soil disturbance activities have been temporarily suspended (e.g. Winter shutdown) and temporary stabilization measures have been applied to all disturbed areas.

7.1.3 Post-Construction Inspections and Maintenance

Inspections and maintenance shall be performed in accordance with Appendix D, when all disturbed areas are stabilized and all stormwater management systems are in place and operable.

7.2 Reporting Requirements

7.2.1 Site Log Book

The Owner and Operator's construction phase Qualified Professional, on behalf of the Owner and Operator, shall retain a copy of the SWPPP at the construction-site from the date of initiation of construction activities to the date of final stabilization.

During construction, the Contractor shall maintain a record of all actions described in the SWPPP at the site in the Site Log Book. The Site Log Book shall be maintained on-site and made available to the permitting authority.

7.2.2 Post Construction Records and Archiving

Following construction, the Owner and Operator shall retain copies of the SWPPP, and the complete construction Site Log Book.

Record shall be maintained of all post construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix D.

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APPENDIX A:

NYSDEC SPDES General Permit GP-0-20-001

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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.**

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

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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

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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

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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;

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(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.

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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

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

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

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

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

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

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

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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

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

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

D. Maintaining Water Quality

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

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

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

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

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

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

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E. Eligibility Under This General Permit

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

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

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

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

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

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

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

2. *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*

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

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

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

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

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

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

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

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

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

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

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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:

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

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

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

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

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

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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

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

c. the final SWPPP has been prepared, and

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

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

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

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

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

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

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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*

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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

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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*

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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;

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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

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

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

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

B. Required SWPPP Contents

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

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

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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

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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;

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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.

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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

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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

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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.

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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:

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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

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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;

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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,

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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

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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.

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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:

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(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,

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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

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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

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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.

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R. Other Permits

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

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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

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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

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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.

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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.

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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 .

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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

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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.

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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

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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.

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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

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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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

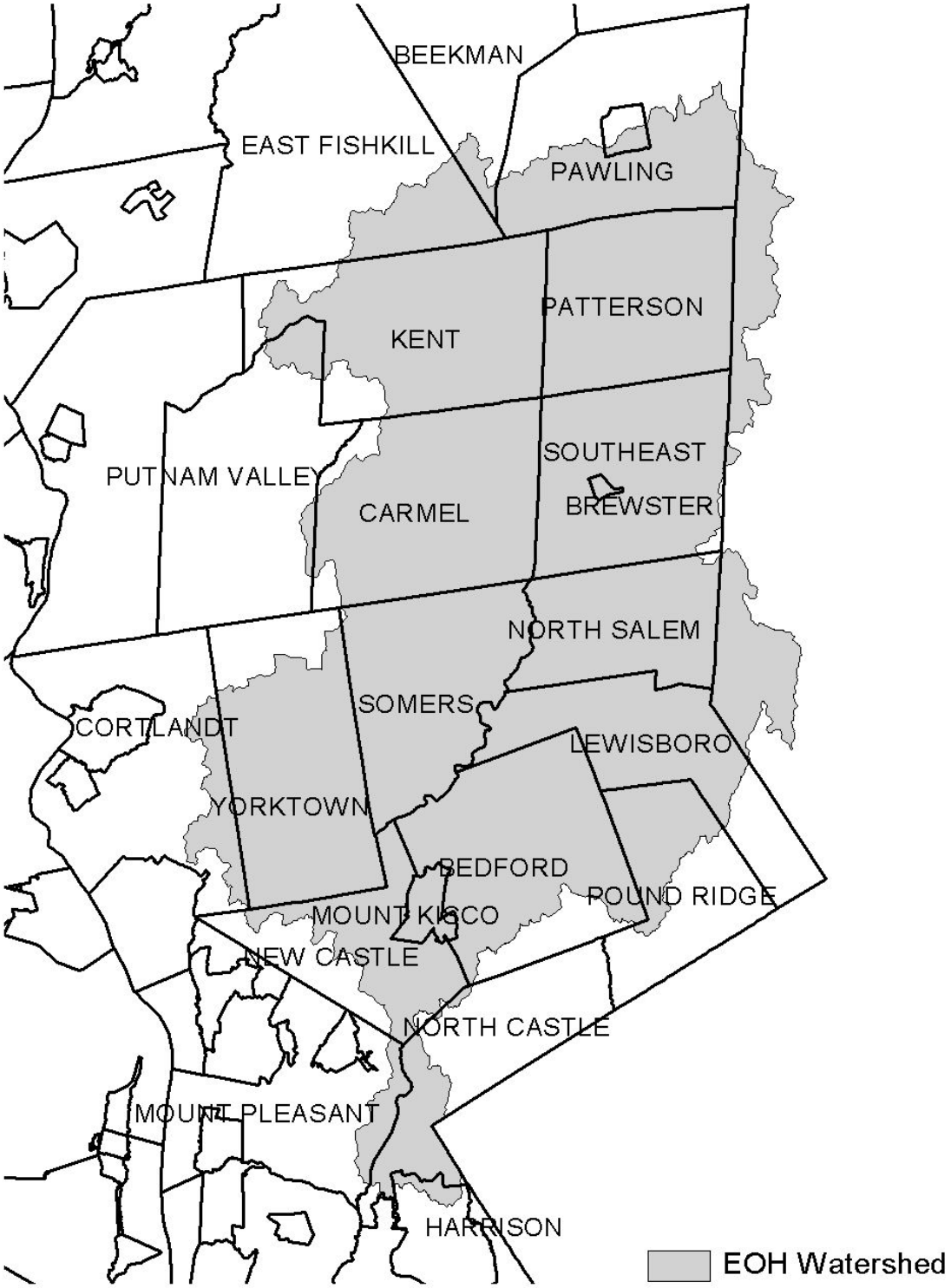
Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Appendix C

Figure 1 - New York City Watershed East of the Hudson



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

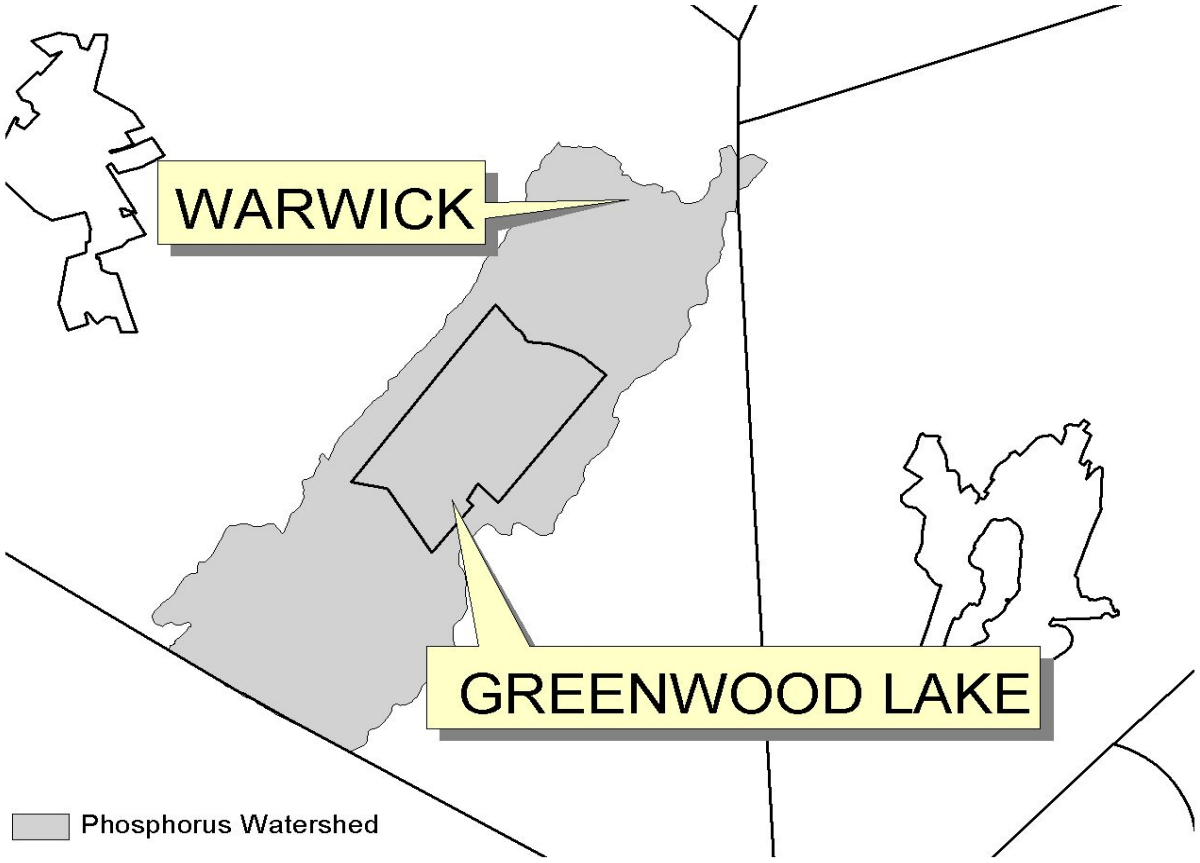
Appendix C

Figure 2 - Onondaga Lake Watershed



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

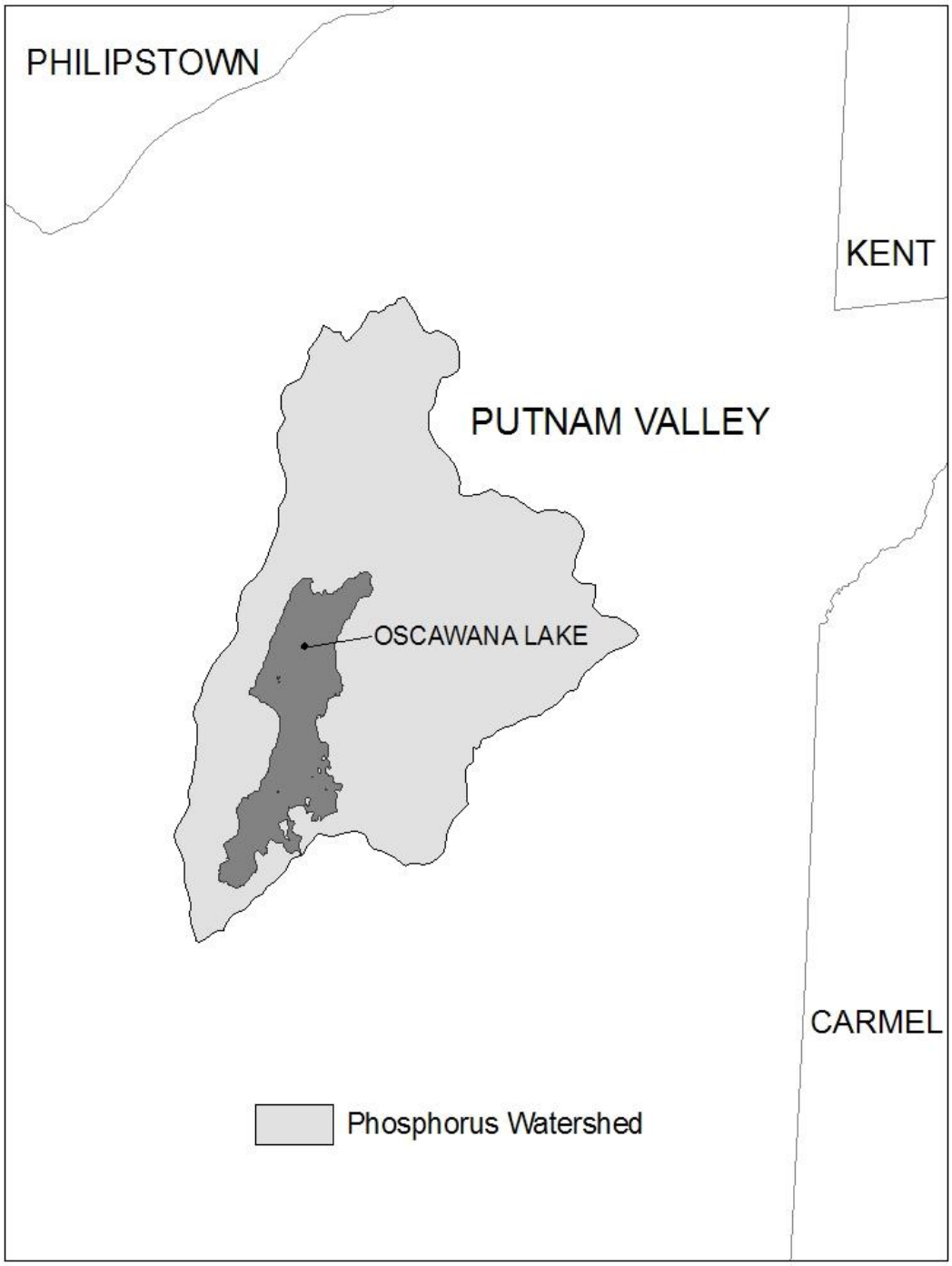
Figure 3 - Greenwood Lake Watershed



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

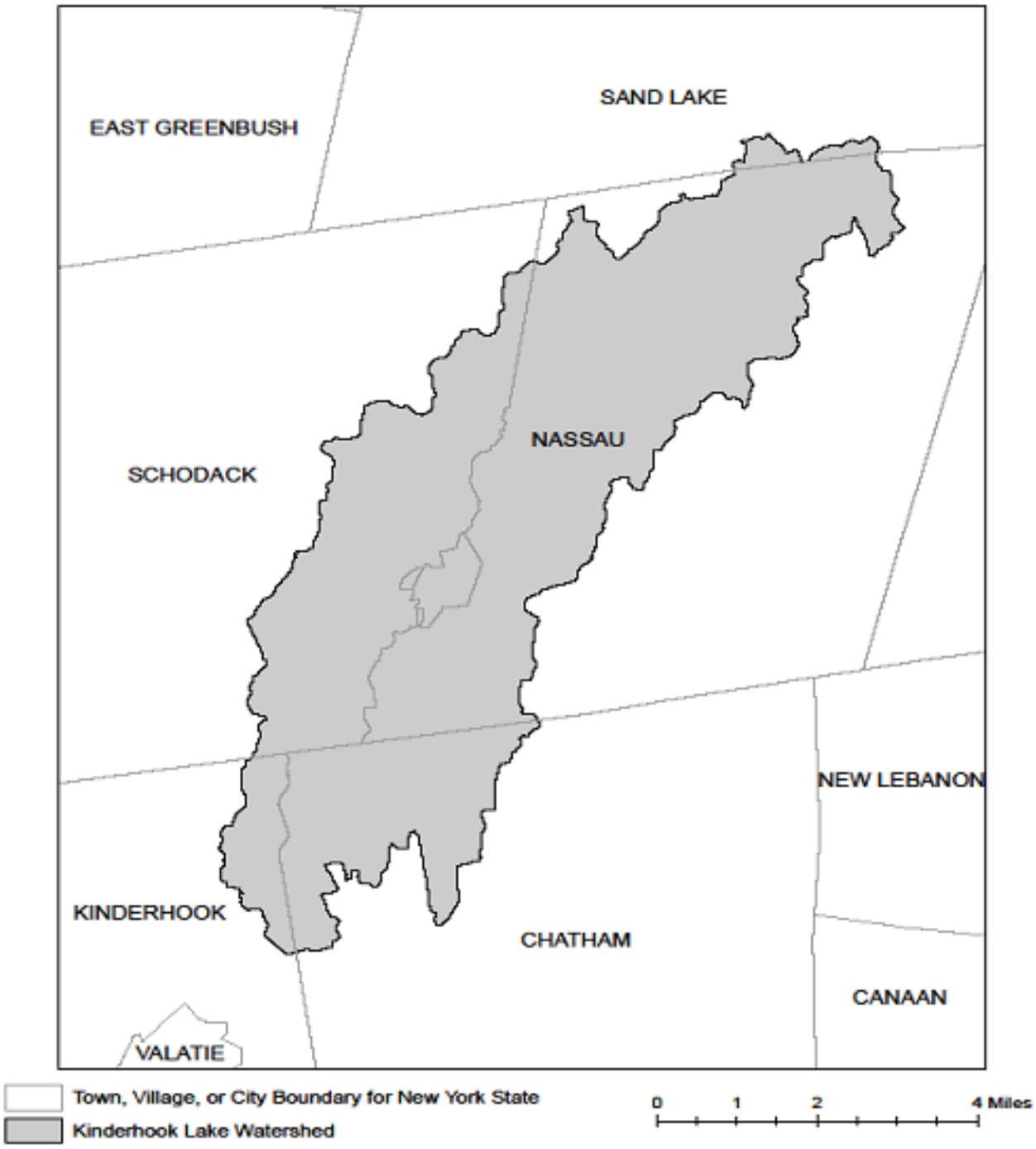
Appendix C

Figure 4 - Oscawana Lake Watershed



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Figure 5 - Kinderhook Lake Watershed



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX B:

NYSDEC Authorization Permit
Notice of Intent (NOI)
MS4 Acceptance Form

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)
AMHERST COMMUNITY SOLAR, LLC

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

Owner/Operator Contact Person First Name
ELISHA

Owner/Operator Mailing Address
412 SOUTH 13TH STREET, UNIT 607

City
PHILADELPHIA

State
PA

Zip
19147-____

Phone (Owner/Operator)
914-420-5803

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)
ESCHECTER@OURGENERATION.DEV

FED TAX ID
__-_____ (not required for individuals)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Project Site Information

Project/Site Name
AMHERST SOLAR FARM

Street Address (NOT P.O. BOX)
595 SCHOELLES ROAD

Side of Street
○ North ◉ South ○ East ○ West

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

State Zip
NY 14228-

County
ERIE

DEC Region
9

Name of Nearest Cross Street
HOPKINS ROAD

Distance to Nearest Cross Street (Feet)
850

Project In Relation to Cross Street
○ North ○ South ○ East ◉ West

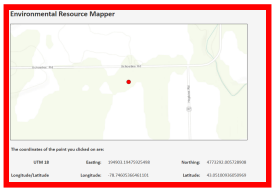
Tax Map Numbers
Section-Block-Parcel
28.00-1-1.11

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
Ex. -73.749

Y Coordinates (Northing)
4
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**

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

Pre-Development Existing Land Use

- ○ FOREST
- ◉ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ◉ OTHER: SOLAR FARM

***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
21.8	6.1	0.0	0.0

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
%	%	%	100 %

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

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

Start Date / / — **End Date** / /

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

Name

RANSOM CREEK, A TRIBUTARY TO TONAWANDA 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**

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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?

TOWN OF AMHERST

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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
Greenman-Pedersen, Inc.

Contact Name (Last, Space, First)
TRUNKO, LAST

Mailing Address
80 WOLF ROAD, SUITE 300

City
ALBANY

State NY Zip 12205-

Phone 518-898-9551

Fax

Email
RTRUNKO@GPINET.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 RYAN **MI** J

Last Name TRUNKO

Signature

Date / /

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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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

			.				**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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7738089822

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

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

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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

_____ **acre-feet**

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

○ **Yes** ○ **No**

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

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

Minimum RRv Required

_____ **acre-feet**

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

○ **Yes** ○ **No**

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

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

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

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

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

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

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

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

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

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

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

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **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

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

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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

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.

The proposed project includes the installation of a solar array and limited use previous access driveway. Solar arrays are treated similarly to vegetative open space projects per NYSDEC Memorandum "Solar Panel Construction Stormwater Permitting/SWPPP Guidance" dated April 6, 2018. Vegetated open space projects are include in Table 1 of Appendix B in GP-0-20-001 requiring erosion and sediment control measures only.

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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][ ][ ][ ][ ][ ][ ]

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Owner/Operator Certification

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

Print First Name **MI**

Print Last Name

Owner/Operator Signature

Date / /

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
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:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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)

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APPENDIX C:

Contractor's Certification Form
(Sample Form)

GPI

Engineering | Design | Planning | Construction Management

Stormwater Pollution Prevention Plan
Contractor or Subcontractor Certification Statement

Amherst Solar Farm
595 Schoelles Road
Town of Amherst, Erie County, New York

Each Contractor and Subcontractor that will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices included in the SWPPP is required to complete and sign this Certification Statement before commencing any construction activity at the site. The completed Certification Statement(s) shall be maintained at the construction site.

Contracting Firm Information

Name: _____

Address: _____

_____

Telephone & Fax: _____

Contractor's Responsibilities Regarding SWPPP Implementation

_____

_____

Trained Individual(s) Responsible for SWPPP Implementation[1] (Provide name, title, and date of last training)

_____

_____

Contractor or Subcontractor Certification[2]

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[1] A Trained Individual means an employee from a contracting (construction) firm that has received four (4) hours of training, which has been endorsed by the NYSDEC, from a Soil and Water Conservation District, CPESC, Inc. or other NYSDEC endorsed entity, in proper erosion and sediment control principles no later than two (2) years from the date GP-0-20-001 was issued. After receiving initial training, the Trained Individual shall receive four (4) hours of training every three (3) years. This individual will be responsible for implementation of the SWPPP.

[2] Signatory Requirements:

a. For a corporation, this form shall be signed by (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle 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, this form shall be signed by a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency, this form 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).

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX D:

Inspection Report
(Sample Form)

ATTACHMENT 1

Construction Stormwater Compliance Inspection Report

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

INSPECTION CHECKLIST

SPDES Authority

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

SWPPP Content

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

Recordkeeping

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

Visual Observations

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

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

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Rev. 10-16-06

Water Quality Observations

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

_____

_____

_____

_____

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

_____

_____

_____

_____

Describe any other water quality standards or permit violations _____

_____

_____

Additional Comments:_____

_____

_____

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☐ Photographs attached

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APPENDIX E:

Record of Stabilization and Construction Activity Dates (Sample Form)

GPI

Engineering | Design | Planning | Construction Management

Site Stabilization & Construction Activities Dates

Amherst Solar Farm
595 Shoelles Road
Town of Amherst, Erie County, New York

Note: This form shall be completed by the Contractor and shall remain as part of the Stormwater Pollution Prevention Plan that is to remain at the project site for the duration of construction.

A record of dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be maintained until final site stabilization is achieved and the Notice of Termination is filed.

MAJOR GRADING ACTIVITIES:

Page ___of___

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

Description of Activity: _____
Contractor:_____
Location:_____
Start Date: _____ Finish Date: _____

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APPENDIX F:

Notice of Termination (NOT)
(Sample Form)

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)?

_____

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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:

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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)

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APPENDIX G:

Geotechnical Data and Information

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Erie County, New York



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Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Custom Soil Resource Report
Soil Map



Map Scale: 1:2,570 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: Jul 26, 2019—Oct 10, 2019

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

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Lc	Lamson very fine sandy loam	11.2	51.4%
Mh	Minoa very fine sandy loam	10.5	48.6%
Totals for Area of Interest		**21.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

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onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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Erie County, New York

Lc—Lamson very fine sandy loam

Map Unit Setting

National map unit symbol: 9rmr
Elevation: 50 to 1,100 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Lamson and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lamson

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Deltaic or glaciolacustrine deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 9 inches: very fine sandy loam
H2 - 9 to 40 inches: fine sandy loam
H3 - 40 to 60 inches: loamy very fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F101XY007NY - Wet Outwash
Hydric soil rating: Yes

Minor Components

Canandaigua

Percent of map unit: 5 percent

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Landform: Depressions
Hydric soil rating: Yes

Halsey

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Minoa

Percent of map unit: 5 percent
Hydric soil rating: No

Cheektowaga

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Elnora

Percent of map unit: 5 percent
Hydric soil rating: No

Mh—Minoa very fine sandy loam

Map Unit Setting

National map unit symbol: 9rnn
Elevation: 250 to 800 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Minoa and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Minoa

Setting

Landform: Deltas on lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Deltaic or glaciolacustrine deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 9 inches: very fine sandy loam
H2 - 9 to 24 inches: loamy very fine sand
H3 - 24 to 40 inches: loamy very fine sand
H4 - 40 to 60 inches: loamy very fine sand

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Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Cosad

Percent of map unit: 5 percent
Hydric soil rating: No

Niagara

Percent of map unit: 5 percent
Hydric soil rating: No

Galen

Percent of map unit: 5 percent
Hydric soil rating: No

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Elnora

Percent of map unit: 5 percent
Hydric soil rating: No

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APPENDIX H:

Fig 1: ACoE Wetlands Findings Statement

Fig 2: NYSOPRHP Approval Letter

Fig 3: Historical, Cultural & Environmental Resources Report

Wetland and Waterbodies Delineation Report

for

AMHERST SOLAR

595 Schoelles Road

Town of Amherst

Erie County, New York

for

Greenman-Pederson, Inc.



August 24, 2020
EDI Project Code: **W2H20a**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

REPORT SUMMARIZING
THE RESULTS OF
A WETLAND DELINEATION SURVEY OF

AMHERST SOLAR

595 Schoelles Road

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:

JASON BURFORD
GREENMAN-PEDERSON, INC.
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225

REPORT DATE: August 24, 2020

EDI PROJECT CODE: W2H20a

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PROJECT INFORMATION

Project Name	Amherst Solar
Street Address	595 Schoelles Road
SBL Number	28.00-1-1.11
Town	Amherst
County	Erie
State	New York
Latitude/Longitude (NAD83)	43.04977°N, 78.74606°W
Investigation Area	21.51± Acres
USGS 7.5 Minute Topographical Map	Clarence Center Quadrangle
Waterway	N/A
Hydrologic Unit Code	04120104
Date of Delineation	August 20, 2020
Consultant	Earth Dimensions, Inc. 1091 Jamison Road Elma, New York 14059
Point of Contact	Scott Livingstone (716)655-1717 slivingstone@earthdimensions.com
Engineer	Greenman-Pederson, Inc.
Property Owner	Cimato Enterprises, Inc.
Authority	Section 404
Permit/Letter Being Requested	Jurisdictional Determination

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EXECUTIVE SUMMARY

Greenman-Pederson, Inc. has proposed the development of a solar energy facility on a 21.51± acre parcel located along the south side of Schoelles Road in the Town of Amherst, County of Erie, and State of New York. Greenman-Pederson, Inc. 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 NRCS map indicates the potential for wetlands under federal 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 eight (8) wetland areas totaling 4.29± acres within the investigation area. No drainage features or open water areas were identified during the investigation. 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	43.05103	78.74505	W1-1 through W1-25	0.84±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 2	43.04996	78.74493	W2-1 through W2-28	0.57±	PEM1B	Emergent Marsh	Non-Jurisdictional
Wetland 3	43.04937	78.74487	W3-1 through W3-11	0.17±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 4	43.04875	78.74508	W4-1 through W4-19	0.99±	PEM1B	Emergent Marsh	Non-Jurisdictional

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Wetland 5	43.04823	78.74647	W5-1 through W5-16	0.90±	PEM/SS1B	Emergent Marsh	Non-Jurisdictional
Wetland 6	43.04920	78.74706	W6-1 through W6-17	0.52±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 7	43.04990	78.74719	W7-1 through W7-12	0.25±	PSS1B	Scrub-shrub	Non-Jurisdictional
Wetland 8	43.05050	78.74659	W8-1 through W8-6	0.05±	PSS1B	Scrub-shrub	Non-Jurisdictional
Total Wetland Acreage:				4.29±			

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SECTION I: INTRODUCTION

Greenman-Pederson, Inc. has proposed the development of a 21.51± acre parcel at 595 Schoelles Road in the Town of Amherst, County of Erie, and State of New York. The project has been given the name Amherst Solar and is located on USGS 7.5 minute quadrangle map indexed as Clarence Center/2002 DeLorme (Figure 1). The field work was completed on August 20, 2020 using a Trimble Geo 7X GPS to locate wetland and drainage boundaries.

Greenman-Pederson, Inc. 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 Amherst Solar project site.

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SECTION II: SITE DESCRIPTION

The Amherst Solar project area is comprised of a 21.51± acre rectangular shaped investigation area on the south side of Schoelles Road, west of Hopkins Road and east of Campbell Boulevard, and is outlined on Figure 1 and depicted on the Wetland Delineation Map included in Appendix A (Figure 6). The southern limits of the site are bound by the Interstate 990 right-of-way.

The natural topography of the Amherst Solar site is flat to gently sloping. The upland within the investigation area consisted of a successional old field community. The wetland areas were found to consist of shallow emergent marsh and scrub-shrub swamp communities. The vegetative communities of the investigation area are described according to *Ecological Communities of New York State* (Edinger et al. 2014).

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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 Amherst Solar project site on the Clarence Center/2002 DeLorme quadrangle map. The figure depicts the flat to gently sloping topography of the site. No drainage features are depicted within 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 no wetlands within the investigation area.

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?
Lc	Lamson very fine sandy loam	Hydric Soil
Mh	Minoa very fine sandy loam	Inclusions Possible

Lamson Series: The Lamson series consists of very deep, poorly drained and very poorly drained soils formed in glacio-fluvial, glacio-lacustrine and deltaic deposits. They are level and nearly level soils in low areas on glacial lake plains. Slope ranges from 0 to 3 percent but is mostly less than 2 percent. Saturated hydraulic conductivity is moderately high through high in the mineral soil. Mean annual air temperature is 49°F and mean annual precipitation is 37 inches.

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Minoa Series: The Minoa series consists of very deep, somewhat poorly drained soils formed in deltaic sediments. They are nearly level or gently sloping soils on lowland lake plains. Permeability is moderate in the solum, and moderate or moderately rapid in the substratum. Slope ranges from 0 to 8 percent, mean annual temperature is about 49°F and mean annual precipitation is about 39 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. Lamson is a hydric soil 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.

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 hydric soils and soils with possible inclusions depicted within the project area as shown on the NRCS map (Figure 3). 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.

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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 41ºF. 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, twelve (12) data points were used to characterize the site.

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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.

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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.

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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 were labeled W1-1 through W1-25, W2-1 through W2-28, W3-1 through W3-11, W4-1 through W4-19, W5-1 through W5-16, W6-1 through W6-17, W7-1 through W7-12 and W8-1 through W8-6.

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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.

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SECTION V: RESULTS AND CONCLUSIONS

Earth Dimensions, Inc. (EDI) has completed a wetland delineation study at the Amherst Solar site located in the Town of Amherst, 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 eight (8) wetlands totaling 4.29± acres present within the Amherst Solar site. No drainage features or open waterbodies were identified within the investigation area.

Figure 5 depicts the vegetative communities as they existed at the time of the investigation. The uplands within the investigation area were comprised of a successional old field community. The wetland areas were found to consist of shallow emergent marsh and scrub-shrub swamp 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: eastern cottonwood (*Populus deltoides*), white ash (*Fraxinus americana*), green ash (*Fraxinus pennsylvanica*), Kentucky bluegrass (*Poa pratensis*), stickywilly (*Galium aparine*), Timothy (*Phleum pratense*), Queen Anne's lace (*Daucus carota*), Canada goldenrod (*Solidago canadensis*) and orchardgrass (*Dactylis glomerata*).

Wetland W1 is a 0.84± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), pussy willow (*Salix discolor*), broom sedge (*Carex scoparia*) and fox sedge (*Carex vulpinoidea*). Soils within wetland W1 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR4/1 with 10% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/8 mottles. The texture is loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W1 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W1 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W2 is a 0.57± acre emergent marsh dominated by green ash (*Fraxinus pennsylvanica*), Indianhemp (*Apocynum cannabinum*) and creeping bentgrass (*Agrostis stolonifera*). Soils within wetland W2 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR4/1 with 7%

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10YR5/8 mottles and a subsoil color of 10YR6/1 with 3% 10YR5/8 mottles. The texture is loam and silty clay. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W2 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W2 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W3 is a 0.17± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), creeping bentgrass (*Agrostis stolonifera*), broom sedge (*Carex scoparia*) and poison ivy (*Toxicodendron radicans*). Soils within wetland W3 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 8% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/6 mottles. The texture is loam and very fine sandy loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W3 included Water-Stained Leaves (B9). Wetland W3 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W3 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W4 is a 0.99± acre emergent marsh dominated by green ash (*Fraxinus pennsylvanica*), Indianhemp (*Apocynum cannabinum*) and purple loosestrife (*Lythrum salicaria*). Soils within wetland W4 are mapped as Lamson very fine sandy 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 and loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W4 included inundation visible on aerial imagery (B7) and Water-Stained Leaves (B9). Wetland W4 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W4 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W5 is a 0.90± acre emergent marsh/scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), pussy willow (*Salix discolor*), purple loosestrife (*Lythrum salicaria*) and reed canarygrass (*Phalaris arundinacea*). Soils within wetland W5 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR5/2 with 20% 10YR5/6 mottles. The texture is loam and very fine sandy loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W5 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W5 is not Federally jurisdictional

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W6 is a 0.52± acre scrub-shrub swamp dominated by Bebb willow (*Salix bebbiana*), pussy willow (*Salix discolor*), creeping bentgrass (*Agrostis stolonifera*) and tall goldenrod (*Solidago gigantea*). Soils within wetland W6 are mapped as Lamson very fine sandy loam and had a topsoil color of 10YR3/1 with 10% 10YR5/8 mottles and a subsoil color of 10YR5/1 with 20% 10YR5/6-5/8 mottles. The texture is silt loam and loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W6 included Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W6 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W7 is a 0.25± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), pussy willow (*Salix discolor*), calico aster (*Symphyotrichum lateriflorum*), fowl mannagrass (*Glyceria striata*) and jumpseed (*Polygonum virginianum*). Soils within wetland W7 are mapped as Minoa very fine sandy 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 loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W7 included Water Marks (B1) and Water-Stained Leaves (B9). It is EDI's professional opinion that Wetland W7 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

Wetland W8 is a 0.05± acre scrub-shrub swamp dominated by green ash (*Fraxinus pennsylvanica*), purple loosestrife (*Lythrum salicaria*), calico aster (*Symphyotrichum lateriflorum*) and fowl mannagrass (*Glyceria striata*). Soils within wetland W8 are mapped as Minoa very fine sandy loam and had a topsoil color of 10YR3/1 with 5% 10YR5/8 mottles and a subsoil color of 10YR6/1 with 15% 10YR5/8 mottles. The texture is silt loam. This soil fits the NRCS F3 indicator (Depleted Matrix). Hydrology indicators present in Wetland W8 included Water Marks (B1) and Water-Stained Leaves (B9). Wetland W8 is a closed wetland pocket and has no apparent outlet. It is EDI's professional opinion that Wetland W3 is not Federally jurisdictional under the Navigable Waters Protection Rule due to the apparent lack of connectivity to an intermittent or perennial stream.

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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.

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SECTION VI: RECOMMENDATIONS

Eight (8) wetland areas 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 none of the wetlands identified are connected to an intermittent or perennial drainageway and therefore are not regulated by the USACE under Section 404 of the Clean Water Act. USACE approaches their regulatory analyses by first considering avoidance of wetlands and minimization of wetland losses. EDI recommends the following:

(1) Submit this report to USACE with a request for a wetland boundary confirmation and jurisdictional determination.

(2) If no impacts are proposed to federally regulated wetlands based on the outcome of the jurisdictional determination, it is the professional opinion of EDI that the project may proceed without the need for a Section 404 Permit.

(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 and Section 401 Water Quality Certification.

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AMHERST SOLAR

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX A - FIGURES

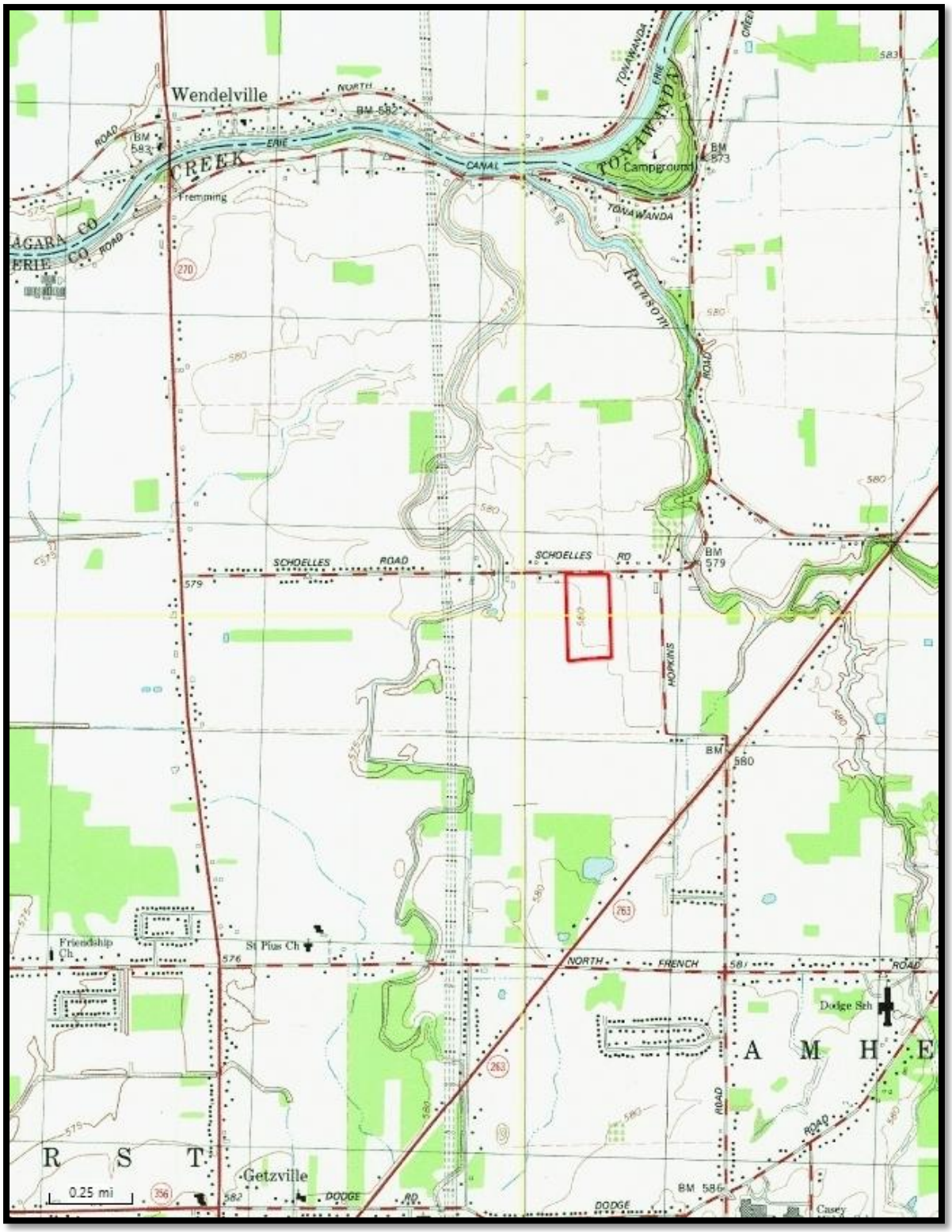


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / 2002 DeLorme

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

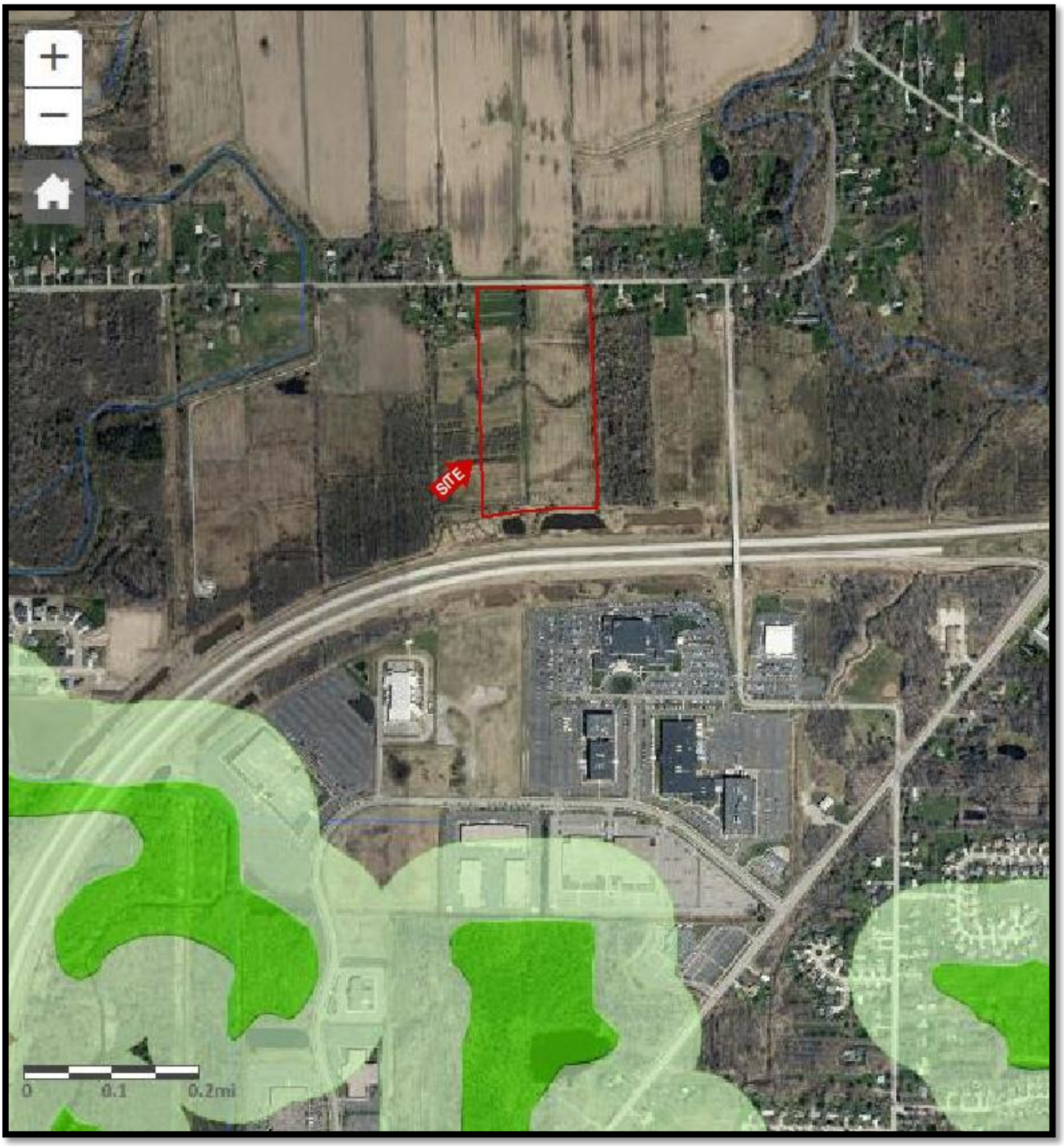


FIGURE 4: NYSDEC ENVIRONMENTAL RESOURCE MAPPER

http://www.dec.ny.gov/imsmaps/ERM/viewer.htm (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

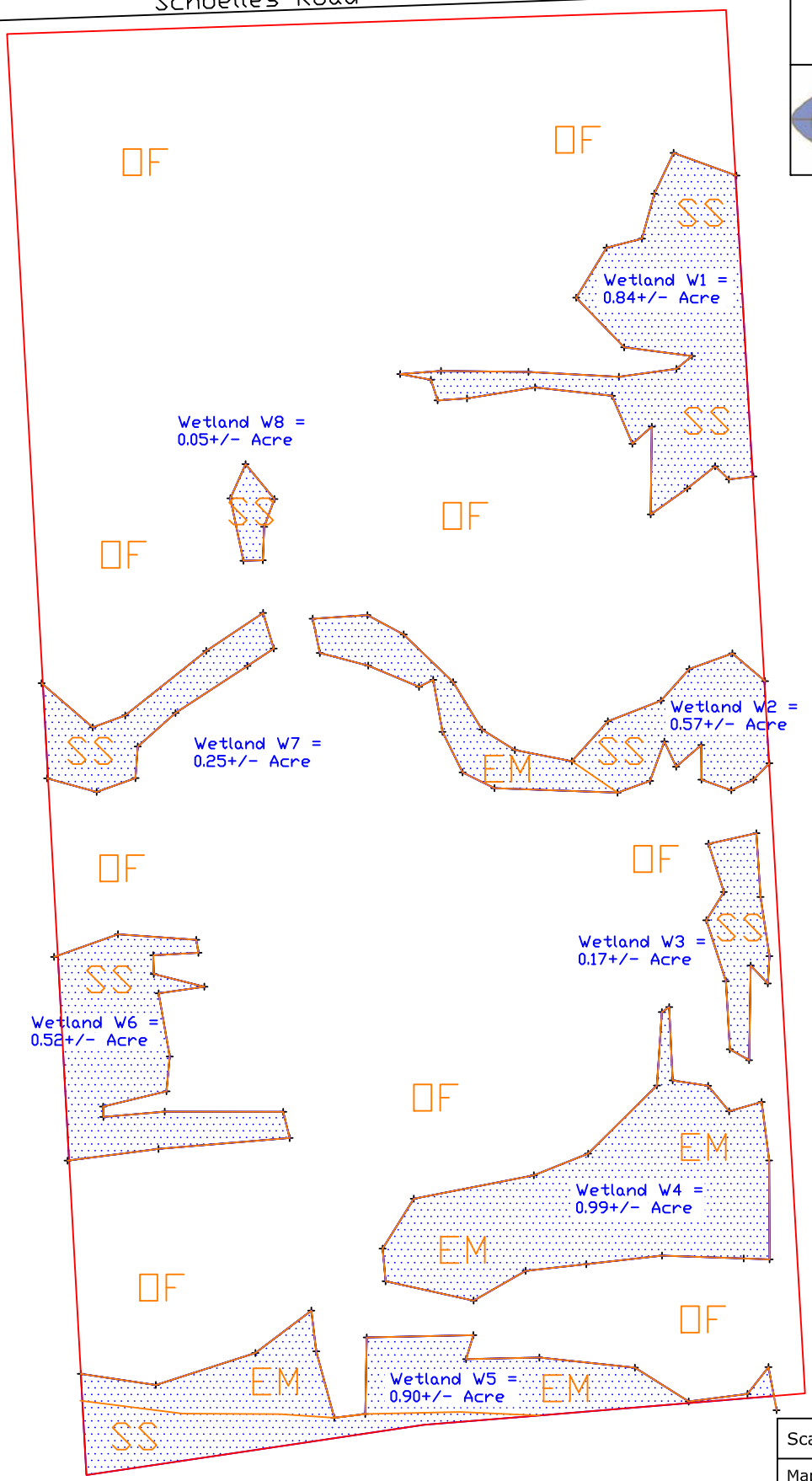
Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Schoelles Road

Figure 5 - General Vegetation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com



N
W E
S

Amherst Solar

LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- EM Emergent Marsh
- SS Scrub-shrub

Scale: 0 100′ 200′

Map Date: August 21, 2020/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X GPS

File Name: Delineation map.dwg

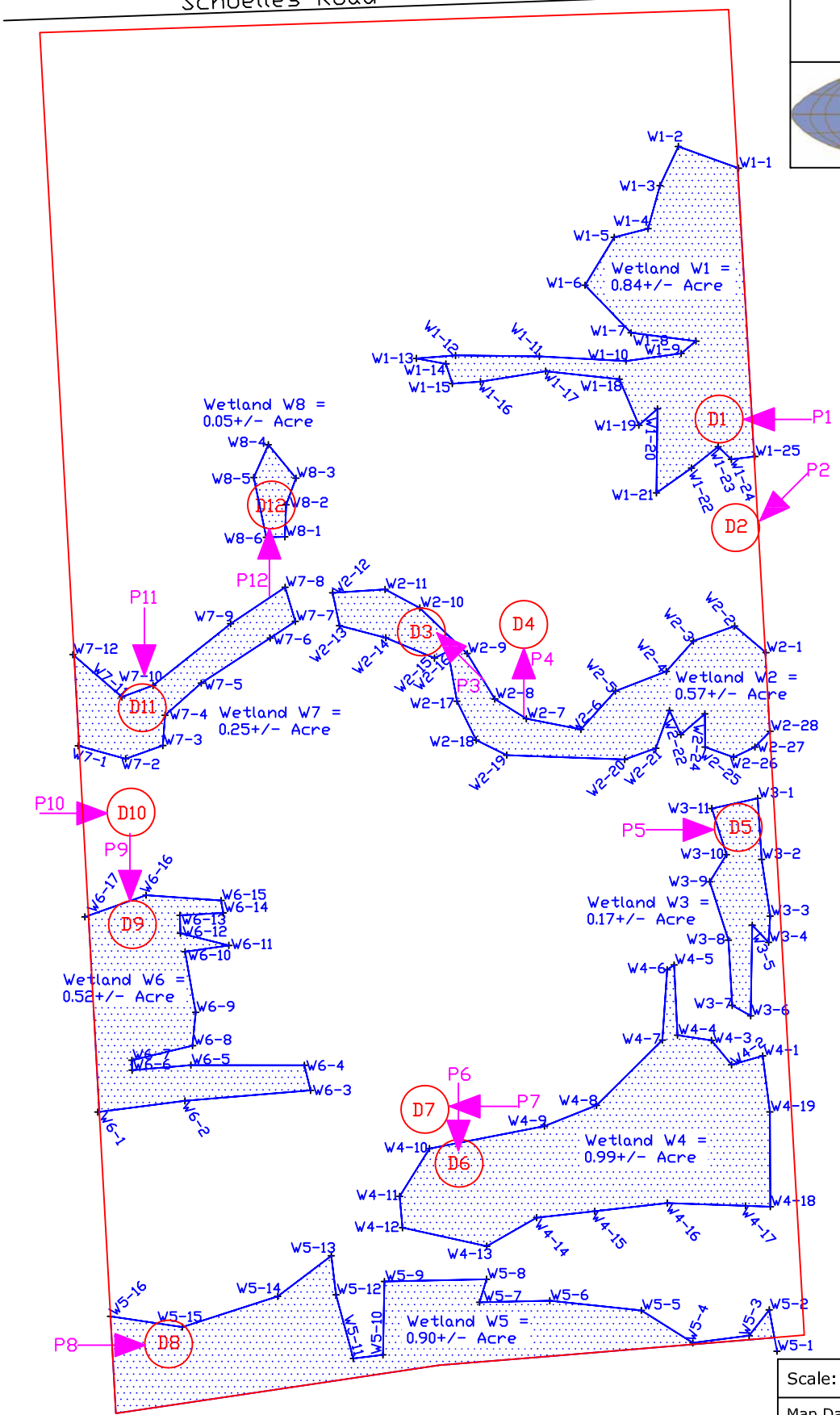
EDI Project Code: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

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Amherst Solar

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale: 0 100' 200'

Map Date: August 21, 2020/ TJS for EDI
Revised:

Base Map Provided By: Trimble Geo 7X GPS

File Name: Delineation map.dwg

EDI Project Code: W2H20a

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

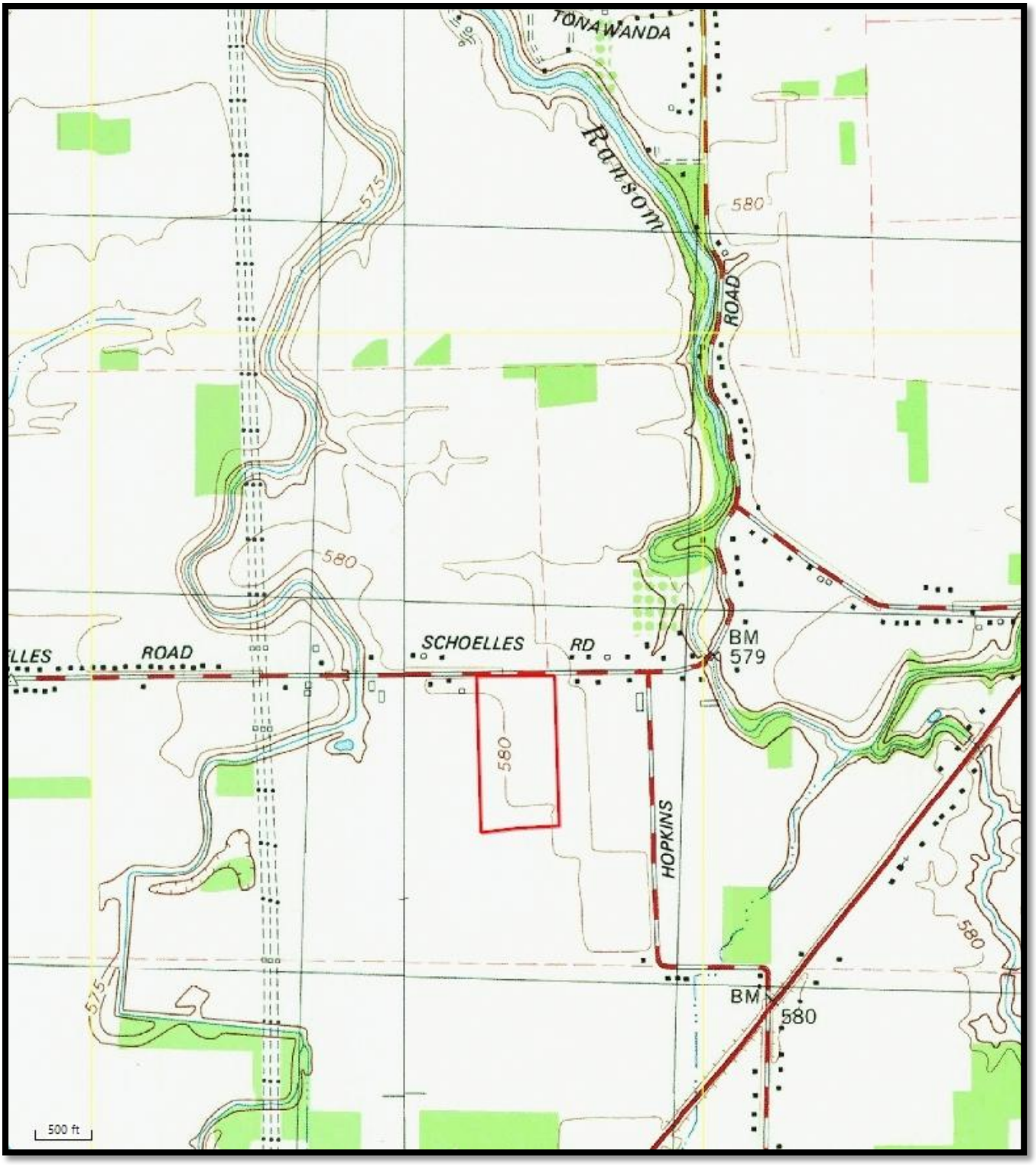


FIGURE 7: DRAINAGE MAP

Clarence Center Quadrangle / 2002 DeLorme

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

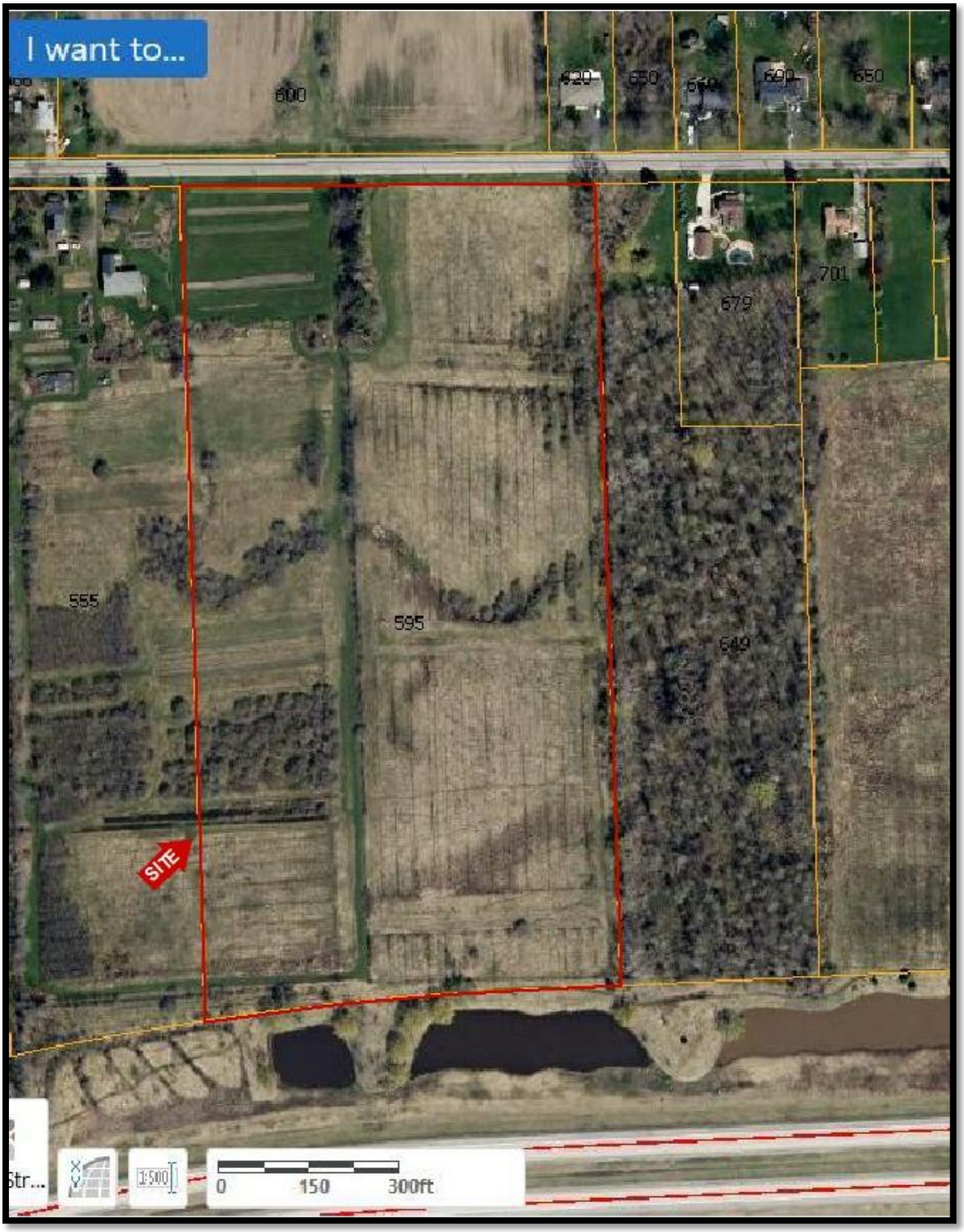


FIGURE 8: SITE AERIAL PHOTOGRAPH

http://gis2.erie.gov/HTML5/ErieCountyNY/PublicLaunchPage.aspx (Visited 8/21/2020)

Amherst Solar

Town of Amherst, Erie County, New York

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

AMHERST SOLAR

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX B – DATA SHEETS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D1

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): NONE Slope (%): 2-1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)

- W1-1- W1-26 (CLOSED)
- PHOTO 1 FACING NORTH

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants. Sampling Point: D1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix bebbiana	40	Y	FACW
2. Salix discolor	20	Y	FACW
3. Fraxinus pennsylvanica	8	N	FACW
4. Cornus amomum	5	N	FACW
5. Quercus palustris	4	N	FACW
6.			
7.			
	77 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Carex Scoparia	30	Y	FACW
2. Carex vulpinoidea	15	Y	OBL
3. Poa palustris	10	N	FACW
4. Symphyotrichum lateriflorum	8	N	FAC
5. Euthamia graminifolia	7	N	FAC
6. Juncus effusus	5	N	OBL
7. Anthoxanthum odoratum	5	N	FACU
8. Prunella vulgaris	3	N	FAC
9. Lycopus americana	2	N	OBL
10. Glyceria striata	1	N	OBL
11.			
12.			
	96 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-shrub PSS1B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P1 **Direction of Photo** West

Wetland W1

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	90	10YR 5/8	10	C	M	L	
8-16	10YR 5/1	80	10YR 5/8	20	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: DZ

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season W ater Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	9	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	9 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus americana	25	Y	FACU
2. Populus deltoides	5	N	FAC
3. Salix discolor	4	N	FACW
4.			
5.			
6.			
7.			
	34 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Poa pratensis	40	Y	FACU
2. Galium aparine	15	Y	FACU
3. Phleum pratense	12	N	FACU
4. Solidago juncea	10	N	FACU
5. Solidago canadensis	7	N	FACU
6. Daucus carota	7	N	FACU
7. Taraxacum officinale	5	N	FACU
8. Ranunculus acris	2	N	FAC
9.			
10.			
11.			
12.			
	98 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P2 **Direction of Photo** Southwest

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR4/2	100					l	
7-16	10YR5/4	85	10YR5/6	15	C	M	vfsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D3

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W2

Remarks: (Explain alternative procedures here or in a separate report.)

- W2-1 - W2-28 (CLOSED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Apocynum Cannabinum	30	Y	FAC
2. Agrostis Stolonifera	20	Y	FACW
3. Asclepias incarnata	15	N	OBL
4. Scirpus Cyperinus	6	N	OBL
5. Lythrum Salicaria	5	N	FACW
6. Fraxinus pennsylvanica	5	N	FACW
7. Lycopus americana	4	N	OBL
8. Carex vulpinoidea	3	N	OBL
9. Carex tribuloides	3	N	FACW
10. Daucus Carota	2	N	FACU
11. Vicia americana	1	N	FACU
12.			
	94 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEMZB

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P3 **Direction of Photo** North west

Wetland W2

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR4/1	93	10YR5/6	7	C	M	L	
10-16	10YR6/1	97	10YR5/6	3	C	M	SiC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D4

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

- UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	10	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	25	Y	FACU
2. Phleum pratense	20	Y	FACU
3. Daucus carota	14	Y	FACU
4. Asclepias syriaca	12	N	UPL
5. Festuca rubra	10	N	FACU
6. Galium mollugo	10	N	FACU
7. Solidago canadensis	6	N	FACU
8. Symphyotrichum ericoides	3	N	FACU
9. Carex tribuloides	2	N	FACW
10. Taraxacum officinale	2	N	FACU
11. Solidago juncea	2	N	FACU
12. Euthamia graminifolia	1	N	FAC
	107 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P4 **Direction of Photo** North

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR4/2	100					l	
7-16	10YR5/3	80	10YR5/6	10	C	M	SiL	
			10YR5/1	10	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: DS

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W3

Remarks: (Explain alternative procedures here or in a separate report.)

- W3-1 – W3-14 (CLOSED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: DS

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix bebbiana	45	Y	FACW
2. Fraxinus pennsylvanica	15	N	FACW
3. Salix discolor	10	N	FACW
4. Spiraea alba	8	N	FACW
5. Frangula alnus	8	N	FAC
6.			
7.			
	86 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Agrostis stolonifera	15	Y	FACW
2. Carex scoparia	12	Y	OBL
3. Eutthamia graminifolia	10	N	FAC
4. Lythrum salicaria	8	N	FACW
5. Solidago gigantea	4	N	FACW
6. Ranunculus acris	3	N	FAC
7. Daucus carota	1	N	FACU
8. Prunella vulgaris	1	N	FAC
9.			
10.			
11.			
12.			
	54 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1. Toxicodendron radicans	8	Y	FAC
2.			
3.			
4.			
	8 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub Shrub PSS 2B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P5 **Direction of Photo** East

Wetland W3

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Project Code: W2H20a

1.a

SOIL

Sampling Point: B5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR3/1	92	10YR5/8	8	C	M	L	
5-16	10YR5/1	80	10YR5/6	20	C	M	vFSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D6

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depressio Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: W4

Remarks: (Explain alternative procedures here or in a separate report.)

CLOSED SCRUB/SHRUB WETLAND (ISOLATED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants. Sampling Point: D6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	7	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	7 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Apocynum Cannabinum	40	Y	FAC
2. Lythrum Salicaria	25	Y	FACW
3. Agrostis Stolonifera	15	N	FACW
4. Carex vulpinoidea	10	N	OBL
5. Euthamia graminifolia	6	N	FAC
6. Carex Scoparia	6	N	OBL
7. Symphyotrichum lateriflorum	4	N	FAC
8. Juncus effusus	3	N	OBL
9. Phleum pratense	2	N	FACU
10. Solidago gigantea	2	N	FACW
11. Carex tribuloides	2	N	FACW
12.			
	115 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEM1B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P6 **Direction of Photo** South

Wetland W4

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL Sampling Point: D6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR3/1	95	10YR5/8	5	C	PL	SiL	
10-16	10YR6/1	90	10YR5/8	10	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D7

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE Plain Local relief (concave, convex, none): CONVEX Slope (%): 2

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

UPLAND SUCCESSIONAL FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D7

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: 5')			
1. Poa pratensis	25	Y	FACU
2. Daucus Carota	18	Y	FACU
3. Phleum pratense	15	Y	FACU
4. Dactylis glomerata	10	N	FACU
5. Apocynum Cannabinum	7	N	FAC
6. Euthamia graminifolia	7	N	FAC
7. Lythrum Salicaria	5	N	FACW
8. Solidago juncea	5	N	FACU
9. Festuca rubra	5	N	FACU
10. Symphyotrichum ericoides	3	N	FACU
11. Ranunculus repens	2	N	FAC
12. Solidago nemoralis	2	N	FACU
	104	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P7 **Direction of Photo** West

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: DP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100					l	
8-16	10YR 5/6	95	10YR 5/8	5	C	M	vfsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D8

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PEM/SS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID: W5

Remarks: (Explain alternative procedures here or in a separate report.)

W5-1- W5-16 (OPEN TO WEST)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season W ater Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D8

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	18	Y	FACW
2. Salix discolor	15	Y	FACW
3. Cornus amomum	3	N	FACW
4.			
5.			
6.			
7.			
	36 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Lythrum Salicaria	30	Y	FACW
2. Phalaris arundinacea	20	Y	FACW
3. Euthamia graminifolia	16	N	FAC
4. Carex tribuloides	8	N	FACW
5. Solidago gigantea	5	N	FACW
6. Apocynum cannabinum	3	N	FAC
7. Phleum pratense	3	N	FACU
8. Juncus effusus	2	N	OBL
9.			
10.			
11.			
12.			
	87 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Emergent Marsh PEM1/SS7B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P8 **Direction of Photo** East

Wetland WS

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/1	95	10YR5/8	5	C	M	L	
8-16	10YR5/2	80	10YR5/6	20	C	M	VFSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes Y No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D9

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): C1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID:	WG

Remarks: (Explain alternative procedures here or in a separate report.)

- W6-1- W6-17 (OPEN TO WEST)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D9

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix discolor	30	Y	FACW
2. Salix bebbiana	30	Y	FACW
3. Cornus racemosa	10	N	FAC
4. Cornus amomum	8	N	FACW
5.			
6.			
7.			
	78 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Agrostis stolonifera	15	Y	FACW
2. Solidago gigantea	6	Y	FACW
3. Solidago rugosa	4	N	FACW
4. Carex scoparia	3	N	OBL
5. Lythrum salicaria	2	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is < 3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-Shrub PSS1B

Hydrophytic Vegetation Present? Yes X No __

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P9 **Direction of Photo** South

Wetland W6

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/1	90	10YR 5/8	10	C	M	SiL	
9-16	10YR 5/1	80	10YR 5/4-5/8	20	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D10

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): LAKE PLAIN Local relief (concave, convex, none): CONVEX Slope (%): 1

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: LAMSON VERY FINE SANDY LOAM NW I classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: N/A

Remarks: (Explain alternative procedures here or in a separate report.)

o UPLAND FIELD

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres on Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- __ Surface Soil Cracks (B6)
- __ Drainage Patterns (B10)
- __ Moss Trim Lines (B16)
- __ Dry-Season W ater Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D10

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus americana	8	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	8 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Solidago Canadensis	20	Y	FACU
2. Dactylis glomerata	15	Y	FACU
3. Poa pratensis	15	Y	FACU
4. Symphyotrichum ericoides	13	N	FACU
5. Daucus Carota	12	N	FACU
6. Phleum pratense	8	N	FACU
7. Solidago juncea	6	N	FACU
8. Anthoxanthum odoratum	3	N	FACU
9. Lythrum Salicaria	2	N	FACW
10. Carex vulpinoidea	2	N	OBL
11. Juncus effusus	1	N	OBL
12. Dipsacus fullonum	1	N	FACU
	98 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is < 3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Successional old field

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P10 **Direction of Photo** East

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: A10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR4/2	100					SiL	
8-16	10YR5/4	85	10YR5/6	15	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: D11

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: Minoa very fine Sandy loam NW I classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?**	Yes X No
Hydric Soil Present?	Yes X No		
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID:	W7

Remarks: (Explain alternative procedures here or in a separate report.)

- W7-1 – W7-12 (OPEN TO WEST)
- WILLOWS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- X Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres on Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- __ Surface Soil Cracks (B6)
- __ Drainage Patterns (B10)
- __ Moss Trim Lines (B16)
- __ Dry-Season W ater Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches): N/A
Water Table Present?	Yes	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D11

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	8	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	8	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Salix discolor	60	Y	FACW
2. Fraxinus pennsylvanica	10	N	FACW
3. Cornus racemosa	6	N	FAC
4. Salix bebbiana	5	N	FACW
5.			
6.			
7.			
	81	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Symphyotrichum lateriflorum	12	Y	FAC
2. Glyceria striata	10	Y	OBL
3. Polygonum virginianum	8	Y	FAC
4. Euthamia graminifolia	6	N	FAC
5. Carex scoparia	5	N	OBL
6. Epilobium coloratum	4	N	OBL
7. Lythrum salicaria	2	N	FACW
8. Geum aleppicum	1	N	FAC
9.			
10.			
11.			
12.			
	48	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrb-shrb PSSZB

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P11 **Direction of Photo** South

wetland W7

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: P11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/1	95	10YR5/6	5	C	M	SiL	
6-16	10YR5/1	85	10YR5/8	15	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Amherst Solar – 595 Schoelles Road Town/County: Amherst/Erie County Sampling Date: August 20, 2020

Applicant/Owner: GPI State: New York Sampling Point: DP2

Investigator(s): Scott Livingstone & Tom Somerville Section, Township, Range: 28.00-1-1.11

Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR or MLRA) LRRL Lat: Long: Datum: NAD83

Soil Map Unit Name: MINOA VERY FINE SANDY LOAM NW I classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS : Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: WB

Remarks: (Explain alternative procedures here or in a separate report.)

WB-1 - WB-6 (CLOSED / ISOLATED)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season W ater Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

VEGETATION : Use scientific names of plants.

Sampling Point: D12

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	15	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	65	Y	FACW
2. Cornus racemosa	10	N	FAC
3. Salix discolor	10	N	FACW
4.			
5.			
6.			
7.			
	85 = Total Cover		

Herb Stratum (Plot size: 5')			
1. Lythrum Salicaria	12	Y	FACW
2. Symphyotrichum lateriflorum	6	Y	FAC
3. Glyceria striata	5	Y	OBL
4. Geum aleppicum	1	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	24 = Total Cover		

Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW , or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW , or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is < 3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Community Type: Scrub-shrub PSS 7B

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo # P12 **Direction of Photo** North

Wetland W8

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

SOIL

Sampling Point: D12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR3/1	95	10YR5/8	5	C	M	S.l	
5-16	10YR2/1	85	10YR5/8	15	C	M	S.l	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L, M)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: NONE

Depth (inches): N/A

Hydric Soil Present? Yes X No ___

Remarks:

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Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX C - SITE PHOTOGRAPHS



Photo 1: Facing west. Depicts the scrub-shrub swamp community of wetland W1 at data point D1.



Photo 2: Facing southwest. Depicts the successional old field community at data point D2.



Photo 3: Facing northwest. Depicts the emergent marsh community of wetland W2 at data point D3.



Photo 4: Facing north. Depicts the successional old field community at data point D4.



Photo 5: Facing east. Depicts the scrub-shrub swamp community of wetland W3 at data point D5.



Photo 6: Facing south. Depicts the emergent marsh community of wetland W4 at data point D6.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)



Photo 7: Facing west. Depicts the successional old field community at data point D7.



Photo 8: Facing east. Depicts the emergent marsh community of wetland W5 at data point D8.



Photo 9: Facing south. Depicts the scrub-shrub swamp of wetland W6 at data point D9.



Photo 10: Facing east. Depicts the successional old field community at data point D10.



Photo 11: Facing south. Depicts the scrub-shrub swamp community of wetland W7 at data point D11.



Photo 12: Facing north. Depicts the scrub-shrub swamp community of wetland W8 at data point D12.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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APPENDIX D - REFERENCES

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Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX E - WETLAND INVESTIGATION PERSONNEL

Soils and Hydrology Sampling
Scott Livingstone, Senior Soil Scientist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Vegetation Sampling
Tom Somerville, Ecologist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Report Preparation
Tom Somerville, Ecologist
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Surveyor of Flag Locations

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

HISTORICAL, CULTURAL, AND ENVIRONMENTAL RESOURCES SUMMARY

Amherst Solar Farm – Amherst Community Solar, LLC

1. USGS Web Soil Survey (http://websoilsurvey.sc.egov.usda.gov/app/homepage.htm)
   a. HSG Classifications
      i. Mh is B/D
      ii. Lc is A/D



2. National Wetlands Inventory (https://www.fws.gov/wetlands/data/mapper.html)
   a. Conclusion: Ransom Creek (Riverine) is located east of the site.



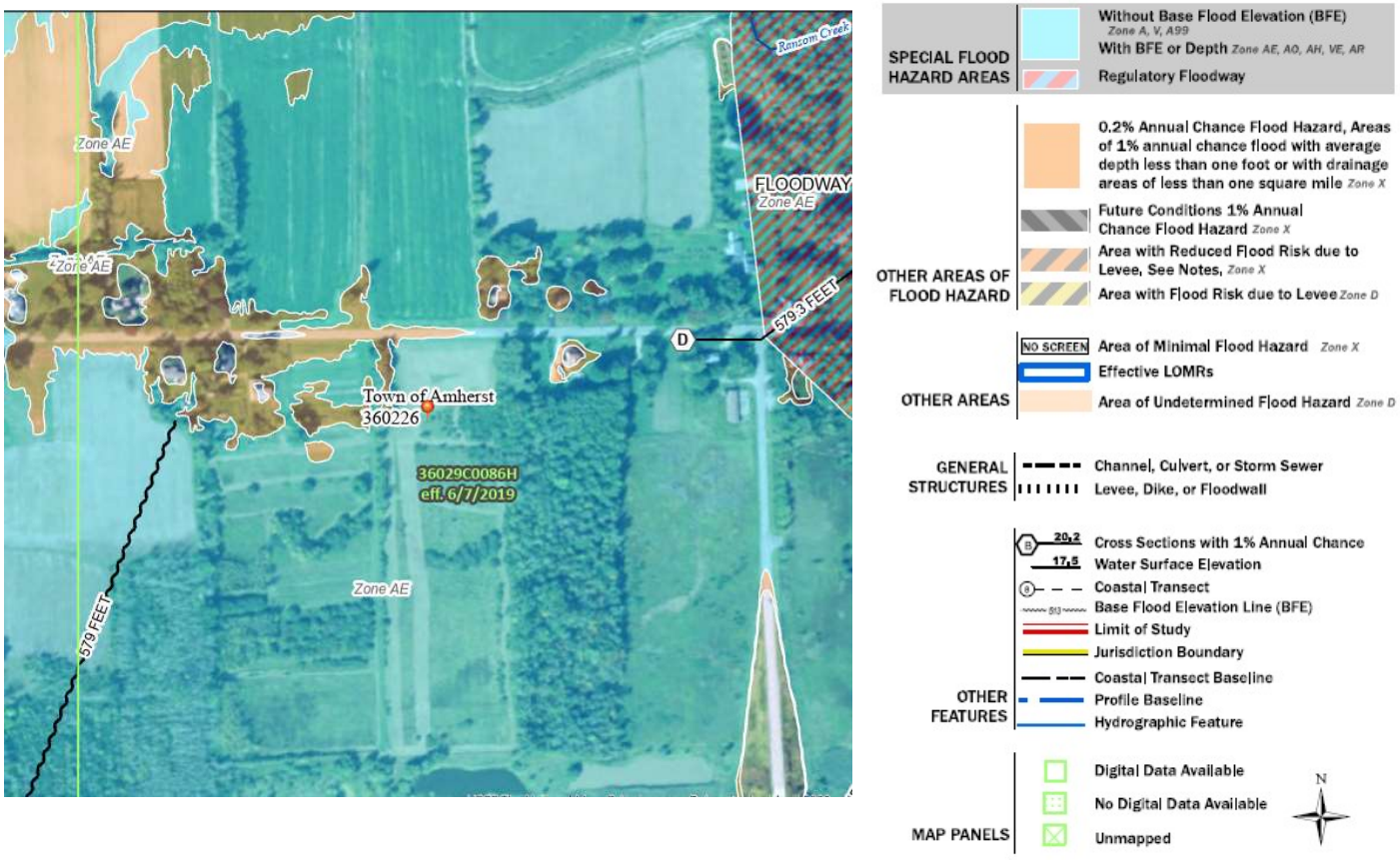


Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

3. NYSDEC's Stormwater Interactive Map (http://www.dec.ny.gov/gis/stormwater/)
   a. Conclusion:
      i. No impaired bodies of water located at the site
      ii. Not in a regulated MS4
      iii. No water bodies on 303D list (https://www.dec.ny.gov/docs/water_pdf/303dListfinal2016.pdf)

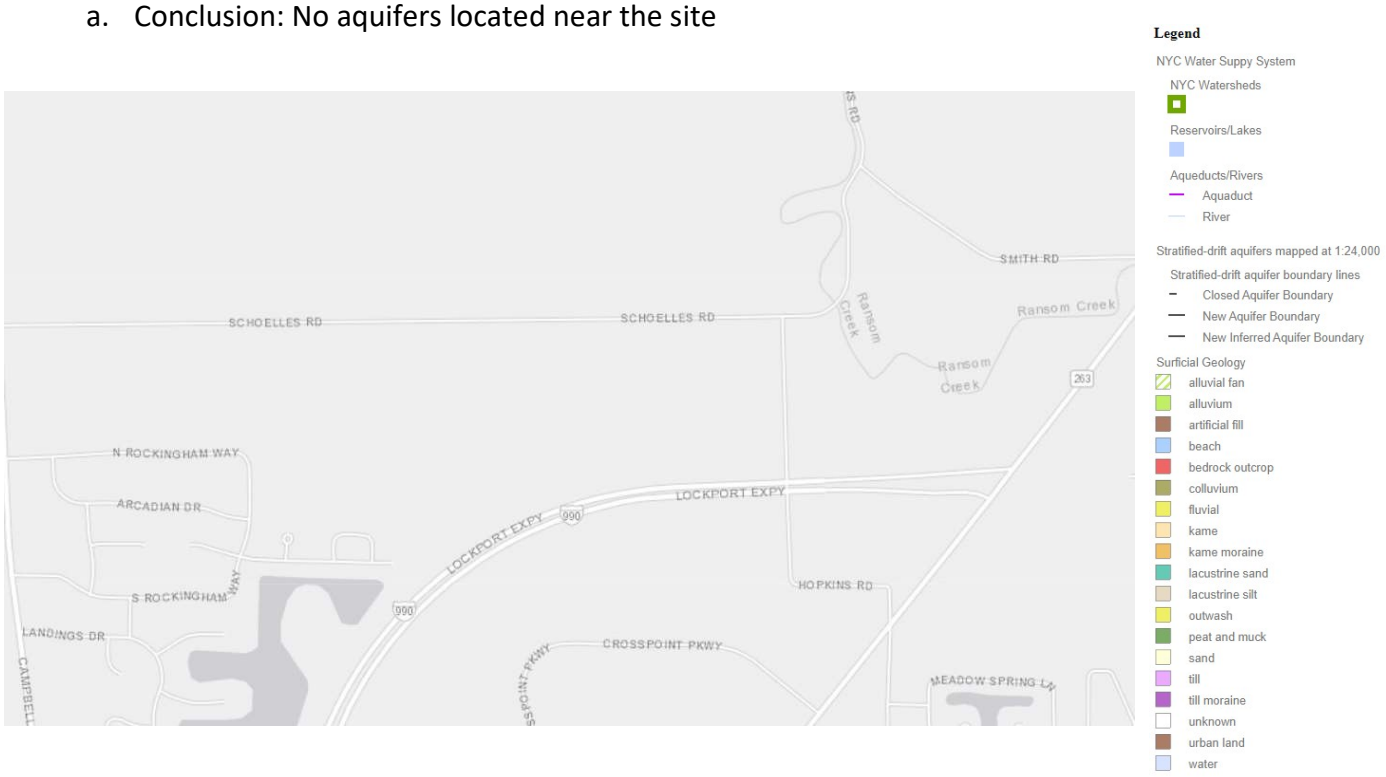


4. FEMA Flood Maps (https://msc.fema.gov/portal)
   i. Conclusion: A portion of the site lies within zones X (0.2% annual flood chance) and AE



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

5. Sole Source, Primary, and Principal Aquifers (https://ny.water.usgs.gov/maps/aquifer/)
   a. Conclusion: No aquifers located near the site

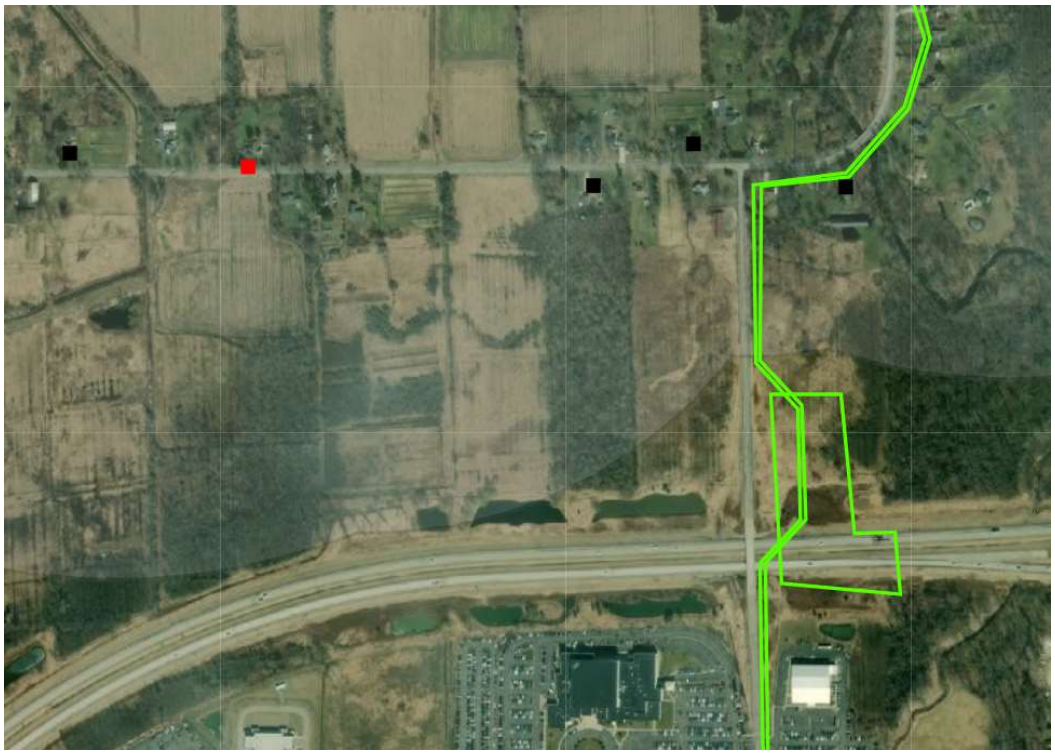


6. NYSDEC's Environmental Resource Mapper (http://www.dec.ny.gov/gis/erm/)
   a. Conclusion: The site is not located near identified environmental resources



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

7. Cultural Resources Information System (http://cris.parks.ny.gov/)
   a. Conclusion: The "Benjamin DuBois Stone House" is nearby and multiple listed/eligible USN points onsite are for the same house.



8. NYS DECinfo Locator: (https://gisservices.dec.ny.gov/gis/dil/)
   a. Conclusion:
      i. No remediation parcels or sites are near the proposed solar farm

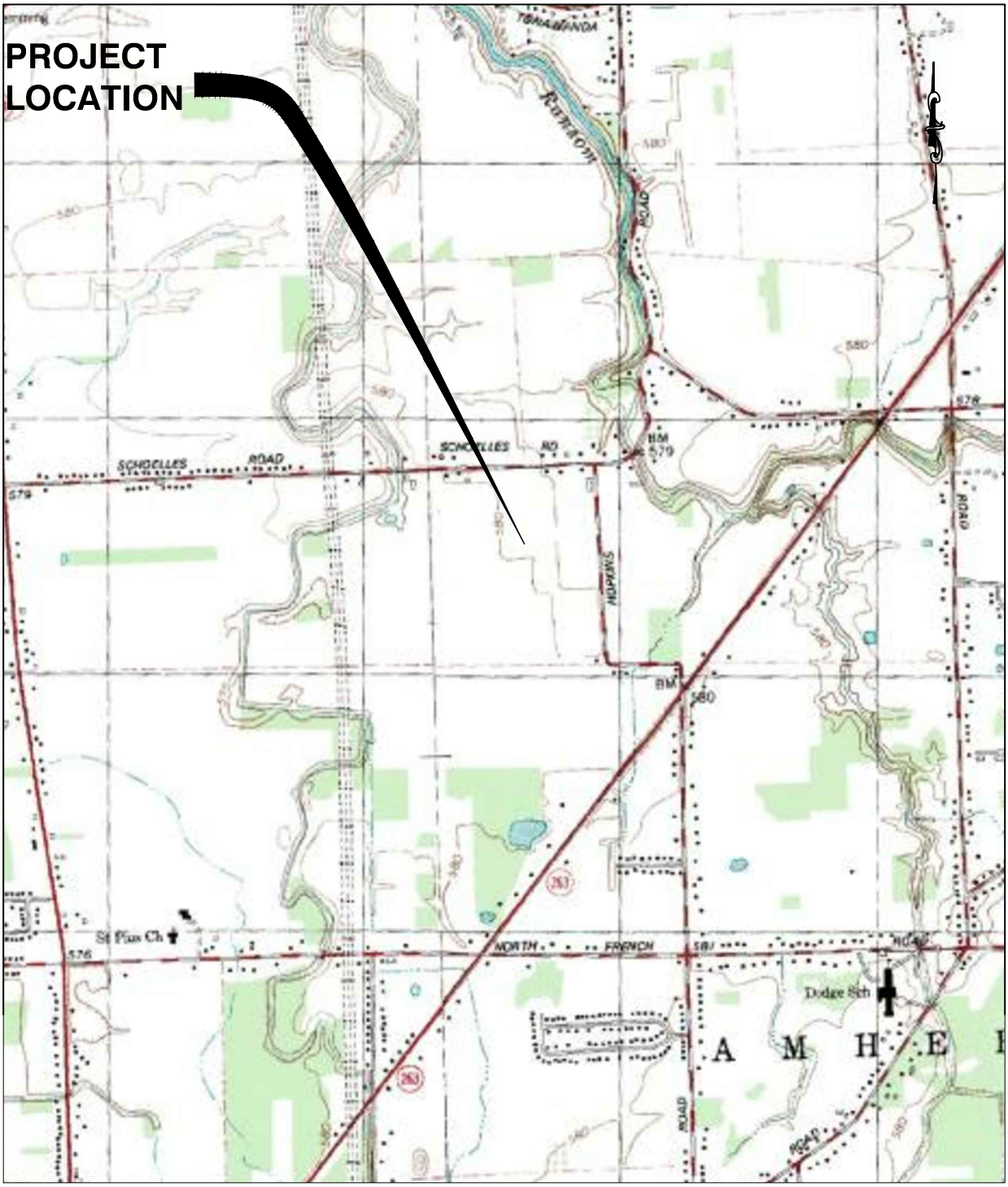


Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX I:

Site Location Map



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

GPI Engineering Design Planning Construction Management 518.453.9431 GPINET.COM Greenman-Pedersen, Inc. 80 Wolf Road, Suite 300 Albany, NY 12205	GPI JOB NO. ALB-2020116.00 SCALE: 1" = 2000' DATE: OCTOBER 28, 2020	CLIENT: AMHERST COMMUNITY SOLAR, LLC 412 SOUTH 13TH STREET UNIT 607 PHILADELPHIA, PA	PROJECT TITLE: **AMHERST SOLAR FARM** **595 SCHOELLES ROAD** **TOWN OF AMHERST, NEW YORK**
MODIFIES DRAWING NUMBER:	SKETCH NO. 1		

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Oct 26,2020
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APPENDIX J:

Hydrologic Analysis Report

GPI

Engineering | Design | Planning | Construction Management

Engineers Report

October 28th, 2020

HYDRAULIC ANALYSIS REPORT

For

AMHERST SOLAR FARM

595 Schoelles Road
Town of Amherst,
Erie County
New York

Owner/Developer: **Amherst Community Solar, LLC**
412 South 13th Street, Unit 607
Philadelphia, PA 19147

WARNING: The alteration of this material in any way, unless under the direction of a comparable professional, i.e. a Professional Engineer, is a violation of the New York State Education Law and/or Regulations and is a Class 'A' misdemeanor.

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Appendix 2: ..... Post-Development Hydrology Map and HydroCAD Report

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1.0 PROJECT INFORMATION

This Hydraulic Analysis Report (HAR) has been prepared for construction activities associated with Amherst Community Solar, LLC's project titled "Amherst Solar Farm" hereafter also called "the project".

The project includes development within the floodplain which prompted a hydraulic analysis of the proposed site development. The hydraulic analysis is necessary to ensure the proposed site design would not significantly impact the floodplain negatively. This report considers the impacts associated with the intended development with the purpose of:

- Maintaining existing drainage patterns as much as possible while continuing the conveyance of upland watershed runoff;
- Analyzing the existing and proposed drainage patterns to identify any potential significant impacts to the local floodplain;
- Outline proposed features to minimize potential floodplain impacts, ground disturbance, while promoting drainage from the project site.

1.1 Project Location

The "project site" is located at 595 Schoelles Road in the Town of Amherst, Erie County, New York. The project site is between the roads of I-990 and Schoelles Road, and lies west of Hopkins Road. National Flood Insurance Rate Map Panel 80 of 807 for Erie County, New York (Map No. 36029C0086H) provided by FEMA indicates most of the project site is within Zone AE of the floodplain, where the 100-year floodplain elevation is known to be approximately 579 feet above mean sea level.

1.2 Project Description

The project proposes the new construction of a 16.1± acre solar farm with single-axis tracker racking PV panels and associated transformers, inverts, switchgears and 7 utility poles. A new gravel access driveway, security fencing, and landscape plantings are also planned for site development. The existing vegetation will be maintained to the maximum extent possible and will be supplemented to buffer views into the site from an adjacent residential property and roadway. The project intends to maintain the existing grading as much as possible to reduce the project's disturbance footprint.

1.3 Soils and Groundwater

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey for Schenectady County was reviewed and identified surficial soil conditions for the study area. The SCS identified the presence of two primary series soil types, "Lc – Lamson very fine sandy loam" on the southern portion of the site and "Mh – Minoa very fine sandy loam" throughout the northern portion of the site.

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The Hydrological Soil Group (HSG) ratings given by the USGS Web Soil Survey for "Lc" and "Mh" soils are A/D and B/D, respectively. The HSG ratings are typically used to describe the soils' capacity for infiltrating water, and how well the soils drain. When a soil has two combined ratings, the USGS has indicated that the soil's properties change based on how saturated the soil is with water. Under dry conditions the onsite soils ("Lc" and "Mh") react as the better rating (A and B respectively), while under wet or "saturated" conditions they would react as the lower soils (D ratings for both in this case). For hydrological calculations and analysis of rainfall events, the lower rating is used to describe the behavior of the onsite soils because the scenario being analyzed requires the soils to be saturated with water.

1.4 Rainfall Data

Rainfall data utilized in the modeling and analysis were obtained from the Northeast Regional Climate Center (NRCC). Rainfall data averaged from the closest rainfall stations to the project site for various 24-hour storm events is presented in Table 1:

Table 1: Rainfall Data

Storm Event Return Period	24-Hour Rainfall (inches)
10-year	3.05
25-year	3.72

These values were used to evaluate the stormwater runoff characteristics and hydraulic analysis of the drainage features.

2.0 STORMWATER RUNOFF ANALYSIS

The goals of this Hydraulic Analysis Report are to analyze the impact to the quantity of runoff exiting the site. The Town of Amherst requires a hydraulic analysis for projects within the floodplain for the 10- and 25-year storm events for projects developed within the floodplain . These objectives will be met by assessing the conditions of the site with the existing runoff controls, analyzing the existing and proposed site designs in HydroCAD, and consolidating the data to indicate whether the proposed development will negatively impact the local floodplain.

2.1 Methodology

In order to analyze the effects of the proposed project, that a hydrologic and hydraulic analysis of the pre- and post-development conditions be performed using the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD, developed by HydroCAD Software Solutions LLC of

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Tamworth, New Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. HydroCAD uses the TR-20 algorithms and TR-55 methods to create and route runoff hydrographs.

HydroCAD has the capability of computing hydrographs (which represent discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. HydroCAD can also calculate the center of mass detention time for various hydraulic features. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

For this analysis, the watershed and drainage system was broken down into a network consisting of three types of components as described below:

A. Subcatchment: A relatively homogeneous area of land, which produces a volume and rate of runoff unique to that area.
B. Reach: Uniform streams, channels, or pipes that convey stormwater from one point to another.
C. Pond: Natural or man-made impoundment, which temporarily stores stormwater runoff and empties in a manner determined by its geometry and the hydraulic structure located at its outlets.

Subcatchments, reaches, and ponds are represented by hexagons, squares, and triangles respectively, on the watershed routing diagrams provided with the computations included in Appendix 1 and Appendix 2.

The analysis of hydrologic and hydraulic conditions and proposed stormwater conveyance elements servicing the study area, was performed by dividing the tributary watershed into relatively homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps.

The hydrologic and hydraulic analysis considered the SCS, Type II 24-hour storm events identified in Table 2.

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Table 2: Design Events

Facility	24-hour Storm Event
Flood Conditions	10-year
	25-year

2.2 Description of Design Points

The study area consists of an overall watershed that encompasses approximately 21.831-acres and contains the 16.1-acre total project site. The overall watershed was broken down into smaller watersheds, or subcatchments, to allow for analysis of runoff conditions at several locations throughout the study area. Each of these locations was defined as a Design Point (DP) in order to compare the effects resulting from stormwater management facilities proposed as part of the project. Descriptions of each of the selected design points are provided below.

- Design Point 1 (DP-1): A series of existing storage ponds on the southern property border adjacent to I-990.

2.3 Pre-development Watershed Conditions

The pre-development project site contains an undeveloped forested and meadow area adjacent to flat residential properties. Schoelles Road to the north of the site acts as a high point with the project site draining to internal drainage ditches that discharge to the south. Analysis of pre-development conditions considered existing drainage patterns, soil types, ground cover, and topography.

The contributing pre-development watershed area was categorized as one (1) subcatchment, labeled SC-1. The Pre-Development Watershed Delineation Map has been provided in Appendix 1. A summary of the subcatchment is as follows:

Subcatchment SC-1's watershed consists of the whole site that includes the existing meadows with clumps of wooded areas within it. Runoff generally sheet flows east or west from the center of the site to the existing drainage ditches. The drainage ditches (model node R-2) convey the runoff to detention ponds south of the site.

The results of the computer modeling used to analyze the overall watersheds under pre-development conditions are presented in Appendix 1. A summary of the pre-development watershed runoff rates for each subcatchment is presented in Table 3.

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2.4 Post-development Watershed Conditions

The analysis of post-development conditions considered existing drainage patterns, soil types, ground cover to remain, and planned site development proposed as part of site improvements. The contributing post-development watershed remained the same one (1) subcatchment as existing conditions to analyze the storm system. The proposed development will not change the existing drainage patterns. The Post-Development Watershed Delineation Map has been provided in Appendix B. A summary of the subcatchment is as follows:

Subcatchment SC-1's watershed consists of the whole site that includes the existing meadows with clumps of wooded around the solar array in the middle of the site. The groundcover below the solar array will be retained from the existing conditions except for areas of tree removals needed to install the solar array. Runoff generally sheet flows east or west from the center of the site to the existing drainage ditches. The drainage ditches (model node R-2) convey the runoff to the existing detention ponds south of the site.

The results of the computer modeling used to analyze the overall watershed under post-development conditions are presented in Appendix B. A summary of the post-development watershed runoff rates at each design point is presented in Table 3.

2.5 Performance Summary

A comparison of the pre- and post-development watershed conditions was performed for all subcatchments and storm events evaluated herein. This comparison demonstrates that the peak rate of runoff will not be increased and pre-development rates will be maintained. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties, receiving water courses, or local floodplain.

The results of the computer modeling used to analyze the pre-development and post-development watersheds are presented in Appendix 1 and Appendix 2, respectively. Table 3 summarizes the results of this analysis.

Table 3: Summary of Pre- and Post-Development Peak Discharge Rates

Pre- vs. Post-Development Discharge Rate (cfs)				
Subcatchment (SC)	**10-year 24-hour storm event**		**25-year 24-hour storm event**	
	Pre	**Post**	**Pre**	**Post**
1	14.85	14.85	21.53	21.53

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

3.0 CONCLUSIONS

To meet floodplain development requirements of the Town of Amherst, a pre- and post-development drainage analysis was performed for the proposed development project. Pre- and post-development surface runoff rates have been evaluated for the 10-, and 25-year 24-hour storm events. The pre- and post-development drainage analysis revealed that stormwater runoff rate will not increase based on the results produced by the HydroCAD modeling. In the post-development condition, drainage patterns will remain the same and runoff will continue to be conveyed to the detention ponds. The analysis indicates the project will not have a significant adverse impact on the adjacent or downstream properties, receiving water courses, or local floodplain.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX 1:

Pre-Development Map and HydroCAD Report



STORMWATER LEGEND:

- FLOW PATH
- WATERSHED BOUNDARY
- # — SUBCATCHMENT
- # / # — TOTAL DRAINAGE AREA [ACRES] / WEIGHTED RUNOFF CURVE NUMBER
- # — REACH

N MAGNETIC

0 60 100 200 300

SCALE: 1" = 60'

Dig Safely. New York Call 811 before you dig

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

PROGRESS PRINT NOT FOR CONSTRUCTION 28 OCTOBER 2020

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS

NO.	REVISION	DATE

CONSTRUCTION PLANS
OCTOBER 28, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	JEM/RJT

PREDEVELOPMENT WATERSHED MAP

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

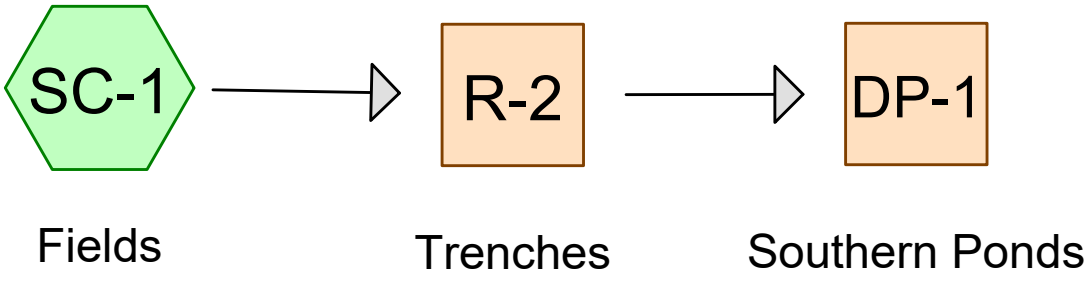
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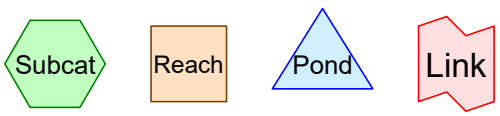
SHEET X OF 8

Oct 28,2020
E:\2020\2020116.00 Amherst Solar Farm\CADD\Stormwater Maps\20201116.00 Predevelopment Map.dwg
36x24 PLOT SHEET

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Routing Diagram for Amherst Solar Predevelopment
Prepared by Greenman-Pedersen, Inc., Printed 10/26/2020
HydroCAD® 10.00-22 s/n 08061 © 2018 HydroCAD Software Solutions LLC

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
18.331	80	Pasture/grassland/range, Good, HSG D (SC-1)
3.499	82	Woods/grass comb., Fair, HSG D (SC-1)
21.830	**80**	**TOTAL AREA**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
21.830	HSG D	SC-1
0.000	Other	
21.830		**TOTAL AREA**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatc Number
0.000	0.000	0.000	18.331	0.000	18.331	Pasture/grassland/range, Good	SC -1
0.000	0.000	0.000	3.499	0.000	3.499	Woods/grass comb., Fair	SC -1
0.000	**0.000**	**0.000**	**21.830**	**0.000**	**21.830**	**TOTAL AREA**	

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1: Fields Runoff Area=950,920 sf 0.00% Impervious Runoff Depth>1.27"
Flow Length=167' Slope=0.0059 '/' Tc=45.5 min CN=80 Runoff=16.53 cfs 2.313 af

Reach DP-1: Southern Ponds Inflow=14.85 cfs 2.277 af
Outflow=14.85 cfs 2.277 af

Reach R-2: Trenches Avg. Flow Depth=1.34' Max Vel=1.64 fps Inflow=16.53 cfs 2.313 af
n=0.022 L=1,315.0' S=0.0008 '/' Capacity=8.78 cfs Outflow=14.85 cfs 2.277 af

Total Runoff Area = 21.830 ac Runoff Volume = 2.313 af Average Runoff Depth = 1.27"
100.00% Pervious = 21.830 ac 0.00% Impervious = 0.000 ac

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Subcatchment SC-1: Fields

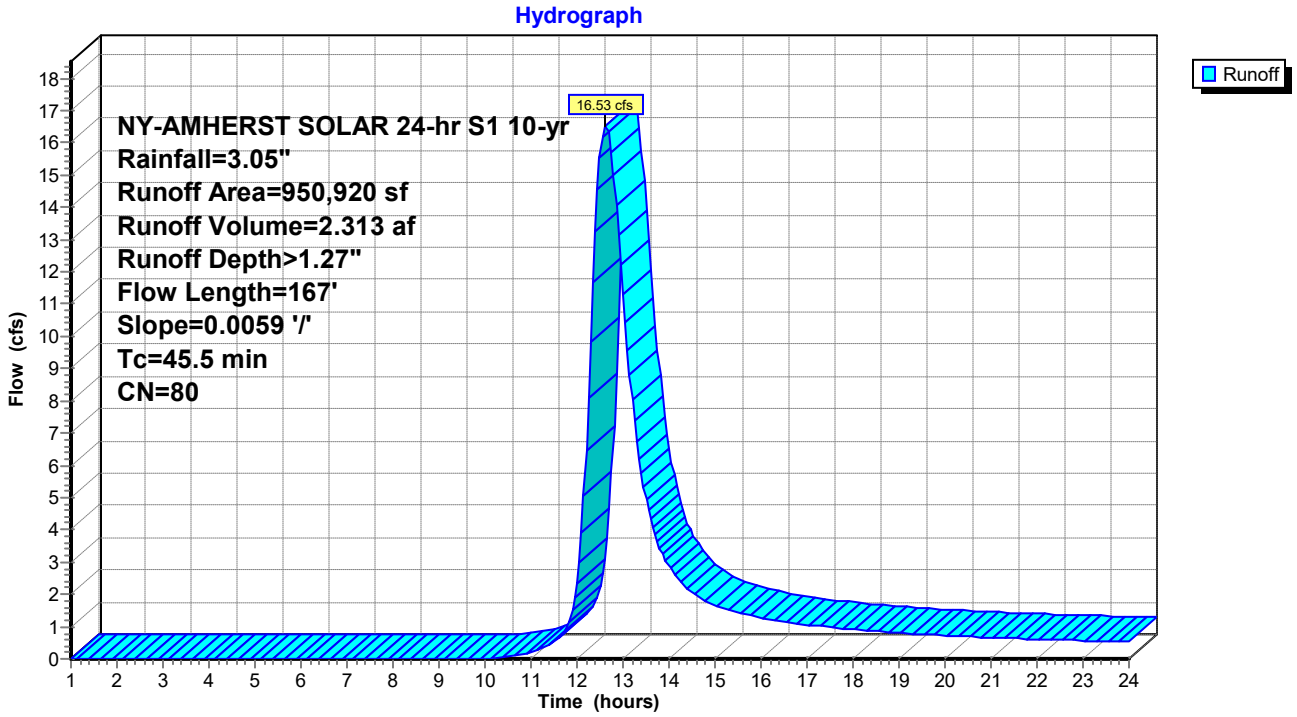
Runoff = 16.53 cfs @ 12.62 hrs, Volume= 2.313 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NY-AMHERST SOLAR 24-hr S1 10-yr Rainfall=3.05"

Area (sf)	CN	Description
798,507	80	Pasture/grassland/range, Good, HSG D
152,413	82	Woods/grass comb., Fair, HSG D
950,920	80	Weighted Average
950,920		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.4	100	0.0059	0.04		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.16"
2.1	67	0.0059	0.54		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
45.5	167	Total			

Subcatchment SC-1: Fields



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

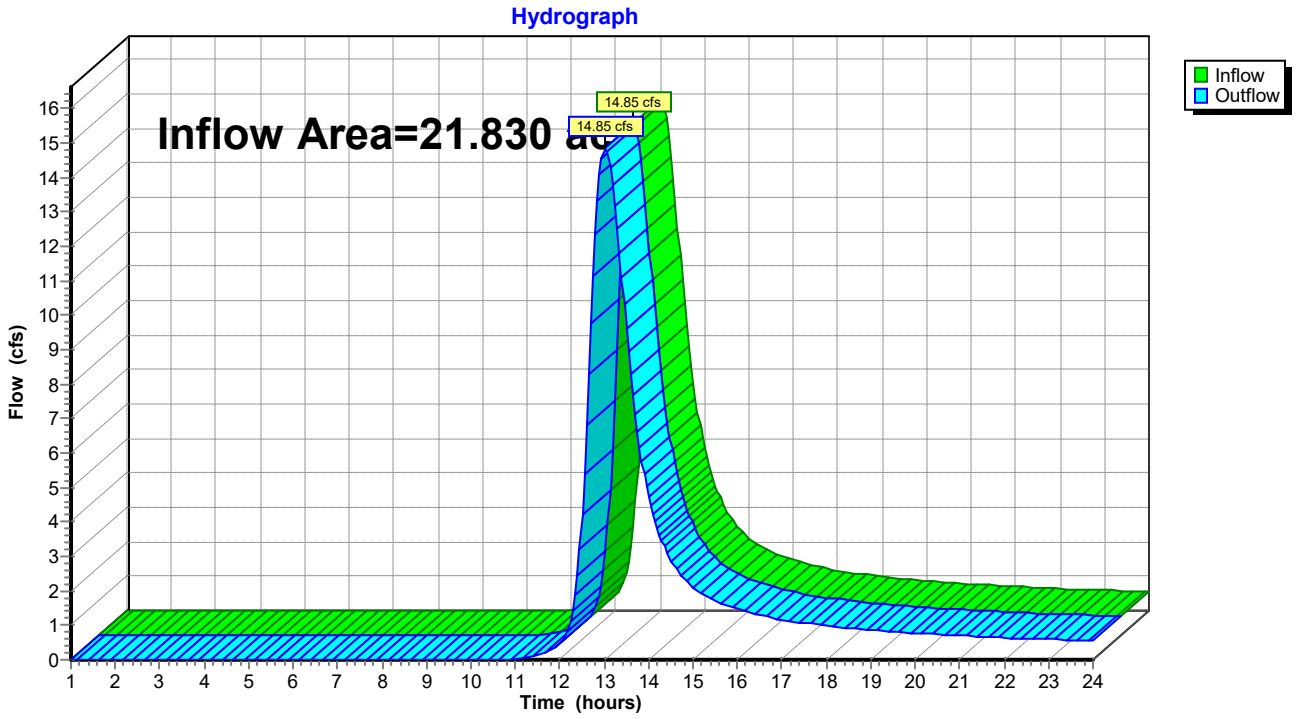
Summary for Reach DP-1: Southern Ponds

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 21.830 ac, 0.00% Impervious, Inflow Depth > 1.25" for 10-yr event
Inflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af
Outflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Southern Ponds



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Reach R-2: Trenches

[91] Warning: Storage range exceeded by 0.34'
[55] Hint: Peak inflow is 188% of Manning's capacity

Inflow Area = 21.830 ac, 0.00% Impervious, Inflow Depth > 1.27" for 10-yr event
Inflow = 16.53 cfs @ 12.62 hrs, Volume= 2.313 af
Outflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af, Atten= 10%, Lag= 24.5 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.64 fps, Min. Travel Time= 13.4 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 27.6 min

Peak Storage= 11,920 cf @ 12.81 hrs
Average Depth at Peak Storage= 1.34'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 8.78 cfs

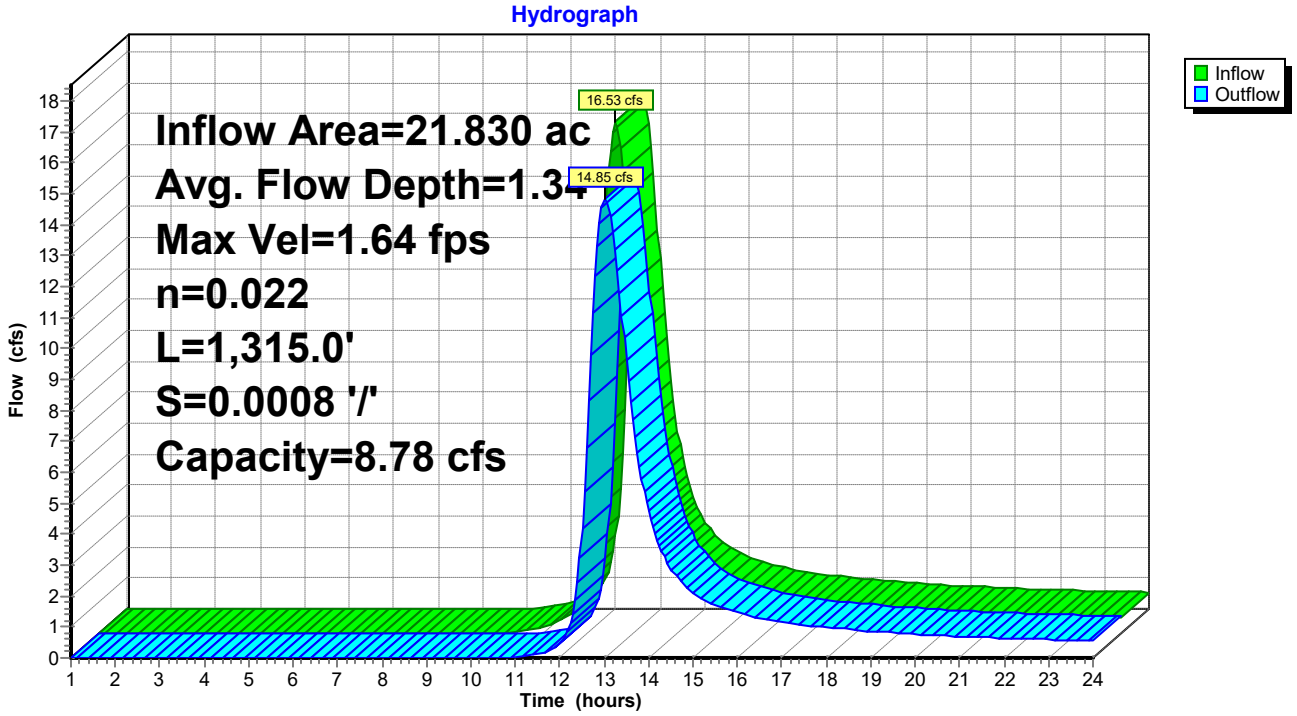
3.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 9.00'
Length= 1,315.0' Slope= 0.0008 '/'
Inlet Invert= 576.53', Outlet Invert= 575.42'



‡

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Reach R-2: Trenches



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1: Fields Runoff Area=950,920 sf 0.00% Impervious Runoff Depth>1.79"
Flow Length=167' Slope=0.0059 '/' Tc=45.5 min CN=80 Runoff=23.83 cfs 3.260 af

Reach DP-1: Southern Ponds Inflow=21.53 cfs 3.218 af
Outflow=21.53 cfs 3.218 af

Reach R-2: Trenches Avg. Flow Depth=1.72' Max Vel=1.74 fps Inflow=23.83 cfs 3.260 af
n=0.022 L=1,315.0' S=0.0008 '/' Capacity=8.78 cfs Outflow=21.53 cfs 3.218 af

Total Runoff Area = 21.830 ac Runoff Volume = 3.260 af Average Runoff Depth = 1.79"
100.00% Pervious = 21.830 ac 0.00% Impervious = 0.000 ac

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Subcatchment SC-1: Fields

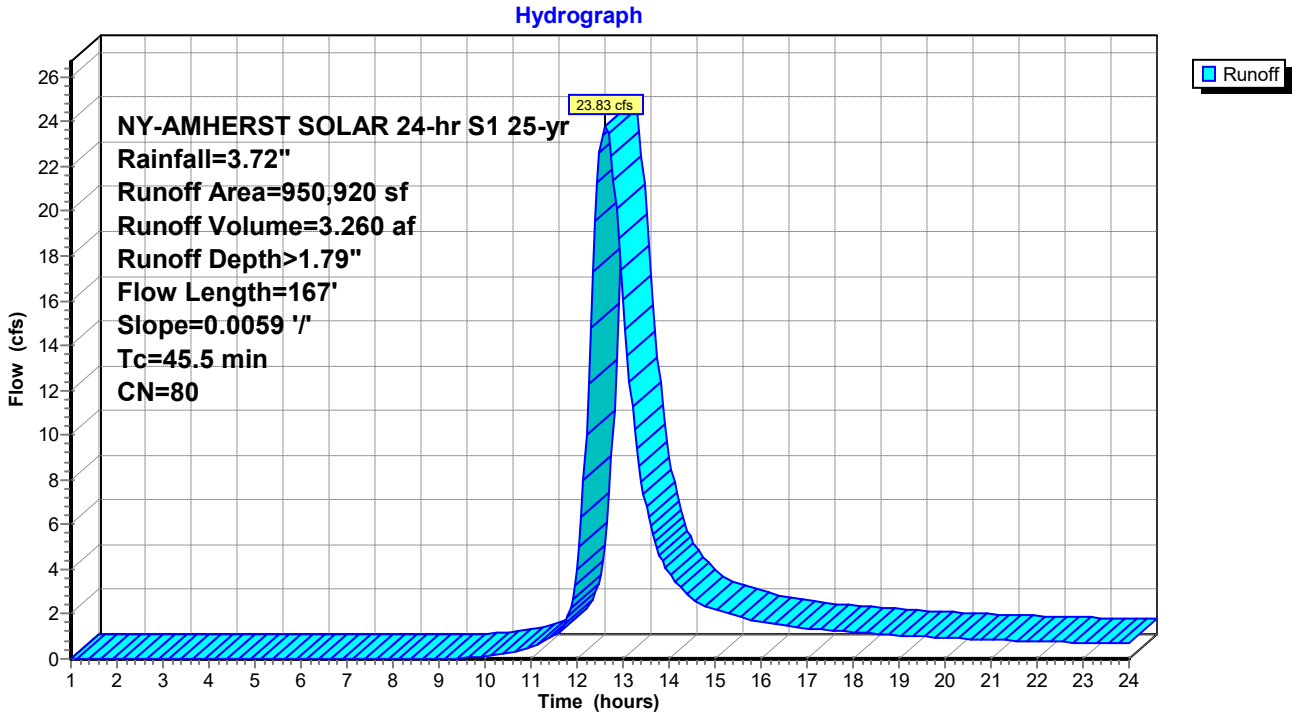
Runoff = 23.83 cfs @ 12.61 hrs, Volume= 3.260 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NY-AMHERST SOLAR 24-hr S1 25-yr Rainfall=3.72"

Area (sf)	CN	Description
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.4	100	0.0059	0.04		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.16"
2.1	67	0.0059	0.54		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
45.5	167	Total			

Subcatchment SC-1: Fields



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

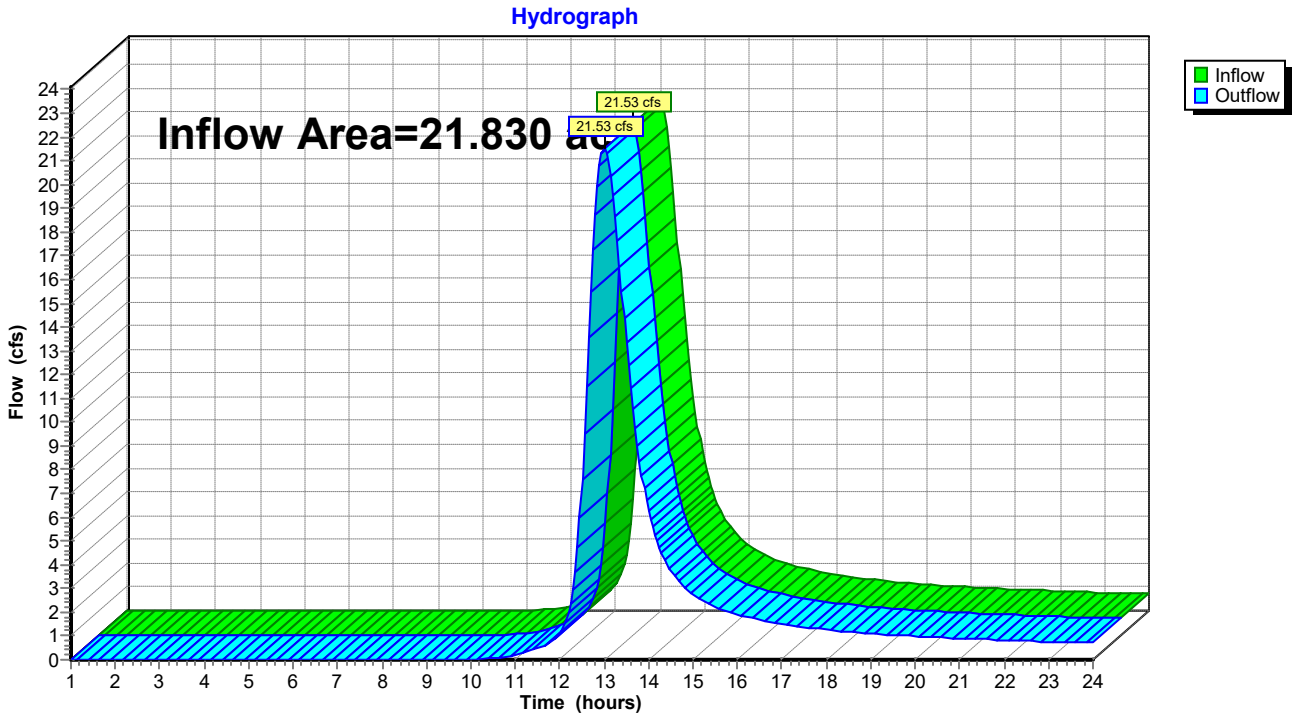
Summary for Reach DP-1: Southern Ponds

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 21.830 ac, 0.00% Impervious, Inflow Depth > 1.77" for 25-yr event
Inflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af
Outflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Southern Ponds



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Reach R-2: Trenches

[91] Warning: Storage range exceeded by 0.72'
[55] Hint: Peak inflow is 272% of Manning's capacity

Inflow Area = 21.830 ac, 0.00% Impervious, Inflow Depth > 1.79" for 25-yr event
Inflow = 23.83 cfs @ 12.61 hrs, Volume= 3.260 af
Outflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af, Atten= 10%, Lag= 23.5 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.74 fps, Min. Travel Time= 12.6 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 25.9 min

Peak Storage= 16,324 cf @ 12.79 hrs
Average Depth at Peak Storage= 1.72'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 8.78 cfs

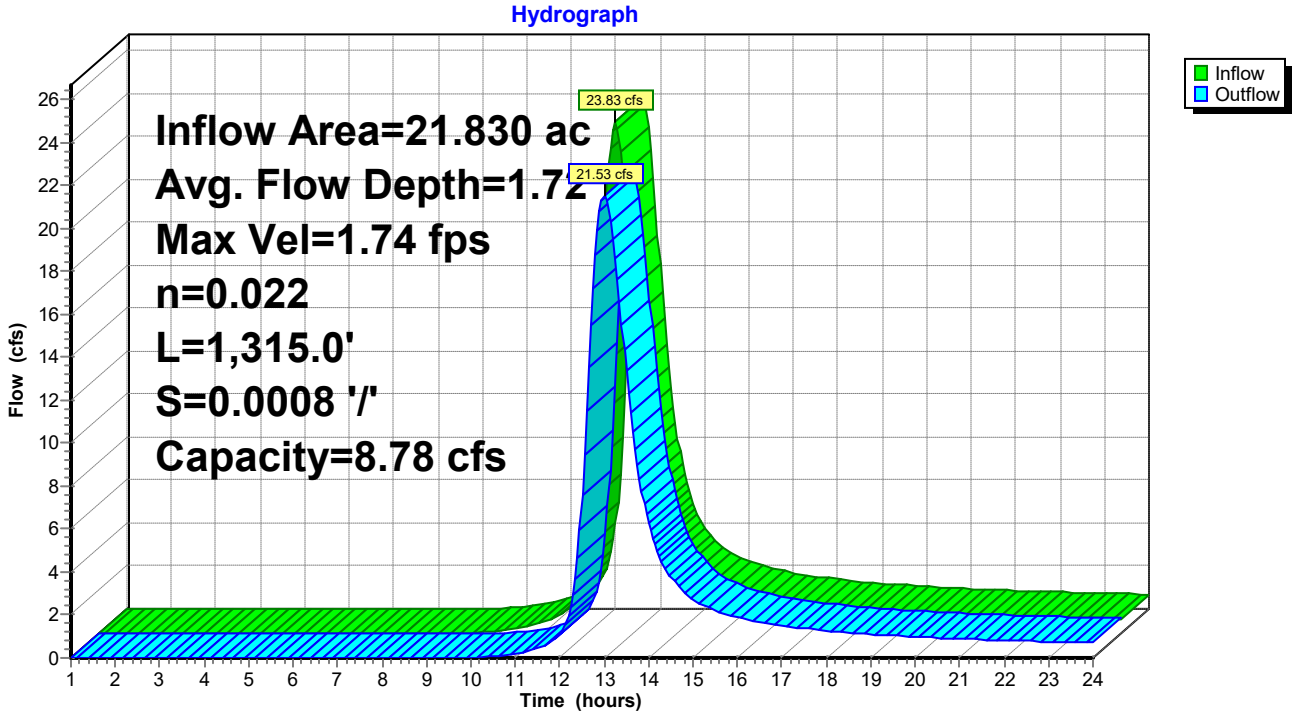
3.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 9.00'
Length= 1,315.0' Slope= 0.0008 '/'
Inlet Invert= 576.53', Outlet Invert= 575.42'



‡

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Reach R-2: Trenches



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

APPENDIX 2:

Post-Development Map and HydroCAD Report



STORMWATER LEGEND:

- FLOW PATH
- WATERSHED BOUNDARY
- # / # / # – SUBCATCHMENT – TOTAL DRAINAGE AREA [ACRES] – WEIGHTED RUNOFF CURVE NUMBER
- # – REACH

N MAGNETIC

0 60 100 200 300

SCALE: 1" = 60'

Dig Safely. New York Call 811 before you dig

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR

AMHERST COMMUNITY SOLAR, LLC

412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM

595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

PROGRESS PRINT NOT FOR CONSTRUCTION 28 OCTOBER 2020

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS

NO.	REVISION	DATE

CONSTRUCTION PLANS
OCTOBER 28, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	JEM/RJT

POSTDEVELOPMENT WATERSHED MAP

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

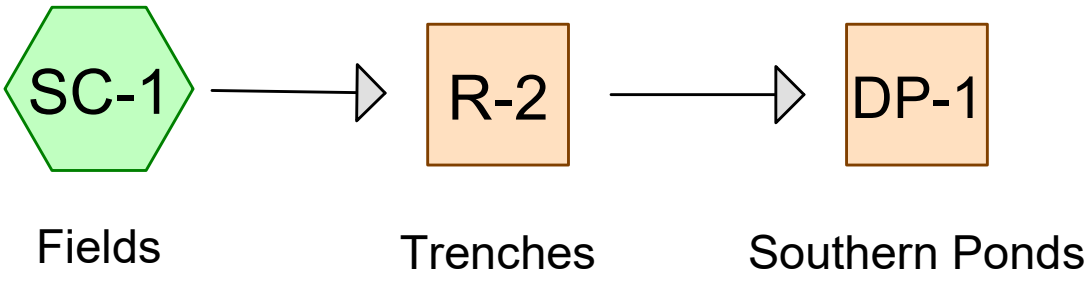
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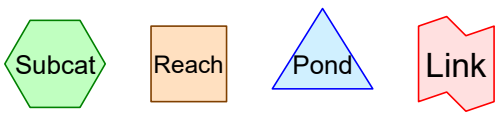
SHEET X OF 8

Oct 28,2020
E:\2020\2020116.00 Amherst Solar Farm\CADD\Stormwater Maps\20201116.00 Postdevelopment Map.dwg
36x24 PLOT SHEET

THE ALTERATION OF THIS DOCUMENT IN ANY WAY, UNLESS UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)





Routing Diagram for Amherst Solar Postdevelopment
Prepared by Greenman-Pedersen, Inc., Printed 10/26/2020
HydroCAD® 10.00-22 s/n 08061 © 2018 HydroCAD Software Solutions LLC

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
20.462	80	Pasture/grassland/range, Good, HSG D (SC-1)
0.148	98	Paved parking, HSG D (SC-1)
1.221	82	Woods/grass comb., Fair, HSG D (SC-1)
21.830	**80**	**TOTAL AREA**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
21.830	HSG D	SC-1
0.000	Other	
21.830		**TOTAL AREA**

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatc Number
0.000	0.000	0.000	20.462	0.000	20.462	Pasture/grassland/range, Good	SC -1
0.000	0.000	0.000	0.148	0.000	0.148	Paved parking	SC -1
0.000	0.000	0.000	1.221	0.000	1.221	Woods/grass comb., Fair	SC -1
0.000	**0.000**	**0.000**	**21.830**	**0.000**	**21.830**	**TOTAL AREA**	

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1: Fields Runoff Area=950,920 sf 0.68% Impervious Runoff Depth>1.27"
Flow Length=167' Slope=0.0059 '/' Tc=45.5 min CN=80 Runoff=16.53 cfs 2.313 af

Reach DP-1: Southern Ponds Inflow=14.85 cfs 2.277 af
Outflow=14.85 cfs 2.277 af

Reach R-2: Trenches Avg. Flow Depth=1.34' Max Vel=1.64 fps Inflow=16.53 cfs 2.313 af
n=0.022 L=1,315.0' S=0.0008 '/' Capacity=8.78 cfs Outflow=14.85 cfs 2.277 af

Total Runoff Area = 21.830 ac Runoff Volume = 2.313 af Average Runoff Depth = 1.27"
99.32% Pervious = 21.682 ac 0.68% Impervious = 0.148 ac

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Subcatchment SC-1: Fields

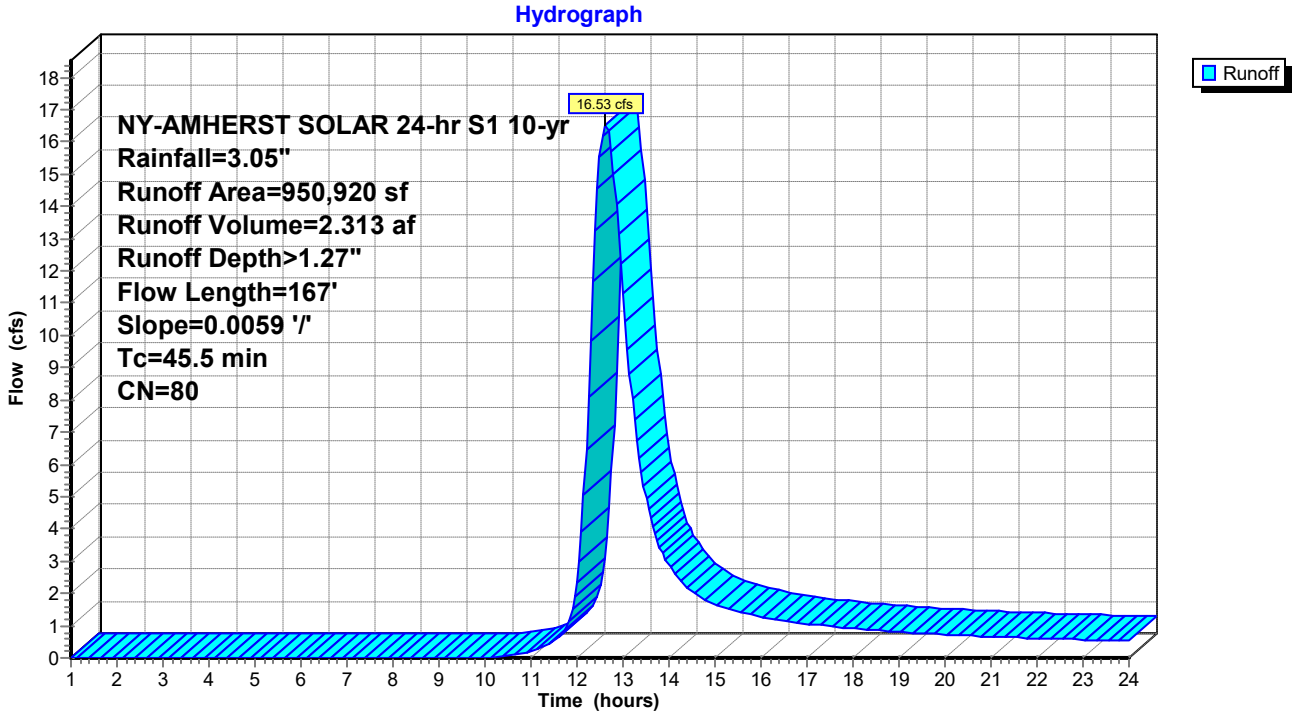
Runoff = 16.53 cfs @ 12.62 hrs, Volume= 2.313 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NY-AMHERST SOLAR 24-hr S1 10-yr Rainfall=3.05"

Area (sf)	CN	Description
891,322	80	Pasture/grassland/range, Good, HSG D
53,166	82	Woods/grass comb., Fair, HSG D
6,432	98	Paved parking, HSG D
950,920	80	Weighted Average
944,488		99.32% Pervious Area
6,432		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.4	100	0.0059	0.04		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.16"
2.1	67	0.0059	0.54		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
45.5	167	Total			

Subcatchment SC-1: Fields



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

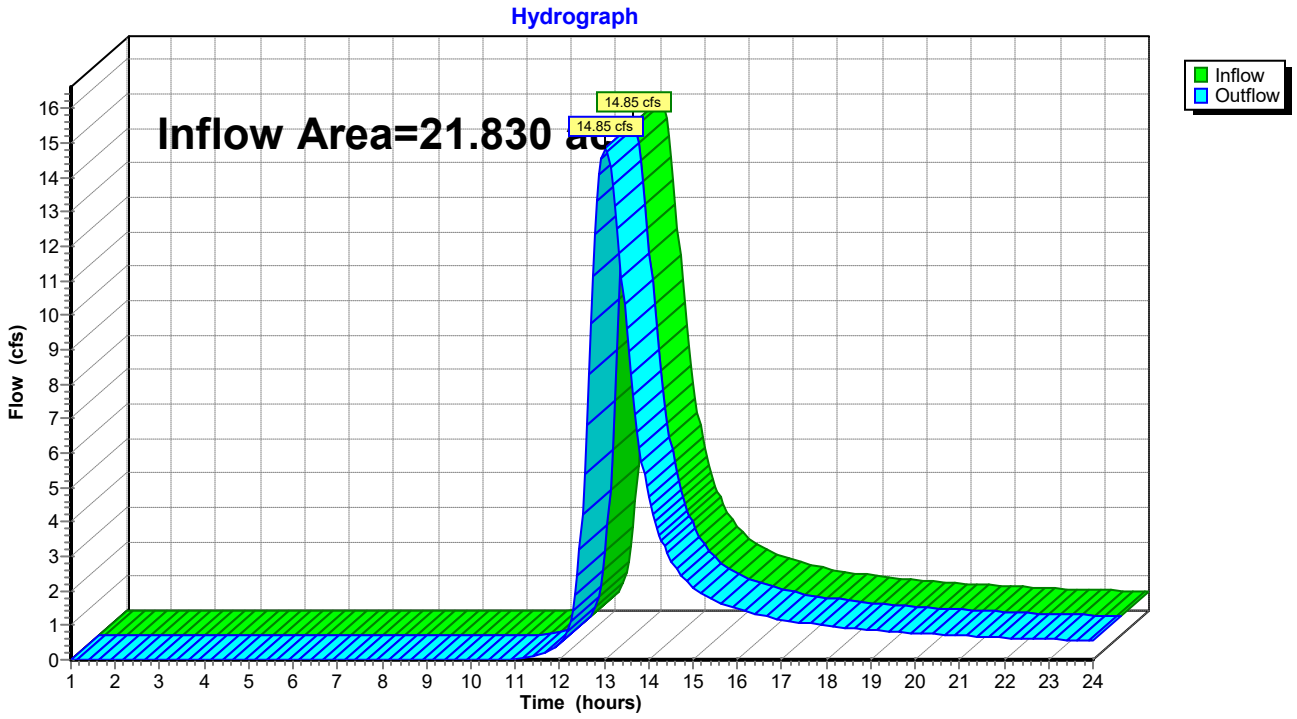
Summary for Reach DP-1: Southern Ponds

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 21.830 ac, 0.68% Impervious, Inflow Depth > 1.25" for 10-yr event
Inflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af
Outflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Southern Ponds



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Reach R-2: Trenches

[91] Warning: Storage range exceeded by 0.34'
[55] Hint: Peak inflow is 188% of Manning's capacity

Inflow Area = 21.830 ac, 0.68% Impervious, Inflow Depth > 1.27" for 10-yr event
Inflow = 16.53 cfs @ 12.62 hrs, Volume= 2.313 af
Outflow = 14.85 cfs @ 13.03 hrs, Volume= 2.277 af, Atten= 10%, Lag= 24.5 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.64 fps, Min. Travel Time= 13.4 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 27.6 min

Peak Storage= 11,920 cf @ 12.81 hrs
Average Depth at Peak Storage= 1.34'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 8.78 cfs

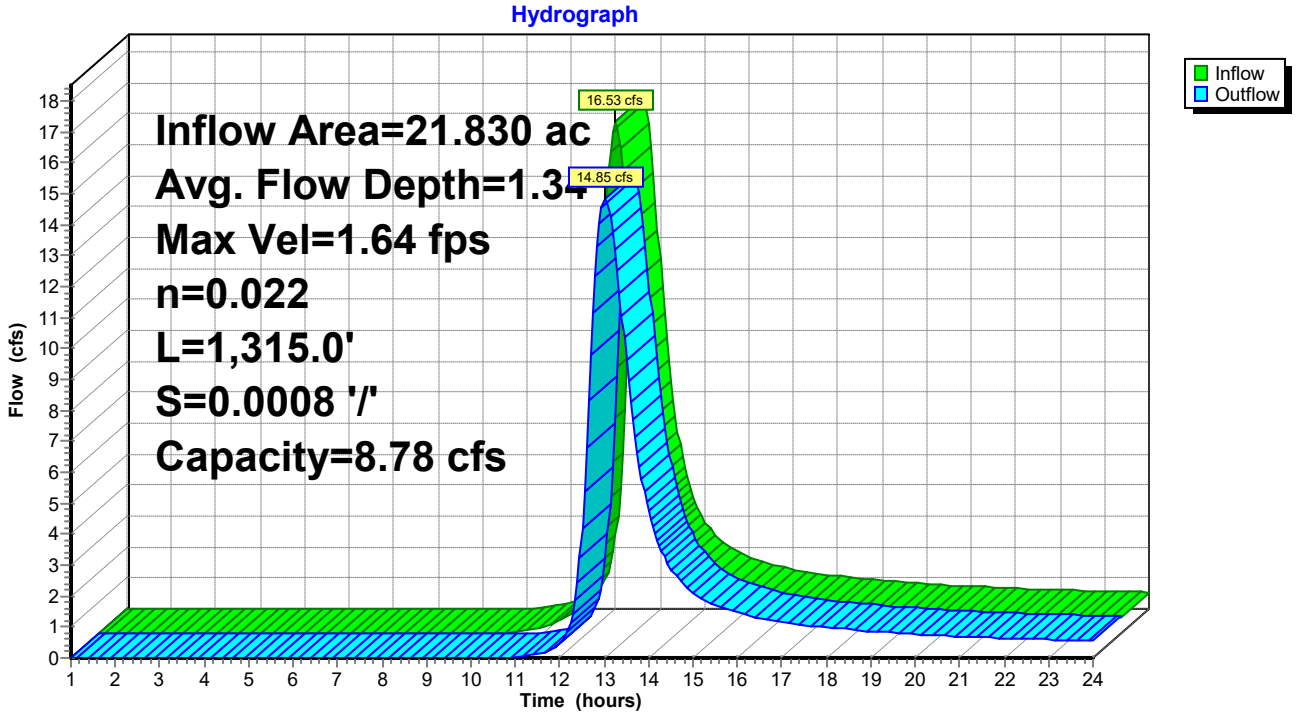
3.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 9.00'
Length= 1,315.0' Slope= 0.0008 '/'
Inlet Invert= 576.53', Outlet Invert= 575.42'



‡

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Reach R-2: Trenches



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1: Fields Runoff Area=950,920 sf 0.68% Impervious Runoff Depth>1.79"
Flow Length=167' Slope=0.0059 '/' Tc=45.5 min CN=80 Runoff=23.83 cfs 3.260 af

Reach DP-1: Southern Ponds Inflow=21.53 cfs 3.218 af
Outflow=21.53 cfs 3.218 af

Reach R-2: Trenches Avg. Flow Depth=1.72' Max Vel=1.74 fps Inflow=23.83 cfs 3.260 af
n=0.022 L=1,315.0' S=0.0008 '/' Capacity=8.78 cfs Outflow=21.53 cfs 3.218 af

Total Runoff Area = 21.830 ac Runoff Volume = 3.260 af Average Runoff Depth = 1.79"
99.32% Pervious = 21.682 ac 0.68% Impervious = 0.148 ac

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Subcatchment SC-1: Fields

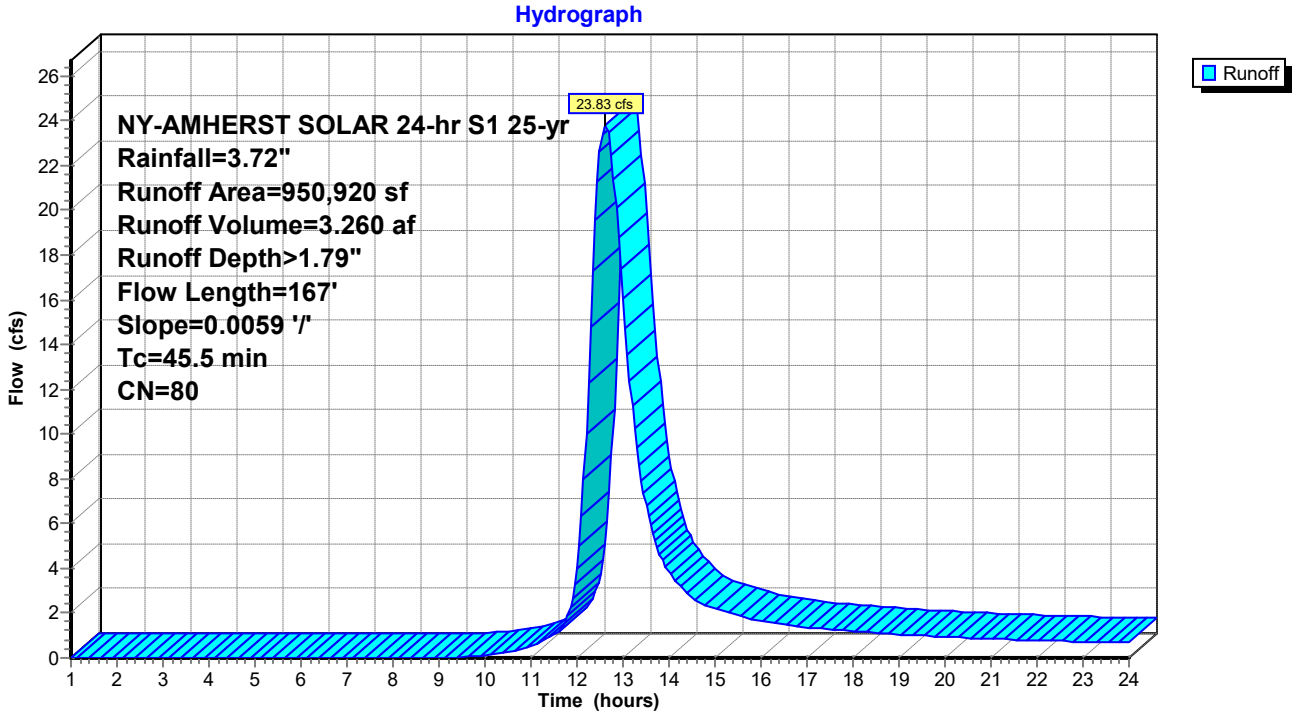
Runoff = 23.83 cfs @ 12.61 hrs, Volume= 3.260 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NY-AMHERST SOLAR 24-hr S1 25-yr Rainfall=3.72"

Area (sf)	CN	Description
891,322	80	Pasture/grassland/range, Good, HSG D
53,166	82	Woods/grass comb., Fair, HSG D
6,432	98	Paved parking, HSG D
950,920	80	Weighted Average
944,488		99.32% Pervious Area
6,432		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.4	100	0.0059	0.04		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.16"
2.1	67	0.0059	0.54		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
45.5	167	Total			

Subcatchment SC-1: Fields



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

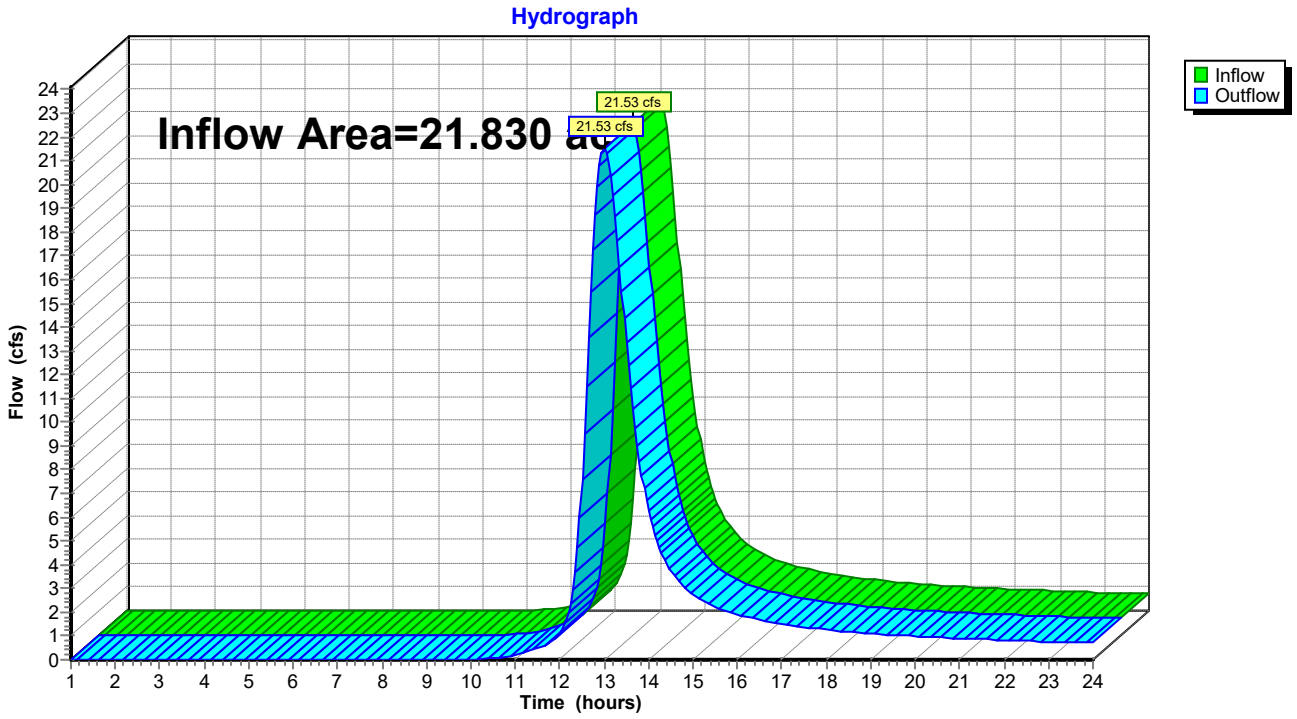
Summary for Reach DP-1: Southern Ponds

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 21.830 ac, 0.68% Impervious, Inflow Depth > 1.77" for 25-yr event
Inflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af
Outflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Southern Ponds



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Summary for Reach R-2: Trenches

[91] Warning: Storage range exceeded by 0.72'
[55] Hint: Peak inflow is 272% of Manning's capacity

Inflow Area = 21.830 ac, 0.68% Impervious, Inflow Depth > 1.79" for 25-yr event
Inflow = 23.83 cfs @ 12.61 hrs, Volume= 3.260 af
Outflow = 21.53 cfs @ 13.01 hrs, Volume= 3.218 af, Atten= 10%, Lag= 23.5 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.74 fps, Min. Travel Time= 12.6 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 25.9 min

Peak Storage= 16,324 cf @ 12.79 hrs
Average Depth at Peak Storage= 1.72'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 8.78 cfs

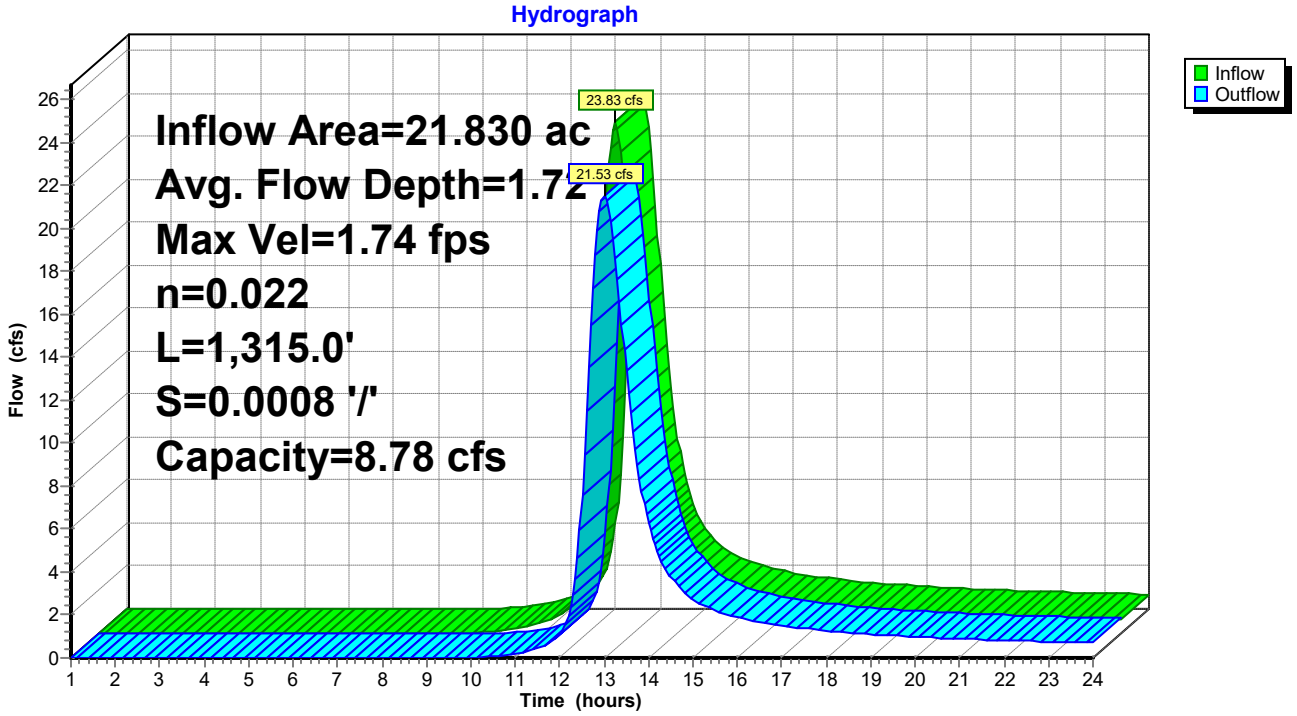
3.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 9.00'
Length= 1,315.0' Slope= 0.0008 '/'
Inlet Invert= 576.53', Outlet Invert= 575.42'



‡

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

Reach R-2: Trenches



Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

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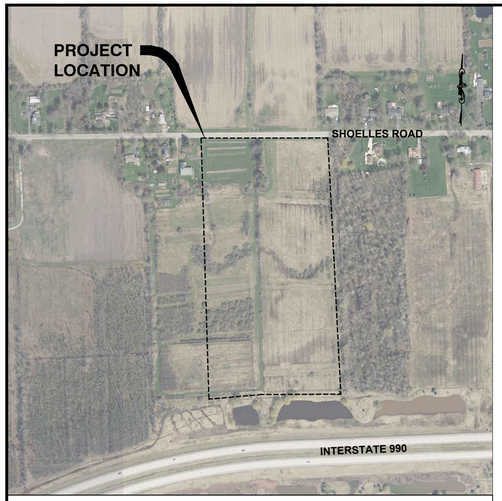
GPI

Many Talents One Firm

Attachment: SP-2020-14_application reports 012121 (22538 : Sp-2020-14)

GPI

Many Talents One Firm

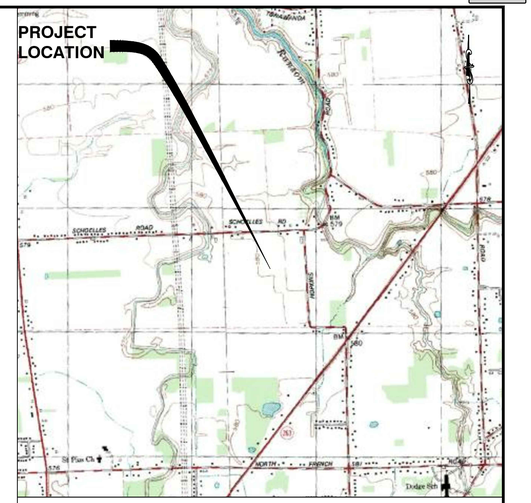


AERIAL MAP: 1" = 400'

AMHERST SOLAR FARM

595 SCHOELLES ROAD
TOWN OF AMHERST, NEW YORK

NOVEMBER 16, 2020
REVISON 2: JANUARY 8, 2021



LOCATION MAP: 1" = 2000'

BULK TABLE - ZONING REQUIREMENTS:		
TOWN OF AMHERST:		
S-A: SUBURBAN AGRICULTURAL		
	REQUIRED:	PROPOSED:
MINIMUM LOT AREA:	1.0 AC	21.87 ACRES
MINIMUM LOT WIDTH:	200 FEET	± 705 FT
MAXIMUM LOT COVERAGE:	25%	73.1%
PARKING REQUIREMENTS:	UTILITY: 1 PER FACILITY + 1 PER 250 SF + 1 PER FLEET VEHICLE	
MIN SPACE SIZE:	9' X 19'	9' X 19'
REQUIRED SPACES (1 FACILITY):	1	1*
PARKING SETBACK:	N/A	± 42 FT
SETBACKS:		
FRONT:	50 FT	±90 FT
SIDE:	50 FT	±65 FT
REAR:	50 FT	±67 FT

*SINGLE PARKING SPACE PROPOSED IS INCLUDED ALONG THE DRIVEWAY

SITE STATS			
TOWN OF AMHERST: 28.00-1-1.11			
	ACRES:	SQUARE FEET:	PERCENT:
GROSS LOT AREA:	21.87	952,618	100%
EXISTING BUILDING COVER:	0.00	0	0%
EXISTING PAVEMENT COVER:	0.00	0	0%
EXISTING IMPERVIOUS COVER:	0.00	0	0%
PROPOSED BUILDING COVER:	0.00	0	0%
PROPOSED DRIVEWAY COVER:	0.10	4,360	0.46%
PROPOSED IMPERVIOUS COVER:	0.15	6,760	0.71%

INDEX OF DRAWINGS

PAGE NO.	REV	SHEET NO.	DATE	DESCRIPTION
1	2	C-001	01/08/21	COVER SHEET
2	2	C-101	01/08/21	BASE SURVEY AND EXISTING CONDITIONS PLAN
3	2	C-101A	01/08/21	DEMOLITION PLAN
4	2	C-102	01/08/21	SITE LAYOUT, GRADING, AND UTILITY PLAN
5	2	C-103	01/08/21	LANDSCAPING PLAN
6	2	C-104	01/08/21	EROSION AND SEDIMENT CONTROL PLAN
7	2	C-501	01/08/21	SITE DETAILS
8	2	C-505	01/08/21	LANDSCAPING DETAILS
9	2	C-510	01/08/21	EROSION AND SEDIMENT CONTROL DETAILS
10	2	C-515	01/08/21	STORMWATER AND UTILITY DETAILS

OWNER/APPLICANT INFORMATION:
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH STREET
UNIT 607
PHILADELPHIA, PA 19147
TEL: (914) 420–5083

CIVIL/SITE ENGINEER:
GPI
GREENMAN-PEDERSEN, INC.
CONSULTING ENGINEERS
80 WOLF ROAD, SUITE 300
ALBANY, NY 12205
TEL: (518) 453–9431
WWW.GPINET.COM

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NO.	REVISIONS			NO.	REVISIONS		
1	11/16/20	SITE PLAN SUBMISSION					
	BY: ABJ	CHK: RJT	APP'D: JEM		BY:	CHK:	APP'D:
2	01/08/21	TOWN COMMENT LETTER					
	BY: AVL	CHK: RJT	APP'D: JEM		BY:	CHK:	APP'D:
	BY:	CHK:	APP'D:		BY:	CHK:	APP'D:
	BY:	CHK:	APP'D:		BY:	CHK:	APP'D:

GPI
GREENMAN-PEDERSEN, INC.
CONSULTING ENGINEERS
80 WOLF ROAD, SUITE 300
ALBANY, NY 12205
(518) 453–9431

AMHERST
SOLAR FARM

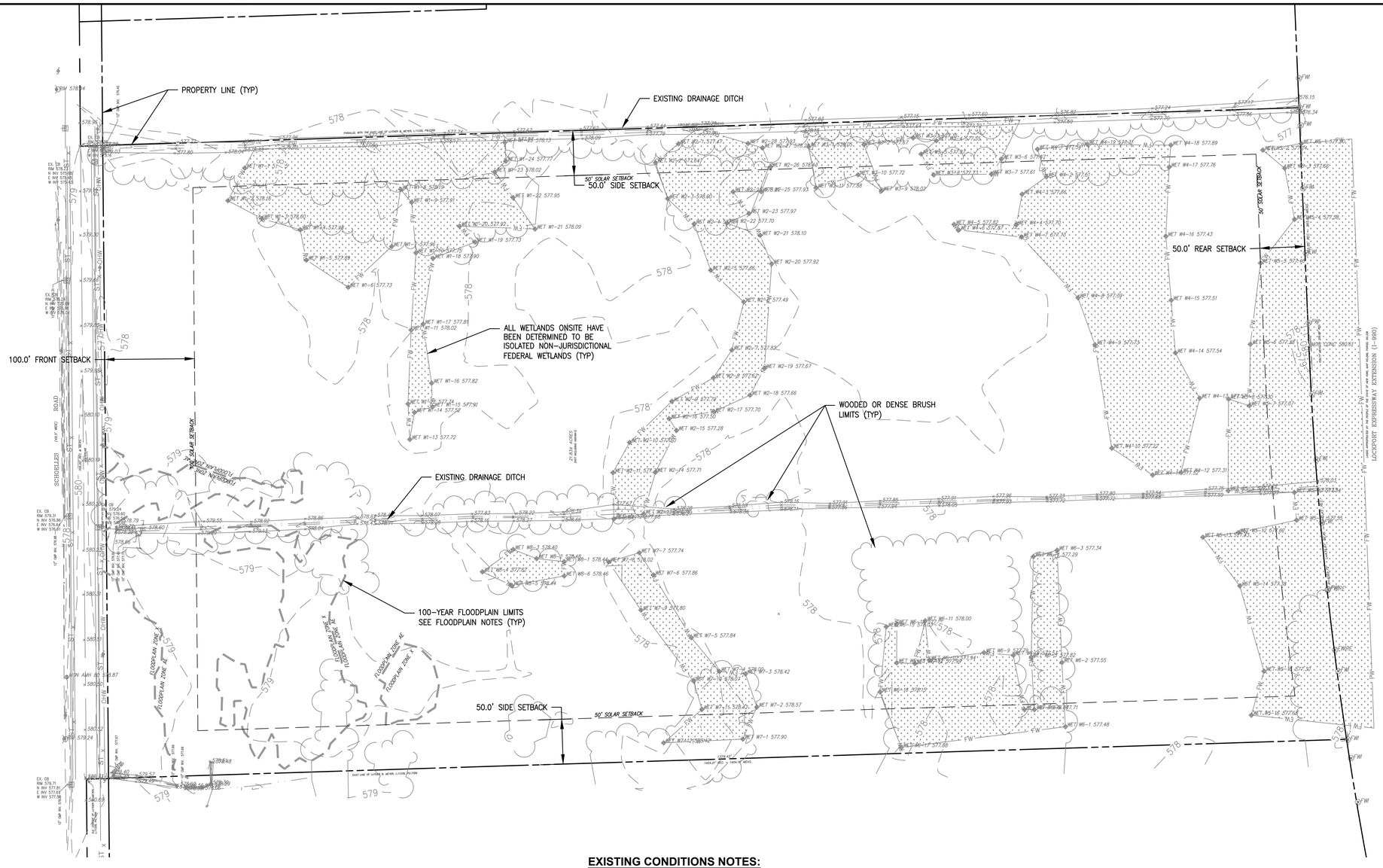
TOWN OF AMHERST
ERIE COUNTY, NEW YORK

DESIGNED BY: R. TRUNKO	APPROVED BY: J. MONTAGNE
DRAFTED BY: A. JOHNSON	DATE: 11/16/20
CHECKED BY: R. TRUNKO	GPI PROJECT NO. ALB–2020116.00

SHEET TITLE: **COVER SHEET**

SHEET NUMBER: C-001

Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)



EXISTING CONDITIONS NOTES:

GENERAL NOTES:

1. UNDERGROUND FACILITIES AND STRUCTURES SHOWN HEREON WERE TAKEN FROM DATA OBTAINED FROM PREVIOUS MAPS AND RECORD DRAWINGS. ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. THE SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTION TEST BORINGS, EXCAVATION AND CONSTRUCTION.

SURVEY REFERENCE:

1. "SURVEY OF PART OF LOT 52, TOWNSHIP 13, RANGE 7 HOLLAND LAND COMPANY'S SURVEY TOWN OF AMHERST, ERIE COUNTY, NEW YORK" PREPARED BY GPI. DATED SEPTEMBER 15, 2020.

WETLAND NOTES:

1. LATITUDE: 43°-03'-04" N
   LONGITUDE: -78°-44-52" W
2. WETLANDS SHOWN HEREON TAKEN FROM WETLAND DELINEATION SURVEY "WETLAND AND WATERBODIES DELINEATION REPORT FOR AMHERST SOLAR", PREPARED BY EARTH DIMENSIONS, INC., DATED AUGUST 24, 2020.

WETLANDS ON THE PROPERTY HAVE BEEN DETERMINED BY THE ARMY CORPS OF ENGINEERS TO BE ISOLATED NON-JURISDICTIONAL UNDER PROCESSING #LRB-2020-01247 DATED 11/17/2020 2

TAX PARCEL NUMBER:

TOWN OF AMHERST, ERIE COUNTY, NEW YORK
28.00-1-1.11

2 ZONING DISTRICTS:

THE SUBJECT PARCEL AS WELL AS THE ADJACENT PARCELS ARE LOCATED WITHIN THE TOWN OF AMHERST'S SUBURBAN AGRICULTURAL ZONING DISTRICT.

FLOODPLAIN NOTES:

1. MAPPED FLOODPLAIN LIMITS PROVIDED ARE TAKEN FROM FEMA'S NFIP FIRM PANEL 86 OF 807 FOR ERIE COUNTY, NEW YORK (MAP NUMBER 36029C0086H, EFFECTIVE DATE: JUNE 7, 2019). FEMA NFIP FIRM PANEL IDENTIFIES THE BASE FLOOD ELEVATION TO BE 579 DEET ABOVE MEAN SEA LEVEL.

EXISTING CONDITIONS LEGEND:

- PROPERTY LINE
- SETBACK LINE
- FW — FEDERAL WETLAND BOUNDARY
- 789 — EXISTING CONTOURS
- 100-YEAR FLOODPLAIN
- TREE/WOODED AREA LIMITS

N MAGNETIC

0 60 100 200 300
SCALE: 1" = 60'

Dig Safely. New York Call 811 before you dig

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK GREENMAN PEDERSEN, INC. No. 131 PROFESSIONAL ENGINEER

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS

NO.	REVISION	DATE
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

BASE SURVEY AND EXISTING CONDITIONS PLAN

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

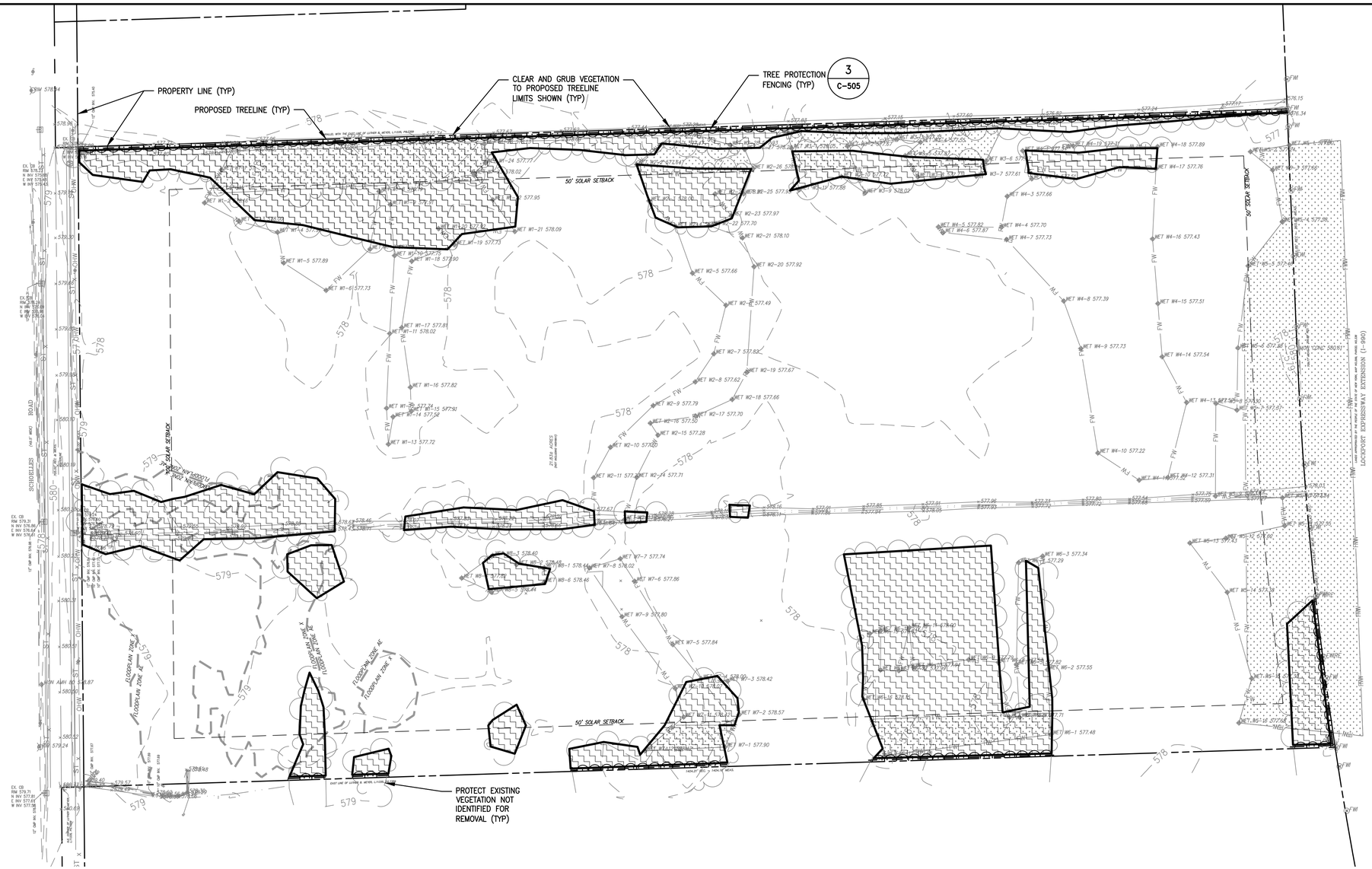
C-101

SHEET 2 OF 10

Jan 08,2021
E:\2020\2020116.00 Amherst Solar Farm\CADD\2020116.00 C-101 EXISTING CONDITIONS PLAN.dwg
36x24 PLOT SHEET

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Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)



DEMOLITION NOTES:

1. REFER TO REQUIREMENTS OUTLINED IN THE EROSION & SEDIMENT CONTROL PLANS & NOTES PRIOR TO COMMENCEMENT OF WORK.
2. PROVIDE, ERECT AND MAINTAIN TEMPORARY BARRIERS AND SECURITY DEVICES AS REQUIRED.
3. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECT DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER AND AUTHORITIES HAVING JURISDICTION.
4. NOTIFY ADJACENT OWNERS OF WORK THAT MAY AFFECT THEIR PROPERTY, POTENTIAL NOISE, UTILITY OUTAGE, OR DISRUPTION. COORDINATE WITH OWNER.
5. LOCATE AND IDENTIFY ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA. DISCONNECT AND SEAL OR CAP OFF UTILITY SERVICES THAT WILL BE AFFECTED BY THIS PROJECT. NOTIFY AFFECTED UTILITY COMPANIES BEFORE STARTING WORK AND COMPLY WITH THEIR REQUIREMENTS. VERIFY THAT UTILITIES HAVE BEEN DISCONNECTED AND CAPPED.
6. DEMOLISH AND REMOVE COMPONENTS IN AN ORDERLY AND CAREFUL MANNER.
7. PROTECT EXISTING FEATURES THAT ARE NOT TO BE DEMOLISHED.
8. CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE ACCESSES.
9. MAINTAIN EGRESS AND ACCESS AT ALL TIMES. DO NOT CLOSE OR OBSTRUCT ROADWAYS OR SIDEWALK WITHOUT PERMITS. COORDINATE WITH AUTHORITY HAVING JURISDICTION.
10. CEASE OPERATIONS IMMEDIATELY IF ADJACENT STRUCTURES APPEAR TO BE IN DANGER. NOTIFY AUTHORITY HAVING JURISDICTION.
11. ROUGH GRADE AND COMPACT AREAS AFFECTED BY DEMOLITION TO MAINTAIN SITE GRADES AND CONTOURS, AND PROVIDE POSITIVE DRAINAGE.
12. FIELD VERIFY EXISTING CONDITIONS AND CORRELATE WITH REQUIREMENTS INDICATED ON DEMOLITION PLAN TO DETERMINE EXTENT OF SELECTIVE DEMOLITION REQUIRED.
13. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND SELECTIVE DEMOLITION AREA.
14. USE WATER MIST, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS. DO NOT USE WATER WHEN IT MAY DAMAGE EXISTING CONSTRUCTION, SUCH AS CAUSING ICING, FLOODING, AND TRANSPORTING POLLUTANTS.
15. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
16. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
17. ALL EXISTING LAWN AREA, CURBING, PAVING, SIDEWALKS, CULVERTS OR OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED BY TRENCHING OR EXCAVATION OPERATIONS SHALL BE REPLACED OR REPAIRED TO A CONDITION EQUAL TO EXISTING, AS DESCRIBED IN CONTRACT DOCUMENTS OR AS ORDERED BY ENGINEER (AOBE). MAILBOXES, SIGN POSTS, ETC SHALL BE PROTECTED OR REMOVED AND REPLACED EXACTLY AS THEY WERE BEFORE BEING DISTURBED. REMOVE AND REPLACE AFFECTED CURBING AND SIDEWALK TO NEAREST JOINT. REMOVE PAVEMENT AND REPLACE TO SAW CUT LINE, SAW CUT IN STRAIGHT LINE TO POINT NEEDED TO BLEND GRADE, REMOVE LAWN AND REPLACE TO MINIMUM LIMIT OF EXCAVATION.
18. ALL EXISTING VEGETATION NOT IDENTIFIED FOR CLEARING AND GRUBBING SHALL BE PROTECTED FROM ANY DAMAGE DURING CONSTRUCTION

DEMOLITION LEGEND:

- PROPERTY LINE
- DISTURBANCE LIMITS
- WETLAND PROTECTION FENCING
- EXISTING PAVEMENT AREA TO BE REMOVED
- EXISTING GRAVEL AREA TO BE REMOVED
- CLEAR AND GRUB EXISTING VEGETATION
- EXISTING ITEM TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCE

0 60 100 200 300

SCALE: 1" = 60'

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PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

REGISTERED LANDSCAPE ARCHITECT CRAIG NEIL BEDELL 001125 STATE OF NEW YORK

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REVISIONS

NO.	REVISION	DATE
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
CNT	RJT

DEMOLITION PLAN

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

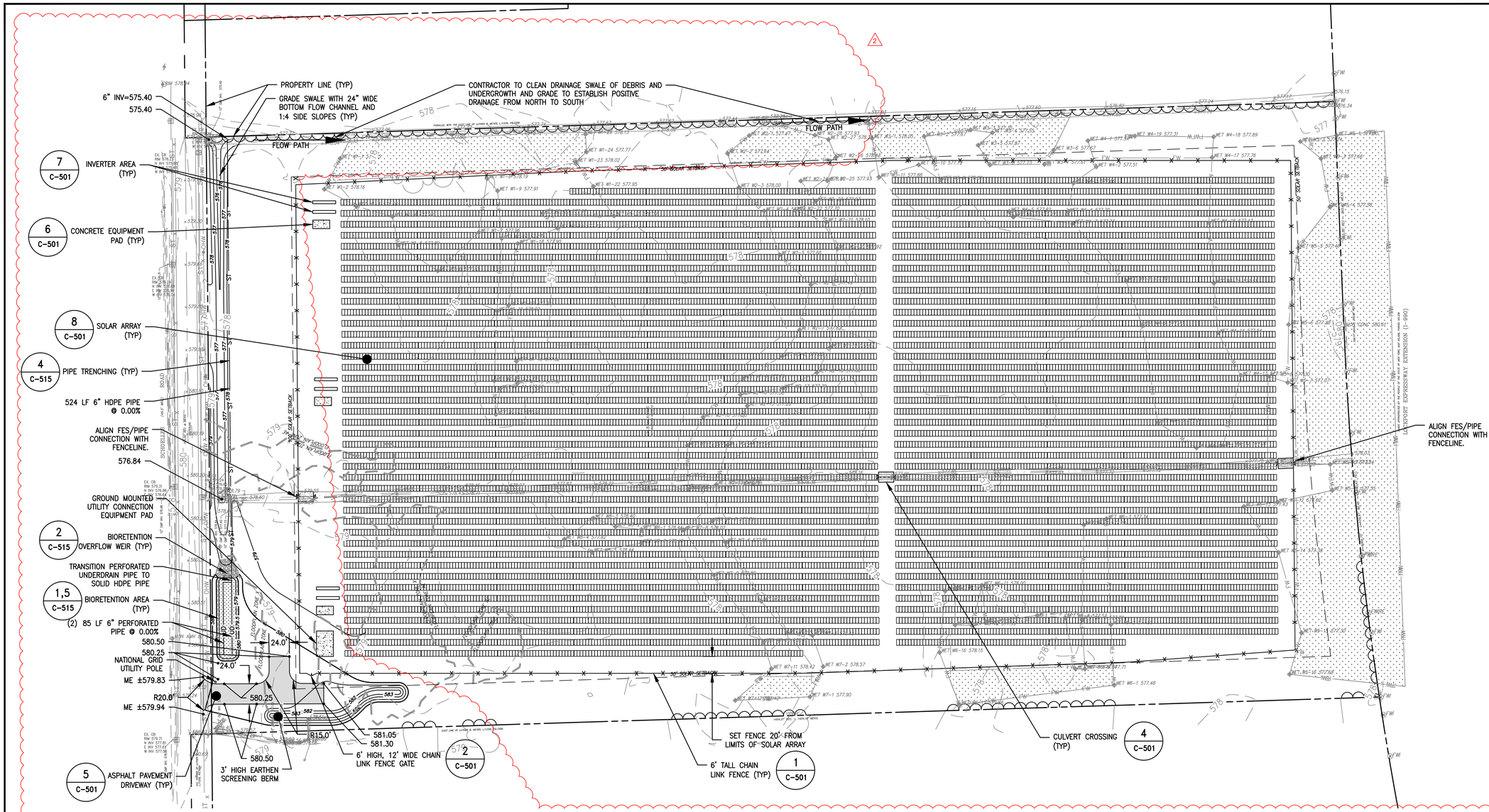
C-101A

SHEET 3 OF 10

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Jan 08,2021
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36X24 PLOT SHEET

Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)



GRADING NOTES:

1. PRIOR TO SITE DISTURBANCE, CONTRACTOR TO INSTALL EROSION & SEDIMENT CONTROL MEASURES.
2. REMOVE ALL VEGETATION, TREES, STUMPS, GRASSES, ORGANIC SOILS, DEBRIS AND DELETERIOUS MATERIALS WITHIN THE AREAS IDENTIFIED ON THIS PLAN.
3. STRIP TOPSOIL FOR THE EARTHEN BERM, GRAVEL DRIVEWAY, CONCRETE EQUIPMENT PADS AND CULVERTS PRIOR TO COMMENCING EARTHWORK OPERATIONS. TOPSOIL MAY BE STORED, SCREENED AND THEN REUSED IN LAWN AND PLANTING AREAS ONLY. TOPSOIL AND SEED ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE TO REMAIN GREEN.
4. BOX ALL TREES AND HOUSE ALL SHRUBS AND HEDGES BEFORE PLACING EARTH AGAINST OR NEAR THEM. ORNAMENTAL TREES, SHRUBS AND HEDGES WHICH MUST BE REMOVED DURING CONSTRUCTION SHALL BE HEALED IN AND RE-PLANTED IN AS GOOD OF CONDITION AS THEY WERE PRIOR TO THEIR REMOVAL. ANY DAMAGED TREES, SHRUBS, AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL EARTHWORK SHALL BE SMOOTHLY AND EVENLY BLENDED INTO EXISTING CONDITIONS. NO WORK, STORAGE OR TRESPASS SHALL BE PERMITTED BEYOND THE BOUNDARIES OF ANY EASEMENT OR PROPERTY LINE.
6. ALL EXISTING SURFACE APPURTENANCES (I.E. WATER VALVES, CATCH BASIN FRAMES AND GRADES, MANHOLE COVERS) WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINISH GRADE FLUSH. AREAS DISTURBED OR DAMAGED AS PART OF THIS PROJECT'S CONSTRUCTION THAT ARE OUTSIDE OF THE PRIMARY WORK AREA SHALL BE RESTORED, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
7. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING. BACKFILL EXCAVATION AS PROMPTLY AS WORK PERMITS, BUT NOT WITHOUT ACCEPTANCE BY ENGINEER OF CONSTRUCTION BELOW FINISH GRADE.
8. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH. FILL MATERIAL SHALL BE FREE FROM DEBRIS, VEGETATION AND DELETERIOUS MATERIAL. COMPACT ALL TRENCH BACKFILL TO 95% STANDARD PROCTOR.
9. GRAVEL AND SUB-BASE SHALL BE LAID IN 6" LIFTS AND SHALL CONFORM TO THE TYPICAL SECTION FOR PAVEMENT. ALL HOLES AND DEPRESSIONS SHALL BE FILLED WITH GRAVEL AND RE-ROLLED.

LAYOUT :

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FIELD LAYOUT.
2. THE CONTRACTOR SHALL TAKE TIES TO ALL UTILITY CONNECTIONS AND PROVIDE MARKED-UP AS BUILT PLANS FOR ALL UTILITIES SHOWING TIES TO CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER/ARCHITECT AND THE ENGINEER AND THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADMISSIONS TO THE SATISFACTION OF THE OWNER/ARCHITECT AND THE ENGINEER BEFORE UTILITIES WILL BE ACCEPTED.

PAVING:

1. NO VEHICULAR TRAFFIC OF ANY SORT SHALL BE PERMITTED ON THE SURFACE OF SUBBASE COURSE MATERIAL ONCE IT HAS BEEN FINE GRADED, COMPACTED, AND IS READY FOR PAVING. SUBBASE MATERIAL SO PREPARED FOR PAVING SHALL BE PAVED WITHIN THREE DAYS OF PREPARATION.
2. SUBBASE MATERIAL AND THE VARIOUS ASPHALT CONCRETE MATERIALS CALLED FOR IN THESE DRAWINGS SHALL CONFORM WITH THE REFERENCED SECTION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 1, 2018, INCLUDING ALL REVISIONS AND ADDENDUMS. CONSTRUCTION SHALL BE AS FURTHER SET FORTH IN THOSE SPECIFICATIONS AND AS OTHERWISE PROVIDED FOR IN THESE DRAWINGS.
3. PROOF ROLLING OF SUBGRADE SHALL BE WITNESSED BY THE ENGINEER, ALL UNSATISFACTORY AREAS, AS DETERMINED BY THE ENGINEER SHALL BE EXCAVATED AND REPLACED WITH SUBBASE MATERIAL TO THE ENGINEER'S SATISFACTION.
4. PLACE ASPHALT CONCRETE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE-OFF USING A SELF-PROPELLED PAVING MACHINE, WITH VIBRATING SCREED. PLACEMENT IN INACCESSIBLE AND SMALL AREAS MAY BE BY HAND.
5. PROVIDE JOINTS BETWEEN OLD AND NEW PAVEMENTS OR BETWEEN SUCCESSIVE DAY'S WORK.
6. TACK COAT BINDER COURSE BEFORE PLACING TOP COURSE IF MORE THAN 48 HOURS HAVE ELAPSED AFTER PLACING BINDER COURSE.
7. ALL PAVEMENT RESTORATION SHALL MEET AND MATCH EXISTING GRADES.
8. AFTER COMPLETION OF PAVING AND SURFACING OPERATIONS, CLEAN SURFACES OF EXCESS OR SPILLED ASPHALT, GRAVEL OR STONE MATERIALS TO THE SATISFACTION OF THE ENGINEER.

SITE LAYOUT LEGEND:

- PROPERTY LINE
- DISTURBANCE LIMITS
- PROPOSED CHAIN LINK FENCE
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED RIP-RAP STONE
- 787 PROPOSED MINOR CONTOUR
- 780 PROPOSED MAJOR CONTOUR
- 124.75 SPOT ELEVATION

ABBREVIATIONS:

TF	TOP OF FRAME
HP	HIGH POINT
LP	LOW POINT
TC	TOP OF CURB
BC	BOTTOM OF CURB
INV	INVERT
ME	MATCH EXISTING
TW	TOP OF RETAINING WALL
BW	BOTTOM OF RETAINING WALL

N MAGNETIC

0 60 100 200 300
SCALE: 1" = 60'

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412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK GREENMAN PEDERSEN No. 131 PROFESSIONAL ENGINEER

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REVISIONS

NO.	REVISION	DATE
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

SITE LAYOUT, GRADING, AND UTILITY PLAN

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

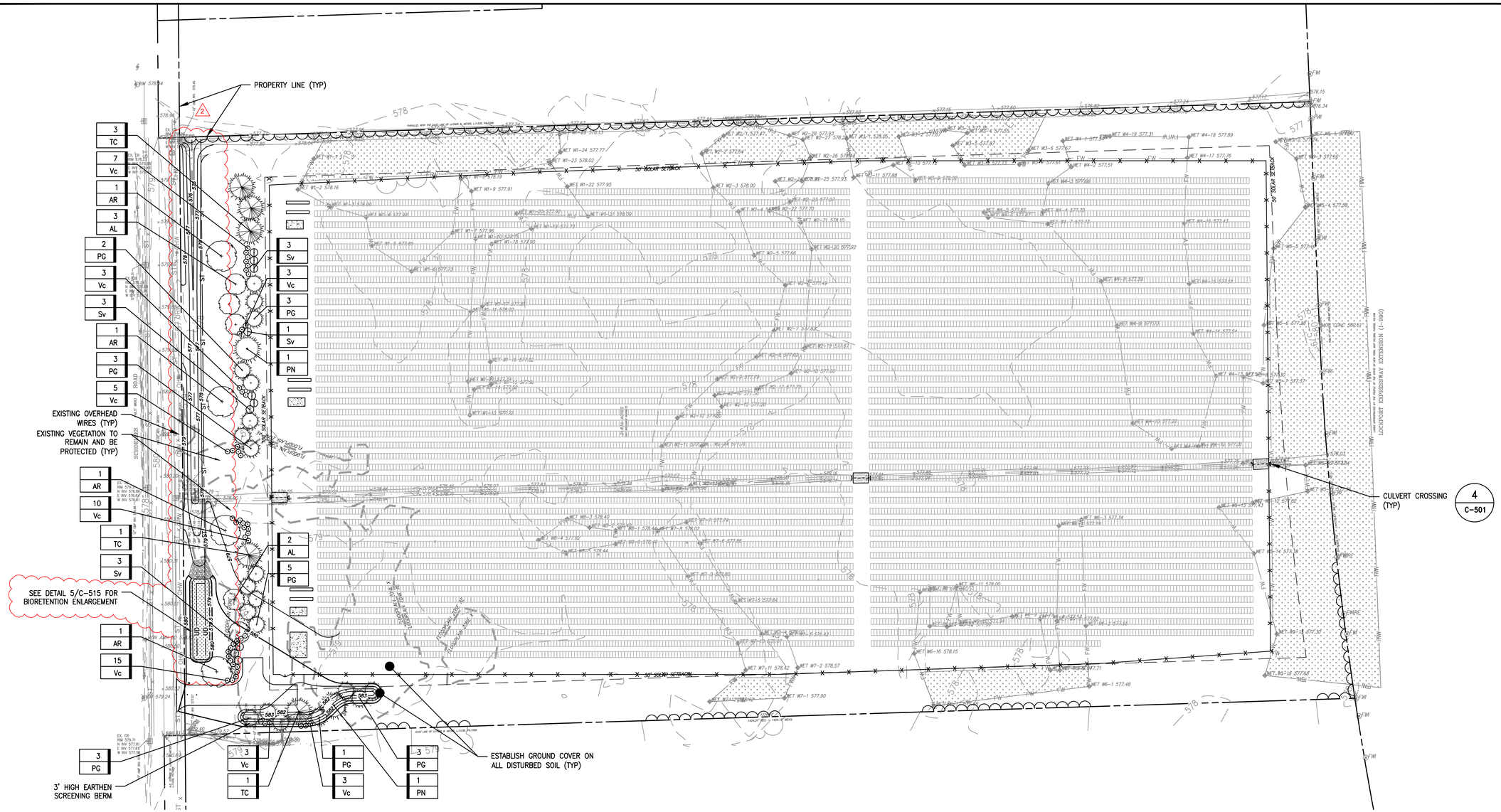
C-102

SHEET 4 OF 10

Jan 08,2021
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36x24 PLOT SHEET

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Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)



PLANTING SCHEDULE*

	QTY.	ABRV.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACING
TREES	5	AL	AMELANCHIER LAEVIS	ALLEGHANY SERVICEBERRY	2.5"-3" CAL.	B&B	AS SHOWN
1 C-505	4	AR	ACER RUBRUM	RED MAPLE	2.5"-3" CAL.	B&B	AS SHOWN
	20	PG	PICEA GLAUCA	WHITE SPRUCE	5'-6' HT.	B&B	AS SHOWN
	2	PN	PINUS NIGRA	AUSTRIAN PINE	5'-6' HT.	B&B	AS SHOWN
	5	TC	TSUGA CANADENSIS	CANADIAN HEMLOCK	5'-6' HT.	B&B	AS SHOWN
SHRUBS	10	Sv	SYRINGA VULGARIS	COMMON LILAC	36"-48" HT.	B&B	AS SHOWN
2 C-505	49	Vc	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	24"-30" HT.	B&B	AS SHOWN

2 * SEE SHEET C-515 FOR BIORETENTION PLANTING MIX.

LANDSCAPING LEGEND:

XX PROPERTY LINE
AB QUANTITY OF PLANT
PLANT TYPE

LANDSCAPING NOTE:

1. LANDSCAPING NOTES CAN BE FOUND ON THE LANDSCAPE DETAILS SHEET, C-505.

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0 60 100 200 300
SCALE: 1" = 60'

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UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

CRAIG NEIL LANDSCAPE ARCHITECT 001156 REGISTERED STATE OF NEW YORK

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CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
CNT	RJT

LANDSCAPING PLAN

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
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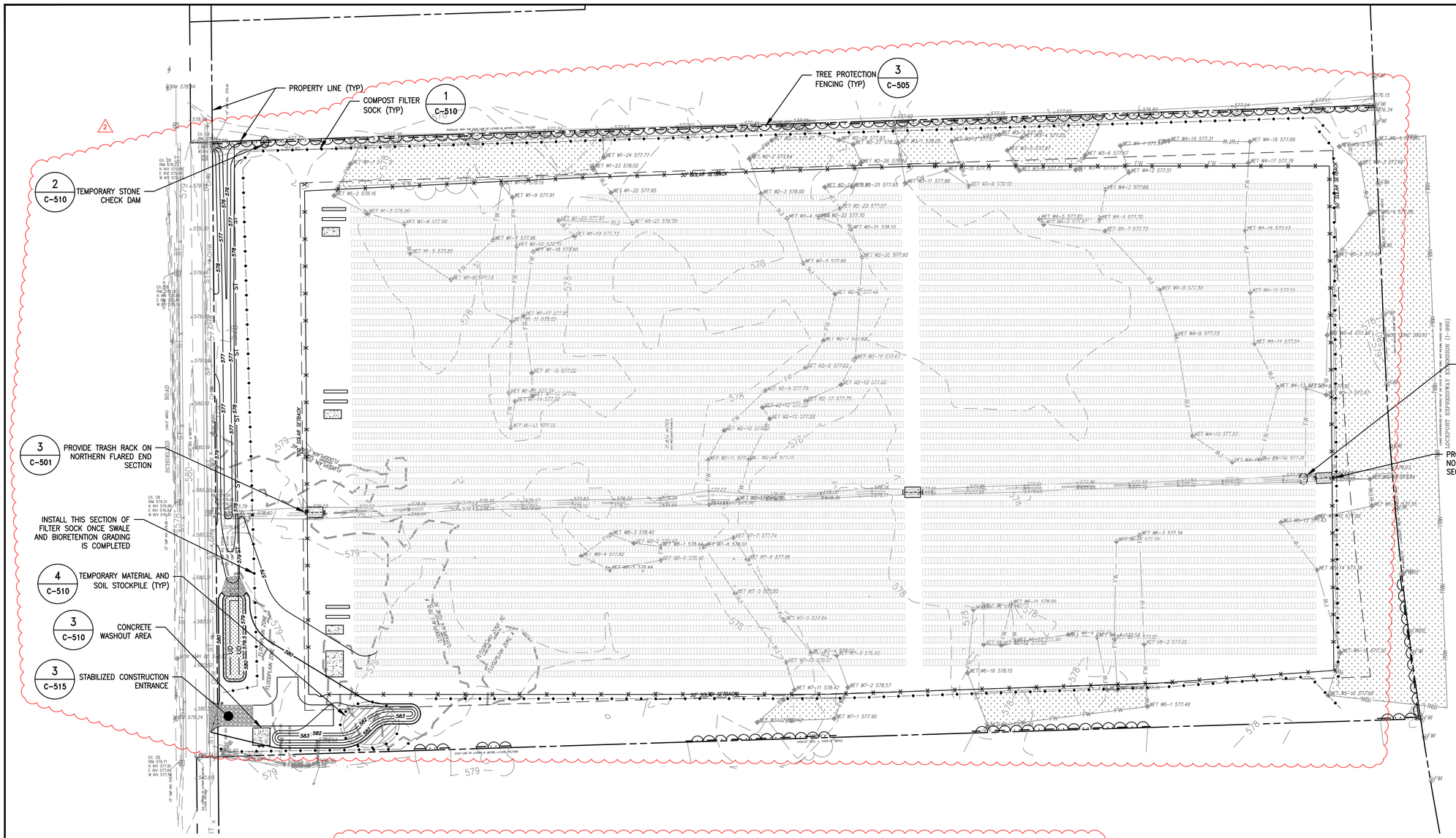
C-103

SHEET 5 OF 10

Jan 08,2021
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36x24 PLOT SHEET

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CONSTRUCTION SEQUENCING NOTES:

1. HOLD PRE-CONSTRUCTION MEETING AT LEAST 1 WEEK PRIOR TO STARTING CONSTRUCTION WITH ALL INVOLVED PARTIES.
2. PRIOR TO COMMENCING ANY CLEARING, GRUBBING, EARTHWORK ACTIVITIES, ETC. AT THE SITE, THE CONTRACTOR SHALL FLAG THE WORK LIMITS AND SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCES, TREE PROTECTION/BARRIER FENCES, STABILIZED CONSTRUCTION ACCESSE(S)/ROAD(S), STORM DRAIN SEDIMENT FILTERS, SEDIMENT TRAP, ETC.) INDICATED ON THE PROJECT DRAWINGS OR AS NECESSARY. THE CONTRACTOR SHALL INSTALL INLET AND OUTLET PROTECTION MEASURES (RIPRAP OVERFLOW WEIR(S), CULVERT INLET/OUTLET PROTECTION, STONE CHECK DAMS, ETC.) TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THEIR TRIBUTARY AREAS.
3. THE CONTRACTOR SHALL COMMENCE SITE CONSTRUCTION ACTIVITIES INCLUDING CLEARING & GRUBBING IDENTIFIED SECTIONS OF THE PROPOSED AREA OF DISTURBANCE. CLEARED AREAS SHALL BE STABILIZED WITH TOPSOIL AND GROUND COVER SEED MIX.
4. INSTALL NEW DIVERSION DITCH AND RESTORE EXISTING DRAINAGE DITCH SHOWN ON PLANS TO PROVIDE POSITIVE FLOW.
5. COMPLETE INSTALLATION OF SOLAR ARRAY, EQUIPMENT, AND APPURTENANCES STARTING FROM THE SOUTHERN END OF THE SITE, WORKING NORTH. STABILIZE ANY TEMPORARY DISTURBANCE AS CONSTRUCTION PROGRESSES.
6. INSTALL PERMANENT CULVERT CROSSINGS AND STABILIZE EXISTING DRAINAGE DITCH. PERMANENT CULVERT CROSSINGS ARE NOT DESIGNED FOR CONSTRUCTION LOADING.
7. REMOVE TEMPORARY CONSTRUCTION ACCESS AND INSTALL PERMANENT ASPHALT DRIVEWAY.
8. COMPLETE FINAL GRADING OF GROUNDS, BIORETENTION PRACTICE, AND EARTHEN SCREENING BERM. TOPSOIL, AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH EACH AREA.
9. AFTER THE SITE IS STABILIZED THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY ESTABLISH PERMANENT VEGETATION ON THE AREAS DISTURBED DURING THEIR REMOVAL.

E&SC NOTES:

1. SEE SHEET C-510 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL NOTES.

EROSION AND SEDIMENT CONTROL LEGEND:

- PROPERTY LINE
- PROPOSED COMPOST FILTER SOCK
- PROPOSED TREELINE PROTECTION FENCING
- TEMPORARY STONE CHECK DAM

0 60 100 200 300

SCALE: 1" = 60'

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CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

EROSION AND SEDIMENT CONTROL PLAN
SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
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C-104

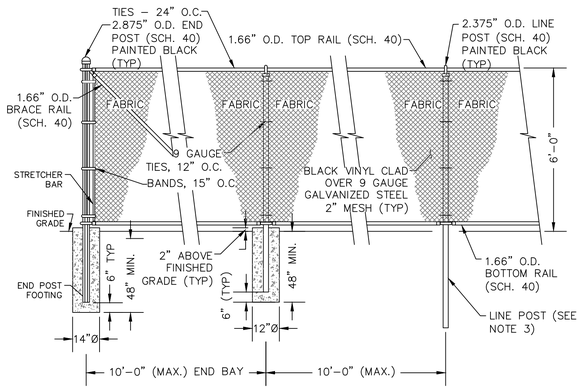
SHEET 6 OF 10

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SOIL TYPE	EMBEDMENT DEPTH (FT) WIND SPEED (MPH)		
	90	105	120
SOFT CLAY	5.5	6	6.5
STIFF CLAY	4.5	5	5.5
VERY STILL CLAY	4	4.5	5
HARD CLAY	3.5	4	4.5
LOOSE SAND	6	6.5	7
Medium Dense Sand	5.5	6	6.5
Dense Sand	5	6	6.5

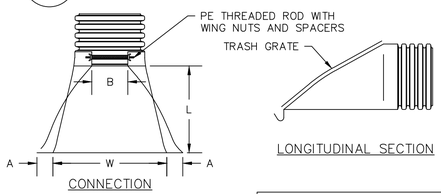
NOTES:
1. ALL POSTS, RAILS, MESH & HARDWARE TO BE GALVANIZED STEEL
2. END POST REQUIREMENTS ALSO APPLY TO CORNER AND PULL POSTS.
3. CONTRACTOR SHALL HAVE THE OPTION OF SETTING LINE POSTS IN 12"ø BY 48" DEEP CONCRETE FOOTING OR USING DRIVING AND ANCHORING SPECIFIED BY THE MANUFACTURER TO THE DEPTH SPECIFIED IN THE INCLUDED TABLE EXCEPT FOR ALL END CORNER AND INTERMEDIATE POSTS SHALL HAVE CONCRETE FOOTINGS PER DETAIL.

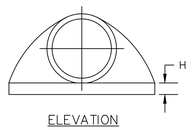
1 C-501 CHAIN LINK FENCE 6' HIGH
SCALE: NOT TO SCALE

GATE POST SCHEDULE	
GATE LEAF SIZE	POST O.D.
UP TO 12'	3"
12' TO 20'	4"

NOTE:
GATES ARE TO SWING OUTWARD, MAINTAINING 4" OF CLEARANCE FROM FINISHED GRADE.

2 C-502 CHAIN LINK FENCE 6' HIGH GATE
SCALE: NOT TO SCALE

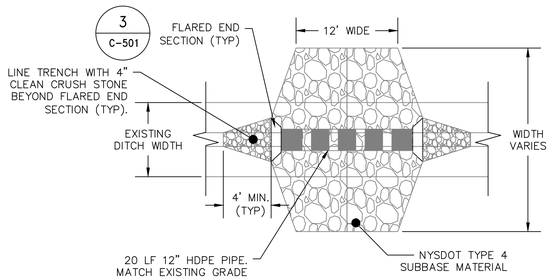


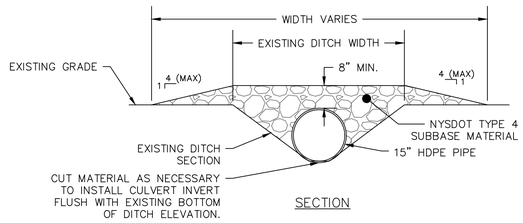


TYPICAL END SECTION					
END SECTION DIMENSIONS					
PIPE DIA.	A	B (MAX)	H	L	W
15"	6.5"	10"	6.5"	25"	29"

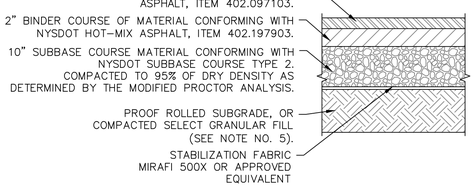
NOTES:
1. WHERE SPECIFIED, PROVIDE TRASH GRATE BY SAME MANUFACTURER AS FLARED END SECTION.
2. ADS, Inc. STANDARD OF QUALITY.

3 C-501 TYPICAL FLARED END SECTION
SCALE: NOT TO SCALE





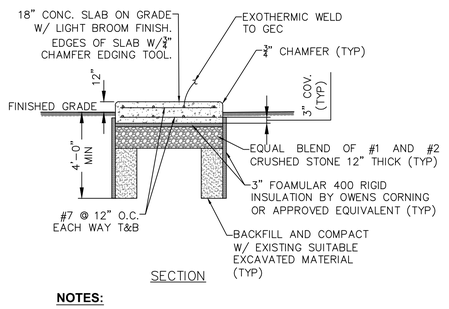
4 C-501 20' LONG CROSSING CULVERT
SCALE: NOT TO SCALE



NOTES:

1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 9, 2020, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
2. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 – SUBBASE COURSE OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS.
3. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400–HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE ITEM NUMBER CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 402–HOT MIX ASPHALT (HMA) PAVEMENTS.
4. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407–TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. APPLY TACK COAT TO ASPHALT PAVEMENT SURFACES AND SURFACES OF CURBS BELOW PAVEMENT LEVEL, GUTTERS, MANHOLES, AND OTHER STRUCTURES PROJECTING INTO OR ABUTTING PAVEMENT. TACK COAT ENTIRE VERTICAL SURFACE OF ABUTTING EXISTING PAVEMENT. DRY TO A "TACKY" CONSISTENCY BEFORE PAVING.
6. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
7. REMOVE LOOSE AND FOREIGN MATERIAL FROM ASPHALT SURFACE BEFORE PAVING NEXT COURSE. USE POWER BROOMS, BLOWERS OR HAND BROOM.

5 C-501 TYPICAL ASPHALT CONCRETE PAVEMENT
SCALE: NOT TO SCALE



NOTES:

1. ELEVATION OF TOP OF EACH PAD TO BE ABOVE THE 100–YEAR FLOODPLAIN ELEVATION OF 579.00.
2. COORDINATE PAD INFORMATION WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

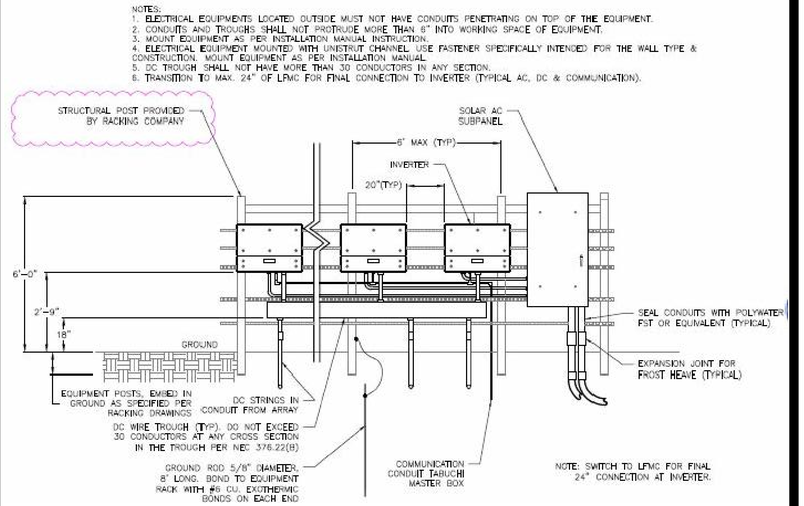
CAST-IN-PLACE CONCRETE GENERAL NOTES:
(UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING SHALL APPLY)

1. CONCRETE WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE ACI 318–14.
2. UNLESS OTHERWISE INDICATED ON DRAWINGS CAST–IN–PLACE CONCRETE SHALL CONFORM TO THE FOLLOWING TABLE:

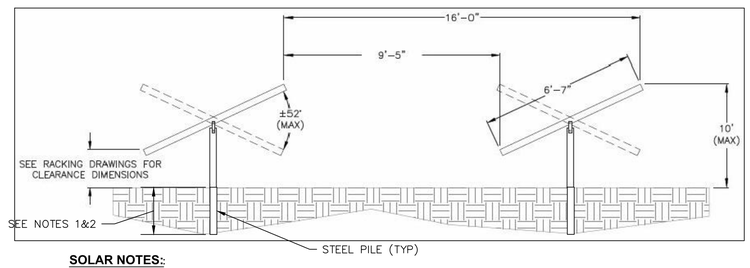
LOCATIONS	CONCRETE STRENGTH (PSI)	MAX. SIZE AGGREGATE	AIR CONTENT (%)	MAX. W/C RATIO
EXTERIOR SLAB–ON–GRADE	5000	1–1/2"	5.5±1.5	0.45

3. REINFORCING FOR CONCRETE SHALL BE DEFORMED STEEL BARS IN ACCORDANCE WITH ASTM SPECIFICATION A615, GRADE 60. REBAR ANCHOR TIES TO BE ASTM SPECIFICATION A–955, GRADE 60.
4. PROVIDE ADEQUATE TIES FOR REINFORCEMENT IN SLABS. REINFORCEMENT TO BE HELD AT CORRECT DISTANCE FROM FORMS AND EARTH BY STEEL CHAIRS OR TIES.
5. FOLLOW C.R.S.I. RULES FOR PLACING OF REINFORCING STEEL AND ACCESSORIES.
6. THIS CONTRACTOR SHALL COOPERATE WITH OTHER TRADES AND WHERE REQUIRED INSTALL ALL BUILT–IN WORK, SLEEVES, INSERTS, ETC., AS REQUIRED FOR A COMPLETE JOB.
7. STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS A DAY'S POUR, JOINTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN, MAIN REINFORCING TO RUN THROUGH THE JOINT, KEY AND ROUGHEN JOINTS TO EXPOSE AGGREGATE FOR CHEMICAL BOND.
8. U.N.O. WALL FOOTINGS SHALL BE MINIMUM 12" THICK AND PROJECT 6" BEYOND ALL FACES OF WALLS AND AS A MINIMUM CONTAIN #5@12" O.C. BOTTOM BARS.

6 C-501 CONCRETE EQUIPMENT PAD
SCALE: NOT TO SCALE



7 C-501 INVERTER AREA ELEVATION
SCALE: NOT TO SCALE



SOLAR NOTES:

1. FINAL PILE DEPTH SHALL BE DESIGNED BY A NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION AND BE IN ACCORDANCE WITH ALL LOCAL AND STATE STANDARDS.
2. SOLAR PANELS INSTALLED WITHIN THE FLOODPLAIN BOUNDARY SHALL INCLUDE ANTI–FLOTATION ANCHORAGE AS NECESSARY.

8 C-501 TYPICAL SOLAR PANEL ELEVATION
SCALE: NOT TO SCALE

SOLAR EQUIPMENT DETAILS NOT DESIGNED BY GPI AND SHOWN FOR REFERENCE ONLY.

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK GREENMAN PEDERSEN No. 131 LICENSED PROFESSIONAL ENGINEER
ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS		
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020
NO.	REVISION	DATE

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

SITE DETAILS

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

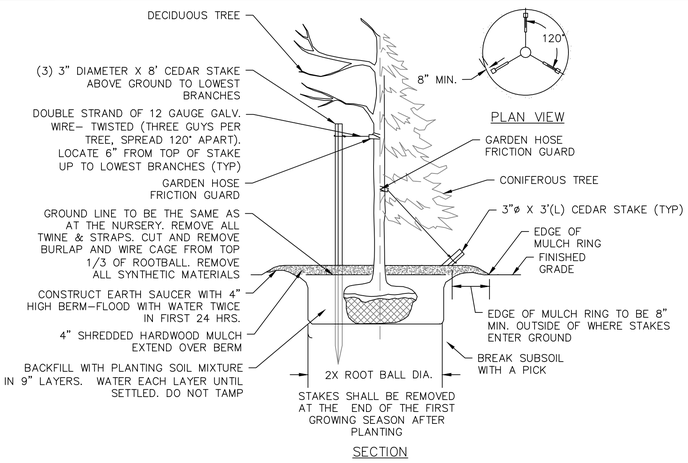
C-501

SHEET 7 OF 10

Jan 08,2021
E:\2020\2020116.00 Amherst Solar Farm\CADD\2020116.00 C-501 SITE DETAILS.dwg
36x24 PLOT SHEET

THE ALTERATION OF THIS DOCUMENT IN ANY WAY, UNLESS UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)



NOTES:
1. TREES SHALL BE BALLED AND BURLAPPED

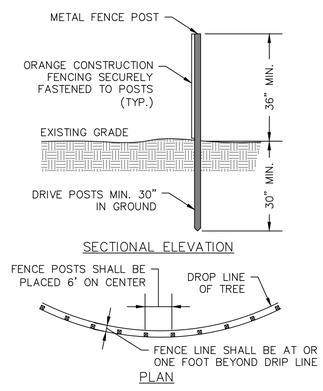
1 C-505 PLANTING AND GUYING FOR TREES SMALLER THAN 3" CALIPER

SCALE: NOT TO SCALE

NOTE:
SPRAY WITH ANTIDESICCANT IN ACCORDANCE WITH MFG.'S RECOMMENDATIONS IF FOLIAGE IS PRESENT.

2 C-505 SHRUB PLANTING DETAIL FOR ALL SHRUBS BALLED AND BURLAPPED

SCALE: NOT TO SCALE



3 C-505 TREE PROTECTION FENCING

SCALE: NOT TO SCALE

GENERAL LANDSCAPING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL CAREFULLY COORDINATE CONSTRUCTION ACTIVITIES WITH THAT OF THE EARTHWORK CONTRACTOR AND OTHER SITE DEVELOPMENT.
2. THE CONTRACTOR SHALL VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS AND INSPECT RELATED WORK AND ADJACENT SURFACES. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL FINISH GRADES WITHIN THE WORK AREA AND REPORT TO THE LANDSCAPE ARCHITECT/ENGINEER AND OWNER ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
3. THE EXACT LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND UNDERGROUND UTILITIES, WHICH MAY NOT BE INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITY SERVICES AND IS RESPONSIBLE FOR THEIR REPLACEMENT IF DAMAGED.
4. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM RUBBISH AND ALL DEBRIS AT ALL TIMES AND SHALL ARRANGE MATERIAL STORAGE SO AS NOT TO INTERFERE WITH THE OPERATION OF THE PROJECT. ALL UNUSED MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE.
5. NO TREES OR SHRUBS SHALL BE PLANTED ON EXISTING OR PROPOSED UTILITY LINES.
6. QUALITY ASSURANCE:
   A. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
   B. SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC (AAN), UNLESS OTHERWISE SPECIFIED.
   C. NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, VIGOROUS PLANTS NURSERY GROWN UNDER CLIMACTIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.
   D. SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON–AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL. WHEN AUTHORIZED, ADJUSTMENTS OF CONTRACT AMOUNT (IF ANY) WILL BE MADE BY CHANGE ORDER.
7. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:
   A. UNLESS OTHERWISE DIRECTED IN WRITING, SEED LAWNS FROM MARCH 15 TO JUNE 15, AND FROM AUGUST 15 TO OCTOBER 15.
   B. UNLESS OTHERWISE DIRECTED IN WRITING, PLANT TREES AND SHRUBS FROM MARCH 15 TO JUNE 1, AND FROM AUGUST 15 TO OCTOBER 30.
   C. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE LAWNS OR PLANTINGS ARE TO BE ESTABLISHED AND WORK IS COMPLETE, SHALL BE RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS AFTER WORK IS COMPLETE; WORK SHALL BE WITHIN THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER (TOPSOIL AND TEMPORARY COVER SEED MIX) WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.

SITE PREPARATION:

GENERAL:

1. EXISTING EXCESS TOPSOIL SHALL BE REMOVED AND STORED IN TOPSOIL STOCKPILES SUFFICIENTLY REMOVED FROM OTHER EXCAVATION OR DISTURBANCE TO AVOID MIXING. SEDIMENT BARRIER SHALL BE INSTALLED AROUND TOPSOIL STOCKPILE AREAS.

TOPSOIL:

1. NEWLY GRADED SUBGRADES: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES (SCARIFY AT APPROXIMATELY RIGHT ANGLES TO THE SLOPE DIRECTION IN SOIL AREAS THAT ARE STEEPER THAN 5%). REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.

1.1. SPREAD APPROXIMATELY 1/2 THE THICKNESS OF PLANTING SOIL OVER LOOSENED SUBGRADE. MIX THOROUGHLY INTO TOP 4 INCHES OF SUBGRADE. SPREAD REMAINDER OF PLANTING SOIL.

2. UNCHANGED SUBGRADES: IF TURF IS TO BE PLANTED IN AREAS UNALTERED OR UNDISTURBED BY EXCAVATING, GRADING, OR SURFACE–SOIL STRIPPING OPERATIONS. PREPARE SURFACE SOILS AS FOLLOWS:

2.1. REMOVE EXISTING GRASS, VEGETATION , AND TURF. DO NOT MIX INTO SURFACE SOIL.

2.2. LOOSEN SURFACE SOIL TO A DEPTH OF AT LEAST 6 INCHES (SCARIFY AT APPROXIMATELY RIGHT ANGLES TO THE SLOPE DIRECTION IN SOIL AREAS THAT ARE STEEPER THAN 5%).

2.3. APPLY SOIL AMENDMENTS AND FERTILIZERS ACCORDING TO PLANTING SOIL MIX PROPORTIONS AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOI. TILL SOIL TO A HOMOGENEOUS MIXTURE OF FINE TEXTURE.

2.3.1. APPLY FERTILIZER DIRECTLY TO SURFACE SOIL BEFORE LOOSENING.

2.4. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, TRASH, AND OTHER EXTRANEOUS MATTER.

2.5. LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION, AND TURF, OFF OWNER'S PRPOERTY.

3. FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANT WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL AND RAKE. REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISH GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDATE FUTURE.
4. MOISTEN PREPARED AREA BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY TO A DEPTH OF 4 INCHES 48 HOURS BEFORE SODDING AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.
5. BEFORE PLANTING, OBTAIN OWNER'S REPRESENTATIVE'S ACCEPTANCE OF FINISH GRADING; RESTORE PLANTING AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING.

SEEDING:

1. LIME TO ACHIEVE pH OF 6.5.
2. FERTILIZER: SEE "EXECUTION OF LANDSCAPE WORK" NOTE #4.
3. INCORPORATE LIME AND FERTILIZER IN THE TOP 4" OF TOPSOIL.
4. SMOOTH AND FIRM THE SEEDBED.

LANDSCAPE MATERIALS:

TOPSOIL:

1. NEW TOPSOIL SHALL BE BETTER THAN OR EQUAL TO THE QUALITY OF THE EXISTING ADJACENT TOPSOIL. IT SHALL MEET THE FOLLOWING CRITERIA:
   A. ORIGINAL LOAM TOPSOIL, WELL DRAINED HOMOGENOUS TEXTURE AND OF UNIFORM GRADE, WITHOUT THE ADMIXTURE OF SUBSOIL MATERIAL AND FREE OF DENSE MATERIAL, HARDPAN, CLAY, STONES, SOD OR OTHER OBJECTIONABLE MATERIAL.
   B. CONTAINING NOT LESS THAN 5% NOR MORE THAN 20% ORGANIC MATTER IN THAT PORTION OF A SAMPLING PASSING A 1/4" SIEVE WHEN DETERMINED BY THE WET COMBUSTION METHOD ON A SAMPLE DRIED AT 105°C.
   C. CONTAINING A pH VALUE WITHIN pH RANGE OF 6.5 TO 7.5 ON THAT PORTION OF THE SAMPLE WHICH PASSES A 1/4" SIEVE.
   D. CONTAINING THE FOLLOWING WASHED GRADATIONS:

SIEVE DESIGNATION	% PASSING
1"	100
1/4"	97–100
No. 200	20–60

MEADOW MIX SEED:

A. STANDARD OF QUALITY FOR MEADOW MIX SHALL BE ERNST SOLAR FARM SEED MIX – ERNMX–186 AS MANUFACTURED BY ERNST CONSERVATION SEEDS (OR APPROVED EQUIVALENT).
ERNST CONSERVATION SEEDS
8884 MERCER PIKE
MEADVILLE, PA 16335
800.873.3321
WWW.ERNSTSEED.COM

	TABLE 5.3 SOIL RESTORATION REQUIREMENTS		
TYPE OF SOIL DISTURBANCE	**SOIL RESTORATION REQUIREMENT**		**COMMENTS/EXAMPLES**
NO SOIL DISTURBANCE	RESTORATION NOT PERMITTED		PRESERVATION OF NATURAL FEATURES
MINIMAL SOIL DISTURBANCE	RESTORATION NOT REQUIRED		CLEARING AND GRUBBING
AREAS WHERE TOPSOIL IS STRIPPED ONLY (NO CHANGE IN GRADE)	**HSG A&B*** **	**HSG C&D*** **	PROTECT AREA FROM ONGOING CONSTRUCTION ACTIVITIES
	APPLY 6" OF TOPSOIL	AERATE* AND APPLY 6" OF TOPSOIL	
AREAS OF CUT OR FILL	**HSG A&B*** **	**HSG C&D*** **	
	AERATE* AND APPLY 6" OF TOPSOIL	APPLY FULL SOIL RESTORATION**	
HEAVY TRAFFIC AREAS ON SITE (ESPECIALLY WITHIN 5–25 FEET AROUND BUILDINGS BUT NOT WITHIN 5 FEET OF PERIMETER FOUNDATION WALLS)	APPLY FULL SOIL RESTORATION** (DE–COMPACTION AND COMPOST ENHANCEMENT)		
AREAS WHERE RUNOFF REDUCTION AND/OR INFILTRATION PRACTICES ARE APPLIED	RESTORATION NOT REQUIRED, BUT MAY BE APPLIED TO ENHANCE THE REDUCTION SPECIFIED FOR APPROPRIATE PRACTICES		KEEP CONSTRUCTION EQUIPMENT FROM CROSSING THESE AREAS. TO PROTECT NEWLY INSTALLED PRACTICE FROM ONGOING CONSTRUCTION, CONSTRUCT A SINGLE PHASE OPERATION FENCE AREA.
REDEVELOPMENT PROJECTS	SOIL RESTORATION IS REQUIRED ON REDEVELOPMENT PROJECTS IN AREAS WHERE EXISTING IMPERVIOUS AREA WILL BE CONVERTED TO PERVIOUS AREA		

* AERATION INCLUDES THE USE OF MACHINES SUCH AS TRACTOR–DRAWN IMPLEMENTS WITH COULTERS MAKING A NARROW SILT IN THE SOIL, A ROLLER WITH MANY SKIPES MAKING INDENTATIONS IN THE SOIL, OR PRONGS WHICH FUNCTION LIKE A MINI–SUBSOILER
** PER "DEEP RIPPING AND DE–COMPACTION, DEC 2008"
*** HYDROLOGIC SOIL GROUP (HSG) ACCORDING TO THE NATIONAL RESOURCE CONSERVATION SERVICE.

EXECUTION OF LANDSCAPE WORK:

1. LANDSCAPE WORK SHALL BE UNDERTAKEN AS SOON AS AREAS OF THE SITE BECOME AVAILABLE.
2. TOPSOIL PLACED AND GRADED ON SLOPES STEEPER THAN 5% SHALL BE PROMPTLY FERTILIZED, SEEDED, MULCHED AND STABILIZED BY "TRACKING" WITH SUITABLE EQUIPMENT.
3. PERFORM FINE GRADING TO FINISHED ELEVATION ONLY IMMEDIATELY PRIOR TO PLANTING. PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN SURFACE, FREE OF DEPRESSIONS OR RIDGES WITH A UNIFORM LOOSE, FINE TEXTURE.
4. SOIL TESTING/AMENDING:
   A. THE SOIL SHALL BE TESTED BY A QUALIFIED TESTING LABORATORY AND AMENDED (PER LABORATORY RECOMMENDATIONS) TO MEET TOPSOIL SPECIFICATIONS HEREIN. LABORATORY RECOMMENDATIONS SHALL BE SUBMITTED TO AND APPROVED BY LANDSCAPE ARCHITECT BEFORE AMENDMENTS ARE MADE.
   B. APPLY FERTILIZER OF TYPE AND AT RATE RECOMMENDED BY TESTING LABORATORY FOR LAWN AREAS.
6. MEADOW MIX (SEED):
   A. STANDARD OF QUALITY FOR MEADOW MIX SHALL BE ERNST SOLAR FARM SEED MIX – ERNMX–186 AS MANUFACTURED BY ERNST CONSERVATION SEEDS (OR APPROVED EQUIVALENT).
   ERNST CONSERVATION SEEDS
   8884 MERCER PIKE
   MEADVILLE, PA 16335
   800.873.3321
   WWW.ERNSTSEED.COM
   B. SEED AT THE RATE OF 6 LBS PER 1,000 SF.
   C. APPLY SEED UNIFORMLY BY CYCLONE SEEDER CULTI–PACKER OR HYDRO–SEEDER AT RATE INDICATED.
   D. ALL SEEDED AREAS SHALL BE PROTECTED FROM EROSION BY ONE OF THE FOLLOWING METHODS:
      i. A UNIFORM BLANKET OF STRAW APPLIED AT A RATE OF 2 TONS/ACRE MIN., TO BE APPLIED ONCE SEEDING IS COMPLETE.
      ii. WOOD FIBER CELLULOSE APPLIED WITH SEED MIX BY HYDROSEEDER AT RATE OF 2,000 LBS/ACRE.
   D. ALL SEEDED SLOPES 3:1 OR GREATER SHALL BE PROTECTED FROM EROSION WITH JUTE MESH OR APPROVED EQUAL.
   E. IRRIGATE TO FULLY SATURATE SOIL LAYER, BUT NOT TO DISCLOSE PLANTING SOIL.
8. ALL NEWLY PLANTED AREAS SHALL BE KEPT MOIST BY WATERING UNTIL GRASSES AND GROUND COVERS ARE WELL ESTABLISHED. THE LANDSCAPE CONTRACTOR MUST WATER PLANT MATERIAL WHEN NECESSARY FOR 60 DAYS AFTER INSTALLATION.
9. MEADOW MIX AREAS ARE TO BE WARRANTED UNTIL THEY BECOME ESTABLISHED, UNTIL FINAL ACCEPTANCE, AND NOT LESS THAN 60 DAYS AFTER COMPLETION OF ALL WORK. TREES, SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE WARRANTED AGAINST DEFECTS INCLUDING POOR GROWTH AND DEATH, EXCEPT WHEN RESULTING FROM OWNER NEGLECT, INCIDENTS THAT ARE BEYOND THE CONTROL OF THE LANDSCAPE INSTALLER AND DAMAGE OR ABUSE BY OTHERS, FOR AT LEAST ONE FULL YEAR AFTER PROJECT COMPLETION.

GPI Engineering Design Planning Construction Management
518.453.9431 GPINT.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK · GREENMAN PEDERSEN · LICENSED PROFESSIONAL ENGINEER · No. 121

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE

REVISIONS

NO.	REVISION	DATE
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	JEM/RJT

LANDSCAPING DETAILS

SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

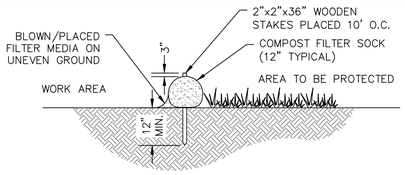
C-505

SHEET 8 OF 10

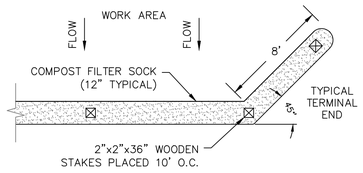
Jan 08,2021
E:\2020\2020116.00 Amherst Solar Farm\CADD\2020116.00 C–505 LANDSCAPING DETAILS.dwg
36x24 PLOT SHEET

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Attachment: SP-2020-14_drawings 012121 (2538 : Sp-2020-14)



SECTION



PLAN

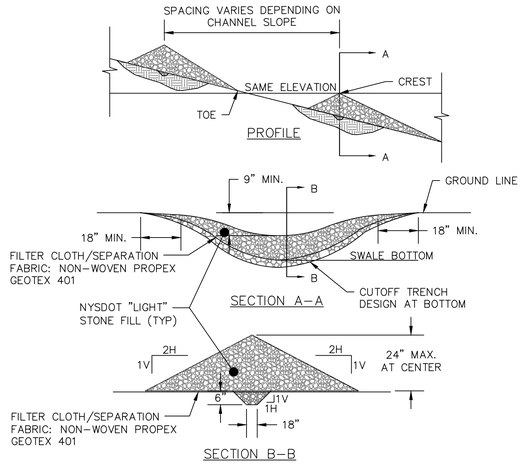
NOTES:

1. COMPOST FILTER SOCKS SHALL BE FILTREXX SILTSOXX OR EQUIVALENT.
2. THE COMPOST FILTER SOCK SHALL MEET THE REQUIREMENTS IN THE NEW YORK STANDARD SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (MOST RECENT EDITION).
3. THE COMPOST INFILL SHALL MEET THE PHYSICAL PARAMETERS IN TABLE 5.3–COMPOST STANDARDS TABLE.
4. SOCKS MAY BE FILLED AFTER PLACEMENT BY BLOWING COMPOST INTO THE TUBE PNEUMATICALLY, OR FILLED AT A STAGING LOCATION AND MOVED INTO THE DESIGNED LOCATION.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND ACCUMULATED SEDIMENT REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT.
6. COMPOST FILTER SOCKS SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
7. UPON STABILIZATION OF THE CONTRIBUTING AREA, THE STAKES SHALL BE REMOVED. THE SOCKS SHALL BE REMOVED BY CUTTING THE MESH AND THE COMPOST SPREAD AS AN ADDITIONAL MULCH TO ACT AS A SOIL SUPPLEMENT.
8. MAXIMUM ALLOWABLE SLOPE LENGTHS CONTRIBUTING RUN–OFF TO A 12" COMPOST FILTER SOCK ARE:

% SLOPE	MAXIMUM SLOPE LENGTH(FT)
2	250
5	225
10	125
20	65
25	50
33	40
50	25

1 C-510 COMPOST FILTER SOCK INSTALLATION

SCALE: NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, DATED NOVEMBER 2016.
2. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN ON THE PLAN.
3. SET SPACING OF CHECK DAMS SUCH THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM ARE AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
4. EXTEND THE STONE A MINIMUM OF 18" BEYOND THE SWALE BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAM ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

2 C-510 STONE CHECK DAM DETAIL

SCALE: NOT TO SCALE

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IN STRICT COMPLIANCE WITH "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", NOVEMBER 2016.
2. EXCESS SOIL TO BE STOCKPILED WITHIN THE LIMITS OF SITE DISTURBANCE IF NOT USED IMMEDIATELY FOR GRADING PURPOSES. INSTALL SEDIMENT BARRIER AROUND SOIL STOCKPILES.
3. APPLY SURFACE STABILIZATION AND RESTORATION MEASURES. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE WORK IS DELAYED, SUSPENDED, OR INCOMPLETE AND WILL NOT BE REDISTURBED FOR 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY VEGETATIVE COVER WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE WORK IS COMPLETE AND WILL NOT BE REDISTURBED SHALL BE STABILIZED AND RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS AFTER WORK IS COMPLETE. (SEE SPECIFICATIONS FOR PERMANENT VEGETATIVE COVER). SEEDING FOR PERMANENT VEGETATIVE COVER SHALL BE WITHIN THE SEASONAL LIMITATIONS. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.
4. SEEDED AREAS TO BE MULCHED WITH STRAW OR HAY MULCH IN ACCORDANCE WITH VEGETATIVE COVER SPECIFICATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. THE CONTRACTOR IS TO SUPPLY ALL EQUIPMENT AND WATER.
7. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.
8. FOR ADDITIONAL WINTER STABILIZATION REQUIREMENTS SEE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", NOVEMBER 2016.

EROSION & SEDIMENT INSPECTION & MAINTENANCE SCHEDULE

STRUCTURE	DAILY	WEEKLY	AFTER RAINFALL	NECESSARY TO MAINTAIN FUNCTION	AFTER COMPLETION OF CONSTRUCTION
SILT FENCE BARRIER	--	INSPECT	INSPECT	CLEAN/ REPLACE	REMOVE
DUST CONTROL	INSPECT	--	INSPECT	MULCHING/ SPRAYING WATER	N/A
VEGETATIVE ESTABLISHMENT	--	INSPECT	INSPECT	WATERING/ RE–SEEDING/ RE–MULCHING	PERMANENT
STONE CHECK DAM	--	INSPECT	INSPECT	CLEAN/ REPAIR/ REPLACE	REMOVE
STABILIZED CONSTRUCTION ENTRANCE	--	INSPECT	INSPECT	CLEAN/ REPLACE STONE & FABRIC	REMOVE
CONCRETE TRUCK WASHOUT	INSPECT	--	INSPECT	DEWATER/ REPLACE	REMOVE

SPDES GENERAL PERMIT GP-0-20-001 COMPLIANCE NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE FOLLOWING:

1. THE CONTRACTOR AND HIS/HER SUBCONTRACTORS SHALL READ AND UNDERSTAND THE CONDITIONS OF THE "NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) STATE POLLUTANT DISCHARGE ELIMINATION (SPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES", GP–0–20–001 FOR THIS PROJECT.
2. THE CONTRACTOR AND HIS/HER SUBCONTRACTORS SHALL SIGN A COPY OF THE GENERAL PERMIT, GP–0–20–001, CERTIFICATION STATEMENT AS IDENTIFIED IN THE APPENDICES OF THE STORM WATER POLLUTION PREVENTION PLAN.
3. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS NECESSARY FOR THE WORK OUTLINED HEREIN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL STORM WATER POLLUTION PREVENTION MEASURES OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN AND SITE PLANS.
5. THE CONTRACTOR SHALL HOLD A PRECONSTRUCTION CONFERENCE WITH THE OWNER'S REPRESENTATIVES AT LEAST ONE WEEK PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. THE CONTRACTOR/OWNER SHALL HAVE A QUALIFIED INSPECTOR, AS DEFINED WITHIN THE NYSDEC SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY PERMIT NO. GP–0–20–001, CONDUCT AN INITIAL SITE ASSESSMENT PRIOR TO CONSTRUCTION, FOLLOWING THE COMMENCEMENT OF CONSTRUCTION, THE QUALIFIED INSPECTOR SHALL CONDUCT AT LEAST ONE (1) SITE INSPECTION EVERY SEVEN (7) CALENDAR DAYS. REFER TO SWPPP FOR INSPECTION GUIDELINES.
7. PRIOR TO COMMENCEMENT OF CONSTRUCTION, A QUALIFIED INSPECTOR IN EROSION AND SEDIMENT CONTROL (HIRED BY CONTRACTOR/OWNER) SHALL CONDUCT AN ASSESSMENT OF THE SITE AND CERTIFY THAT THE APPROPRIATE EROSION AND SEDIMENT CONTROL STRUCTURES AS DEPICTED ON THE PLANS HAVE BEEN ADEQUATELY INSTALLED AND IMPLEMENTED. CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER ONCE THE EROSION AND SEDIMENT CONTROL STRUCTURES HAVE BEEN INSTALLED. REFER TO STORMWATER POLLUTION PREVENTION PLAN FOR INSPECTION GUIDELINES.
8. THE OWNER/OPERATOR SHALL MAINTAIN A RECORD OF ALL EROSION AND SEDIMENT CONTROL INSPECTION REPORTS AT THE SITE IN A LOG BOOK. THE SITE LOG BOOK SHALL BE MAINTAINED ON–SITE AND BE MADE AVAILABLE TO THE PERMITTING AUTHORITY. THE OWNER/CONTRACTOR SHALL POST AT THE SITE, IN A PUBLICLY–ACCESSIBLE LOCATION, A SUMMARY OF THE SITE INSPECTION ACTIVITIES ON A MONTHLY BASIS.
9. THE OWNER/OPERATOR SHALL FILE A NOTICE OF INTENT (NOI) WITH THE NYSDEC AND MS4 ACCEPTANCE FORM WITH THE TOWN OF EAST GREENBUSH, NY PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES AND A NOTICE OF TERMINATION (NOT) WITH NYSDEC FOLLOWING CONSTRUCTION ACTIVITIES.

EROSION AND SEDIMENT CONTROL MEASURES:

GENERAL MEASURES:

1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. AS MUCH AS IS PRACTICAL, EXISTING VEGETATION SHALL BE PRESERVED. FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL POINTS OF ENTRY ONTO THE PROJECT SITE.

PARTICULAR MEASURES:

1. STABILIZED CONSTRUCTION ENTRANCE, UTILIZED DURING CONSTRUCTION, SHALL BE MAINTAINED IN A CONDITION THAT SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTIONS AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
2. SOIL STOCKPILES: SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL STOCKPILES OF FILL, TOPSOIL, AND EXCAVATED OVERBURDEN THAT ARE TO REMAIN EXPOSED FOR PERIODS LESS THAN 21 DAYS. SEDIMENT BARRIERS SHALL BE ANCHORED AND MAINTAINED IN GOOD CONDITION UNTIL SUCH TIME AS SAID STOCKPILES ARE REMOVED AND STOCKPILING AREAS ARE BROUGHT TO FINAL GRADE AND PERMANENTLY STABILIZED. TOPSOIL AND FILL THAT IS TO REMAIN STOCKPILED ON–SITE FOR PERIODS GREATER THAN 21 DAYS SHALL BE STABILIZED BY SEEDING. PRIOR TO THE SEEDING OPERATION, THE STOCKPILED MATERIAL SHALL BE GRADED AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY.
3. STONE CHECK DAMS: UNTIL SUCH TIME AS FINAL SITE STABILIZATION IS COMPLETED, DITCHES SHALL RECEIVE TREATMENT WITH STONE CHECK DAMS TO EFFECTIVELY TRAP SEDIMENT AND MINIMIZE ITS RELEASE OFF–SITE. STONE CHECK DAMS SHALL BE CONSTRUCTED WITHIN EACH DITCH BEGINNING AT ITS DOWNSTREAM TERMINUS AND SHOULD BE PLACED AT INTERVALS INDICATED ON THE DRAWINGS.
4. CONCRETE TRUCK WASHOUT: WASHOUT FACILITIES SHALL BE PROVIDED FOR EVERY PROJECT WHERE CONCRETE WILL BE POURED OR FORMED ON SITE. THIS FACILITY WILL RECEIVE HIGHLY ALKALINE WASH WATER FROM THE CLEANING OF CHUTES, MIXERS, HOPPERS, VIBRATORS, PLACING EQUIPMENT, TROWELS AND SCREEDS. THE FACILITY MUST BE LOCATED A MINIMUM OF 100 FEET FROM DRAINAGE SWALES, STORM DRAIN INLETS, WETLANDS, STREAMS, AND OTHER SURFACE WATERS. ALL WASHOUT FACILITIES WILL BE LINED TO PREVENT LEACHING OF LIQUIDS INTO THE GROUND. THE LINER SHALL BE PLASTIC SHEETING WITH A MINIMUM THICKNESS OF 10 MILS WITH NO HOLES OR TEARS AND ANCHORED BEYOND THE TOP OF THE PIT WITH AND EARTHEN BERM, SAND BAGS, STONE, OR OTHER STRUCTURAL APPURTENANCE EXCEPT AT THE ACCESS POINT.

MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES:

PERMANENT AND TEMPORARY VEGETATION:

INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:

INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS. CHECK FOR MUD, SEDIMENT BUILD–UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF–SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE.

SEDIMENT CONTROL BARRIERS:

INSPECT FOR DAMAGE EVERY SEVEN DAYS. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP–SLOPE FACE OF THE BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE BARRIER. IF BARRIER FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF BARRIER IMMEDIATELY.

SOIL STOCKPILE:

INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE OR COMPOST FILTER SOCK) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP–SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANYWAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCK PILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:

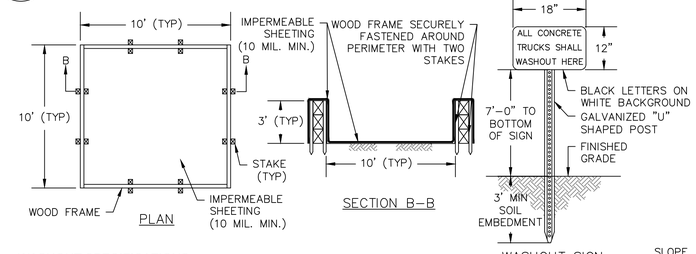
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORK. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CHECK DAM:

INSPECT CHECK DAMS EVERY SEVEN DAYS. IF SIGNIFICANT EROSION HAS OCCURRED BETWEEN STRUCTURES A LINER OF STONE OR OTHER SUITABLE MATERIAL SHOULD BE INSTALLED IN THAT PORTION OF THE CHANNEL. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAM AS NEEDED TO ALLOW CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. STONE CHECK DAM FAILURES SHALL BE REPLACED/REPAIRED WITHIN 2 CALENDAR DAYS OF IDENTIFICATION. REPLACE STONES AS NEEDED TO MAINTAIN THE DESIGN CROSS SECTION OF THE STRUCTURES. REMOVE CHECK DAMS AS PER APPROVAL OF TOWN ENGINEER AND PROJECT ENGINEER.

CONCRETE TRUCK WASHOUT:

CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITIES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER THE HARDENED CONCRETE SHOULD BE PUMPED TO A STABILIZED AREA, SUCH AS A GRASS FILTER STRIP. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE. DISPOSE OF THE HARDENED MATERIAL OFF SITE IN A CONSTRUCTION/DEMOLITION LANDFILL. ON SITE DISPOSAL MAY BE ALLOWED IF THIS HAS BEEN APPROVED AND ACCEPTED AS PART OF THE PROJECTS SWPPP. IN THAT CASE, THE MATERIAL SHOULD BE RECYCLED AS SPECIFIED, OR BURIED AND COVERED WITH A MINIMUM 2 FEET OF CLEAN COMPACTED EARTH FILL THAT IS PERMANENTLY STABILIZED TO PREVENT EROSION. THE PLASTIC LINER SHALL BE PLACED WITH EACH CLEANING OF THE WASHOUT FACILITY. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGED ARE TAKING PLACE IN NON–DESIGNATED AREAS.

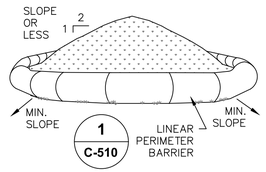


WASHOUT SPECIFICATIONS:

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET–VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

3 C-510 TEMPORARY CONCRETE WASHOUT STRUCTURE WITH WOODEN PLANKS

SCALE: NOT TO SCALE



NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH A LINEAR PERIMETER BARRIER, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS FOR INSTALLATION OF LINEAR BARRIER.

4 C-510 TEMPORARY SOIL STOCKPILE

SCALE: NOT TO SCALE

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR

AMHERST COMMUNITY SOLAR, LLC

412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM

595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK GREENMAN PEDERSEN No. 131 LICENSED PROFESSIONAL ENGINEER

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS

NO.	REVISION	DATE
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

EROSION AND SEDIMENT CONTROL DETAILS
SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

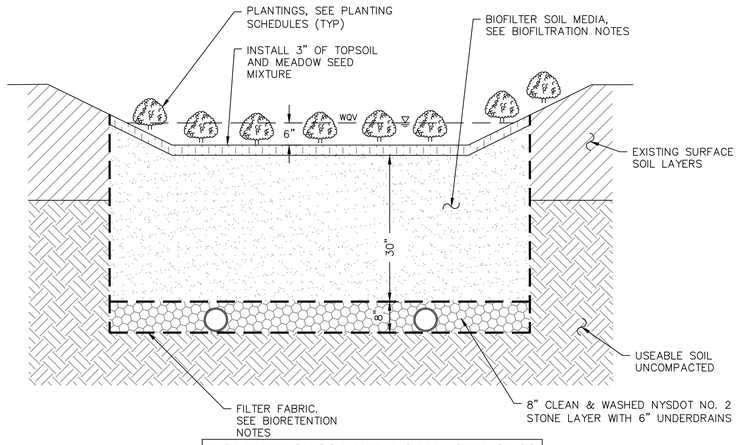
C-510

SHEET 9 OF 10

THE ALTERATION OF THIS DOCUMENT IN ANY WAY, UNLESS UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

Jan 08,2021
E:\2020\2020116.00 Amherst Solar Farm\CADD\2020116.00 C-510 EROSION AND SEDIMENT CONTROL DETAILS.dwg
36x24 PLOT SHEET

Attachment: SP-2020-14 drawings 012121 (22538 : Sp-2020-14)



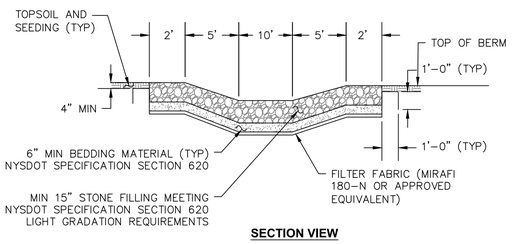
BIORETENTION SOIL MEDIA CHARACTERISTICS	
PARAMETER	VALUE
PH RANGE	5.5 TO 7.5
ORGANIC MATTER	3% TO 5%
SOIL FINES	8% TO 12%
SAND	85% TO 88%
PHOSPHORUS (P_2O_5)	10 TO 30 PPM
CATIONIC EXCHANGE CAPACITY (CEC)	>10 meq/100 g

BIORETENTION NOTES:

1. THE BIORETENTION AREAS MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE BIORETENTION AREA HAS RECEIVED FINAL STABILIZATION. PROVIDE TEMPORARY BYPASS FOR STORMWATER RUNOFF.
2. THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER, BRUSH OR SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE SOIL MEDIA SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED BY TAMPING LIGHTLY WITH A DOZER OR BACKHOE BUCKET. SEE TABLE BELOW FOR PLANTING SOIL CHARACTERISTICS.
3. THE NON-WOVEN FILTER FABRIC SHALL BE MIRAFI 180-N, AMOCO 4552, WEBTEC N70, GEOLON N70, CARTHAGE FX-80S OR APPROVED EQUIVALENT. WHEN OVERLAPS ARE REQUIRED BETWEEN ROLLS, THE UPHILL ROLL SHOULD OVERLAP A MINIMUM 2' OVER THE DOWNHILL ROLL IN ORDER TO PROVIDE A SHINGLE EFFECT.
4. THE TOPSOIL SHALL MEET THE SPECIFICATIONS ON SHEET C-505. THE TOPSOIL SHALL BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR SOIL MEDIA SHOWING THE USDA SOIL CLASSIFICATION AND GRADATION, FILTER FABRIC, TOPSOIL AND DRAINAGE STONE.
6. A PERCOLATION TEST WITNESSED BY THE ENGINEER SHALL BE COMPLETED UPON FINAL CONSTRUCTION OF THE BIORETENTION PRACTICE TO CONFIRM PERFORMANCE.
7. BIORETENTION SEED MIX:
   - A. STANDARD OF QUALITY FOR BIORETENTION MIX SHALL BE ERNST RAIN GARDEN SEED MIX – ERNMX-180 AS MANUFACTURED BY ERNST CONSERVATION SEEDS BROADCAST AT A RATE OF 20 LBS/ACRE (OR APPROVED EQUIVALENT).
     ERNST CONSERVATION SEEDS
     8884 MERCER PIKE
     MEADVILLE, PA 16335
     800.873.3321
     WWW.ERNSTSEED.COM
   - B. CONTRACTOR TO PLACE EROSION CONTROL BLANKET OVER THE SEEDED AREA. STANDARD OF QUALITY SHALL BE EAST COAST EROSION CONTROL ECS-1D.
   - C. MAINTENANCE: DURING THE FIRST SEASON OF GROWTH THE BIORETENTION AREA SHALL BE BRUSH HOGGED TWICE (ONCE MID-WAY THROUGH THE GROWING SEASON AND ONCE IN THE LATE FALL). IN SUBSEQUENT YEARS BRUSH HOGGING SHALL BE SHALL BE PERFORMED ONCE ANNUALLY IN THE LATE FALL.

1 C-515 BIORETENTION TYPICAL SECTION

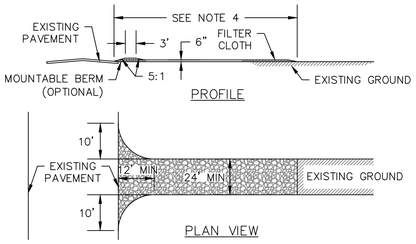
SCALE: 1"=10'



SECTION VIEW

2 C-515 BIORETENTION OVERFLOW WEIR

SCALE: NOT TO SCALE

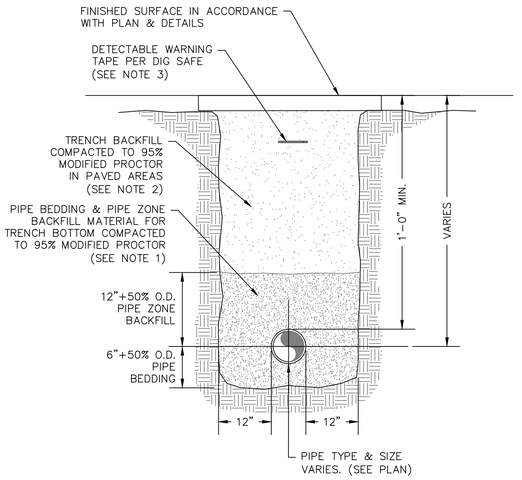


CONSTRUCTION ENTRANCE SPECIFICATIONS:

1. STONE SIZE – USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS – NOT LESS THAN SIX (6) INCHES.
3. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY FOUR FEET (24) FOOT IF SINGLE ENTRANCE TO SITE.
4. LENGTH – NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
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. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

3 C-515 STABILIZED CONSTRUCTION ACCESS

SCALE: NOT TO SCALE



NOTES:

1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

2. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

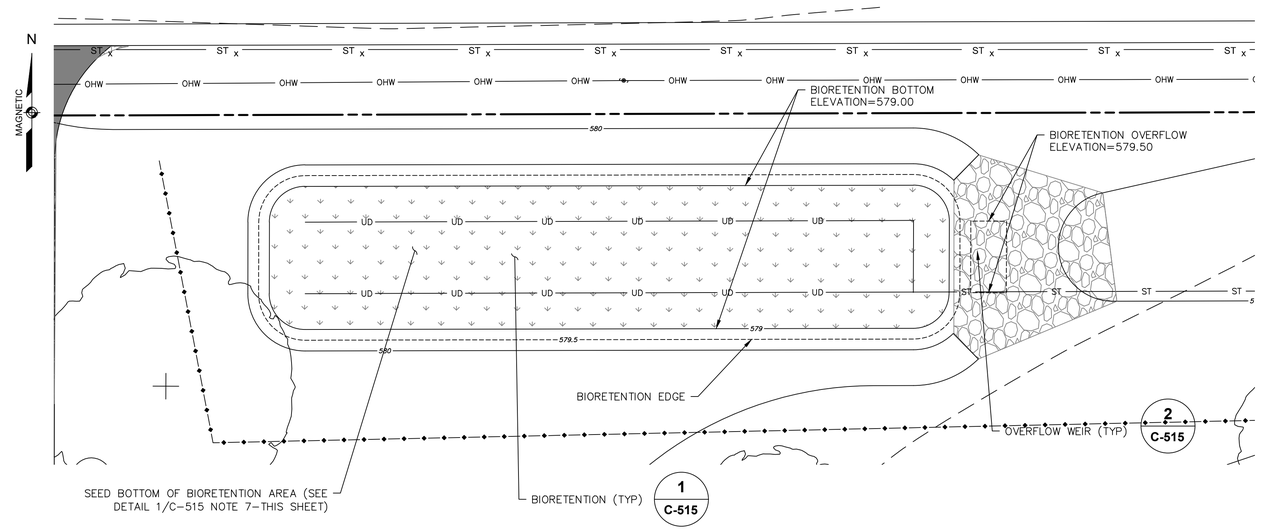
SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER.

3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

4 C-515 PIPE TRENCH DETAIL (TYPICAL)

SCALE: NOT TO SCALE



5 C-515 BIORETENTION LAYOUT AND LANDSCAPING

SCALE: 1"=10'

GPI Engineering Design Planning Construction Management
518.453.9431 GPINET.COM
Greenman-Pedersen, Inc.
80 Wolf Road, Suite 300
Albany, NY 12205

PREPARED FOR
AMHERST COMMUNITY SOLAR, LLC
412 SOUTH 13TH ST.
UNIT 607
PHILADELPHIA, PA 19147

AMHERST SOLAR FARM
595 SCHOELLES ROAD
TOWN OF AMHERST, NY 14228

STATE OF NEW YORK GREENMAN PEDERSEN LICENSED PROFESSIONAL ENGINEER No. 101

ISSUED FOR PERMIT REVIEW ONLY. THESE DRAWINGS ARE IN SUBSTANTIAL CONFORMANCE WITH THE BUILDING CODE.

REVISIONS		
2	TOWN COMMENT LETTER	01/08/2021
1	SITE PLAN SUBMISSION	11/16/2020
NO.	REVISION	DATE

CONSTRUCTION PLANS
NOVEMBER 16, 2020

DRAWN/DESIGN BY	CHECKED BY
ABJ/RJT	RJT

EROSION AND SEDIMENT CONTROL DETAILS
SHEET SIZE: 24"x36"

GPI PROJECT/CONTRACT NO.:
ALB-2020116.00

C-515

SHEET 10 OF 10

THE ALTERATION OF THIS DOCUMENT IN ANY WAY, UNLESS UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

Jan 08 2021
E:\2020\2020116.00 Amherst Solar Farm\CADD\2020116.00 C-515 STORMWATER AND UTILITY DETAILS.dwg
36x24 PLOT SHEET

Attachment: SP-2020-14_drawings 012121 (22538 : Sp-2020-14)

DRAFT

(1/21/21)

SEQR
Negative Declaration

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency: Town of Amherst Planning Board

Project: SP- 2020-14

Address: 5583 Main Street
Williamsville, NY 14221
(716) 631-7051

Date:

This notice is issued pursuant to Part 617 and Local Law #3-82, as amended, of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The Lead Agency has determined that the proposed action described below will not have a significant adverse effect on the environment.

Title of Action: Site Plan Review

SEQR Status: Type I Action

Description of Action: Proposed development of a 15± acre solar energy development on a 21.5± acre parcel. A maximum of 13,260 solar panels will be post mounted in a southerly orientation facing I-990, with a potential output of 3.5-4 mw of energy. A 75 ft. paved access driveway will be located at the west end of the frontage along Schoelles Road. A 6 ft. tall fence and high impact screening will be installed on all four sides of the buildable area- 50 feet on the east, west and south boundaries, and 100 feet from Schoelles Road. Energy collecting equipment is to be located on pads within the fence line to the north of the property along Schoelles Road. An additional agricultural use, to be determined at a later date, will be included with this project. Work will include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 595 Schoelles Road, Amherst, Erie County

Petitioner: Amherst Community Solar, LLC

Attachment: SP-2020-14_draft_neg_dec_012121 (22538 : Sp-2020-14)

Reasons Supporting This Determination

Based on information submitted by the applicant including a Full Environmental Assessment Form (EAF) - Part I, (as amended) and a complete site plan application, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that this action will not have a significant impact on the environment, as follows:

1. The project is not expected to cause a substantial adverse change in existing air quality, ground or surface water quality or quantity, or noise levels; a substantial increase in solid waste production; or a substantial increase in the potential for erosion, flooding, leaching or drainage problems. The Engineering Department on November 24, 2020 reviewed the Grading, Drainage and Utility Plans, Erosion and Control Plans, and the Engineer's Report submitted on November 16, 2020, and the Geotechnical Report prepared by _____.

   The Stormwater Pollution Prevention Plan (SWPPP) submitted on November 16, 2020 was also reviewed. Based on its review of these documents, the Department has determined that the project has or will have met all applicable requirements and has no objection to its approval.

2. The project will not result in the removal or destruction of large quantities of vegetation or fauna; or in significant adverse impacts to fish or wildlife species, habitats or other natural resources. The Planning Department reviewed a Landscape Plan submitted on November 16, 2020 and determined that it meets or exceeds Zoning Ordinance requirements for greenspace. The Landscape Plan has or will have met all Zoning Ordinance and Town requirements for landscaping.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The Building Department in their review of December 9, 2020 and the Planning Department in their review of December 14, 2020, along with the Geotechnical Report submitted on _____, determined that the subject project has or will have met all International Building Code – 2015 and Zoning Ordinance regulations.

4. The project is within an area identified by the State as having potentially archaeological or historical significance. A report by_____ and received by the Planning Department on _____ concluded that the project will not have a significant impact on historical or cultural resources.

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The project is located in the Suburban Agriculture (SA) zoning district; neighboring uses are agricultural uses and single family

Attachment: SP-2020-14_draft_neg_dec_012121 (22538 : Sp-2020-14)

homes and zoned Suburban Agriculture (SA); therefore, the project is consistent with surrounding land use since it complies with the Town's adoption of local laws that strongly emphasize mitigation measures (e.g. landscaping, inclusion of agricultural use) to allow renewable energy developments to be compatible with the surrounding rural character in the area.

6. The proposed subject development will include a 15± acre solar energy development which will increase energy output at this location.

7. The project will not create any hazard to human health. The Fire Chief's Association on December 3, 2020 has reviewed the project and has no objection to the approval of the site plan, as all requirements of this agency has or will have been met.

8. The project will change the use, and the intensity of the use, of land at this location, from open farmland to a field of solar arrays, however, the proposed 15± acre solar energy development will include a co-located agricultural use and will be consistent with the scale of surrounding land uses.

9. The function of the proposed 15± acre solar energy development will not significantly increase the number of people using the site over its previous level of use. A maintenance plan will provide the minimum access by individuals needed to maintain the equipment and uses on the site.

10. Reviews by the Town Traffic/Safety Board dated December 3, 2020, and NYSDOT dated_____ indicate that significant negative traffic impacts are not expected to result from the proposed project.

11. A coordinated review of the project has been undertaken by Town Departments including, in addition to those mentioned above, Highway on December 5, 2020, Assessor on December 1, 2020, Plumbing Division on December 1, 2020, and Right-of-Way Agent on November 25, 2020. These reviews did not identify any potential significant adverse environmental issues and indicated that the proposal will not have a significant damaging impact on the environment.

12. Issues not specifically mentioned above and/or those not specifically reviewed were not raised by Town departments, outside agencies or the public and are not determined to cause significant negative environmental impacts.

Attachment: SP-2020-14_draft_neg_dec_012121 (22538 : Sp-2020-14)

Planning Board Approval
Moved by: ; Seconded by: Ayes; Noes Absent

_____ _____
signature & title of preparer Date

_____ _____
Robert J. Gilmour, Planning Board Chair Date

RR/bf
X:\Current_Planning\Files\Site Plans\2020\SP-2020-14_(595_Schoelles_Rd)_2020\SP-2020-14_Blurb_012121.doc
cc: Amherst Town Clerk
Building Department
Engineering
Fire Chiefs'
Highway
Traffic/Safety
NYSDEC
NYSDOT
Amherst Community Solar, LLC, 412 S. 13th St, Unit 607, Philadelphia, PA 19147
Greenman-Pedersen, Inc, 4950 Genesee St. Suite 100, Buffalo, NY 14225

Attachment: SP-2020-14_draft_neg_dec_012121 (22538 : Sp-2020-14)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2020-14

PETITIONER

Amherst Community Solar, LLC

412 S. 13th St, Unit 607
Philadelphia, PA 19147

PROPERTY LOCATION

595 Schoelles Road

WHEREAS, the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on a Site Plan for a 15± acre solar energy development, and

WHEREAS, the Planning Board reviewed the plans and specifications for the proposed project, and

WHEREAS, the Site Plan was referred to the Town's various review agencies, and

WHEREAS, in accordance with Section 8-7-9 of the Zoning Ordinance, the Planning Board finds that:

A. The proposed site plan is consistent with the development plan if one is required.

B. The proposed site plan is consistent with the purpose and specific requirements of the Zoning Ordinance and generally consistent with the policies of the Comprehensive Plan.

C. Adequate services and utilities will be available prior to occupancy.

D. The site plan is consistent with all other applicable laws.

E. Pursuant to Local Law #3-82, as amended, the Planning Board has determined that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act is required since Hydric/potentially hydric soils have been identified on the parcel.

NOW THEREFORE BE IT RESOLVED that in accordance with 6 NYCRR, Part 617 and Local Law #3-82, as amended, the Planning Board has issued a Negative Declaration attached hereto, and

NOW THEREFORE BE IT FURTHER RESOLVED that the Planning Board, in accordance with

Attachment: SP-2020-14_draft_resolution_012121 (22538 : Sp-2020-14)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2020-14

PETITIONER	PROPERTY LOCATION
Amherst Community Solar, LLC	595 Schoelles Road

Section 8-7 of the Zoning Ordinance **approves/denies** said Site Plan subject to the following conditions:

1. That the consideration of signs is specifically excluded from this approval as they require a separate review and approval by the Town.

2. That any lights used to illuminate the property be equipped with adjustable hoods to control light spread and direction so as not to create any nuisance to nearby properties, and that lights not exceed 25 feet in total height from finished grade.

3. That as-built record drawings, including location of utilities, be provided to the Engineering Department prior to issuance of a Certificate of Occupancy by the Building Department.

The foregoing resolution was adopted by the Town of Amherst Planning Board, _____; moved by - _____; seconded by - _____; ayes _, noes _; absent - ____.

_____ _____
Robert J. Gilmour, Chair Date

RR/bf
X:\Current_Planning\Files\Site Plans\2020\SP-2020-14_(595_Schoelles_Rd)_2020\SP-2020-14_Blurb_012121.doc

cc: Town Clerk
Commissioner of Building
Town Engineer
Fire Chiefs
Traffic/Safety
Highway Superintendent
NYSDOT
NYSDEC
Amherst Community Solar, LLC, 412 S. 13th St, Unit 607, Philadelphia, PA 19147
Greenman-Pedersen, Inc, 4950 Genesee St. Suite 100, Buffalo, NY 14225

Approved Plan:
Received:

Attachment: SP-2020-14_draft_resolution_012121 (22538 : Sp-2020-14)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard, A
Planning Director

Ellen M. Kost, AICP
Assistant Planning Dir

SEQR
Negative Declaration

JAN22'21 PM

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Planning Board	**Project:**	SP- 2020-14
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date:**	January 21, 2021

This notice is issued pursuant to Part 617 and Local Law #3-82, as amended, of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The Lead Agency has determined that the proposed action described below will not have a significant adverse effect on the environment.

Title of Action: Site Plan Review

SEQR Status: Type I Action

Description of Action: Proposed development of a 15± acre solar energy development on a 21.5± acre parcel. A maximum of 13,260 solar panels will be post mounted in a southerly orientation facing I-990, with a potential output of 3.5-4 mw of energy. A 75 ft. paved access driveway will be located at the west end of the frontage along Schoelles Road. A 6 ft. tall fence and high impact screening will be installed on all four sides of the buildable area- 50 feet on the east, west and south boundaries, and 100 feet from Schoelles Road. Energy collecting equipment is to be located on pads within the fence line to the north of the property along Schoelles Road. An additional agricultural use, to be determined at a later date, will be included with this project. Work will include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 595 Schoelles Road, Amherst, Erie County

Petitioner: Amherst Community Solar, LLC

Attachment: Z-2020-14_signed neg dec_012121 (22538 : Sp-2020-14)

Reasons Supporting This Determination

JAN22'21 PM 2:45 ROL

Based on information submitted by the applicant including a Full Environmental Assessment Form (EAF) - Part I, (as amended) and a complete site plan application, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that this action will not have a significant impact on the environment, as follows:

1. The project is not expected to cause a substantial adverse change in existing air quality, ground or surface water quality or quantity, or noise levels; a substantial increase in solid waste production; or a substantial increase in the potential for erosion, flooding, leaching or drainage problems. The Engineering Department on November 24, 2020 reviewed the Grading, Drainage and Utility Plans, Erosion and Control Plans, and the Engineer's Report submitted on November 16, 2020.

   The Stormwater Pollution Prevention Plan (SWPPP) submitted on November 16, 2020 was also reviewed. Based on its review of these documents, the Department has determined that the project has or will have met all applicable requirements and has no objection to its approval.

2. The project will not result in the removal or destruction of large quantities of vegetation or fauna; or in significant adverse impacts to fish or wildlife species, habitats or other natural resources. The Planning Department reviewed a Landscape Plan submitted on November 16, 2020 and determined that it meets or exceeds Zoning Ordinance requirements for greenspace. The Landscape Plan has or will have met all Zoning Ordinance and Town requirements for landscaping.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The Building Department in their review of December 9, 2020 and the Planning Department in their review of December 14, 2020 determined that the subject project has or will have met all International Building Code – 2015 and Zoning Ordinance regulations.

4. The project is within an area identified by the State as having potentially archaeological or historical significance. A report by PanAmerican Consultants, Inc. and received by the Planning Department on January 21, 2021 concluded that the project will not have a significant impact on historical or cultural resources.

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The project is located in the Suburban Agriculture (SA) zoning district; neighboring uses are agricultural uses and single family homes and zoned Suburban Agriculture (SA); therefore, the project is consistent with surrounding land use since it complies with the Town's adoption of local laws that strongly emphasize mitigation measures (e.g. landscaping, inclusion of agricultural use) to allow renewable energy developments to be compatible with the surrounding rural character in the area.

Attachment: Z-2020-14_signed neg dec_012121 (22538 : Sp-2020-14)

JAN22'21 PM 2:49 RCVD

6. The proposed subject development will include a 15± acre solar energy development which will increase energy output at this location.

7. The project will not create any hazard to human health. The Fire Chief's Association on December 3, 2020 has reviewed the project and has no objection to the approval of the site plan, as all requirements of this agency has or will have been met.

8. The project will change the use, and the intensity of the use, of land at this location, from open farmland to a field of solar arrays, however, the proposed 15± acre solar energy development will include a co-located agricultural use and will be consistent with the scale of surrounding land uses.

9. The function of the proposed 15± acre solar energy development will not significantly increase the number of people using the site over its previous level of use. A maintenance plan will provide the minimum access by individuals needed to maintain the equipment and uses on the site.

10. Reviews by the Town Traffic/Safety Board dated December 3, 2020, and NYSDOT dated January 21, 2021 indicate that significant negative traffic impacts are not expected to result from the proposed project.

11. A coordinated review of the project has been undertaken by Town Departments including, in addition to those mentioned above, Highway on December 5, 2020, Assessor on December 1, 2020, Plumbing Division on December 1, 2020, and Right-of-Way Agent on November 25, 2020. These reviews did not identify any potential significant adverse environmental issues and indicated that the proposal will not have a significant damaging impact on the environment.

12. Issues not specifically mentioned above and/or those not specifically reviewed were not raised by Town departments, outside agencies or the public and are not determined to cause significant negative environmental impacts.

Attachment: Z-2020-14_signed neg dec_012121 (22538 : Sp-2020-14)

JAN22'21 PM 2:49 RCVD

Planning Board Approval
Moved by: Giuliani; Seconded by: Penberthy Ayes 7; Noes 0; Absent 0

Ellen M Hoot, Ass't. Planning Director 1/22/21
signature & title of preparer Date

Robert J. Gilmour, Planning Board Chair 1/22/21
Date

RR/ac
X:\Current_Planning\Files\Site Plans\2020\SP-2020-14_(595_Schoelles_Rd)_2020\SP-2020-14_neg_dec_012121.doc
cc: Amherst Town Clerk
Building Department
Engineering
Fire Chiefs'
Highway
Traffic/Safety
NYSDOT
Amherst Community Solar, LLC, 412 S. 13th St, Unit 607, Philadelphia, PA 19147
Greenman-Pedersen, Inc, 4950 Genesee St. Suite 100, Buffalo, NY 14225
Jeff Palumbo, Barclay Damon LLP, 9276 Main Street, Suite 3, Clarence, New York 14031

Attachment: Z-2020-14_signed neg dec_012121 (22538 : Sp-2020-14)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2020-14

PETITIONER

Amherst Community Solar, LLC
412 S. 13th St, Unit 607
Philadelphia, PA 19147

PROPERTY LOCATION

595 Schoelles Road

JAN22'21 PM 2:49 RCVD

WHEREAS, the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on a Site Plan for a 15± acre solar energy development, and

WHEREAS, the Planning Board reviewed the plans and specifications for the proposed project, and

WHEREAS, the Site Plan was referred to the Town's various review agencies, and

WHEREAS, in accordance with Section 8-7-9 of the Zoning Ordinance, the Planning Board finds that:

A. The proposed site plan is consistent with the development plan if one is required.

B. The proposed site plan is consistent with the purpose and specific requirements of the Zoning Ordinance and generally consistent with the policies of the Comprehensive Plan.

C. Adequate services and utilities will be available prior to occupancy.

D. The site plan is consistent with all other applicable laws.

E. Pursuant to Local Law #3-82, as amended, the Planning Board has determined that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act is required since Hydric/potentially hydric soils have been identified on the parcel.

NOW THEREFORE BE IT RESOLVED that in accordance with 6 NYCRR, Part 617 and Local Law #3-82, as amended, the Planning Board has issued a Negative Declaration attached hereto, and

BE IT FURTHER RESOLVED that in accordance with Section 6-10-7B(3)(d) of the Zoning Ordinance, the Planning Board recommends Town Board approval of the Special Use Permit for the proposed solar development; and

Attachment: Z-2020-14_signed resolution_012121 (22538 : Sp-2020-14)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2020-14

PETITIONER

Amherst Community Solar, LLC

PROPERTY LOCATION

595 Schoelles Road

JAN22'21 PM 2:49 RCVD

NOW THEREFORE BE IT FURTHER RESOLVED that the Planning Board, in accordance with Section 8-7 of the Zoning Ordinance approves said Site Plan subject to the following conditions:

1. That the consideration of signs is specifically excluded from this approval as they require a separate review and approval by the Town.

2. That any lights used to illuminate the property be equipped with adjustable hoods to control light spread and direction so as not to create any nuisance to nearby properties, and that lights not exceed 25 feet in total height from finished grade.

3. That as-built record drawings, including location of utilities, be provided to the Engineering Department prior to issuance of a Certificate of Occupancy by the Building Department.

4. That all adjacent zoning districts designations be clearly marked on all drawings.

5. That all equipment on the proposed pads include a detail sheet with dimensions, including height.

6. That the required high impact landscape screening along the east, west and south property lines be shown on the plans.

7. That the site plan be revised to show the correct orientation of the solar panels.

8. That the 20 ft. setback dimension from the edge of panels to the fence line be shown on the plans.

9. That the Maintenance Plan address all comments by the Zoning Enforcement Officer's review dated January 20, 2021.

10. That the Maintenance Plan required by Section 6-10-7B(3) (d)(7) include the preservation of the existing topsoil on site.

11. That the petitioner negotiate the PILOT agreement with the Amherst Industrial Development Agency.

12. That a jurisdictional determination from the Army Corps of Engineers be obtained.

Attachment: Z-2020-14_signed resolution_012121 (22538 : Sp-2020-14)

TOWN OF AMHERST
PLANNING BOARD
SITE PLAN RESOLUTION
SP-2020-14

PETITIONER

Amherst Community Solar, LLC

PROPERTY LOCATION

595 Schoelles Road

JAN22'21 PM 2:49 RCVD

13. That a floodplain permit be obtained as required by the Amherst Building Department.

14. That the Town reserves the right to add supplemental planting to the hedgerow(s) during post construction as per Zoning Ordinance Section 7-2-4(A)(5).

15. That discussion continue between the Town and the developer regarding the relocation of the access drive towards the center of the development along Schoelles Road.

16. That discussion continue between the Town and the developer regarding the extension of the north fence line to the east and west property lines.

The foregoing resolution was adopted by the Town of Amherst Planning Board, January 21, 2021; moved by Giuliani; seconded by Chmiel; ayes 7, noes 0.

Robert J. Gilmour, Chair — Date 1/22/21

RR/ac
X:\Current_Planning\Files\Site Plans\2020\SP-2020-14_(595_Schoelles_Rd)_2020\SP-2020-14_resolution_012121.doc

cc: Town Clerk
Commissioner of Building
Town Engineer
Fire Chiefs
Traffic/Safety
Highway Superintendent
NYSDOT
Amherst Community Solar, LLC, 412 S. 13th St, Unit 607, Philadelphia, PA 19147
Greenman-Pedersen, Inc, 4950 Genesee St. Suite 100, Buffalo, NY 14225
Jeff Palumbo, Barclay Damon LLP, 9276 Main Street, Suite 3, Clarence, New York 14031

Approved Plan: Greenman-Pederson, Inc.
Received: January 12, 2021

Attachment: Z-2020-14_signed resolution_012121 (22538 : Sp-2020-14)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 01/21/21 06:30 PM
Department: Planning
Category: Site Plan and Relief from Conditions of Site Plan
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 22544

TABLED

PLANNING BOARD ITEM (ID # 22544)

The Following Item Has Been Postponed at the Petitioner's Request: Proposed Automotive Dealership Building and Vehicle Storage Expansion, SP-2013-08B; and Unified Development with SP-1988-57C, 2619-2635 Millersport Highway

Property located at 2601 Millersport Highway
West Herr Automotive, Petitioner

ATTACHMENTS:

- SP-2013-08B_application reports_012121 (PDF)
- SP-2013-08B_drawings_012121 (PDF)
- SP-2013-08B postponed letter 012121 (PDF)

Application for Site Plan & Unified Development Approval - 2601 and Portion of 2619-2635 Millersport Highway
Project: Lincoln Automotive Dealership
Applicant: West Herr Automotive Group c/o Sean Hopkins, Esq.

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Major Site Plan Review

For Official Use

File #: _____ **Acreage** 7.78 +/- acres **Fee $** 4,365.00

Address Verified by Assessor's Office
_____ _____
VERIFIED BY DATE

Site Plan Review

		Fill in Applicable Fees
1 acre or less	$1,250.00	$1,250.00
Each Additional acre or fraction thereof	$ 650.00/acre	$2,600.00
Amendments to Site Plans	$1,200.00	_____
Request for Relief of / or Change to Conditions of Site Plan Approval	$1,200.00	_____
Request for Extension of Site Plan Approval	$ 450.00	_____
Stormwater Pollution Prevention Plan		
1-4.99 Acres	$ 500.00	$500.00
5-10 Acres	$ 750.00	_____
>10 Acres	$1,000.00	_____
Affidavit Fee for Public Hearing	$ 15.00	$15.00
	TOTAL FEE:	$4,365.00

Materials Received by Planning Department
_____ _____
RECEIVED BY DATE

Materials Accepted by Town Clerk & Fee Paid
_____ _____
ACCEPTED BY DATE

To Be Completed By Applicant

Petitioner:
Name: West Herr Automotive Group c/o Sean Hopkins, Esq.
Address: Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, New York 14221
city state zip code
Phone: 510-4338 Fax: 427-6501 E Mail: shopkins@hsr-legal.com

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Representative (Architect, Engineer, Landscape Architect, Surveyor, or Attorney):

Name: Nussbaumer & Clarke, Inc. c/o Robert Pidanick

Address: 3556 Lake Shore Road, Suite 5000

Buffalo (city) New York (state) 14219 (zip code)

Phone: 716.827-8000 Fax: 716.826-7958

E Mail: rpidanick@nussclarke.com

Project Location (must be verified by Town Assessor's Office):

Address: 2601 Millersport Highway and 2619-2635 Millersport Highway

SBL No(s): 41.15-1-17 and 41.15-1-16

Project Name: West Herr Lincoln Dealership

Project Description: Proposed approximately 9,900 sq. ft. addition to the existing building on the property at 2601 Millersport Highway to be utilized as a new Lincoln dealership along with an accessory vehicle storage lot consisting for 224 vehicles and all related site improvements as depicted on the Overall Site Plan Plan [Drawing C-101] and the fully engineered plans for the project prepared by Nussbaumer & Clarke, Inc. A reduced size copy of the Overall Site Plan is attached as Exhibit "2".

[Note: A completed Short Environmental Assessment Form with Page 5[a] and Attachment "A" is provided at Exhibit "1" of this Major Site Plan & Unified Development Application.]

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

If this petition is an amendment to a previously approved site plan, please describe the proposed changes (include type and size of existing structures and number of existing parking spaces):

The existing vehicle repair and storage facility on 2601 Millersport Highway received Site Plan Approval from the Planning Board on May 14, 2014 [SP-2013-08A].

	existing	proposed	total
Gross Floor Area (non-residential):	5,450 sq. ft.	9,900 sq. ft.	15,350 sq. ft.
Number of Residential Units:	N/A	N/A	N/A
Number of Parking Spaces:	247	450	

Acreage of Parcel: 7.78 +/- acres

Frontage on Public Roads: 465.24 ft. of frontage on Millersport Highway

Existing Zoning District(s) Commercial Service District ("CS") and General Business District ("GB")

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Town of Amherst Planning Department 5583 Main Street Williamsville-NY-14221
(716) 631-7051- Fax: (716) 631-7153

Exhibit 1 – Short Environmental Assessment Form Prepared Pursuant to the State Environmental Quality Review Act ("SEQRA") with Attached Page 5[a] and Attachment A

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Short Environmental Assessment Form with Page 5[a] and Attachment "A" Application for Site Plan & Unified Development - 2601 Portion of 2619-2635 Millersport Highway

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

West Herr Automotive Group

Name of Action or Project:

Proposed Lincoln Dealership building addition and adjacent vehicle storage lot.

Project Location (describe, and attach a location map):

2601 Millersport Highway and Portion of 2619-2635 Millersport Highway - Town of Amherst - Erie County

Brief Description of Proposed Action:

The Project Sponsor is proposing a building addition to the existing building at located at 2601 Millersport Highway to be used as a new Lincoln dealership showroom. The project includes a new one-story building addition (9,900 sf) and site modifications to the existing parking lot for customer parking in front of the building. The Project Sponsor is also proposing an accessory 224 vehicle storage lot located on a portion of 2619-2635 Millersport Highway. The proposed action has been defined broadly to include all required approvals and permits and all proposed site improvements improvements include new paving, drainage, grading, lighting and landscaping as depicted on the Site Plan and the engineered plans. The proposed project is an "Unlisted Action" pursuant to the State Environmental Quality Review Act and the implementing regulations promulgated by the New York State Department of Environmental Conservation (collectively "SEQRA") since the project will not cross any of the applicable thresholds for a Type 1 action contained in 6 NYCRR Part 617.4.

Name of Applicant or Sponsor:	Telephone: 716-510-4338
West Herr Automotive Group, c/o Sean Hopkins, Esq.	E-Mail: shopkins@hsr-legal.com

Address:

5500 Main Street, Suite 343

City/PO:	State:	Zip Code:
Williamsville	New York	14221.

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Planning Bd. - Site Plan & Unif. Dev.; DEC - SPDES Permit, SHPO - No Impact Det.; ECWA - Water, Eng. Dept. - Stormwater Permit	☐	☑

3. a. Total acreage of the site of the proposed action? 7.78 acres
   b. Total acreage to be physically disturbed? 3.00 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 7.78 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies:	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water:	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment:	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		
On site federal wetland evaluated and determined to be non-jurisdictional per the Jurisdictional Determination issued by the United States Army Corps of Engineers on November 6, 2020. A copy of the Jurisdictional Determination is provided at Attachment "A" of this Short Environmental Assessment Form.		

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☑ Wetland ☑ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe:		
Storm water will be directed to the Town of Amherst storm water system for the Lincoln Dealership building addition and the vehicle storage lot will sheet flow to the existing pond located on the rear portion of the Project Site.		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	☑	☐
If Yes, explain the purpose and size of the impoundment:		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	☑	☐
If Yes, describe:		
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	☑	☐
If Yes, describe:		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: West Herr Automotive Group Date: November 16, 2020

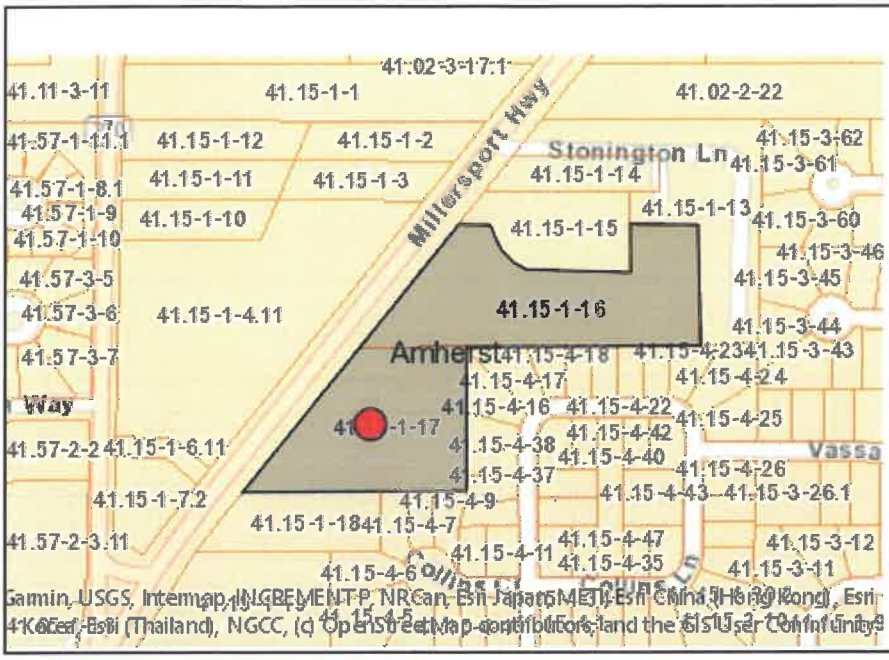
Signature: _____ Title: _____

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

PRINT FORM

EAF Mapper Summary Report

Monday, November 9, 2020 10:52 AM



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



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

EXHIBIT "A"
TOWN OF AMHERST ATTACHMENT
State Environment Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Part I-A.3.a. For each applicable category of proposed <u>new</u> structures, including additions to existing structures, provide the following information for all soil types on the project site *(according to Soil Survey of Erie County, NY; Table 11, Building Site Development,pp.294-305)*:

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
Cosad	Severe	Severe	Severe	Severe	Moderate

If the Soil Survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

No Geotechnical report attached (Report will be submitted prior to Building Permit)

___ Not applicable

Part I-A.17 Is your property located:
On Youngs Road between Dodge and Klein Roads? ( ) Yes (✓) No

OR

On Wehrle Drive between Spindrift Dr. and Oakwood Road? ( ) Yes (✓) No

If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

Part I-C.13 Are there alternative locations on the site for this project? ( ) Yes (✓) No

Part I-C.14 Location and size of real property owned by petitioner in the near vicinity of subject proposal.
7.78 +/- acres

Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request? ( ) Yes (✓) No

Describe_____ *

* Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment "A" of Short Environmental Assessment Form – Jurisdictional Determination for 2619 Millersport Highway Issued by the United States Army Corps of Engineers dated November 6, 2020

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

November 6, 2020

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01353

Mr. Scott Livingstone
Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059

Dear Mr. Livingstone:

I have reviewed your request, submitted on behalf of West Herr Automotive Group, for an approved jurisdictional determination (JD) on an approximately 4-acre parcel of land located at 2619 Millersport Highway, in the town of Amherst, Erie County, New York (Sheet 1 of 2).

Enclosed is an approved JD which verifies the limits of waters of the U.S. within the subject parcel as depicted on Sheets 2 of 2. This approved JD will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the approved JD before the expiration date. At the end of this period, a new aquatic resource delineation and JD will be required.

I have determined that the following aquatic resources are not waters of the U.S. as noted on the attached Approved Jurisdictional Determination Form: Wetlands W1 and W2, and Pond 1. Therefore, these aquatic resources are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Department of the Army authorization is not required if you propose work or propose a discharge of dredged or fill material in these aquatic resources.

Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in your 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 United States Department of Agriculture (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.

If you object to this determination, 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:

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01353

Jacob Siegrist
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: 513-684-2699 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 6, 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 716-879-4339, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: keith.c.sendziak@usace.army.mil

Sincerely,

Keith C. Sendziak

Keith C. Sendziak
Biologist

Enclosures

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Earth Dimensions, Inc.	File Number: 2020-01353	Date: 11/6/2020
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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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:
Keith Sendziak U.S. Army Corps of Engineers 1776 Niagara Street Buffalo, New York 14207 716-879-4339 keith.c.sendziak@usace.army.mil	Jacob Siegrist 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: 513-684-2699 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.		

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 11/6/2020
ORM Number: LRB-2020-01353
Associated JDs: N/A.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Review Area Location[1]: State/Territory: New York City: Amherst County/Parish/Borough: Erie
Center Coordinates of Review Area: Latitude 43.01862 Longitude -78.76360

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
Pond 1	0.348	acre(s)	(b)(10) Stormwater	This feature was constructed in uplands for the express purpose of treating and conveying

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

			control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff.	stormwater from an adjacent development to the north and east. During the October 21, 2020 site visit no stream channels were observed connecting to / through the pond. Furthermore, the Tonawanda East USGS 7.5 min Quad and historic Soil Survey of Erie County do not show a stream channel at this location. Also, historic aerial imagery from 1995 does not identify the pond. The 2002 aerial image shows the pond along with the adjacent residential development. Thus, the pond was constructed for purposes of stormwater retention. Therefore, this feature is a b(10) stormwater exclusion.

Excluded waters ((b)(1) – (b)(12)):[6]				
Exclusion Name	Exclusion Size		Exclusion[7]	Rationale for Exclusion Determination
Wetlands W1 and W2	0.145 and 0.145	acre(s)	(b)(1) Non-adjacent wetland.	Wetlands W1 and W2 do not meet any of the four criteria that would make an (a)(4) adjacent water subject to jurisdiction under Section 404 of the Clean Water Act. Wetlands W1 and W2 were circumnavigated during the October 21, 2020 site visit. No defined channels/tributaries/ditches were observed flowing from Wetlands W1 and W2. A review of the Tonawanda East USGS 7.5 min Quad and Soil Survey Map for Erie County do not show stream channels nor contours that would support channels at this location. Also, it is not expected that water from the nearest a(1-3) water would inundate Wetlands W1 and W2 in a typical year. The wetlands are located approximately 785 linear feet southwest of the nearest a(2) water. There was no evidence that water from the nearest a(2) water reaches Wetlands W1 and W2 in a typical year. Based on the above discussion, it has been determined that Wetlands W1 and W2 are b(1) non-adjacent, excluded wetlands.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.
[6] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[7] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Wetland and Waterbodies Delineation Report for 2619 Millersport Highway, West Herr Automotive Group, Erie County, New York, prepared for West Herr Automotive Group, prepared by Earth Dimensions, Inc., October 6, 2020.
This information is sufficient for purposes of this AJD.
Rationale: N/A

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
☒ Photographs: Aerial: HistoricAerials.com (1995 and 2002)
☒ Corps site visit(s) conducted on: October 21, 2020
☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
☐ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.
☒ USDA NRCS Soil Survey: Erie County
☐ USFWS NWI maps: Title(s) and/or date(s).
☒ USGS topographic maps: Tonawanda East, NY, 7.5 min

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	N/A.

B. Typical year assessment(s): N/A.

C. Additional comments to support AJD: N/A.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

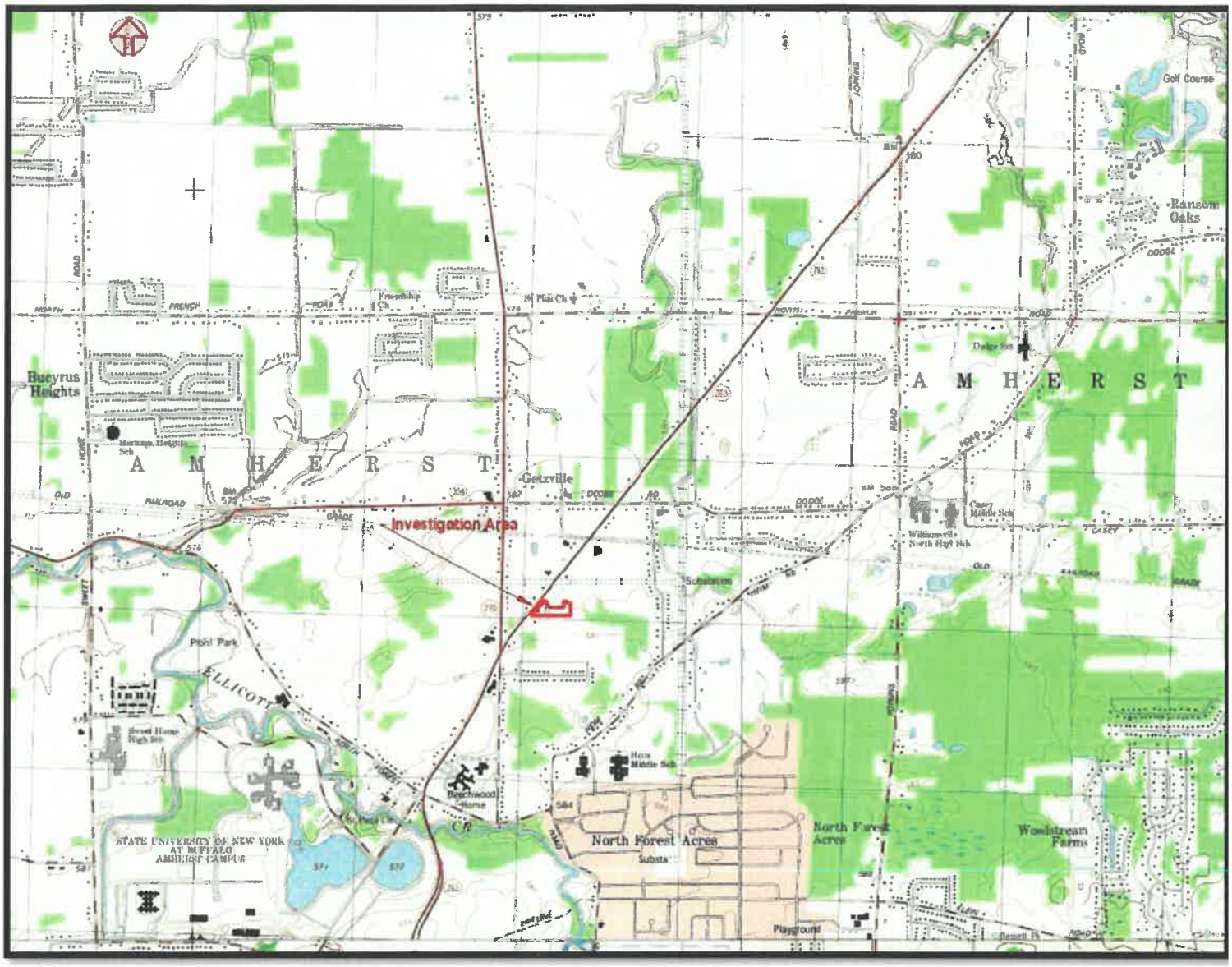


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Tonawanda East Quadrangle / 2002 DeLorme

2619 Millersport Highway

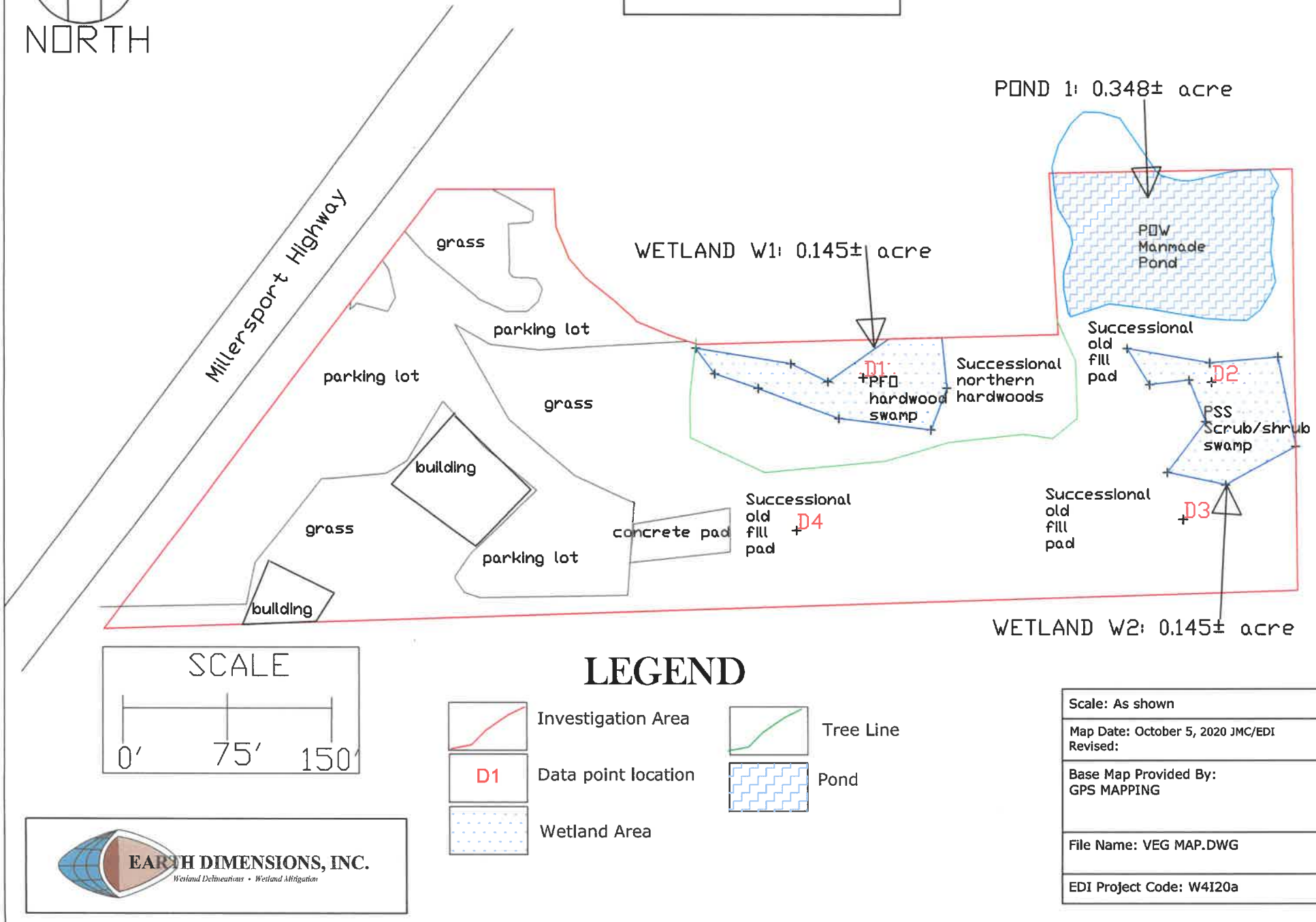
Town of Amherst, Erie County, New York

Attachment: SP-2013-08B_application reports_012121 (225544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : SP-2013-08B)

Figure 5: General Vegetation Map
2619 Millersport Highway
SBL# 41.15-1-16
Town of Amherst Erie County, New York

Sheet 2 of 2



SCALE
0′ 75′ 150′

LEGEND

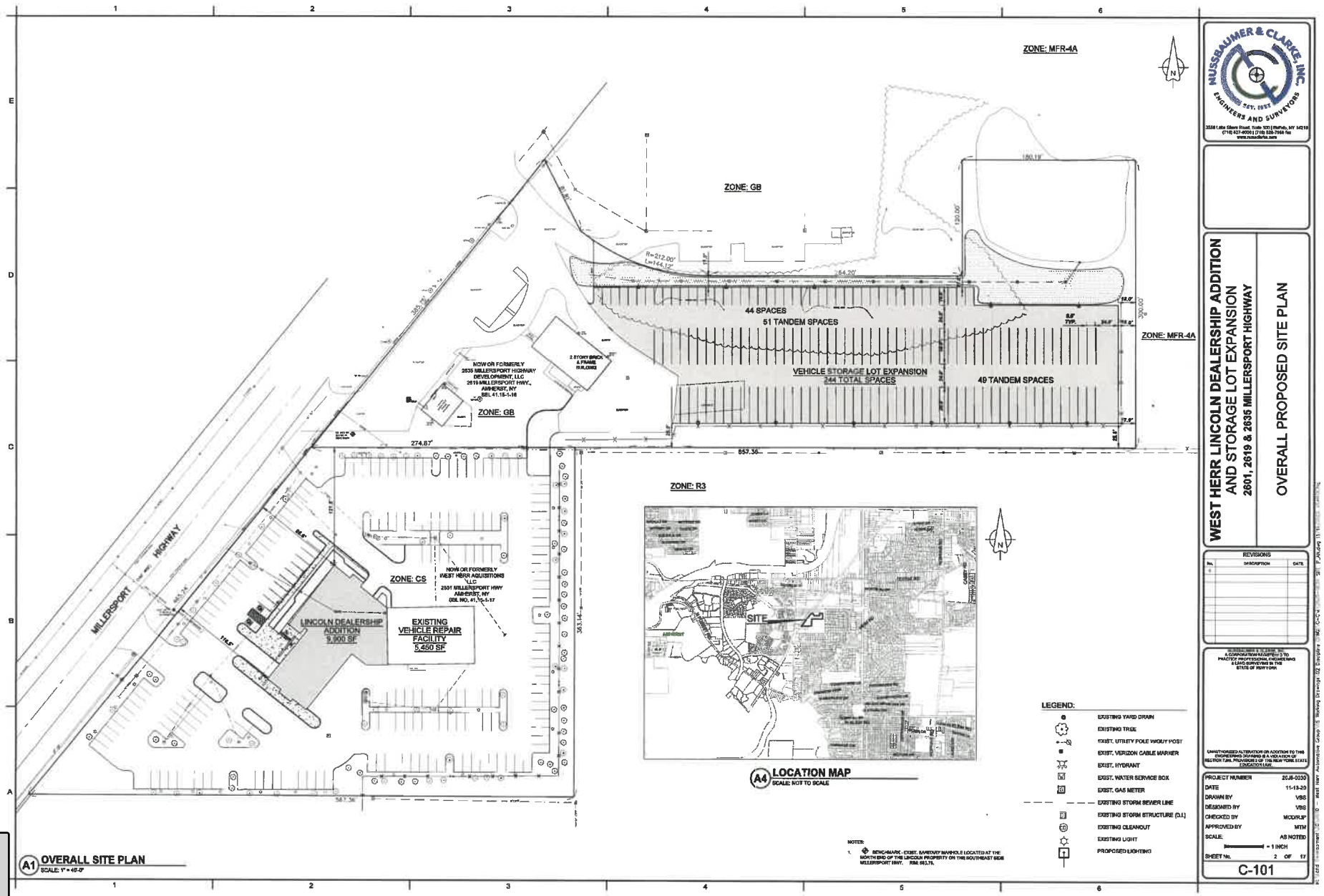
- Investigation Area
- D1 — Data point location
- Wetland Area
- Tree Line
- Pond

EARTH DIMENSIONS, INC.
Wetland Delineations • Wetland Mitigation

Scale: As shown
Map Date: October 5, 2020 JMC/EDI Revised:
Base Map Provided By: GPS MAPPING
File Name: VEG MAP.DWG
EDI Project Code: W4I20a

Exhibit 2 – Reduced Size Copy of the Overall Site Plan [Drawing C-101] as Prepared by Nussbaumer & Clarke, Inc. dated November 13, 2020

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1955
3556 Lake Shore Road, Suite 320 | Buffalo, NY 14219
(716) 827-4005 | (716) 826-7866 fax
www.nussclarke.com

WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

OVERALL PROPOSED SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
1		

A CORPORATION ADDITION IS TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK

UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISIONS 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	2018-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	WTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	2 OF 17

C-101

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

FINAL

ENGINEER'S REPORT

WEST HERR LINCOLN DEALERSHIP BUILDING ADDITION AND VEHICLE STORAGE LOT

2601, 2619 & 2635 MILLERSPORT HIGHWAY AMHERST, NY

PREPARED FOR:

WEST HERR AUTOMOTIVE GROUP
3252 Southwestern Boulevard
Orchard Park, NY 14127

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1933

20J5-0030

November, 2020

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1.0 GENERAL DESCRIPTION

The West Herr Automotive Group, 3552 Southwestern Boulevard, Orchard Park, is the owner of 2601 Millersport Highway, SBL No. 41.15-1-17 (3.48 acres) and is proposing to construct an addition to the existing building for a new Lincoln Dealership. West Herr Automotive Group has recently purchased the parcel at 2619 and 2635 Millersport Highway in Amherst, NY, SBL No. 41.15-1-16 (4.30 acres) to add a 244 space vehicle storage lot.

2.0 GENERAL INFORMATION

Project Name and Location:	West Herr Lincoln dealership building addition and vehicle storage lot 2601, 2619 and 2635 Millersport Highway Town of Amherst, Erie County, New York
Owner:	West Herr Automotive Group John Wabick, Vice President 3552 Southwestern Blvd. Orchard Park, NY 14127 (716) 491-7000
Design Engineers:	Nussbaumer & Clarke, Inc. 3556 Lake Shore Rd., Suite 500 Buffalo, NY 14219-1494 (716) 827-8000

3.0 SITE GRADING

The proposed Lincoln Dealership building addition will not require any new storm drainage as paving removed will be replaced with the building expansion. New roof drains will be connected to the existing on-site drainage system that conveys drainage to the state's existing drainage system located on Millersport Highway. The proposed vehicle storage lot will be designed and graded to sheet flow to a proposed drainage swale located at the north end of the property and eventually drain to the existing pond located at the northeast end of the property.

4.0 LANDSCAPING

Landscaping is proposed within three (3) new islands at the Lincoln Dealership building addition and will be landscaped to reflect the existing landscaping on-site. An extensive landscape tree buffer along the east and south property lines for the vehicle storage lot located 2619 and 2635 Millersport Highway as well as a wood privacy fence.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

5.0 UTILITIES

Utilities proposed for the storage lot are a water and sanitary sewer connection for the Lincoln Dealership building addition. Re-routing of some existing storm drainage piping will be required to accommodate the new addition. The vehicle storage lot will include new paving, grading, lighting and extensive landscaping adjacent to an adjoining residential development.

6.0 STORM SEWER

The Storm Water Drainage System has been designed to comply with the Town of Amherst guidelines. The intent is to design an effective Storm Water Management System for controlling runoff and pollutants from a site during and after construction.

In general, all storm water runoff will be collected across the project site by means of sheet flow, drainage swales, catch basins and storm drainage piping. This flow will be conveyed to the Town of Amherst stormwater system which is located at the southeast side of Millersport Highway and a pond on 2635 Millersport parcel. The drainage system is to attenuate runoff to a pre-developed rate of discharge for Town of Amherst and State of New York mandated storm events.

7.0 SCHEDULE

The project is anticipated to begin in spring of 2021. Construction of the vehicle storage lot and Lincoln Dealership building addition will run concurrently.

Sincerely,

NUSSBAUMER & CLARKE, INC.



Michael T. Marino, P.E.
Chief Executive Officer

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

DRAFT

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

for

WEST HERR LINCOLN – BUILDING ADDITION & STORAGE LOT EXPANSION AMHERST, NEW YORK

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

PREPARED FOR:

WEST HERR AUTOMOTIVE GROUP
3552 Southwestern Boulevard
Orchard Park, New York, 14127

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
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November 2020

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Appendix D Erosion and Sediment Control Plan Sheets and Specifications
Appendix E Stormwater Calculations and Modeling
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1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared to document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations specified by the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001).

This SWPPP will always be kept current so that it accurately documents the erosion and sediment control (ESC) 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, this SWPPP will be amended whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site; whenever there is a change in design, construction or operation at the construction site that has or could have an effect on the discharge of pollutants; and to address issues or deficiencies identified during an inspection by the qualified inspector, NYSDEC or other regulatory agency.

The engineer of record for this project certifies that this SWPPP meets the requirements of and complies with the New York State Stormwater Management Design Manual and latest NYSDEC Phase II Stormwater Regulation requirements.

2.0 SITE EVALUATION, ASSESSMENT & PLANNING

Project Name:	West Herr Lincoln – Building Addition and Storage Lot Expansion
Project Location:	SBL 41.15-1-16 2619 Millersport Highway, Getzville, NY 14068
Property Owner:	West Herr Automotive
USGS Quadrangle:	Tonawanda East, **Appendix A**

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

2.1 Project Description

West Herr Automotive (West Herr) is proposing to expand an existing dealership building and storage lot at their West Herr Lincoln location in Getzville, NY. The proposed construction consists of a 9,000 square foot building addition and approximately 71,000 square foot asphalt storage lot.

2.2 Stormwater Management Objectives

According to the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001), Table 2 of Appendix B (of the General Permit) the proposed project is considered under “commercial developments”. Therefore, the preparation of this SWPPP must include post-construction stormwater management practices in addition to the temporary erosion and sediment control components.

The Stormwater Management objective is to protect the natural drainage features and quality of waters from degradation by uncontrolled stormwater runoff, both during and after construction. Temporary erosion and sediment control measures will be implemented during construction. Permanent, post-construction stormwater management practices will include surface runoff sheet flow to a large, grassed bioretention area with underdrain and emergency spillway. The bioretention area and spillway discharge to an existing detention pond, northeast of the proposed storage lot.

2.3 Existing Site Characteristic

The project site includes redevelopment of existing dealership asphalt lot (impervious) to new building space and new development of a large, overgrown brush/weeded area located northeast of the existing dealership.

A large detention pond sits northeast of the proposed storage lot area. The proposed bioretention area and spillway will discharge to this existing pond. In October 2020, the water surface elevation was measured at approximately 580.25± feet. At the time of this design there was very little information available on pond capacity or location and elevation of outlet(s) connected to the pond. Verification of these elements will be required prior to construction to ensure proper function of the proposed stormwater management practices.

2.3.1 Topography

Excess surface runoff over the undeveloped proposed storage lot (Subcatchment 1S) area appears to drain north/northeast towards the detention pond and heavier brush at an average slope of approximately 1.3%. The existing parking lot sheet runoff (Subcatchment 2S) is collected in the existing piped storm sewer collection system and discharged to public storm sewer located along Millersport Highway.

2.3.2 Soils

According the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) online web soils survey, the development area consists of Cosad loamy fine sand. The site soils vary from hydrologic soil group C and D and are somewhat poorly drained to somewhat poorly drained.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

A complete soils report can be found in **Appendix B**.

2.3.3 Watershed Designation & Receiving Waters

The project site and surrounding area drains to the Ellicott Creek Watershed. Excess stormwater generated from the existing and proposed development discharge to the New York State Department of Transportation (NYSDOT) storm sewer along Millersport Highway.

2.3.4 Wetlands and Waterbodies

According to State and Federal Wetland Mappers, no wetlands exist within the project limits. The Federal Wetland Mapper identifies the existing retention pond as a Freshwater Pond however there is no proposed disturbance or impact to the wetlands by the project. Wetland documentation is included in **Appendix C**.

2.4 Future Site Description

The proposed disturbance includes the existing dealership building expansion, proposed clearing and grubbing, underground electrical, proposed grassed bioretention area, proposed access driveway and grading and paving. Approximately 2.19± acres of land will be disturbed. The total post-construction impervious area is 1.77± acres, about 81% of the total project disturbance. The new storage lot expansion will add approximately 71,000± square feet of parking to the site. A new access drive will be constructed to connect the existing dealership to the proposed storage lot expansion. The grassed bioretention area is proposed along the north perimeter of the storage lot. The bioretention has a proposed surface area of approximately 12,000 square feet and approximately 2 feet depth. A 12-inch wide stone diaphragm shall be installed along the length of the bioretention south edge as pretreatment for the practice. The diaphragm is proposed at minimum 12-inches wide and minimum 6-inches deep to provide 25% water quality volume. The bioretention basin shall be grassed using Bermudagrass sod. Seeding is not permitted for this application.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

3.0 APPROACH TO DRAINAGE ANALYSIS

Stormwater management during construction will be achieved through various temporary erosion and sediment control measures such as a stabilized construction entrance, proposed silt fencing, and stabilization of disturbed soils. Stormwater quality and quantity requirements will be met by directing most of the site runoff to the proposed grassed bioretention area and existing detention pond. An Erosion and Sediment Control Plan has been prepared and can be found in **Appendix D.**

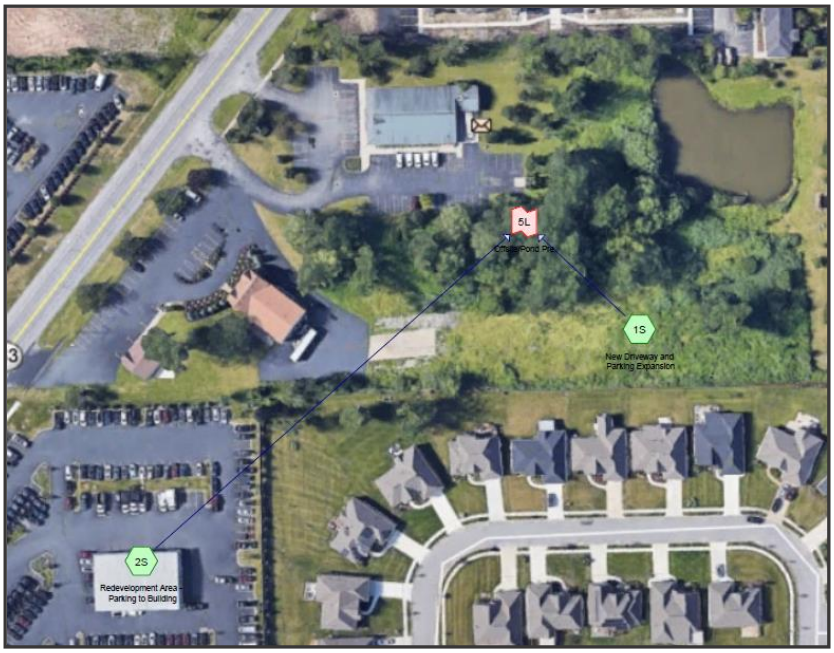
The objective of modeling is to demonstrate that the post-development peak runoff rates contain the necessary controls as required by the New York State Stormwater Management Design Manual (NYSWMDM). The system, assuming sufficient capacity in the existing detention pond, is also designed to provide extended detention of the Channel Protection Volume (Cpv); control of post-development Overbank Flood (Qp) (10-year) peak runoff to the corresponding pre-development rate; and control of post-development Extreme Storm (Qf) (100-year) peak runoff to the corresponding pre-development rate. HydroCAD Model reporting and detailed stormwater calculations are found in **Appendix E.** Calculations contained in this report were performed using HydroCAD® v.10.26. HydroCAD uses the SCS unit hydrograph procedure also known as the TR-20 runoff method. Nussbaumer & Clarke, Inc. has reviewed the calculations and determined the methodology, input data, and output results to be fair and reasonable for this project.

3.1 Summary of Pre-Development Analysis

To determine the existing site run-off, two drainage areas were modeled. Figure 1 illustrates the pre-development HydroCAD model created for the site. Subcatchments (green hexagon) are routed to Link 5L, “Offsite/Pond Pre”, to estimate the total site pre-development runoff rates.:

- Subcatchment 1S, “New Driveway and Parking Expansion”, modeled as 1.66± acres of brush/weed/grass mix; and
- Subcatchment 2S, “Redevelopment Area – Parking to Building”, modeled as 0.23± acres of unconnected impervious.

Figure 1 *– Pre-development HydroCAD Model Diagram*



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pre-development hydrologic site conditions are summarized in Table 1, below. A full pre-development modeling report in included in **Appendix E**.

Table 1: Pre-Development Runoff Summary	
Outfall	Link 5L – Offsite/Pond Pre
Drainage Area (acres)	1.87
Peak Runoff, 1-yr. (cfs)	1.20
Peak Runoff, 10-yr. (cfs)	3.74
Peak Runoff, 100-yr. (cfs)	8.73

3.2 Summary of Post-Development Analysis

Several existing site conditions controlled the design and sizing of the selected practices. These conditions included:

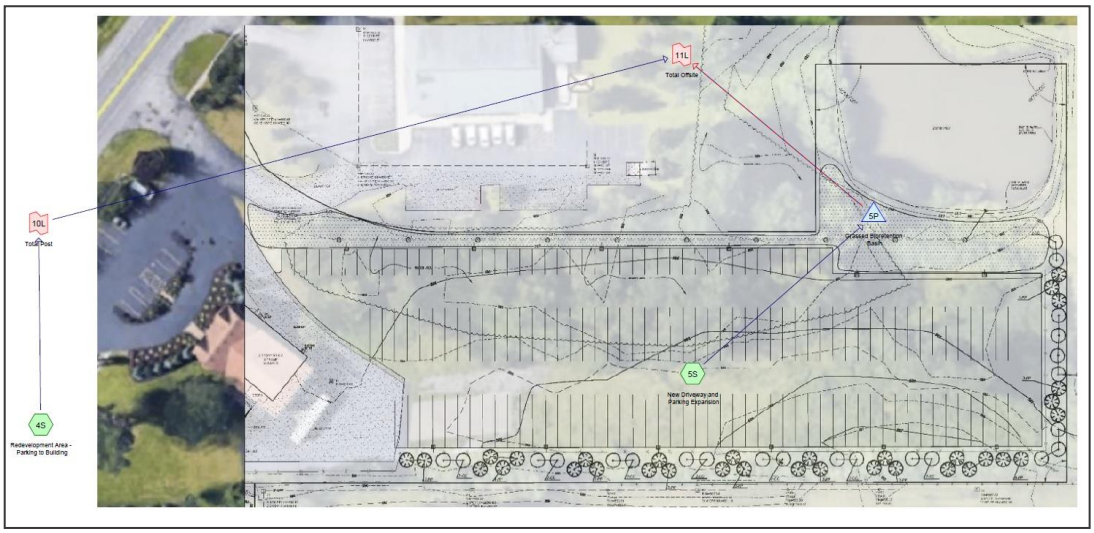
- Existing water surface elevation of the existing detention pond.
- Soil conditions.
- Site grading.

The existing pond water surface elevation was held as the outlet control for the site. At the time of survey, the water surface elevation was approximately 580.20±. In order to prevent submerging the bioretention outlet, the minimum invert elevation to the pond was held at 580.50 feet. Additionally, the site sits on Type C/D soils which require an underdrain for infiltration practices. For cold weather conditions, this underdrain is upsized to an 8-inch diameter perforated pipe embedded in a 12-inch deep gravel drain bed. The final grade elevation for the bioretention and surrounding area was set at 583.00 feet to promote overland sheet flow and avoid the installation of closed pipe networks, but further limited the available practice depth. Finally, the bioretention contributing drainage area is 1.64 acres and 100% impervious. These conditions result in limited available depth for infiltration practices, driving the increased bioretention surface area to prevent surcharging during a 25 year storm. The shallow nature of the proposed bioretention system and the vast surface area to cover inhibit the application of typical deep-rooted bioretention plantings. In such cases, bioretention cells have an alternate planting option where the entire surface of the practice is grassed. Sod must be used when installing covering for bioretention areas as seed germination is not a viable option for erosion and sediment control.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

To evaluate post-development runoff, the site was separated into two (2) drainage areas as show in **Figure 2**. The proposed redevelopment area of pavement to building expansion (Subcatchment 4S) will be directed to an existing stormwater collection system and discharged to the NYSDOT storm sewer located on Millersport Highway. This area was modeled as 0.23± acres of impervious area. Although bypassing treatment, the runoff generated from this portion of the development must be accounted for when evaluating water quantity and quality requirements. The storage lot expansion (Subcatchment 5S) was modeled as 1.64± acres of impervious area that sheet flows overland to reach the proposed grassed bioretention basin. The grassed bioretention is modeled as a 12,000 square foot, 2.25 foot deep pond with 40% voids planting/infiltration soil and 6-inches of ponding depth. Multiple outlets are modeled to account for ten risers along the length of the practice connected to the 8-inch diameter underdrain. A final 10-inch diameter culvert outlet discharges from the bioretention basin to the existing detention pond. An emergency rip-rap spillway is proposed and modeled as a secondary outlet to prevent bioretention surcharging during 50-year and 100-year storm events.

Figure 2 *– Post-development HydroCAD Model Diagram*



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Post-development hydrologic site conditions are summarized in Table 2, below. A full pre-development modeling report in included in **Appendix E**.

Table 2: Post-Development Runoff Summary[1]		
Link 11L – Total Offsite		
Storm Event	Peak Outflow (cfs)	Flood Elevation (ft)
1-year	0.00	582.58
10-year	0.21	582.97
25-year	1.28	583.00
100-year	12.63	583.28

3.3 New York State Stormwater Sizing Requirements

NYSDEC presents a unified approach for sizing green infrastructure for runoff reduction and SMPs to meet pollutant removal goals, reduce channel erosion, prevent overbank flooding, and help control extreme floods. The sizing criteria for these practices are described in detail in the New York State Stormwater Management Design Manual which presents guidance on how to properly compute and apply the required reduction and storage volumes.

3.3.1 Water Quality Volume (WQ_v)

The water quality volume (WQ_v) is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volume. The WQ_v is directly related to the amount of impervious cover created at a site.

The proposed project includes both redevelopment and new development as defined by the NYSDEC. Therefore, treatment is required for 25% of the WQ_v of the redevelopment area and 100% of the WQ_v of the new development area. Using this criterion, it was determined that the required water quality storage volume for full build-out conditions is approximately 0.132 acre-ft. or 5,742 cubic feet. The project provides water quality storage volume by means of the grassed bioretention. Approximately 16,700 cubic feet of water quality storage volume is provided by the practice, exceeding the requirement. The calculations for this determination are included in **Appendix E**.

[1] Post-Development Runoff summary does not account for available detention pond storage or outlets. Bioretention discharge is modeled as though directed offsite rather than a detention pond. The true peak outflow from the site may be less depending on available pond capacity.

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3.3.2 Runoff Reduction Volume (RR_v)

Runoff reduction volume (RR_v) is a component of green infrastructure design intended to reduce the required water quality storage volume by addressing it near the source. The minimum runoff reduction volume (RR_{vmin}) for the site was determined to be 1,353 cubic feet. Bioretention in Type C/D soils are eligible for up to 40% of the WQ_v provided by the practice. Ideally, post construction practices will reduce 100% of the $WQ_{vrequired}$ for the site. The proposed grassed bioretention area reduces the 100% of the calculated WQ_v, providing 5,742 cubic feet of runoff reduction volume. The calculations for this determination are included in **Appendix E**.

3.3.3 Stream Channel Protection Volume (Cp_v)

Cp_v is designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the post-developed 1-year, 24-hour storm runoff volume. The required Cp_v for the proposed development was determined to be 6,409 cubic feet. The available Cp_v is considered to be the storage provided by the practice less than storage for pretreatment and required WQ_v. The proposed grassed bioretention basin provides 7,763 cubic feet of storage (above pretreatment and required WQ_v), exceeding the channel protection requirement.. The calculations for this determination are included in **Appendix E**.

3.3.4 Overbank Flood Control (Q_p)

The primary purpose of the overbank flood control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development. Overbank control requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Q_p) to less than the pre-development rate, in this case 3.74 cfs. The proposed stormwater management system will exceed this requirement by reducing the post-development 10-year peak discharge to 0.21 cfs after the proposed construction is completed. Therefore, the required overbank flood control is provided by the proposed project.

3.3.5 Extreme Flood Control (Q_f)

The intent of the extreme flood criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the pre-development 100-year floodplain, and (c) protect the physical integrity of stormwater management practices. 100-year control requires sufficient storage to attenuate the post development 100-year, 24-hour peak discharge rate (Q_f) to pre-development rates, in this case 8.73 cfs. The proposed stormwater management system, as currently modeled, will not attenuate the discharge enough to reduce the 100-year peak discharge rate. However, future analysis of the existing detention pond may offer additional capacity for extreme flood control.

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4.0 GREEN INFRASTRUCTURE PRACTICES

The following table summarizes the green infrastructure practices considered during the planning of the proposed project, whether the practice is applied to the site design, and applicable notes.

Table 3: Summary of Green Infrastructure

Practice	**Application**	**Notes**
Preservation of Undisturbed Areas	Not Applied.	
Preservation of Buffers	Considered & Applied.	
Reduction of Clearing and Grading	Not Applied.	
Locating Development in Less Sensitive Areas	Not Applied.	
Open Space Design	Not Applicable.	
Soil Restoration	Considered & Applied.	*Disturbed soils will be restored in accordance with the New York State Standards and Specifications for Erosion and Sediment Control.*
Roadway Reduction	Not Applicable.	
Sidewalk Reduction	Not Applicable.	
Driveway Reduction	Not Applied.	
Cul-de-sac Reduction	Not Applicable.	
Building Footprint Reduction	Not Applied.	
Parking Reduction	Not Applied.	

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5.0 POLLUTION PREVENTION MEASURES

5.1 Waste Disposal

5.1.1 Waste Materials

Waste materials will be collected and stored in a securely lidded metal dumpster(s) procured from a licensed solid waste disposal management company. All trash and construction debris from the site will be stored in the dumpster. The dumpster will be emptied regularly, and the waste will be hauled to a solid waste management facility. No construction waste materials, including building materials, stormwater pollutants, sediment, toxic chemicals, bacteria, nutrients, oxygen demand, oils/ grease/ hydrocarbons, litter, and metals, will be discharged to any water of the United States.

5.1.2 Hazardous Waste

Hazardous waste will be disposed of in the manner specified by local or state regulations or, in their absence, in the manner specified by the manufacturer.

5.1.3 Sanitary Waste

Sanitary waste will be collected from the portable units, as needed, by a licensed sanitary waste management contractor as required by local, county, and state regulations.

5.1.4 Off-Site Vehicle Tracking

Sediment and the generation of dust will be minimized via dust control measures, and the use of a stabilized construction entrance. Additionally, dump trucks hauling any material to or from the construction site shall have the load covered with a tarpaulin.

5.2 General Material Management Practices

These practices will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

5.2.1 Best Management

- Efforts will be made to store on-site only enough product to do the job.
- When not in use, all materials on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure. Chemicals shall be apportioned within the designated storage area as much as practical.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The site superintendent/contractor will inspect the site daily to ensure proper use and disposal of materials.

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5.2.2 Hazardous Products

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets (MSDS) will be retained.
- If surplus product must be disposed of, it will be disposed of in the manner specified by local or state regulations or, in their absence, in the manner specified by the manufacturer.
- Keep dumpsters, construction related chemicals, and construction related washwaters away from environmentally sensitive areas and buffers, waterbodies, watercourses, areas of concentrated flow, flooded areas, and storm drain inlets.

5.3 Product Specific Practices

The following product specific practices will be followed on-site:

5.3.1 Petroleum Products

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled.

5.3.2 Fertilizers

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

5.3.3 Concrete Trucks

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water directly into active portions of the construction site. Surplus concrete or drum wash water must be discharged into impervious wash out areas (wash basins) and be removed and disposed of at least once per day.

5.4 Spill Control Practices

- Manufacturer's recommended methods for spill cleanup, as well as materials and equipment necessary for spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- All spills will be cleaned up immediately after discovery.
- Any spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous materials will be reported immediately to the appropriate State and/or local government agency, and/or the local fire department regardless of the size of the spill.

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- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one.
- The site superintendent responsible for day-to-day operations will be the spill prevention and cleanup coordinator. He will designate other personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for phase(s) of prevention cleanup.

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6.0 EROSION AND SEDIMENT CONTROLS

The New York State Standards and Specifications for Erosion and Sediment Control (Latest Edition) is to be utilized where additional information is required with respect to any of the measures described below. In addition, the following measures are to be implemented in compliance with the standards and requirements of the NYSDEC and the Town of Amherst.

Erosion and sediment controls and pollution prevention measures will be selected, designed, installed, implemented and maintained in order to minimize the discharge of pollutants and prevent a violation of the water quality standards.

The erosion and sediment component of this SWPPP will conform to, and be implemented in a manner consistent with, the "*New York State Standards and Specifications for Erosion and Sediment Control*" (latest edition). The erosion and sediment control measures and design specifications summarized below will be implemented at the construction site. The Erosion and Sediment Control Plan for this project is included in **Appendix D** and contains construction details for anticipated best management practices. This also includes construction specifications for all temporary and permanent erosion and sediment controls and post construction practices.

6.1 Temporary Stabilization

Until all disturbed areas are established with permanent stabilization measures, temporary stabilization measures must be implemented. Site Plan Sheets with Erosion and Sediment Control details and specifications are included in **Appendix D**.

In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures will be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. This pertains to piles of topsoil and overburden, as well as other disturbed portions of the project site.

The temporary seed will be ryegrass (annual or perennial) applied at the rate of 30 lbs/acre or equivalent. If temporary seed is planted during October/November, winter rye (cereal rye) will be used in lieu of rye grass and applied at a rate of 100 lbs/acre. Prior to seeding, the site will be prepared. Site preparation will include application of lime to attain a pH of 6.0 in the upper 2 inches of soil and application of fertilizer (5-10-10 or equivalent) at the rate of 600 lbs/acre. If the soil is not seeded within 24 hours of construction or disturbance, the soil will be raked before planting. After seeding, each area will be mulched with the appropriate type of mulch and applied in accordance with the New York Standards and Specifications for Erosion and Sediment Control.

For additional Sediment and Erosion Control Details, (silt fence detail, stabilized construction entrance, etc.) refer to **Appendix d**.

6.2 Permanent Stabilization

Disturbed portions of the site, once final graded, or where construction activity ceases in that area for seven (7) or more days, will be stabilized with seed and mulch. Mulch will be maintained until seeded vegetation achieves 80% mature coverage. The appropriate site preparation (amounts of lime and fertilizer), permanent seed mix, mulch application, and application rate will be selected in accordance with the specifications in the NYS Standards and Specifications for Erosion and Sediment Control or approved project specifications.

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6.3 Inspection and Maintenance Practices

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

6.3.1 Contractor Maintenance Inspection Requirements

- A ***Trained Contractor*** will inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are always being maintained in effective working conditions. Correction of any deficiencies will be initiated within one business day of discovery and will be completed in a reasonable time frame.
- The ***Trained Contractor*** can stop conducting maintenance inspections for construction sites after receiving approval from the Town of Amherst where soil disturbance activities have been suspended and temporary stabilization measures have been applied to all disturbed areas. Inspections will start again as soon as soil disturbance activities are resumed.
- The ***Trained Contractor*** can stop conducting maintenance inspections for construction sites after receiving approval from the Town of Amherst where soil disturbance activities have been shut down with partial project completion 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.

6.3.2 Qualified Inspector Inspection Requirements

- For construction sites where soil disturbance activities are on-going, the ***Qualified Inspector*** will conduct a site inspection at least once every seven calendar days.
- For construction sites where soil disturbance activities are on-going and authorization to disturb greater than five acres of soil at any one time has been received from the Town of Amherst, the ***Qualified Inspector*** will conduct at least two site inspections every seven calendar days. No two inspections will be separated by less than two full calendar days.
- The ***Qualified Inspector*** can reduce inspection frequencies after receiving approval from the Town of Amherst to once every 30 calendar days where soil disturbance activities have been suspended and temporary stabilization measures have been applied to all disturbed areas. The Town of Amherst must be notified in writing prior to reducing the frequency of inspections.
- The ***Qualified Inspector*** can stop conducting inspections after receiving approval from the Town of Amherst (the MS4) for construction sites where soil disturbance activities have been shut down with partial project completion 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 Town of Amherst must be notified in writing prior to the shutdown.
- If soil disturbance activities are not resumed within two years from the date of shutdown, the ***Qualified Inspector*** will complete a final inspection and certify that all disturbed areas have achieved final stabilization; all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the Notice of Termination (NOT).

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- The ***Qualified Inspector*** will 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.
- The ***Qualified Inspector*** will prepare and sign an inspection report subsequent to every inspection. The inspection report will be in conformance with the requirements of GP-0-15-002. A copy of each inspection report will be maintained on-site with the SWPPP.
- Within one business day of the completion of the inspection, the ***Qualified Inspector*** will notify the Town of Amherst and the appropriate contractor or subcontractor of any corrective actions that need to be taken. Correction of any deficiencies will be initiated within one business day of this notification and will be completed in a reasonable time frame.

6.4 Miscellaneous Erosion and Sediment Control Provisions

6.4.1 Pre-Construction Actions

6.4.1.1 Resource Protection

- Evaluate, mark and protect important trees and associated rooting zones, wetlands, on-site septic systems absorption fields, etc.
- Protect existing vegetated areas suitable for filter strips, especially in perimeter areas.

6.4.1.2 Surface Water Protection

- Identify the drainage area in the plan. Divide the site into natural drainage areas.
- Divert the off-site clean runoff from entering disturbed areas.
- Identify bodies of water located either on-site or in the vicinity of the site.
- Plan appropriate practices to protect on-site or downstream surface water.

6.4.1.3 Stabilized Construction Entrance

- Establish a temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway.
- Immediately stabilize bare areas (entrances, construction routes, equipment parking areas) as work takes place. Top these areas with gravel or maintain vegetative cover.
- Sediment tracked onto public streets should be removed or cleaned on a daily basis.

6.4.1.4 Perimeter Sediment Controls

- Silt fence material and installation comply with the standard drawing and specifications.
- Install silt fences based on appropriate spacing intervals. Decrease this interval as the slope increases. Silt fence should be placed on or parallel to contours where there is no concentration of water flowing to the silt fence and where erosion occurs in the form of sheet erosion. The area below the silt fence should be undisturbed ground.
- Install principal basins after construction site is assessed.
- Install additional sediment traps and barriers as needed during grading.

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6.4.2 Runoff and Drainage Control

6.4.2.1 Runoff Control

- Install practices after sediment traps are installed and before land grading starts.
- Control the runoff in each small drainage area before flow reaches runoff from entire site.
- Divert offsite or clean runoff from disturbed areas.
- Convey surface flows from highly erodible soil and steep slopes to more suitable stable areas.
- Runoff from existing or proposed cut and fill slopes should be redirected to lower water velocity without causing erosion.
- Final site drainage should be designed to prevent erosion, concentrated flows to adjacent properties, uncontrolled overflow, and ponding.

6.4.2.2 Runoff Conveyance System

- Stabilize conveyance system.
- Channels and stream banks need to be seeded at the outlet points.
- Install check dams to slow down the velocity of concentrated flow.
- Protect existing natural drainage systems and streams by maintaining vegetative buffers and by implementing other appropriate practices.

6.4.2.3 Groundwater Recharge

- Install practices to infiltrate the runoff on the site as much as possible.
- Provide groundwater recharge to maintain the hydrologic regime of the downstream water bodies and simulate predevelopment hydrology.
- Use infiltration practices to prevent concentrated flows.

6.4.2.4 Outlet stabilization

- Install practices to prevent erosion at discharge points.

6.4.3 Grading

- Limit the initial clearing and earth disturbance to that necessary to install sediment control measures. Excavation for footings, clearing, or other earth disturbance may only take place after the sediment and erosion controls are installed.
- Stockpile the topsoil removed from the site. The topsoil should be protected, stabilized and sited in a location away from the storm drains and water bodies.
- Changes in grade or removal of vegetation should not disturb established buffers and should not be allowed within any regulated distance from wetlands, the high-water line of a body of water affected by tidal action, or other such protected zones.
- Avoid disturbance of steep slopes.
- An undisturbed buffer should be maintained to control runoff from steep slopes within sensitive areas.
- Proposed grading should not impair existing surface drainage resulting in a potential erosion hazard impacting adjacent land or water bodies if possible.

6.4.4 Erosion Control (Stabilization)

- Implement erosion control practices to keep the soil in place.
- Stabilization should be completed immediately for the surface of all perimeter controls and perimeter slopes.
- When activities temporarily cease during construction, soil stockpiles and exposed soil shall be stabilized by seed and mulch or other appropriate measures as soon as possible, but in no case more than seven days after construction activity has ceased.

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- Following initial soil disturbance or re-disturbance, permanent or temporary, stabilization should be completed within seven days, or as soon as possible.
- Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or completed.
- Consult the local Soil and Water Conservation District for proper timing and application rate of seed, fertilizer and mulch.

6.4.5 Sediment Control

- At any location where surface runoff from disturbed or graded areas may flow off the construction area, sediment control measures must be installed to prevent sediment from being transported off site. No grading, filling or other disturbance is allowed within existing drainage swales.
- Swales or other areas that transport concentrated flow shall be appropriately stabilized.
- Downspout or sump pump discharges must have acceptable outfalls that are protected by splash blocks, sod, or piping as required by site conditions (i.e., no concentrated flow directed over fill slopes). Sediment will be removed from behind silt fencing when it has reached a depth of one third the silt fence height.
- Sediment basins will be cleaned out when 50% of the storage capacity has been reached. When permanent detention basins are being used as sediment basins during construction, they are to be dredged to the original design depth prior to being placed online.

6.4.6 Maintenance and Inspection

- Identify the type, number and frequency of maintenance actions required for stormwater management and erosion control during construction and for permanent practices that remain on the site once construction is finalized.
- Inspections by a Qualified Inspector must be indicated on the Construction Sequence Schedule and must be conducted every seven calendar days.
- Inspection, must verify that all practices are adequately operational, maintained properly and that sediment is removed from all control structures.
- Inspection must look for evidence of the soil erosion on the site, potential of pollutants entering drainage systems, problems at discharge points (such as turbidity in receiving water), and signs of soil and mud transport from the site to the public road at the entrance.
- Routine maintenance must be identified on the schedule and performed on a regular basis and as soon as a problem is identified.
- Identify the person or entities responsible for conducting the maintenance actions during construction and post-construction.
- Retain a copy of the inspection reports on-site with the SWPPP inclusive of SPDES permit, NOI, DEC acknowledgement and MS4 SWPPP acceptance (**Appendix F**).

6.4.7 Finalize Grading & Landscaping

- Identify the final grading and stabilization plan once the construction is completed.
- All open areas, including borrow and spoil areas must be stabilized.
- Plan a permanent topsoil, seed, sod, mulch, riprap or other stabilization practices in the remaining disturbed areas as appropriate.
- Stabilization must be undertaken no later than seven days after construction activity has ceased except as noted in the GP-0-15-002.
- Remove the temporary control measures.

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6.4.8 Post Construction Controls

- Identify the permanent structural or non-structural practices that will remain on the site.
- Ensure that the permanent structural or non-structural practices utilized during construction are properly designed to suit the post-construction site conditions.
- In finalizing the plan, evaluate the post-construction runoff condition on the site.
- Minimize the risk of concentrated flow and erosion.
- On-site runoff controls help reduce the risk of increased runoff velocity, erosion and point source discharge. In addition to the standard runoff and erosion control practices identified in NYS Standards and Specifications for Erosion and Sediment Control, some of the techniques discussed under on-site runoff control discussion may be applied.

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7.0 CONSTRUCTION SEQUENCE SCHEDULING

7.1 Sequence of Major Activities

1. Obtain plan approval and other applicable permits.
2. Set up construction office location (if applicable), install stabilized construction entrance, and designate material holding area.
3. Schedule and hold pre-construction conference. Qualified Inspector and MS4 Representative shall be present.
4. Install temporary erosion and sediment control measures prior to any site disturbance activities. A Qualified Inspector will inspect all erosion and sediment control practices weekly. Needed repairs or modifications shall be made as soon as reasonably practical.
5. Begin construction and excavation operations, including clearing, grubbing, rough grading, and stockpiling topsoil. Stabilize all disturbed areas as soon as practicable in areas where stormwater or sediment may run off the site.
6. Begin construction and excavation for of grassed bioretention area.
7. Complete installation of new storage lot, permanent impervious structures and complete existing gravel road improvements. Appropriate temporary erosion and sediment control measures must be erected and maintained for the site for the duration of disturbance and until final stabilization is achieved.
8. Complete installation of grassed bioretention area. Upstream area shall be completely stabilized before flow is directed to the practice.
9. Install site landscaping. Restore all disturbed areas for final site stabilization.
10. Temporary erosion and sediment controls may be removed when permanent stabilization measures have achieved mature state, as approved by the Qualified Inspector. At all instances, obtain written approval from the Qualified Inspector before removing any erosion and sediment control device or mechanism.
11. Upon completion of the project, a Notice of Termination (NOT) form is to be filed with the NYSDEC after MS4 representative review, approval and execution.

7.2 Erosion and Sediment Control Activities

Type	Activities	Control Measures	Start Date	End Date	Maintenance Actions
Pre-Construction	Resource Protection	Identify important resources (wetlands, drainage areas, etc.)	2021	2021	N/A
Runoff Control	Perimeter Sediment Controls	Silt fence, etc.	2021	2021	See Plan
	Land Grading	Misc. grading and shaping of access road to site.	2021	2021	See Plan
Stabilization	Permanent/ Temporary Seeding	Permanent/Temporary Seeding	2021	2021	See Plan
	Additional Plantings	Additional Seeding as Needed	2021	2021	As Required

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7.3 Site Inspection Requirements

Following the commencement of construction, a **Qualified Inspector** must conduct site inspections as defined in **Section 7.3.2** of this report and Part IV C of the SPDES General Permit GP-0-20-001.

1. On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period.
2. Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization.
3. Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period.
4. Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume (for example, 10 percent, 20 percent, and 50 percent).
5. Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching.
6. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, inspect rock filters for excessive plugging; and document all deficiencies that are identified with the implementation of the SWPPP.
7. Maintain a record of all inspection reports in a site logbook. The site logbook shall be maintained on-site with the SWPPP and be made available to the permitting authority upon request. Copies of all inspection reports are to be submitted to the Town of Amherst on a regular basis. It is the responsibility of the individual contractor/operator to provide the inspection logbook.
8. Copy the Town of Amherst on all inspection reports.

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8.0 CERTIFICATIONS

Documents for the following certifications can be found in **Appendix F**.

8.1 Preparer Certification

The preparer of this Stormwater Pollution Prevention Plan (SWPPP) shall sign Preparer Certification, attesting to the following statement:

"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."

8.2 Owner/Operator Certification

The Owner/Operator shall sign Owner/Operator Certification, attesting to the following statement:

"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."

8.3 Contractor Certification

Each contractor and subcontractor responsible for installing, constructing, repairing, replacing, inspecting, or maintaining any erosion and sediment control measures or post-construction stormwater management practices identified in the SWPPP, shall sign Contractor Certification, attesting to the following statement:

> *"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"*

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APPENDIX A

USGS LOCATION MAP

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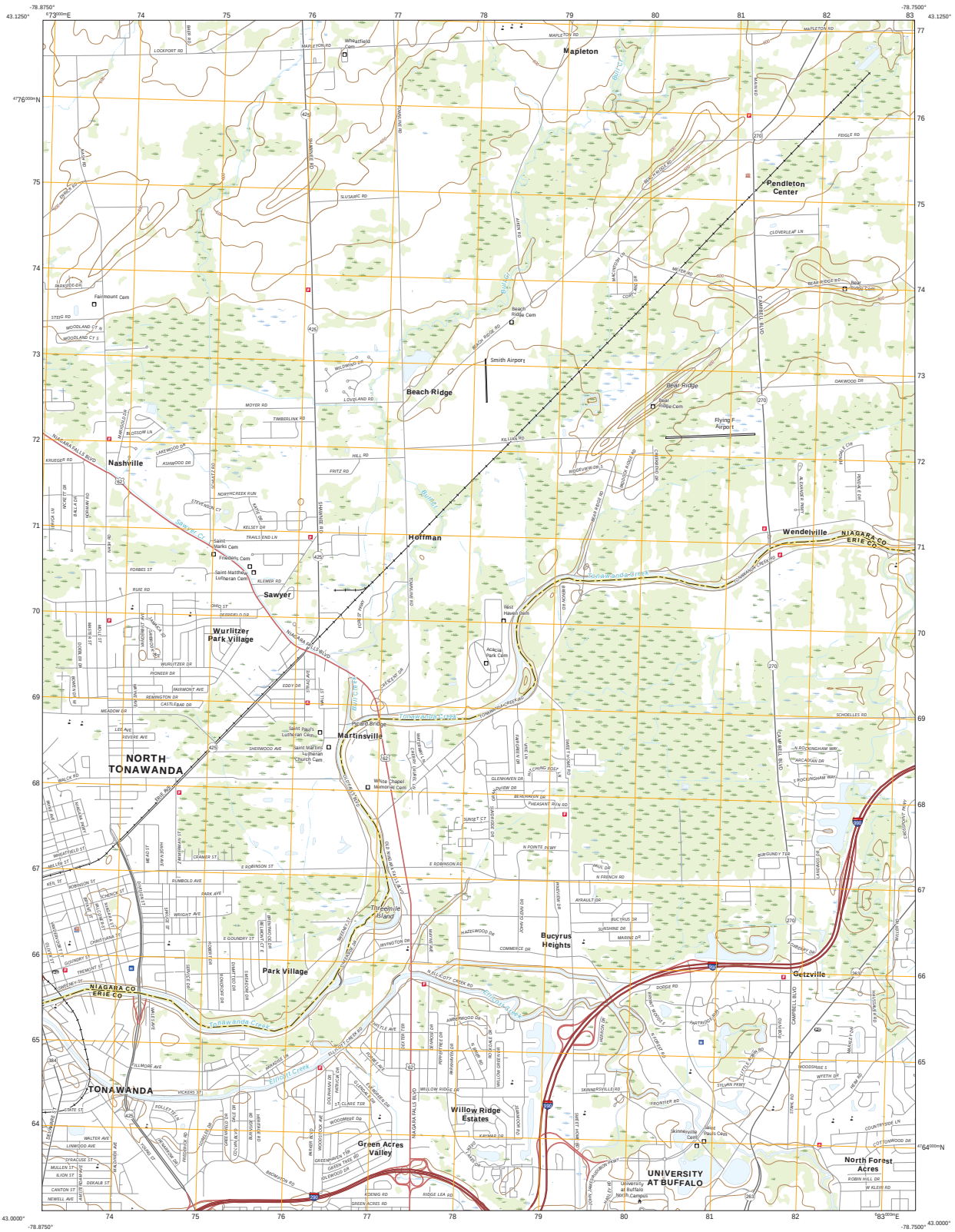
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USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

TONAWANDA EAST QUADRANGLE
NEW YORK
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 17T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery.....NAIP, September 2017 - December 2017
Roads.....U.S. Census Bureau, 2016
Names.....GNIS, 1980 - 2017
Hydrography.....National Hydrography Dataset, 2003 - 2019
Contours.....National Elevation Dataset, 1998 - 2002
Boundaries.....Multiple sources; see metadata file 2017 - 2018

Wetlands.....FWS National Wetlands Inventory 2002

UTM GRID AND 2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

ADJOINING QUADRANGLES
1 Ransomville
2 Cambria
3 Lockport
4 Tonawanda West
5 Clarence Center
6 Buffalo NW
7 Buffalo NE
8 Lancaster

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

TONAWANDA EAST, NY
2019

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APPENDIX B

USDA NRCS CUSTOM SOIL RESOURCE REPORT

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Erie County, New York

West Herr Lincoln



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Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Map Scale: 1:801 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Erie County, New York
Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: Jul 4, 2020—Jul 10, 2020

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

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Packet Pg. 510

2.a

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cv	Cosad loamy fine sand	2.0	100.0%
Totals for Area of Interest		**2.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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Erie County, New York

Cv—Cosad loamy fine sand

Map Unit Setting

National map unit symbol: 9rl8
Elevation: 200 to 800 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Cosad and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cosad

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy glaciofluvial or deltaic deposits over clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 21 inches: loamy fine sand
H3 - 21 to 24 inches: fine sandy loam
H4 - 24 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

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Minor Components

Claverack

Percent of map unit: 5 percent
Hydric soil rating: No

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Odessa

Percent of map unit: 5 percent
Hydric soil rating: No

Cheektowaga

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Minoa

Percent of map unit: 5 percent
Hydric soil rating: No

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APPENDIX C

WETLAND DOCUMENTATION

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U.S. Fish and Wildlife Service
National Wetlands Inventory

West Herr Lincoln



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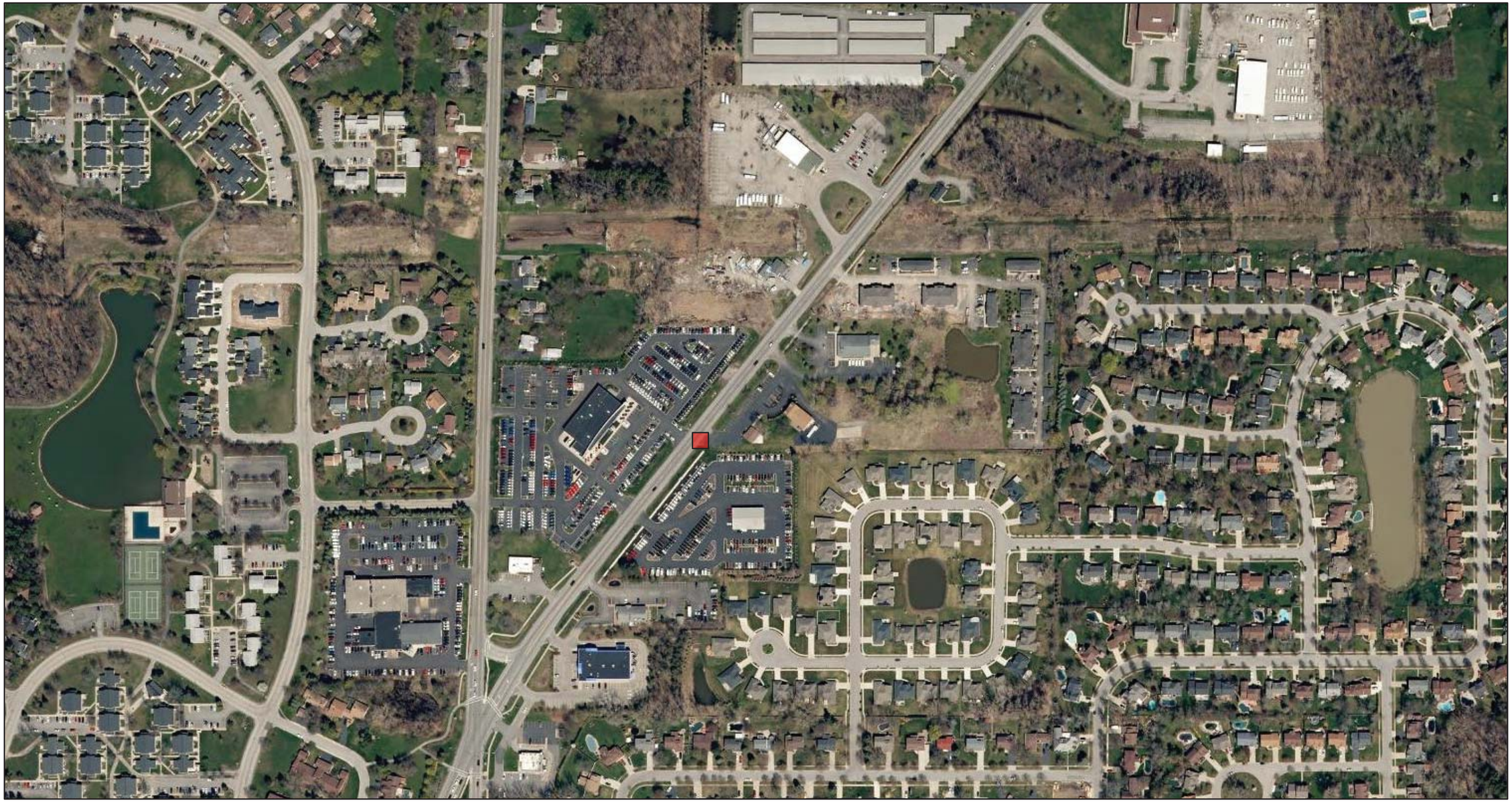
November 16, 2020

Wetlands

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

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

West Herr Lincoln



November 16, 2020

1:4,514

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, NYS ITS GIS Program Office

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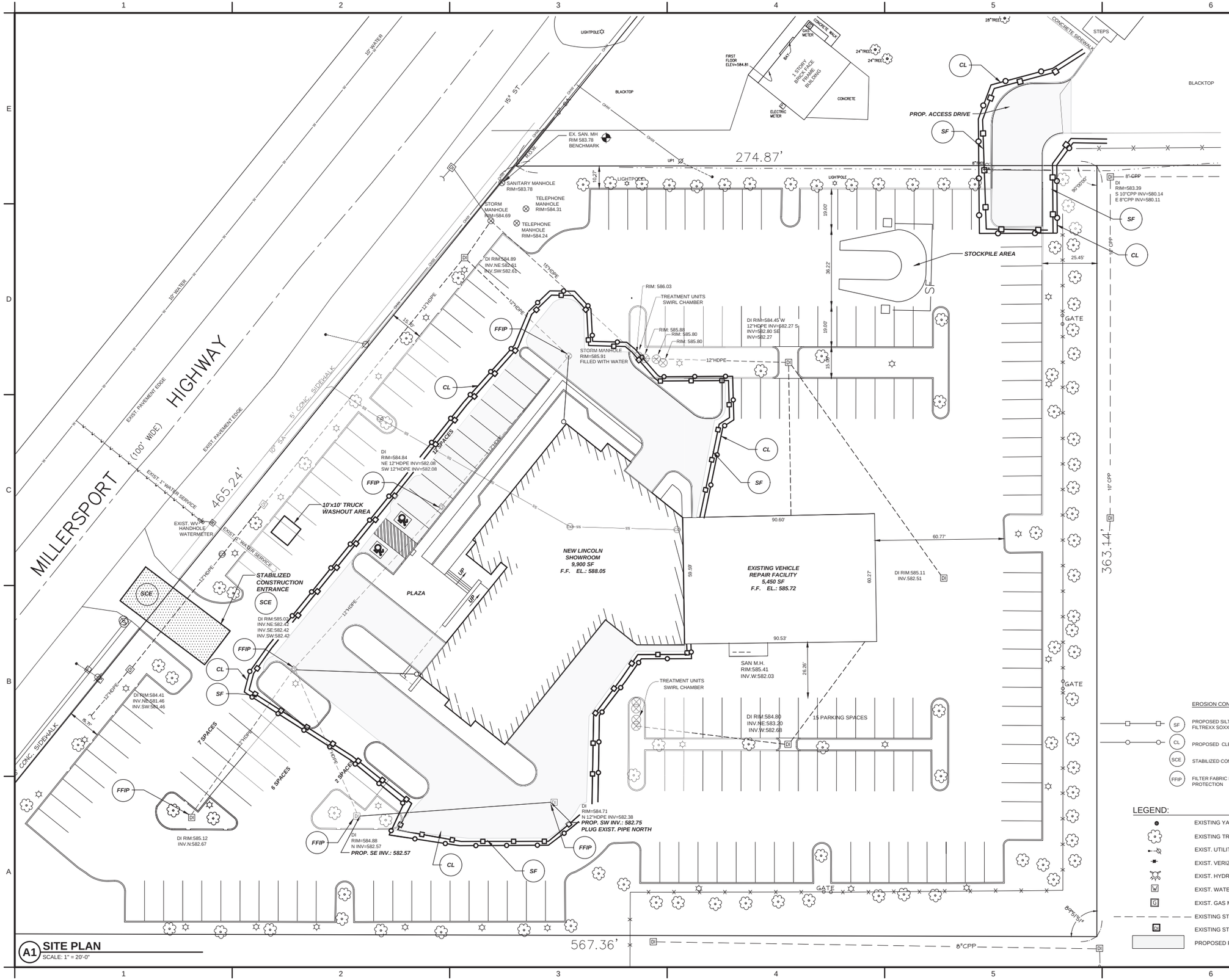
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APPENDIX D

EROSION AND SEDIMENT CONTROL PLAN SHEETS AND SPECIFICATIONS

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



A1 **SITE PLAN**
SCALE: 1" = 20'-0"

EROSION CONTROL LEGEND:

- SF — PROPOSED SILT FENCE OR FILTREXX SOXX (SEDIMENT CONTROL)
- CL — PROPOSED CLEARING LIMITS
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- FFIP — FILTER FABRIC INLET PROTECTION

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- W — EXIST. WATER SERVICE BOX
- G — EXIST. GAS METER
- EXISTING STORM SEWER LINE
- DI — EXISTING STORM STRUCTURE (D.I.)
- PROPOSED PAVING

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AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
SEDIMENT AND EROSION CONTROL PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

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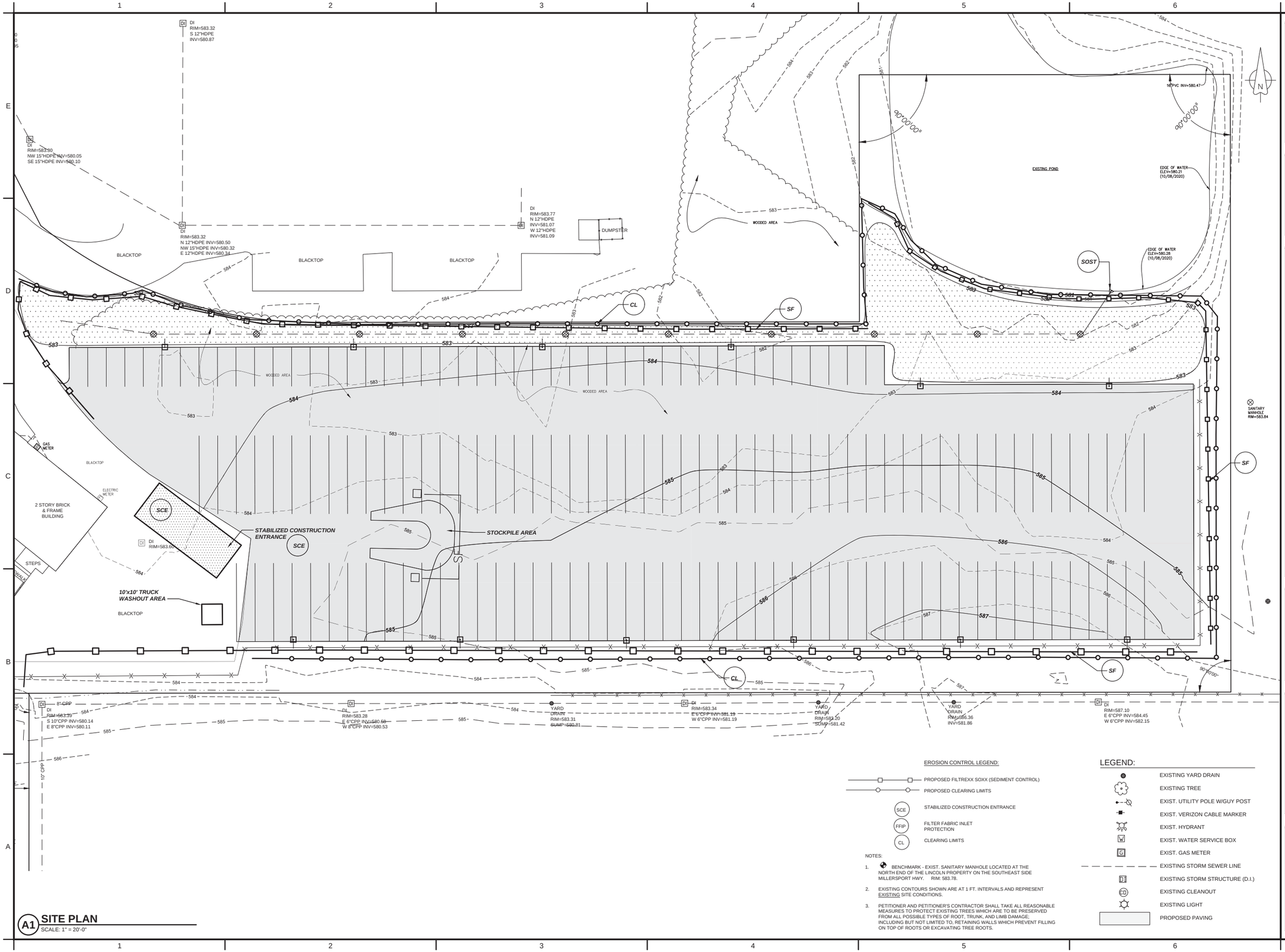
UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STAT EDUCATION LAW.

PROJECT NUMBER	20J5-003(
DATE	11-13-2(
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJF
APPROVED BY	MTM
SCALE:	
	= 1 INCH
SHEET No.	8 OF 17

C-107

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A1 SITE PLAN
SCALE: 1" = 20'-0"

EROSION CONTROL LEGEND:

- PROPOSED FILTREXX SOXX (SEDIMENT CONTROL)
- PROPOSED CLEARING LIMITS
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- FFIP — FILTER FABRIC INLET PROTECTION
- CL — CLEARING LIMITS

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
2. EXISTING CONTOURS SHOWN ARE AT 1 FT. INTERVALS AND REPRESENT EXISTING SITE CONDITIONS.
3. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE, INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED PAVING

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WEST HERR LINCOLN DEALERSHIP ADDITION
AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT
SEDIMENT AND EROSION CONTROL PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

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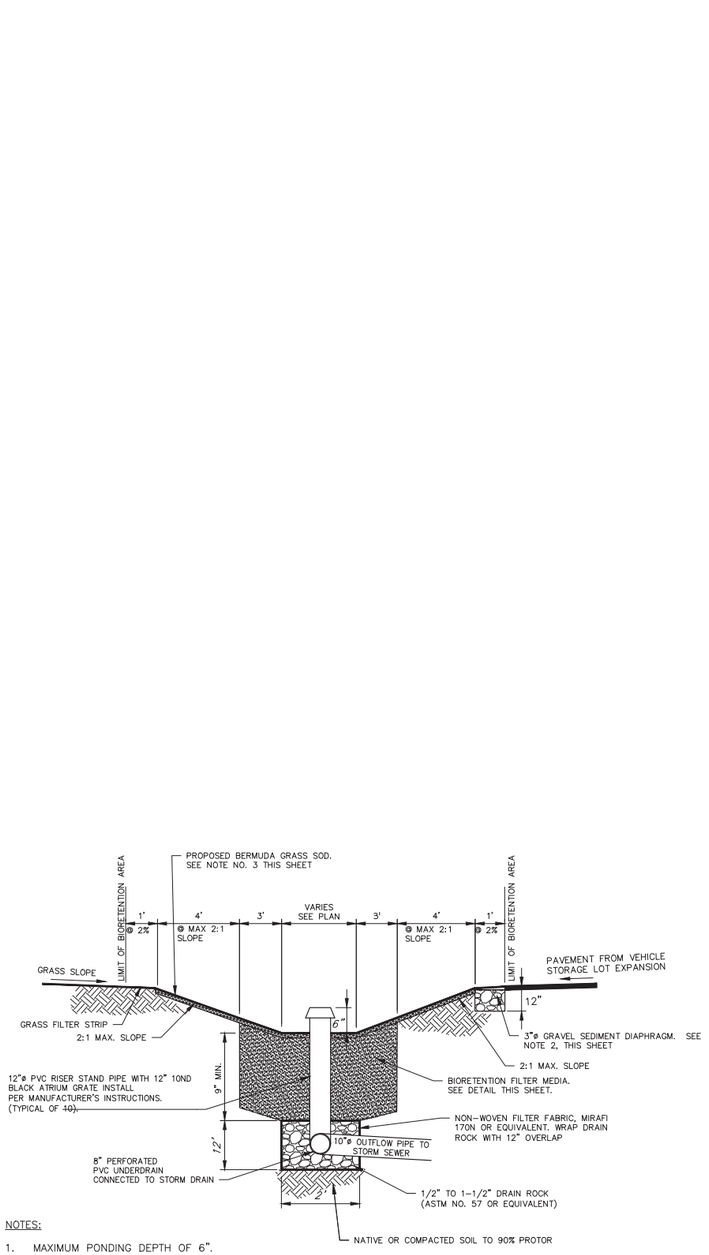
UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	----
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	RJP
APPROVED BY	--
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	13 OF 17

C-113

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



NOTES:

1. MAXIMUM PONDING DEPTH OF 6".
2. 3"ø GRAVEL PRE-TREATMENT DIAPHRAGM SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF BASIN SOUTH EDGE (ADJACENT TO NEW PAVEMENT). DIAPHRAGM SHALL BE MINIMUM 1-FOOT WIDE.
3. PROPOSED BERMUDAGRASS SOD COVER (TYP. 12,000 SF). SOD MUST BE INSTALLED FOR GRASSED BIORETENTION, SEEDED GRASS IS NOT PERMITTED. SEE STORMWATER POLLUTION PREVENTION PLAN FOR BLUEGRASS SPECIFICATIONS.

A1 GRASSED BIORETENTION BASIN DETAIL
SCALE: NOT TO SCALE

1. THE BIORETENTION SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.
2. THE USDA TEXTURAL CLASSIFICATION OF THE PLANTING SOIL FOR THE BIORITENTION SOIL MIXTURE SHALL BE LOAMY SAND OR SANDY LOAM. PLANTING SOIL SHALL BE SALVAGED OR FURNISHED. PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

ITEM	PERCENT BY WEIGHT	TEST METHOD
SAND(0.42 – 2.0 MIN.)	60 – 85%	AASHTO T88
SILT (0.050 – 0.002 MM)	0 – 50% < 20%	AASHTO T88
CLAY (LESS THAN 0.002 MM)	10 – 20% < 5%	AASHTO T88
ORGANIC MATTER	5 – 10%	AASHTO T194

3. THE TEXTURAL ANALYSIS FOR THE PLANTING SOIL SHALL BE AS FOLLOWS:

ASTM E11 SIEVE SIZE	MINIMUM PERCENT PASSING BY WEIGHT
2 IN.	100
NC. 4	90
NC. 10	80

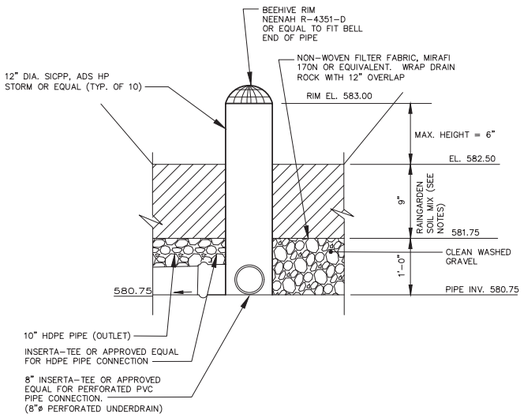
4. THE BIORETENTION SOIL MIXTURE SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

ITEM	CRITERIA	TEST METHOD
CORRECTED PH	5.5 – 7.5	ASTM D4972
MAGNESIUM	MINIMUM 32 PPM	*
PHOSPHORUS (PHOSPHATE - P_2O_5)	NOT TO EXCEED 69 PPM	*
POTASSIUM (K_2O)	MINIMUM 78 PPM	*
SOLUBLE SALTS	NOT TO EXCEED 500 PPM	*

* USE AUTHORIZED SOIL TEST PROCEDURES.

5. THE BIORETENTION SOIL MIXTURE SHALL BE MIXED TO A HOMOGENEOUS CONSISTENCY TO THE SATISFACTION OF THE ENGINEER.

A3 BIORETENTION SOIL MIXTURE NOTES
SCALE: NOT TO SCALE



A5 BIORETENTION OVERFLOW STRUCTURE DETAIL
SCALE: NOT TO SCALE

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AND STORAGE LOT EXPANSION
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BIORETENTION DETAILS

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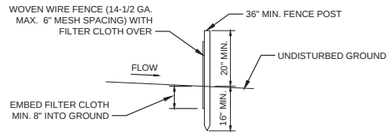
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DATE	11-13-20
DRAWN BY	VBS
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APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	15 OF 17

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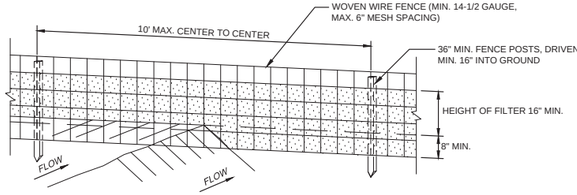
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Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



SECTION



PERSPECTIVE VIEW

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

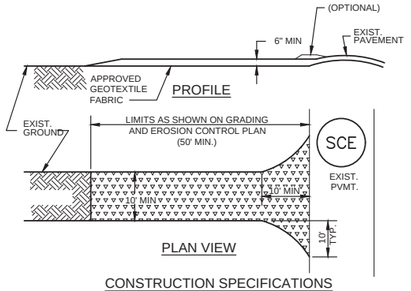
POSTS:
STEEL EITHER T OR U TYPE OR 2"X2" HARDWOOD.
FENCE:
WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH:
FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT:
GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

D1 SILT FENCE DETAILS

SCALE: NOT TO SCALE

SF

CONTRACTOR HAS THE OPTION TO USE FILTREXX SEDIMENT CONTROL "SOXX" IN PLACE OF OR COMBINED WITH SILT FENCE AT HIS/HER DISCRETION. SEE DETAIL THIS SHEET.



PLAN VIEW

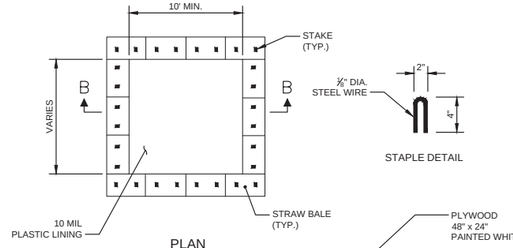
CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQ'D, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESI-DENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQ'D ON A SINGLE FAMILY RESIDENCE LOT.
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 1:5 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. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQ'D, 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 EVENT.

C2 STABILIZED CONSTRUCTION ENTRANCE DETAILS

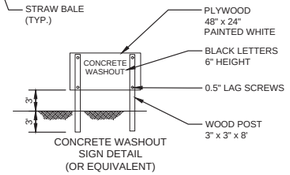
SCALE: NOT TO SCALE

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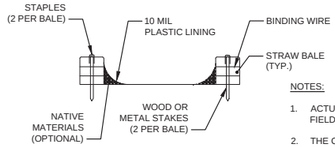


PLAN

TYPE "ABOVE GRADE" WITH STRAW BALES



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



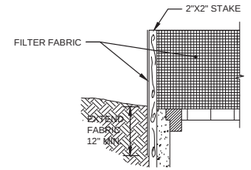
SECTION B-B

NOTES:

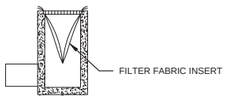
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

D4 CONCRETE TRUCK WASH OUT DETAIL

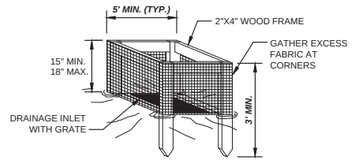
SCALE: NOT TO SCALE



SECTION VIEW

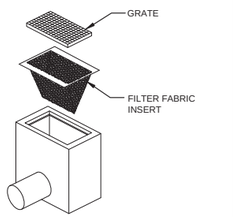


SECTION VIEW



PERSPECTIVE VIEW

SILT FENCE INLET PROTECTION (FOR UNPAVED AREAS)



PERSPECTIVE VIEW

FILTER FABRIC INLET PROTECTION (FOR PAVED AREAS)

SILT FENCE INLET PROTECTION NOTES:

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"X4" 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"X4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

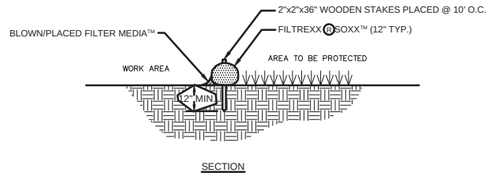
FILTER FABRIC INLET PROTECTION NOTES:

1. INSPECT ON A WEEKLY BASIS AND REMOVE SILT AS NECESSARY.

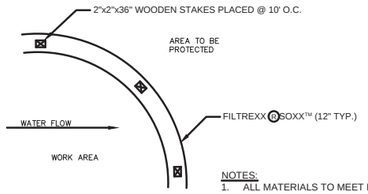
C5 FILTER FABRIC INLET PROTECTION DETAIL

SCALE: NOT TO SCALE

FFIP



SECTION



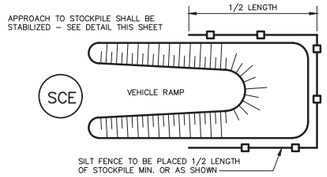
PLAN

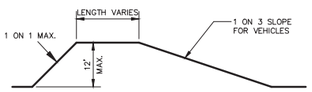
NOTES:

1. ALL MATERIALS TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIALS TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

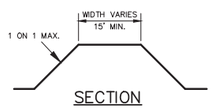
A1 FILTREXX® SEDIMENT CONTROL

SCALE: NOT TO SCALE





LONGITUDINAL VIEW

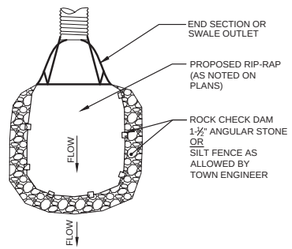


SECTION

A3 TOPSOIL STOCKPILE DETAILS

SCALE: NOT TO SCALE

SCE



1. SEDIMENT SHALL BE REMOVED WHEN IT HAS ACCUMULATED TO A DEPTH OF WHERE THE RIP-RAP IS NOT VISIBLE AND/OR NO LONGER FUNCTIONS AS A FLOW DISSIPATER. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT, AND REPAIRS MADE AS NEEDED.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

A4 SWALE OUTLET SEDIMENT TRAP

SCALE: NOT TO SCALE

SOST

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH SWPPP REQUIREMENTS INCLUDING HIRING A SWPPP INSPECTOR TO PERFORM WEEKLY INSPECTIONS. INSPECTOR SHALL BE NOTIFIED AT LEAST ONE (1) WEEK PRIOR TO ANY CLEARING.
2. SURVEY AND STAKEOUT FOR CLEARING, STRIPPING AND EROSION CONTROL ACTIVITIES.
3. INSTALL EROSION AND SEDIMENT CONTROLS.
4. PERFORM THE NECESSARY WORK TO ENSURE PROPER SURFACE DRAINAGE WHILE MAINTAINING EROSION AND SEDIMENT CONTROL AS DEFINED BY TOWN SPECIFICATIONS AND DESIGN DRAWINGS.
5. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, SOIL STOCKPILES AND EXPOSED SOIL SHOULD BE STABILIZED BY SEED AND MULCH OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
6. NOTIFY SEDIMENT CONTROL INSPECTOR AND OBTAIN APPROVAL BEFORE PROCEEDING FURTHER.
7. SITE PREPARATION AND CONSTRUCTION SHALL NOT ADVERSELY AFFECT THE FREE FLOW OF STORM RUNOFF OR WATER COURSES.
8. UPON COMPLETION OF UTILITY INSTALLATION, RESTORATION SHALL COMMENCE.
9. EROSION AND SEDIMENT CONTROLS ARE TO BE REMOVED AS THEIR USEFULLNESS DIMINISH. AT ALL INSTANCES, NOTIFY THE SEDIMENT CONTROL INSPECTOR AND OBTAIN WRITTEN APPROVAL BEFORE REMOVAL OF ANY EROSION AND SEDIMENT CONTROL DEVICE OR MECHANISM.
10. PROPER SURFACE DRAINAGE MUST BE INSTALLED PRIOR TO CONSTRUCTION OF THE UTILITIES.
11. NO MORE THAN 5 ACRES CAN BE DISTURBED AT ANY GIVEN TIME WITHOUT PRIOR WRITTEN PERMISSION FROM THE MUNICIPALITY.
12. THE CLEARING LIMITS MAY NOT BE REVISED WTIHOUT APPROVAL OF THE TOWN.
13. THE TOWN SHALL BE COPIED ON ALL SWPPP REPORTS.
14. IMMEDIATE RESTORATION OF ALL DISTURBED AREAS WILL BE REQUIRED, INCLUDING RETURNING TO ORIGINAL GRADE, SEEDING WITH NATIVE, APPROPRIATE SEED MIX, AND MULCHING WITH STRAW.

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION

2601, 2619 & 2635 MILLERSPORT HIGHWAY

EROSION CONTROL DETAILS

REVISIONS

No.	DESCRIPTION	DATE
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PROJECT NUMBER	20J5-003(
DATE	11-13-2(
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJF
APPROVED BY	MTM
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SHEET No.	16 OF 17

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Comp Dev

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

STANDARD AND SPECIFICATIONS FOR COMPOST FILTER SOCK



Definition & Scope

A **temporary** sediment control practice composed of a degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants associated with construction activity to prevent their migration offsite.

Condition Where Practice Applies

Compost filter socks can be used in many construction site applications where erosion will occur in the form of sheet erosion and there is no concentration of water flowing to the sock. In areas with steep slopes and/or rocky terrain, soil conditions must be such that good continuous contact between the sock and the soil is maintained throughout its length. For use on impervious surfaces such as road pavement or parking areas, proper anchorage must be provided to prevent shifting of the sock or separation of the contact between the sock and the pavement. Compost filter socks are utilized both at the site perimeter as well as within the construction areas. These socks may be filled after placement by blowing compost into the tube pneumatically, or filled at a staging location and moved into its designed location.

Design Criteria

1. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45 degree angle to prevent bypass flow.

2. Diameters designed for use shall be 12" – 32" except that 8" diameter socks may be used for residential lots to control areas less than 0.25 acres.

3. The flat dimension of the sock shall be at least 1.5 times the nominal diameter.

4. The **Maximum Slope Length** (in feet) above a compost filter sock shall not exceed the following limits:

Dia. (in.)	Slope %						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	—	—
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
* Length in feet							



5. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.**

6. The compost filter sock fabric material shall meet the

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.
3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.

3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated silt fence is acceptable as long as all material specifications are met.

Reinforced Silt Fence

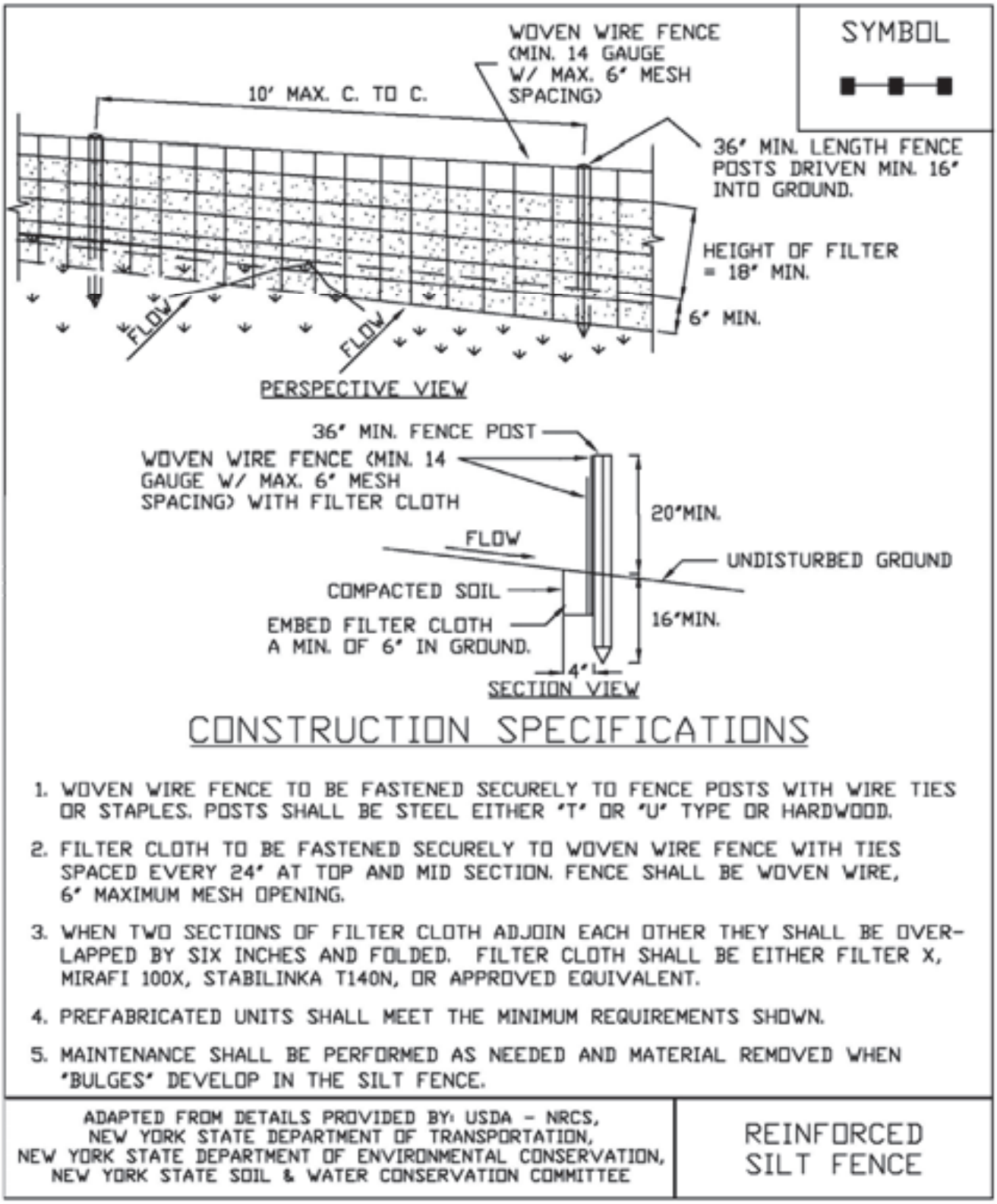


Super Silt Fence



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Figure 5.30
Reinforced Silt Fence



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

7. Compost filter socks shall be anchored in earth with 2" x 2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.

8. All specific construction details and material specifications shall appear on the erosion and sediment control constructions drawings when compost filter socks are included in the plan.

Maintenance

1. Traffic shall not be permitted to cross filter socks.

2. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan.

3. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired in the manner required by the manufacturer or replaced within 24 hours of inspection notification.

4. Biodegradable filter socks shall be replaced after 6 months; photodegradable filter socks after 1 year. Polypropylene socks shall be replaced according to the manufacturer's recommendations.

5. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the stabilization plan. For removal the mesh can be cut and the compost spread as an additional mulch to act as a soil supplement.

Table 5.1 - Compost Sock Fabric Minimum Specifications Table

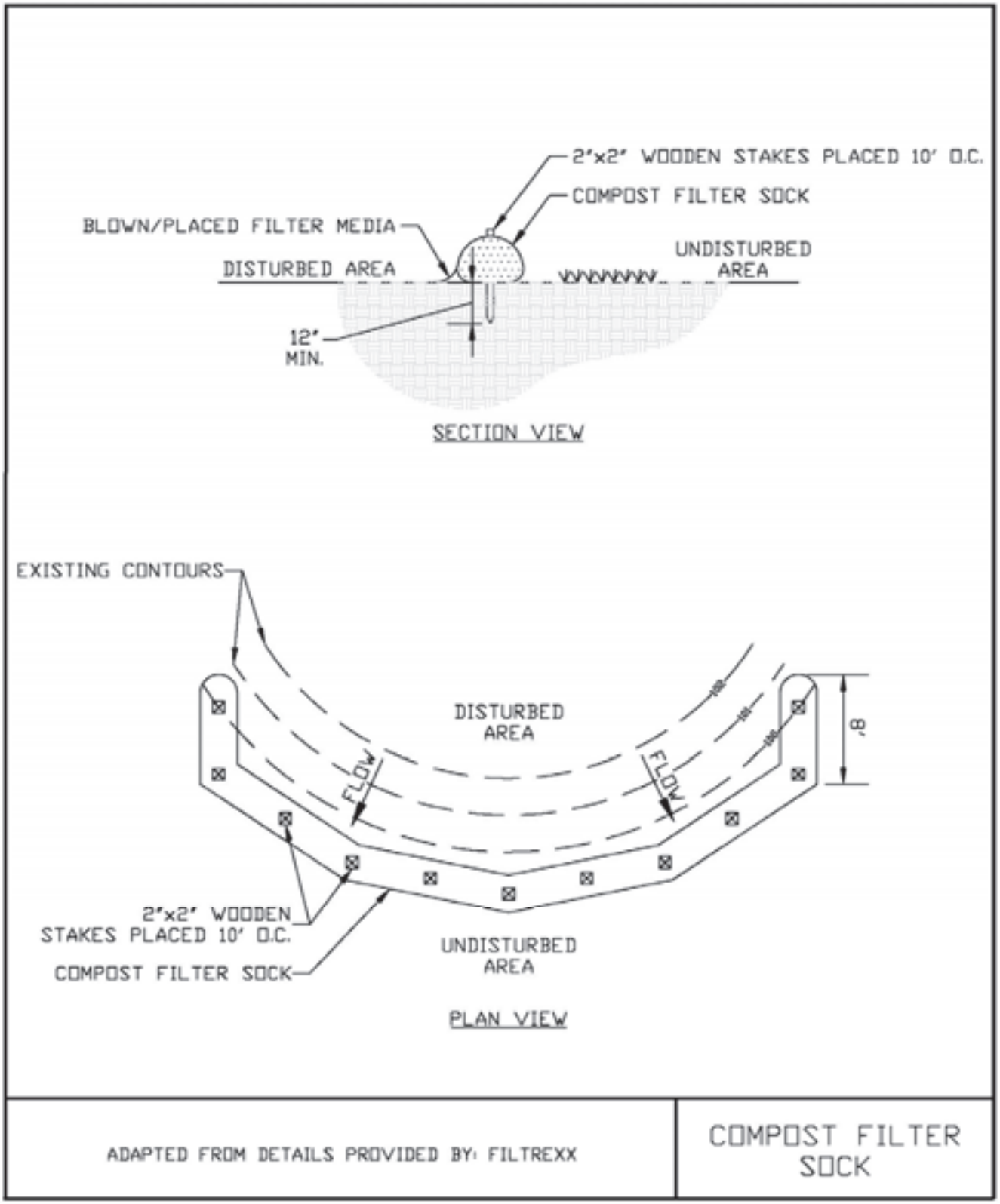
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photodegradable	Photodegradable	Biodegradable	Photodegradable	Photodegradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Table 5.2 - Compost Standards Table

Organic matter content	25% - 100% (dry weight)
Organic portion	Fibrous and elongated
pH	6.0 – 8.0
Moisture content	30% - 60%
Particle size	100% passing a 1" screen and 10 - 50% passing a 3/8" screen
Soluble salt concentration	5.0 dS/m (mmhos/cm) maximum

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Figure 5.2
Compost Filter Sock



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



Definition & Scope

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

Conditions Where Practice Applies

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

Design Criteria

See Figure 2.1 on page 2.31 for details.

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

Thickness: Not less than six (6) inches.

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

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

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

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

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

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

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

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

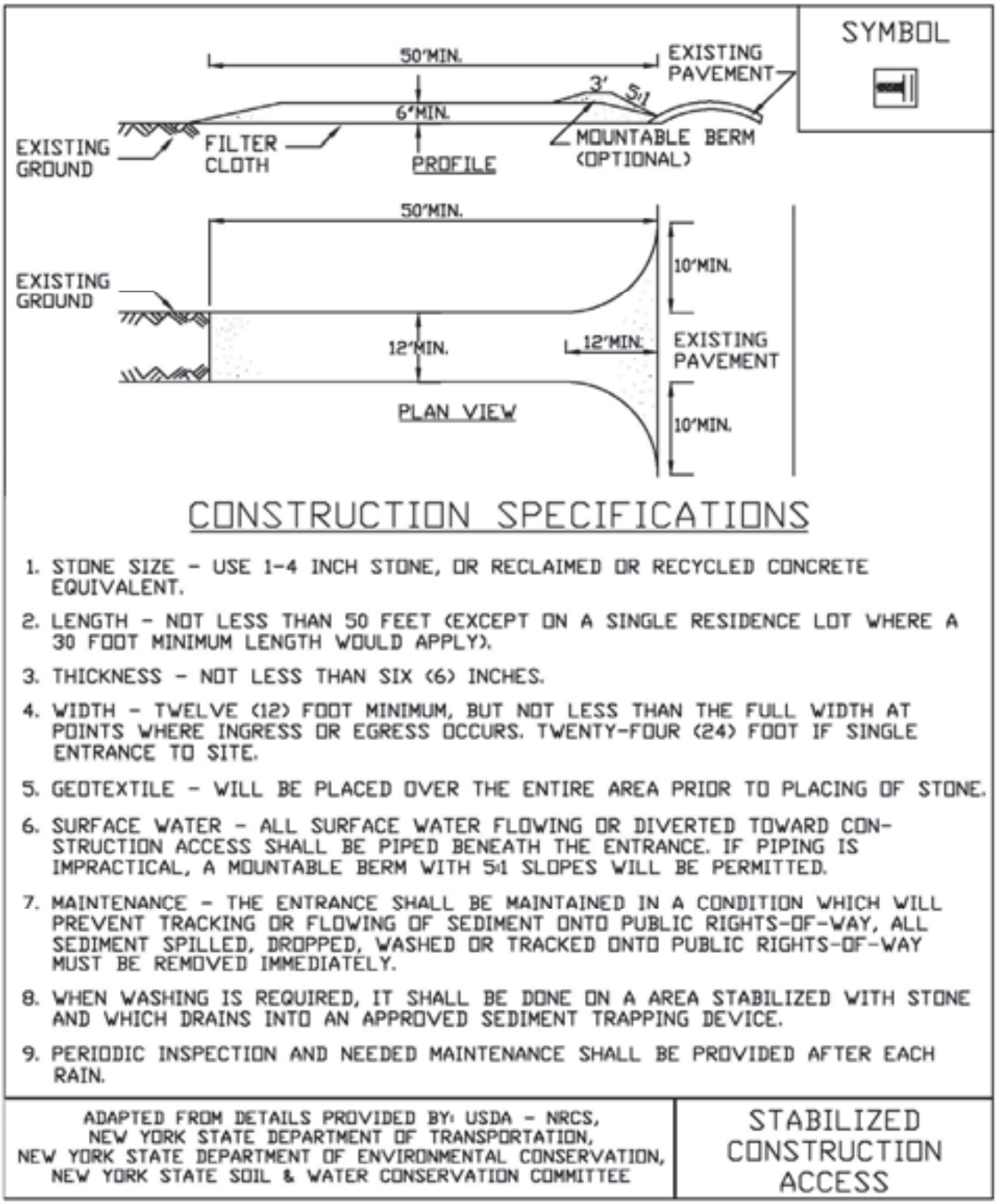
Maintenance

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

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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Figure 2.1
Stabilized Construction Access



CONSTRUCTION SPECIFICATIONS

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

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

STABILIZED CONSTRUCTION ACCESS

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Specifications for Bioretention

Material Specifications

The allowable materials to be used in bioretention area are detailed in Table G.2.

Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of noxious weeds.

The planting soil shall be tested and shall meet the following criteria:

pH range	5.2 - 7.0
organic matter	1.5 - 4%
magnesium	35 lb./ac
phosphorus P_2O_5	75 lb./ac
potassium K_2O	85 lb./ac
soluble salts	not to exceed 500 ppm

All bioretention areas shall have a minimum of one test. Each test shall consist of both the standard soil test for pH, phosphorus, and potassium and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the top soil was excavated.

Since different labs calibrate their testing equipment differently, all testing results shall come from the same testing facility.

Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

Compaction

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoes to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before back filling the required sand layer. Pump any ponded water before preparing (rototilling) base.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

When back filling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When back filling the bioretention facility, place soil in lifts 12” or greater. Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials by hand or with light equipment such as a compact loader or a dozer/loader with marsh tracks.

Plant Installation - Not Applicable. See USDA NRCS Plant Fact Sheet for Bermudagrass Sod.

Mulch around individual plants only. Shredded hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

The plant root ball should be planted so 1/8th of the ball is above final grade surface.

Root stock of the plant material shall be kept moist during transport and on-site storage. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" X 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed shall be tilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch is used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains

Under drains to be placed on a 3’-0” wide section of filter cloth. Pipe is placed next, followed by the gravel bedding. The ends of under drain pipes not terminating in an observation well shall be capped.

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

Miscellaneous

The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

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Table C.2 Materials Specifications for Bioretention

Parameter	Specification	Size	Notes
Plantings	Bermudagrass sod.	n/a	Grassed bioretention area cover must be sod. Seeding not permitted.
Planting Soil [4= deep]	sand 35 - 60% silt 30 - 55% clay 10 - 25%	n/a	USDA soil types loamy sand, sandy loam or loam
Mulch	shredded hardwood		**NOT APPLICABLE**
pea gravel diaphragm and curtain drain	pea gravel: ASTM D 448 ornamental stone: washed cobbles	pea gravel: No. 6 stone: 2" to 5"	
Geotextile	Class "C" apparent opening size (ASTM-D-4751) grab tensile strength (ASTM-D-4632) burst strength (ASTM-D-4833)	n/a	For use as necessary beneath underdrains only - Mirafi 170N or approved equal.
underdrain gravel	AASHTO M-43. No. 67.	0.25" to 0.75"	
underdrain piping	ASTM D 1785 or AASHTO M-278	6" rigid schedule 40 PVC	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
poured in place concrete (if required)	See local DOT Standards and Specs.; f=c = 3500 psi. @ 28 days, normal weight, air-entrained; re-inforcing to meet ASTM 615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) *not using previously approved State or local standards* requires design drawings sealed and approved by a licensed professional structural engineer.
sand [1= deep]	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

Packet Pg. 543
2.a
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USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Fact Sheet

BERMUDAGRASS

Cynodon dactylon (L.) Pers.

Plant Symbol = CYDA

Contributed by: USDA NRCS Plant Materials Program



USDA NRCS National Plant Materials Center
Beltsville, MD

Caution: This plant is considered noxious in several states and invasive by several sources. Please check the Noxious and Invasive portion of PLANTS for additional information. Please consult with your local resource specialist prior to using.

Uses

Erosion control: Bermudagrass is used for critical area planting (including channels and pond banks), grassed waterways, and vegetated flumes.

Turf: This grass is suitable for lawns and public areas, and is recommended for problem soils and heavy traffic areas.

Livestock: Bermudagrass provides fair to good pasture and hay with proper management. Forage quality is dependent on soil fertility and stage of growth.

Wildlife: Bermudagrass has forage value for deer, geese and ducks in open, sunny areas.

Recreation: Turf types of the grass form attractive, traffic-resistant, weed-free, and low maintenance ground covers for areas with half to full day sun.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

Bermudagrass, is of probable Asian origin and was documented as an important grass in the United States by l807. It is a long-lived, warm season perennial that spreads by rhizomes, stolons, and seed. Stems are leafy, branched, and 4 to 6 inches tall. Under favorable conditions, stems may be 12 to 18 inches high. Stems are short jointed. Leaves are flat and spreading. The ligule is a circle of white hairs. Leaves may be hairy or smooth. Seedheads are usually in one whorl of 3 to 7 spikes, each about 1 to 2-1/2 inches long. Some robust forms may have up to 10 spikes in 2 whorls.

Adaptation and Distribution

Although a few hardy strains of Bermudagrass persist in areas with sub-zero winter temperatures, it has achieved importance only in areas of relatively mild winters. Once established on moderately deep to deep soils, Bermudagrass maintains dense sod, non-irrigated, with 16 inches of rainfall. It can withstand sedimentation and long periods of inundation. It prefers full sun and can grow rapidly at air temperatures exceeding 100°F.

Bermudagrass prefers deep soils but produces well on moderately shallow sites under irrigation and good management. It persists on poor soils but require high nitrogen levels for best appearance. It withstands pH ranges from about 5.0 to 8.5 and is boron tolerant. It tolerates saline soils with up to 18 millimhos of electrical conductivity in the soil solution.

Plant Materials <http://plant-materials.nrcs.usda.gov/>
Plant Fact Sheet/Guide Coordination Page <http://plant-materials.nrcs.usda.gov/intranet/pfs.html>
National Plant Data Center <http://npdc.usda.gov>

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Bermudagrass is distributed throughout the majority of the United States. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment
Stands may be established by use of seed, sprigs, or plugs planted during mid-spring to mid-summer followed by frequent applications of fertilizer and water. Early planting is most important in areas of marginal adaptability.

Beds for seeding or planting should be firm, smooth, and free of weed seed. For turf plantings, absolute smoothness is necessary for close mowing following establishment. Seed, sprigs, or plugs should be placed into moist soil.

For pasture or hay, drill 3 pounds pure live seed per acre at 1/2 inch depth or less. For turf, use 10 pounds of seed per acre. Higher seeding rates are advisable if seed must be broadcast. If using sprigs, broadcast by hand or with hydro-equipment. Punching and irrigation, if needed, must be done immediately following spreading to keep the sprigs from drying out. Surface soil moisture must be kept high while roots and shoots develop at the sprig nodes.

Fifteen bushels of sprigs per acre disk punched or covered with 1-1/2 inches of soil followed by irrigation as needed ordinarily gives fully established stands in one growing season. On saline soils planting in the side of furrows is desirable so salts will accumulate on the ridges above grass rows.

Use of sod rolls or plugs cut from sod is often a preferred method of establishing turf-type Bermuda on critical sites. Plugs of 3 inch diameter planted on 15 to 18 inch centers will ordinarily establish complete cover in 1 growing season with adequate fertilizer, moisture and half-day to full sun. Complete sodding is preferred for very critical areas or where immediate foot traffic is contemplated. Care immediately following planting is less critical on plantings of sod or plugs than turf-type sprigs.

Management
High quality turf will require frequent very low mowing, fertilizer, and water for vigorous growth. Clippings must be removed. A sharp reel-type mower will avoid unsightly scalping. Good to fair quality turf can be maintained on short water and low fertilizer schedules, thereby reducing mowing frequency.

Bermudagrass will persist as a weed-free ground cover on soils of moderate to high water-holding capacity. Where desirable and permissible, mid-winter controlled burning can be used to reduce thatch. Most herbicides used at recommended rates with reasonable care can be used to control undesirable plants without destroying fully established Bermudagrass. Applications of nitrogen every 2 to 5 years will be needed to maintain vigorous stands on most sites.

Both pasture and hay require good rainfall and heavy fertilizer application for high yield and quality. Thirty to forty pounds of nitrogen should be applied in split increments for each ton of anticipated dry forage yield. Highest yields are obtained on good soils in areas of high average annual temperature with ample water. Harvest or graze at 3 to 4 week intervals for best yields of total digestible nutrient and protein.

Pests and Potential Problems
Several white grubs are known to feed on the root system, however they are normally not a major pest.

Cultivars, Improved, and Selected Materials (and area of origin)
'Santa Ana', 'Tifway', 'Tifgreen', 'Tifdwarf', 'Tufcote', 'Brazos', 'Quickstand', 'Coastal', 'Coastcross-1', and 'Midland'. All form dense, fine-textured, weed-free sods and tolerate drought, close mowing and heavy traffic, even on problem soils. Seeds, springs, and sod are all commercially available.

Control
Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Prepared By & Species Coordinator:
USDA NRCS Plant Materials Program

Edited: 10Aug2000 JLK; 05jun06 jsp

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site<http://plants.usda.gov> or the Plant Materials Program Web site <http://Plant-Materials.nrcs.usda.gov>

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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Read about Civil Rights at the Natural Resources Convervation Service.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION



Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

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CONSTRUCTION DURATION INSPECTIONS **Page 1 of _____**

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SITE PLAN/SKETCH

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

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

CONSTRUCTION DURATION INSPECTIONS **Page 2 of _____**

Maintaining Water Quality

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

Housekeeping

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

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

Runoff Control Practices

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

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

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

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CONSTRUCTION DURATION INSPECTIONS **Page 3 of _____**
Runoff Control Practices (continued)

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

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

Soil Stabilization

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

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

Sediment Control Practices

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

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

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CONSTRUCTION DURATION INSPECTIONS **Page 4 of _____**

Sediment Control Practices (continued)

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

Yes No NA

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

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

Yes No NA

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

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

Yes No NA

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

Sediment accumulation is ___% of design capacity.

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

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CONSTRUCTION DURATION INSPECTIONS

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

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

Modification & Reason:

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III. Monthly Summary of Site Inspection Activities

Name of Permitted Facility:	Today's Date:	Reporting Month:
Location:	Permit Identification #:	
Name and Telephone Number of Site Inspector:		

Date of Inspection	Regular / Rainfall based Inspection	Name of Inspector	Items of Concern

Owner/Operator Certification:

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

Signature of Permittee or Duly Authorized Representative

Name of Permittee or Duly Authorized Representative Date

Duly authorized representatives must have written authorization, submitted to DEC, to sign any permit documents.

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CONSTRUCTION STORMWATER COMPLIANCE INSPECTION REPORT

Project Name:	**Date:**
Location:	**Permit #:**
Municipality:	**Entry Time:**
County:	**Exit Time:**
Owner Representative:	**Weather Conditions:**
Inspector:	**Temperature:**
Title of Inspector:	**Soil Conditions:**
Inspector's Qualifications:	
Signature:	

General Requirements for Owners or Operators with Permit Coverage

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.

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, and all documentation necessary to demonstrate eligibility with the 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.

1.	Is all documentation necessary to demonstrate eligibility with the permit at the construction site and maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock that is accessible during normal business hours to an individual performing a compliance inspection.	*(yes)*	*(no)*	*(N/A)*

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 the *regulated, traditional land use control MS4*.

2.	Has the *owner or operator* disturbed greater than 5 acres of soil?	*(yes)*	*(no)*	*(N/A)*

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 the permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005.
c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
d. The *owner or operator* shall install any additional site specific practices needed to protect water quality.
e. The *owner or operator* shall include the requirements above in their SWPPP.

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

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permit requirements. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of the permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4 (MS4)*, the *owner or operator* shall notify the *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 the permit. Unless otherwise notified by the *MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *MS4* prior to commencing construction of the post-construction stormwater management practice.

3.	Are there any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP?	*(yes)*	*(no)*	*(N/A)*
4.	If yes, has the MS4 been notified?	*(yes)*	*(no)*	*(N/A)*
5.	If yes, has the MS4 reviewed and accepted amendments/modifications?	*(yes)*	*(no)*	*(N/A)*

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

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

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

6.	Is SWPPP up-to-date?	*(yes)*	*(no)*	*(N/A)*

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

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 certification statement before they commence any *construction activity*.

7.	Have all Contractors and subcontractors, if any, signed a certification statement?	*(yes)*	*(no)*	*(N/A)*

INSPECTION AND MAINTENANCE REQUIREMENTS

General Construction Site Inspection and Maintenance Requirements

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 the permit.

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Contractor Maintenance Inspection Requirements
The *owner or operator* 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.

Qualified Inspector Inspection Requirements
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.

8. Describe the condition of the runoff at all points of *discharge* from the construction site. Identify any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow.

9. Describe 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. Identify any *discharges* of sediment to the surface waterbody.

10. Identify all erosion and sediment control practices and pollution prevention measures that need repair or maintenance.

11. Identify all erosion and sediment control practices and pollution prevention measures that are not installed properly or are not functioning as designed and need to be reinstalled or replaced.

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12. Describe and sketch 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.

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13. Describe current phase of construction of all post-construction stormwater management practices and identify all construction that is not in conformance with the SWPPP and technical standards;

14. List any 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).

15. Identify and list status of all corrective actions that were required by previous inspection.

16. Attach digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions; and, that clearly show the condition of the practice(s) after the corrective action has been completed.

Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor 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.

STANDARD PERMIT CONDITIONS

Duty to Comply

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

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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.

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.

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.

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 the 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 the permit.

Signatory Requirements
All inspection reports shall be signed by the *qualified inspector* that performs the inspection. It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

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 the permit and with the requirements of the SWPPP.

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 the 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.

ADDITIONAL NOTES

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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		

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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		

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Comments:

Actions to be Taken:

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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		

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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		

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Comments:

Actions to be Taken:

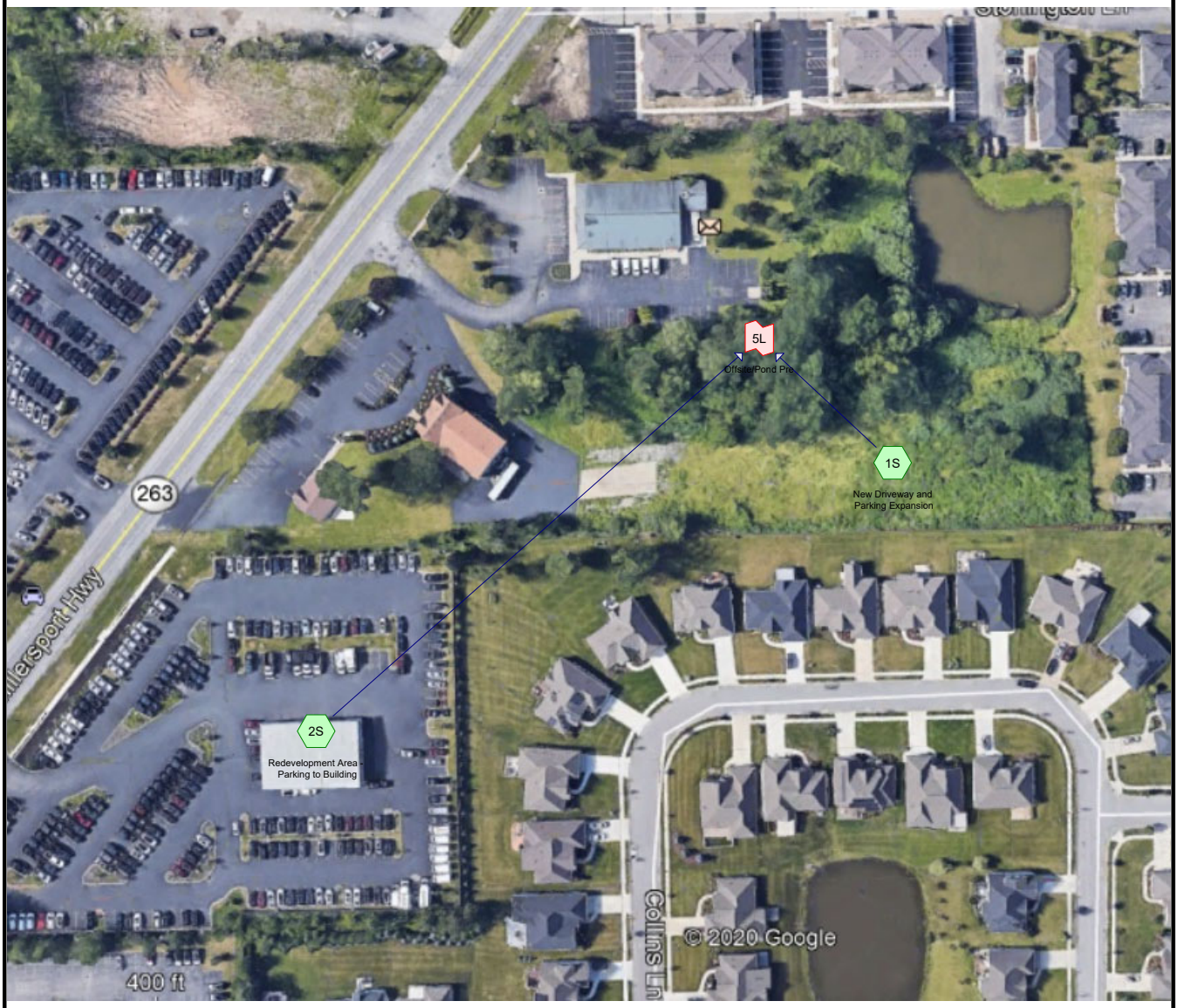
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APPENDIX E

STORMWATER CALCULATIONS AND MODELING

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



Subcat Reach Pond Link

Routing Diagram for West Herr Millersport Pre-Development
Prepared by Nussbaumer & Clarke, Inc., Printed 11/16/2020
HydroCAD® 10.00-26 s/n 04121 © 2020 HydroCAD Software Solutions LLC

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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 7041 NY Erie

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.660	77	Brush, Fair, HSG D (1S)
0.230	98	Unconnected pavement, HSG D (2S)
1.890	**80**	**TOTAL AREA**

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
1.890	HSG D	1S, 2S
0.000	Other	
1.890		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.660	0.000	1.660	Brush, Fair	1S
0.000	0.000	0.000	0.230	0.000	0.230	Unconnected pavement	2S
0.000	**0.000**	**0.000**	**1.890**	**0.000**	**1.890**	**TOTAL AREA**	

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>0.34"
Tc=0.0 min CN=77 Runoff=1.00 cfs 0.048 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>1.56"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=0.38 cfs 0.030 af

Link 5L: Offsite/Pond Pre Inflow=1.20 cfs 0.077 af
Primary=1.20 cfs 0.077 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.077 af Average Runoff Depth = 0.49"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

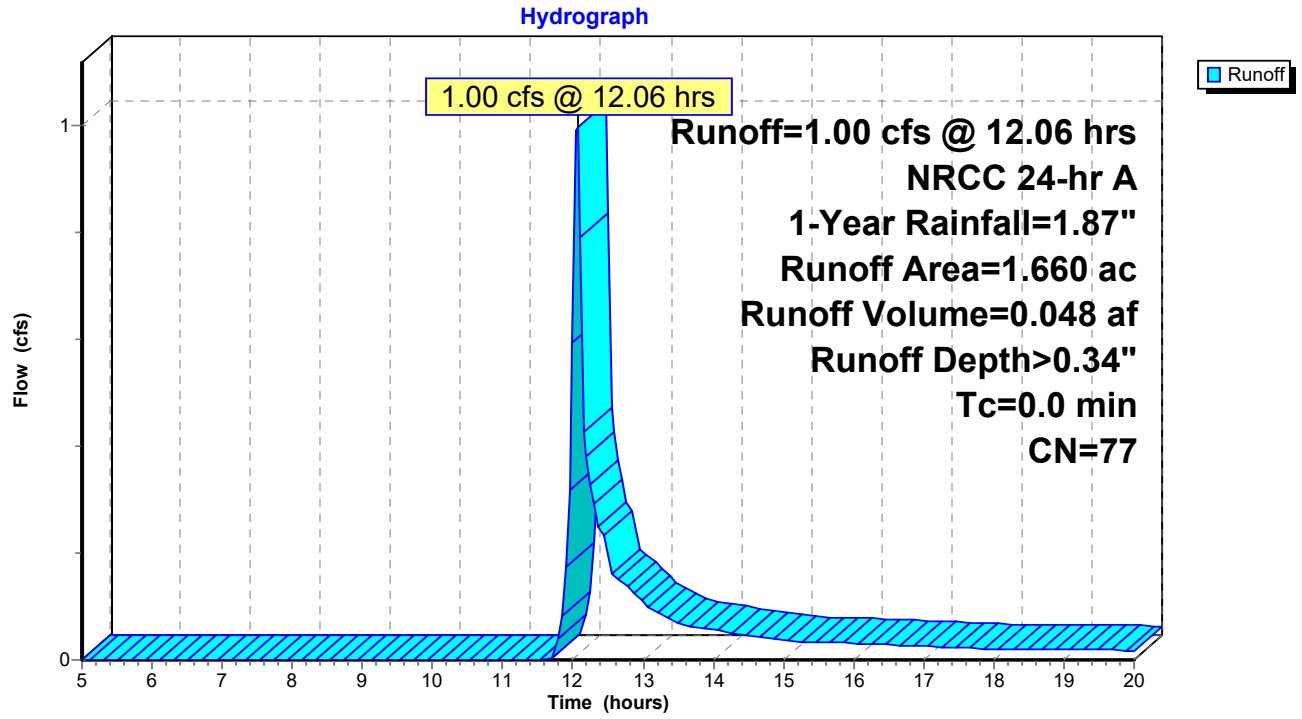
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 1.00 cfs @ 12.06 hrs, Volume= 0.048 af, Depth> 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.87"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

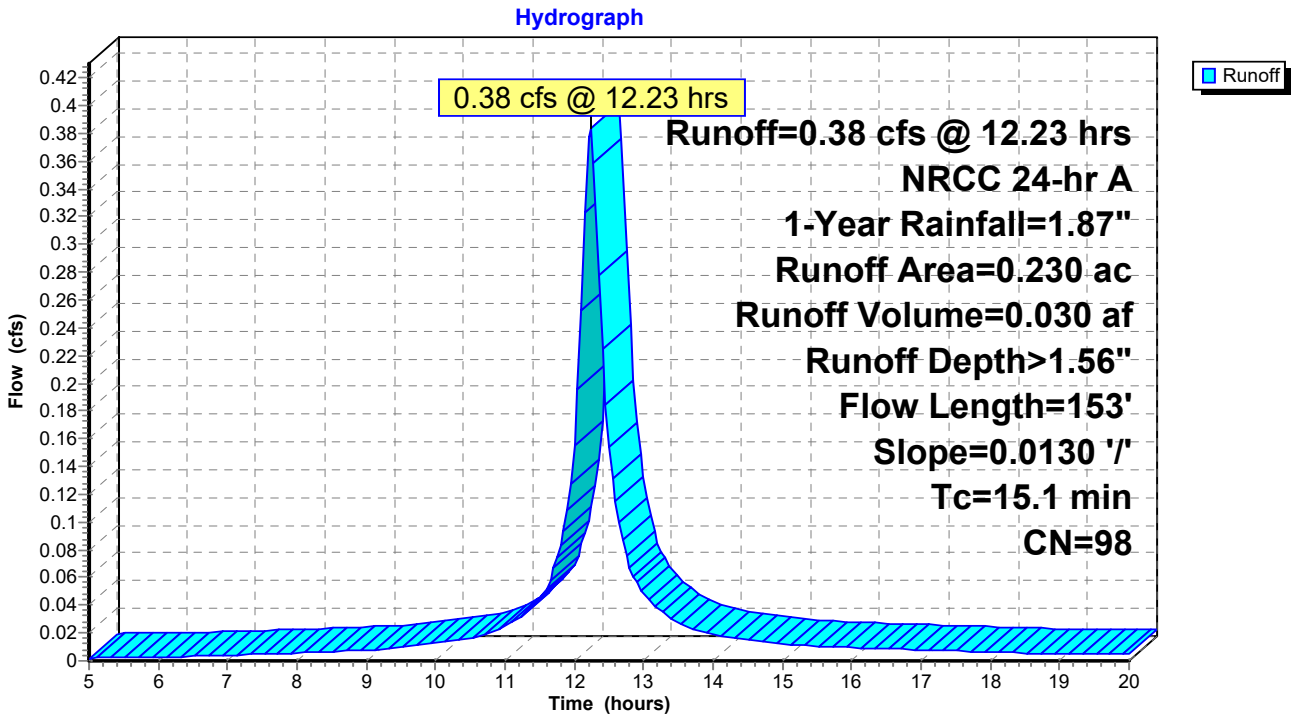
Runoff = 0.38 cfs @ 12.23 hrs, Volume= 0.030 af, Depth> 1.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



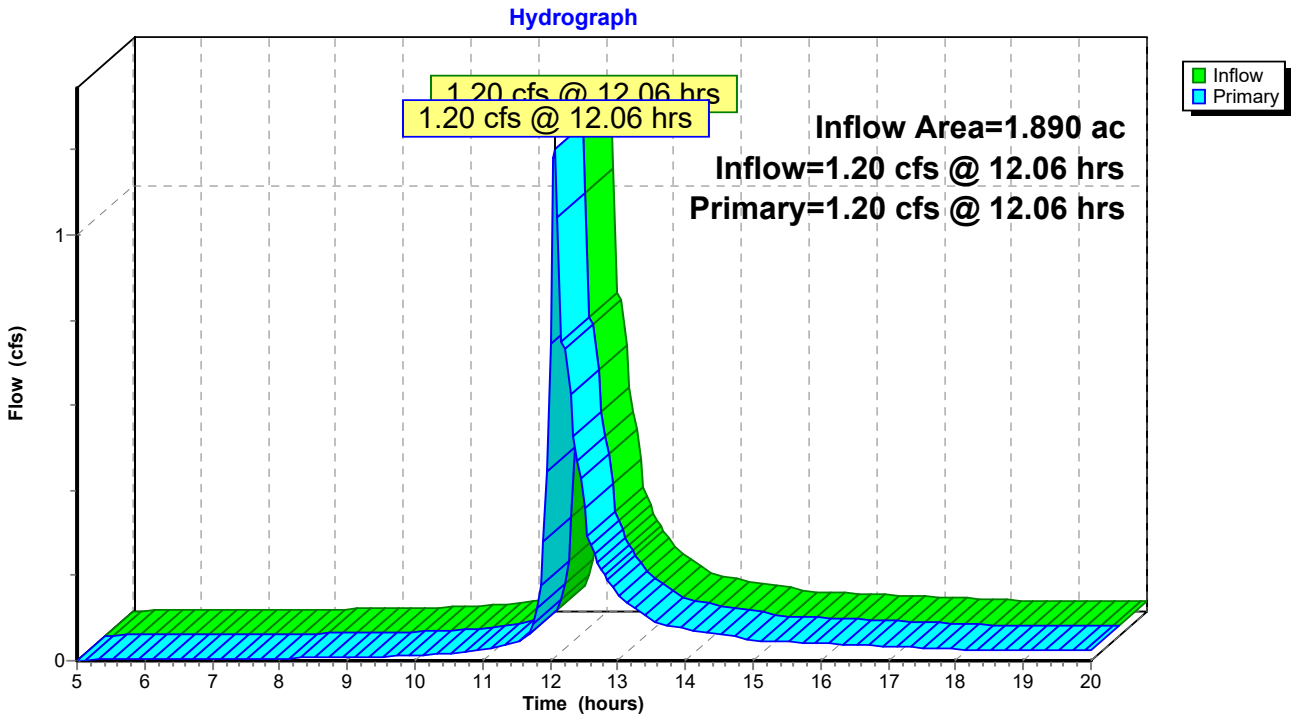
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 0.49" for 1-Year event
Inflow = 1.20 cfs @ 12.06 hrs, Volume= 0.077 af
Primary = 1.20 cfs @ 12.06 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>0.79"
Tc=0.0 min CN=77 Runoff=2.47 cfs 0.110 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>2.32"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=0.56 cfs 0.045 af

Link 5L: Offsite/Pond Pre Inflow=2.77 cfs 0.154 af
Primary=2.77 cfs 0.154 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.154 af Average Runoff Depth = 0.98"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

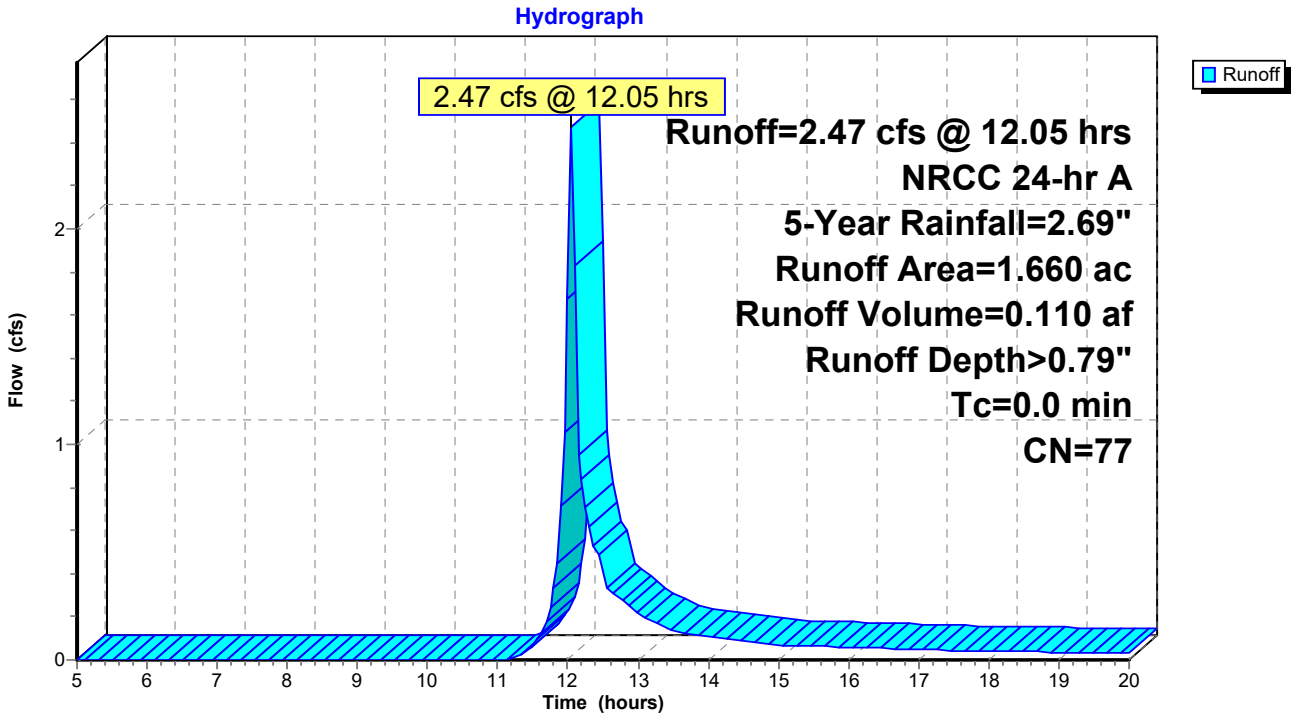
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 2.47 cfs @ 12.05 hrs, Volume= 0.110 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 5-Year Rainfall=2.69"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

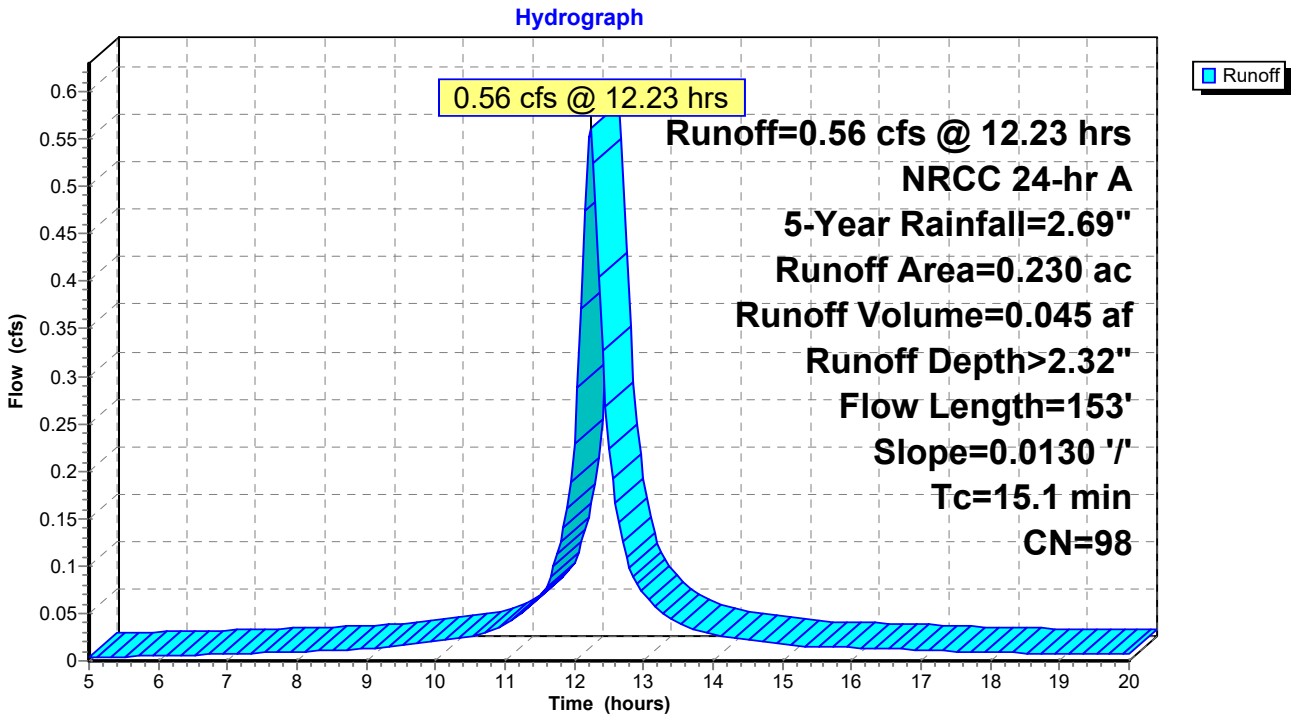
Runoff = 0.56 cfs @ 12.23 hrs, Volume= 0.045 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 5-Year Rainfall=2.69"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



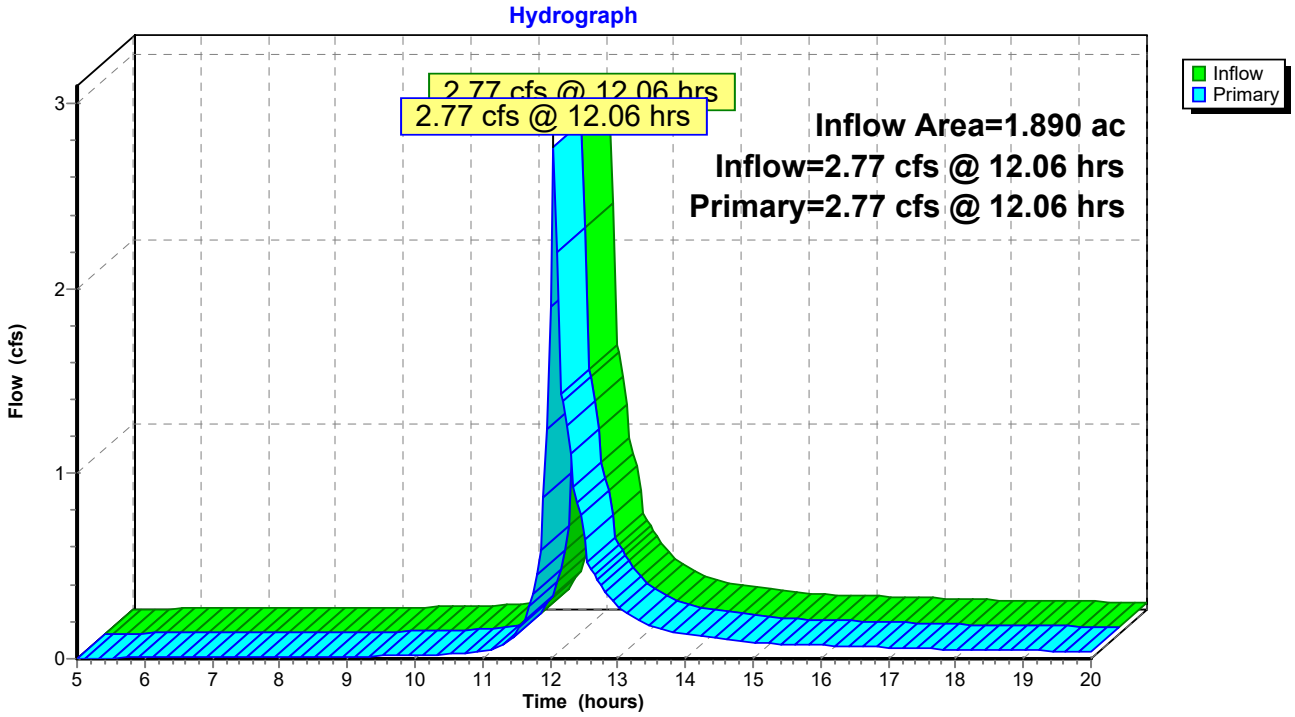
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 0.98" for 5-Year event
Inflow = 2.77 cfs @ 12.06 hrs, Volume= 0.154 af
Primary = 2.77 cfs @ 12.06 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>1.08"
Tc=0.0 min CN=77 Runoff=3.39 cfs 0.150 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>2.74"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=0.66 cfs 0.053 af

Link 5L: Offsite/Pond Pre Inflow=3.74 cfs 0.202 af
Primary=3.74 cfs 0.202 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.202 af Average Runoff Depth = 1.29"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

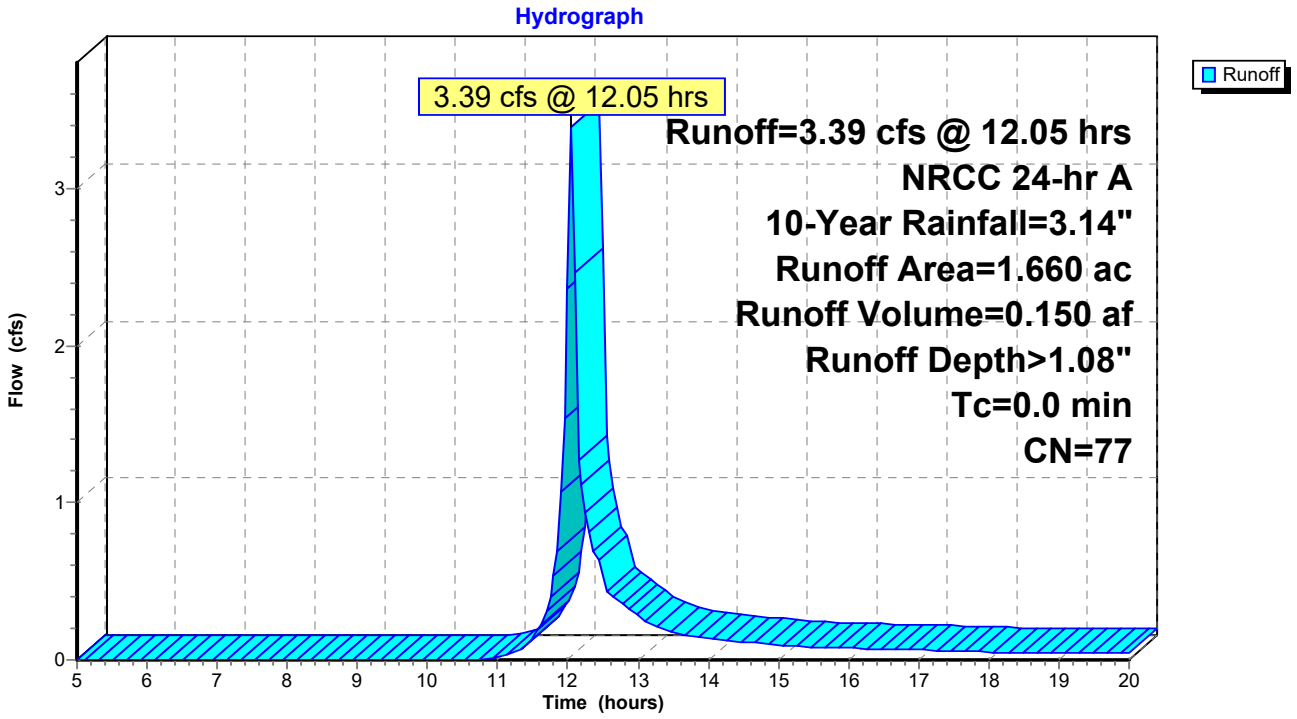
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 3.39 cfs @ 12.05 hrs, Volume= 0.150 af, Depth> 1.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

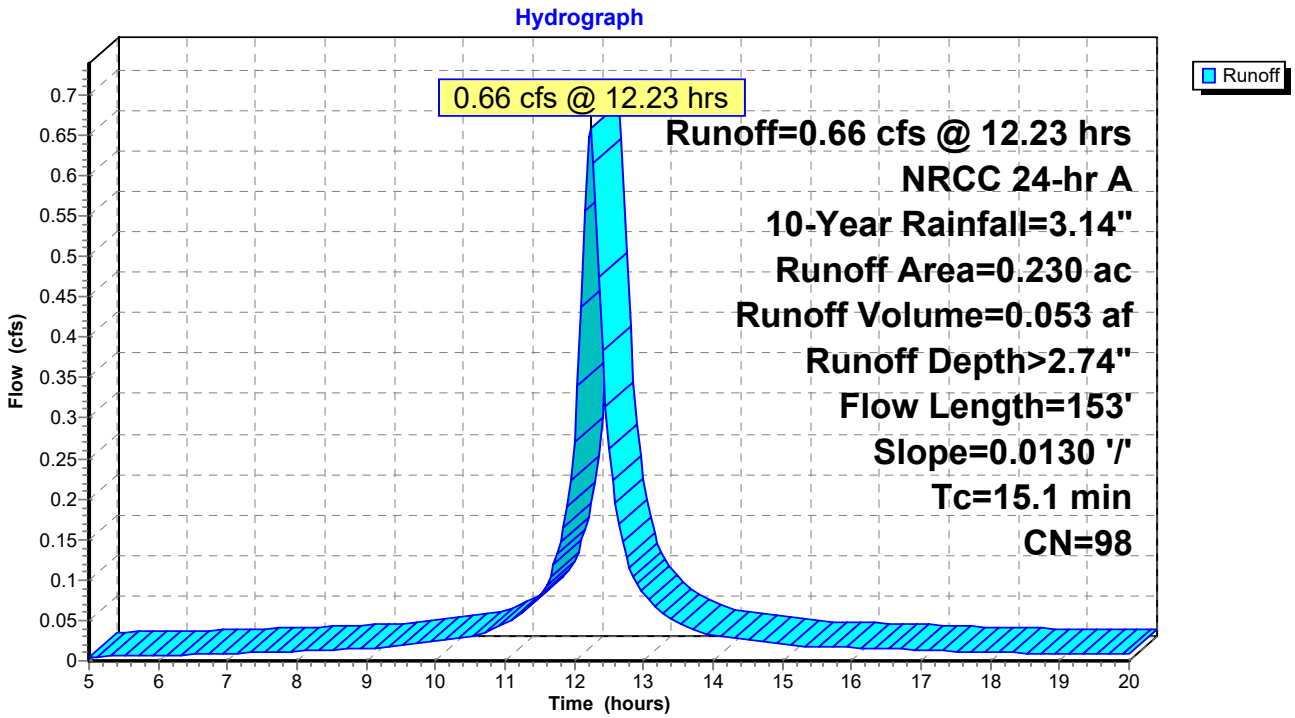
Runoff = 0.66 cfs @ 12.23 hrs, Volume= 0.053 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



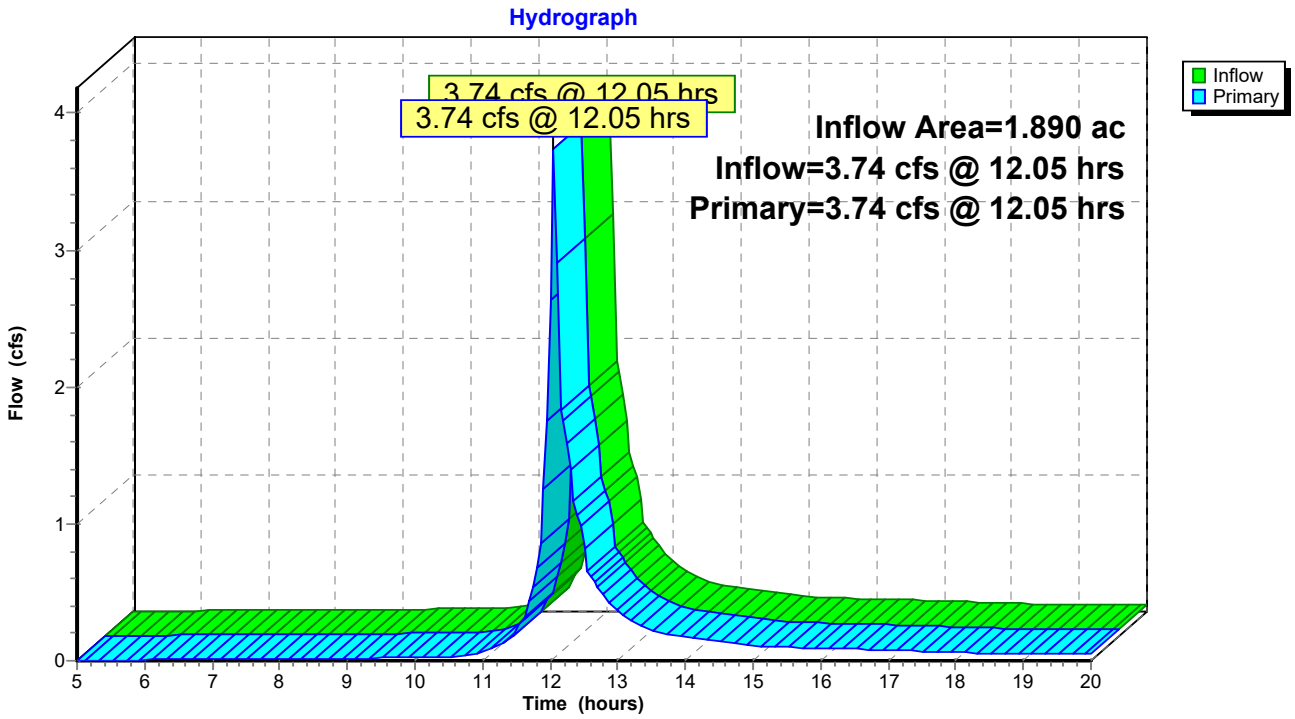
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 1.29" for 10-Year event
Inflow = 3.74 cfs @ 12.05 hrs, Volume= 0.202 af
Primary = 3.74 cfs @ 12.05 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>1.57"
Tc=0.0 min CN=77 Runoff=4.92 cfs 0.218 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>3.39"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=0.81 cfs 0.065 af

Link 5L: Offsite/Pond Pre Inflow=5.34 cfs 0.283 af
Primary=5.34 cfs 0.283 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.283 af Average Runoff Depth = 1.80"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

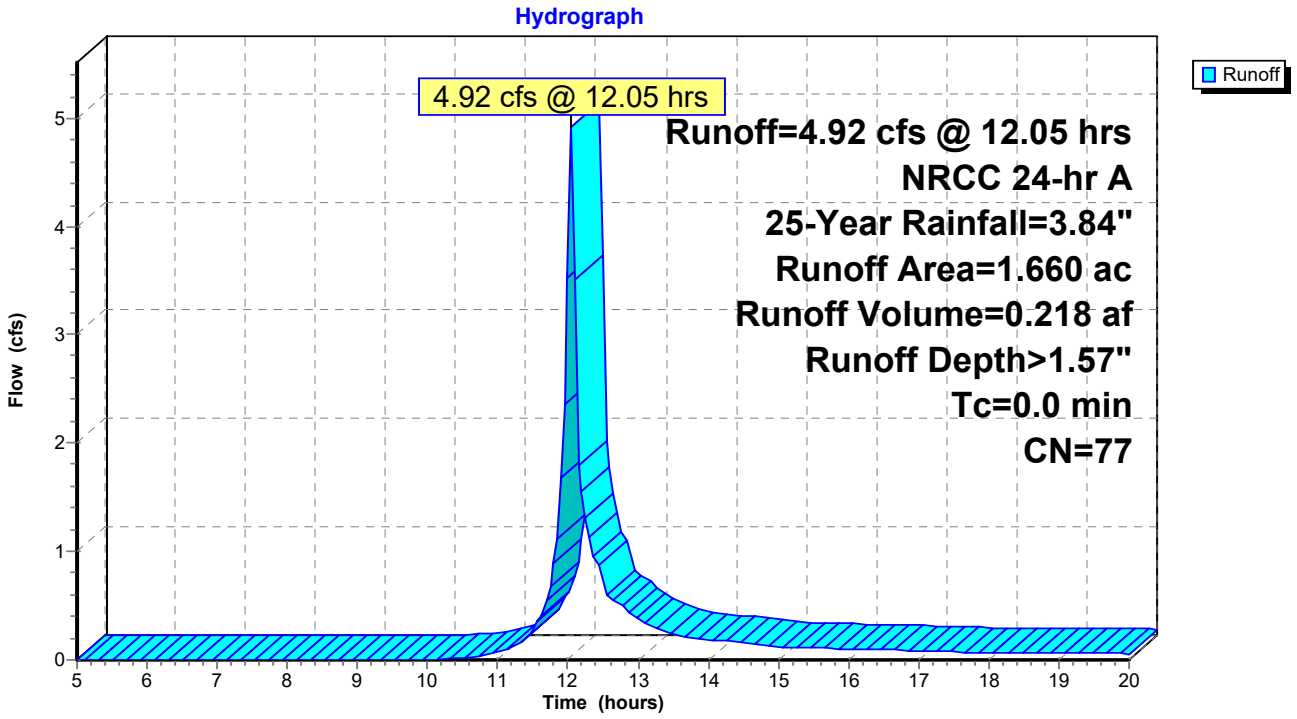
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 4.92 cfs @ 12.05 hrs, Volume= 0.218 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-Year Rainfall=3.84"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

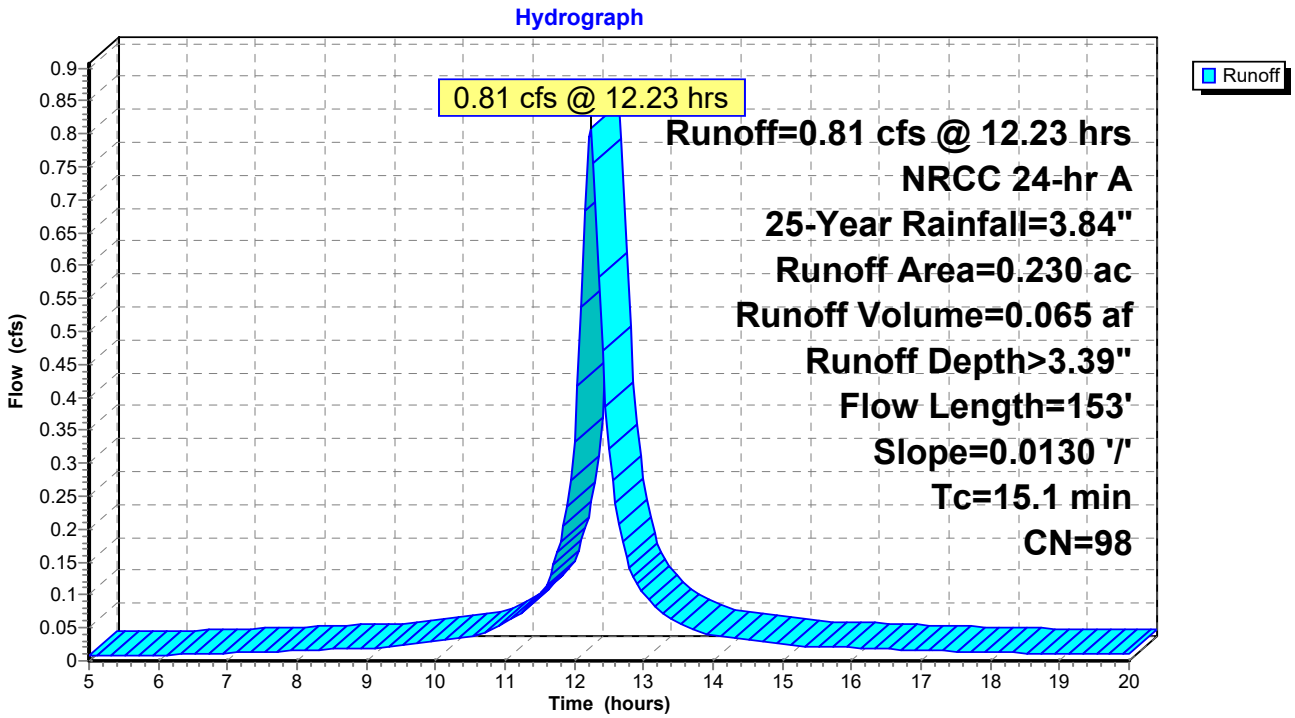
Runoff = 0.81 cfs @ 12.23 hrs, Volume= 0.065 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



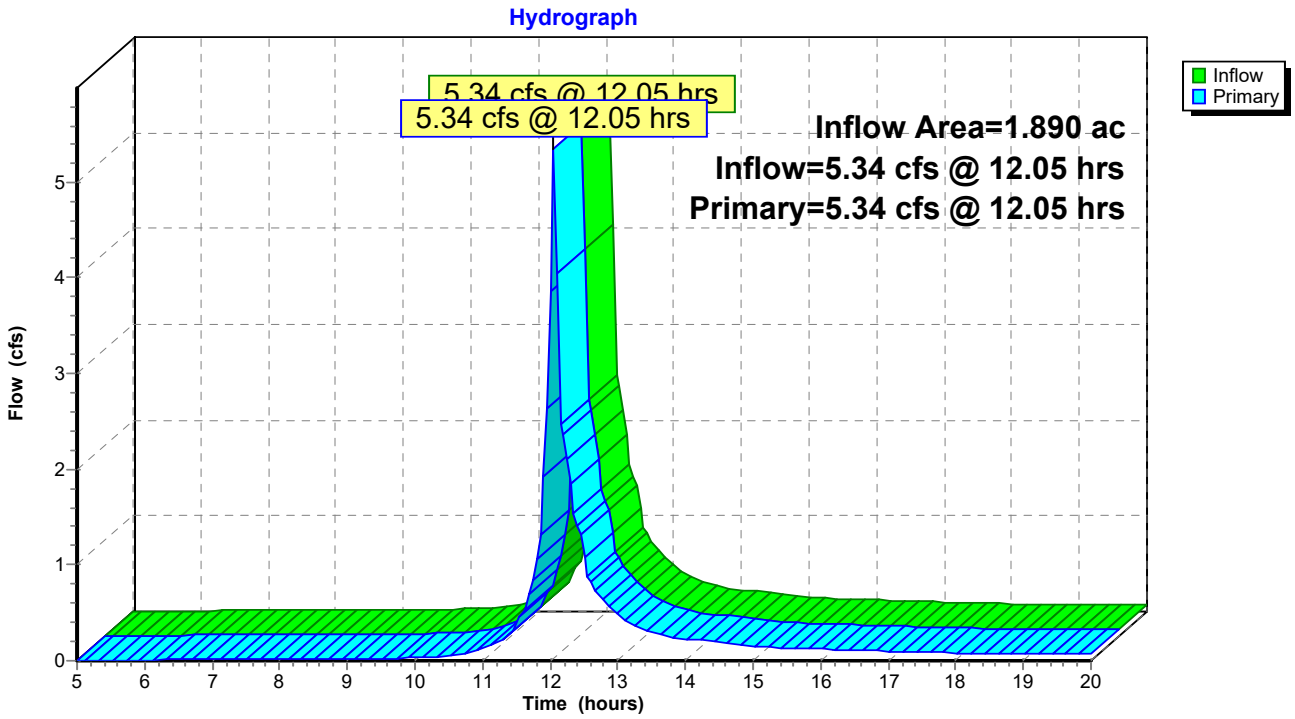
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 1.80" for 25-Year event
Inflow = 5.34 cfs @ 12.05 hrs, Volume= 0.283 af
Primary = 5.34 cfs @ 12.05 hrs, Volume= 0.283 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>2.05"
Tc=0.0 min CN=77 Runoff=6.39 cfs 0.284 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>3.98"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=0.95 cfs 0.076 af

Link 5L: Offsite/Pond Pre Inflow=6.88 cfs 0.361 af
Primary=6.88 cfs 0.361 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.361 af Average Runoff Depth = 2.29"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

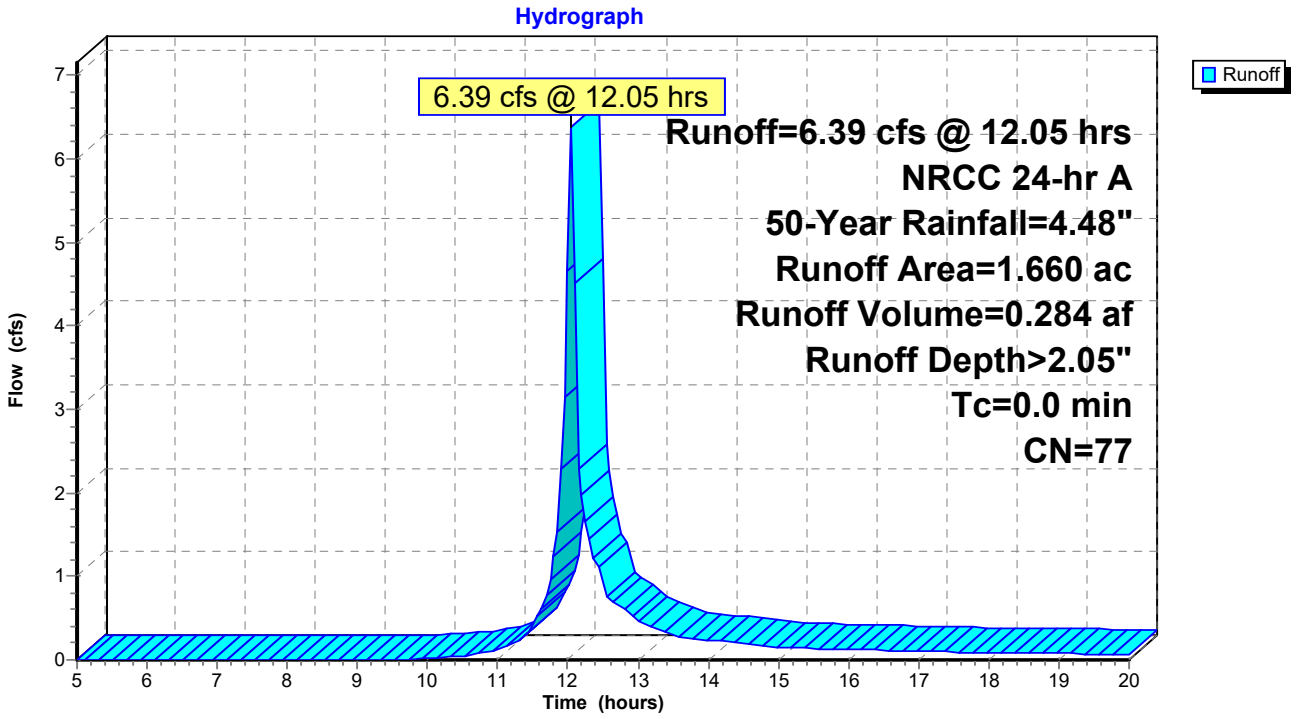
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 6.39 cfs @ 12.05 hrs, Volume= 0.284 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-Year Rainfall=4.48"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

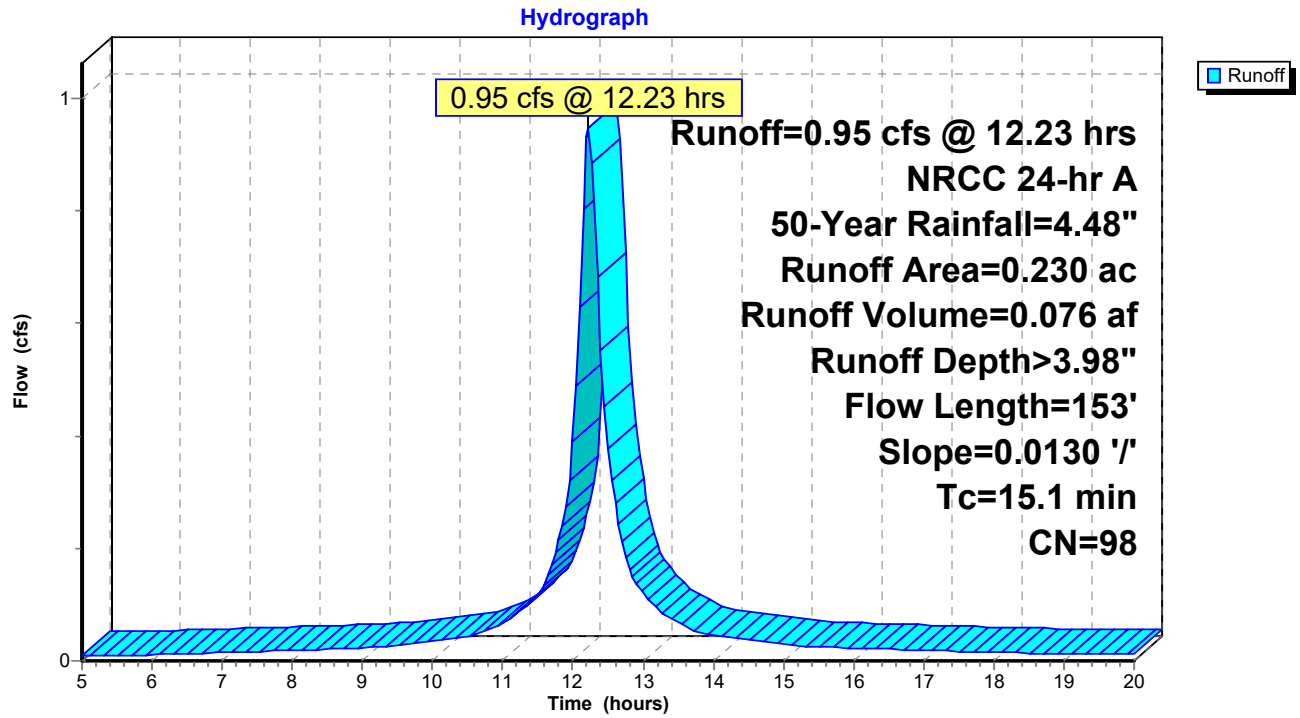
Runoff = 0.95 cfs @ 12.23 hrs, Volume= 0.076 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-Year Rainfall=4.48"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



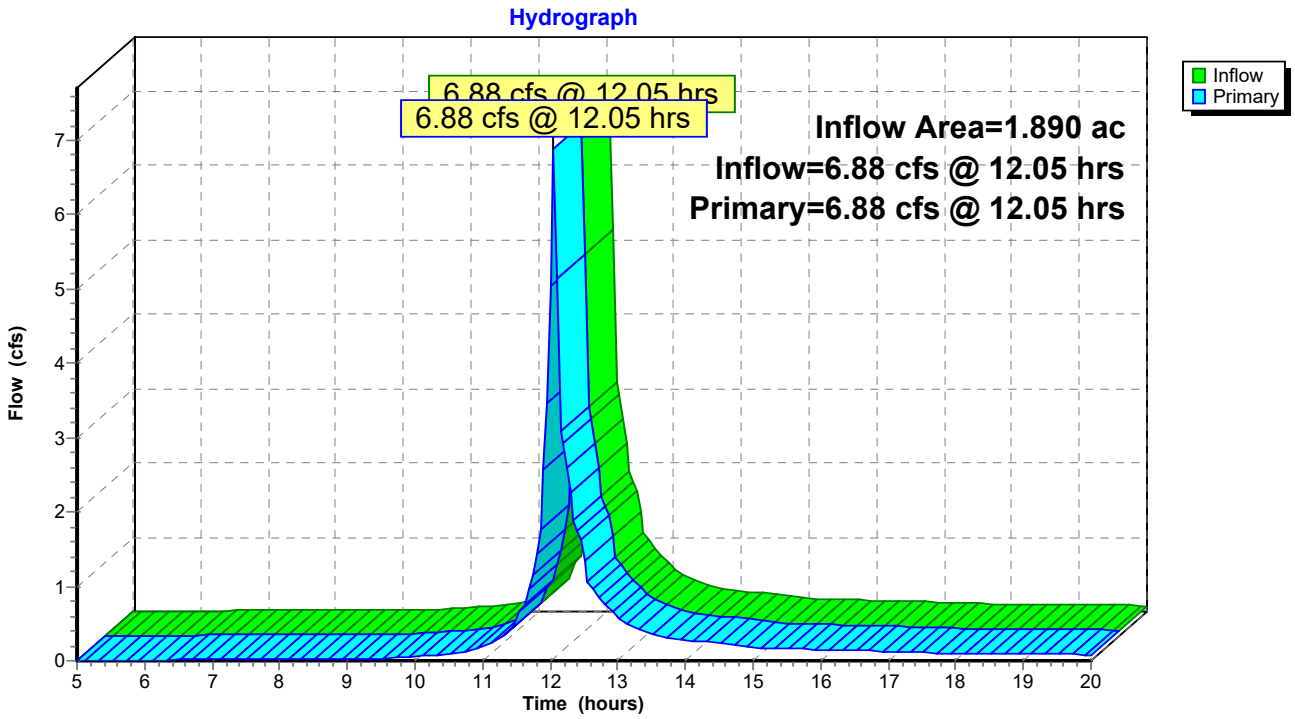
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 2.29" for 50-Year event
Inflow = 6.88 cfs @ 12.05 hrs, Volume= 0.361 af
Primary = 6.88 cfs @ 12.05 hrs, Volume= 0.361 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: New Driveway and Runoff Area=1.660 ac 0.00% Impervious Runoff Depth>2.65"
Tc=0.0 min CN=77 Runoff=8.16 cfs 0.366 af

Subcatchment 2S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth>4.67"
Flow Length=153' Slope=0.0130 '/' Tc=15.1 min CN=98 Runoff=1.11 cfs 0.090 af

Link 5L: Offsite/Pond Pre Inflow=8.73 cfs 0.456 af
Primary=8.73 cfs 0.456 af

Total Runoff Area = 1.890 ac Runoff Volume = 0.456 af Average Runoff Depth = 2.89"
87.83% Pervious = 1.660 ac 12.17% Impervious = 0.230 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 1S: New Driveway and Parking Expansion

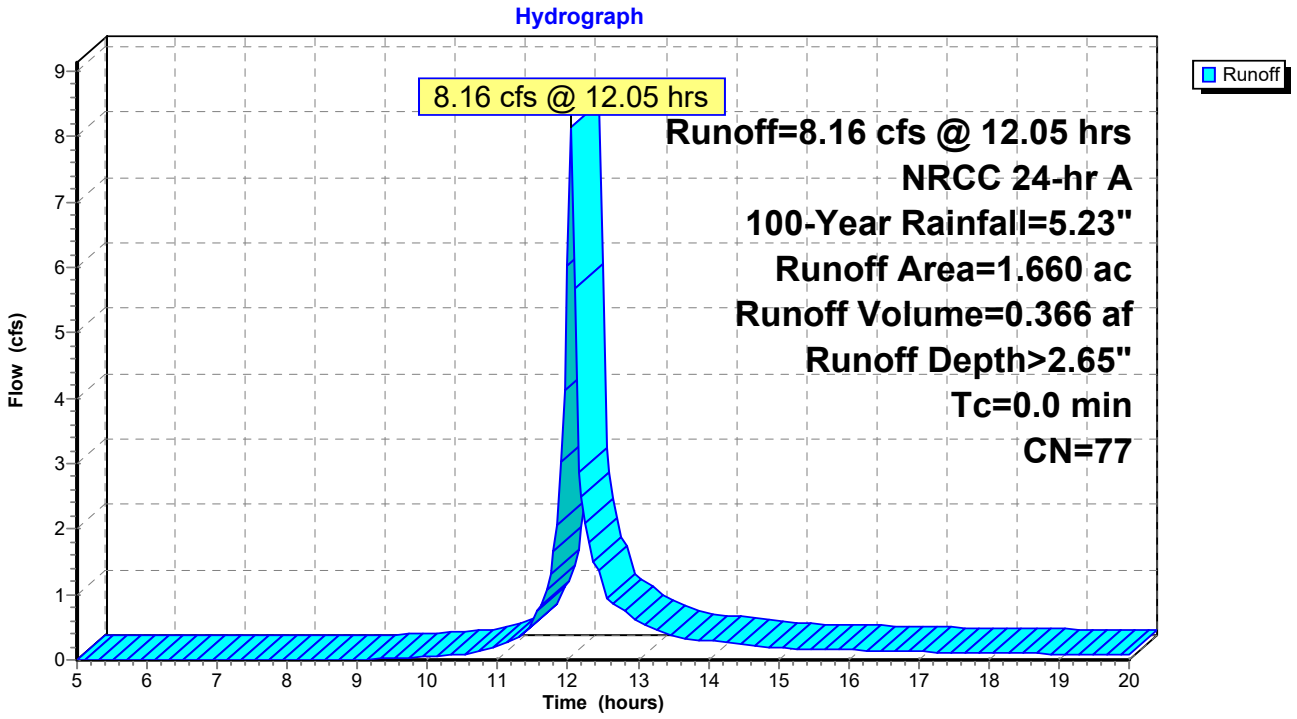
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 8.16 cfs @ 12.05 hrs, Volume= 0.366 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.23"

Area (ac)	CN	Description
1.660	77	Brush, Fair, HSG D
1.660		100.00% Pervious Area

Subcatchment 1S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 2S: Redevelopment Area - Parking to Building

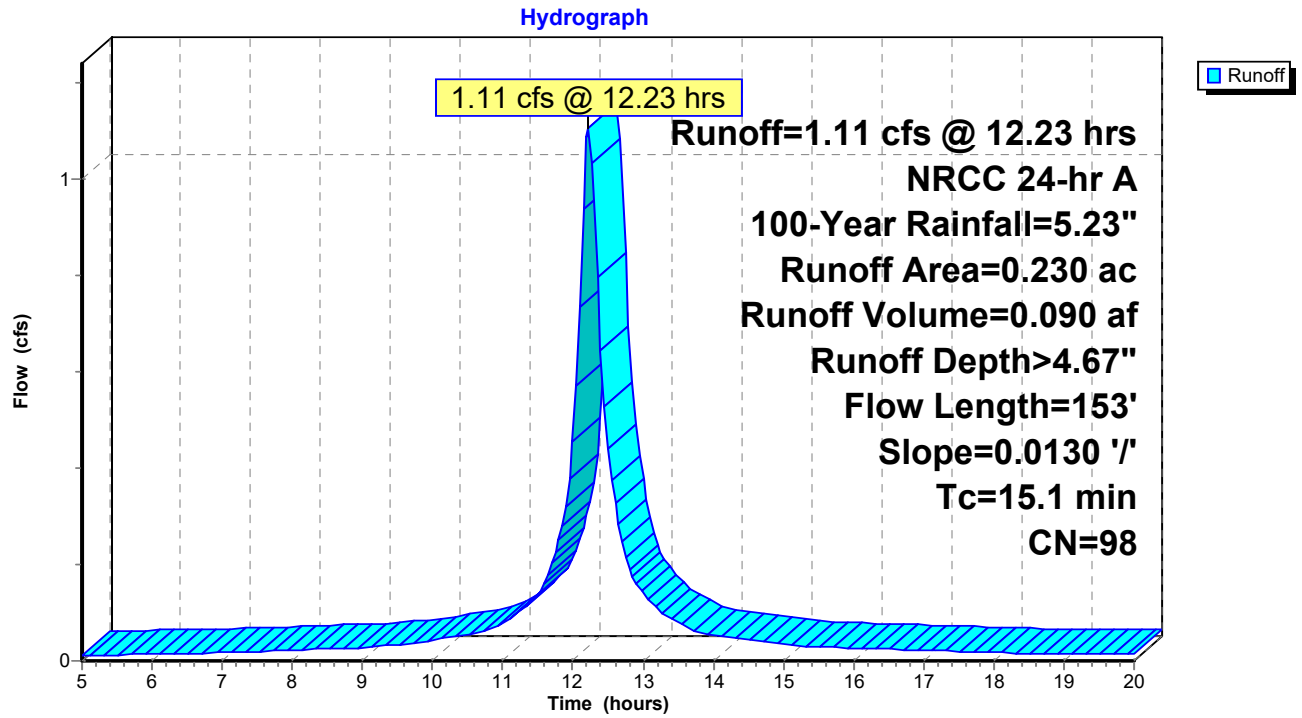
Runoff = 1.11 cfs @ 12.23 hrs, Volume= 0.090 af, Depth> 4.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0130	0.12		**Sheet Flow, Overland sheet flow to pond** Grass: Short n= 0.150 P2= 2.20"
1.1	53	0.0130	0.80		**Shallow Concentrated Flow, Overland, cton.** Short Grass Pasture Kv= 7.0 fps
15.1	153	Total			

Subcatchment 2S: Redevelopment Area - Parking to Building



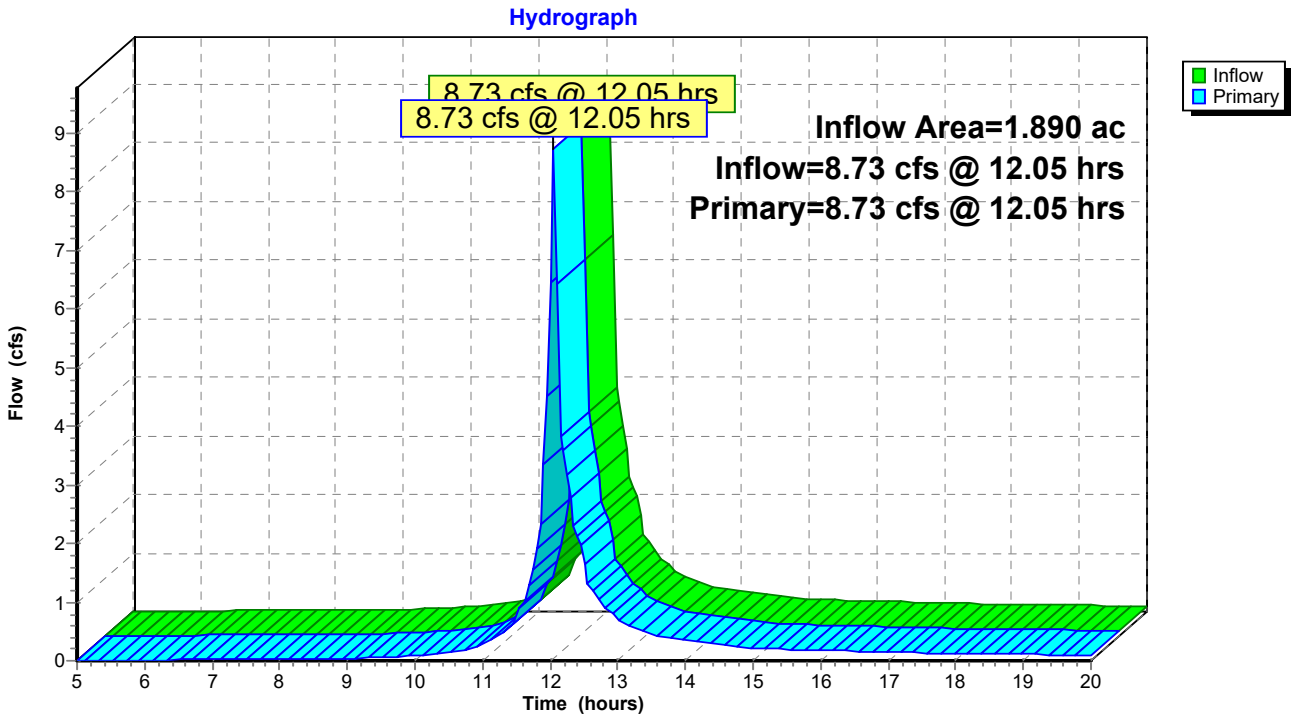
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 5L: Offsite/Pond Pre

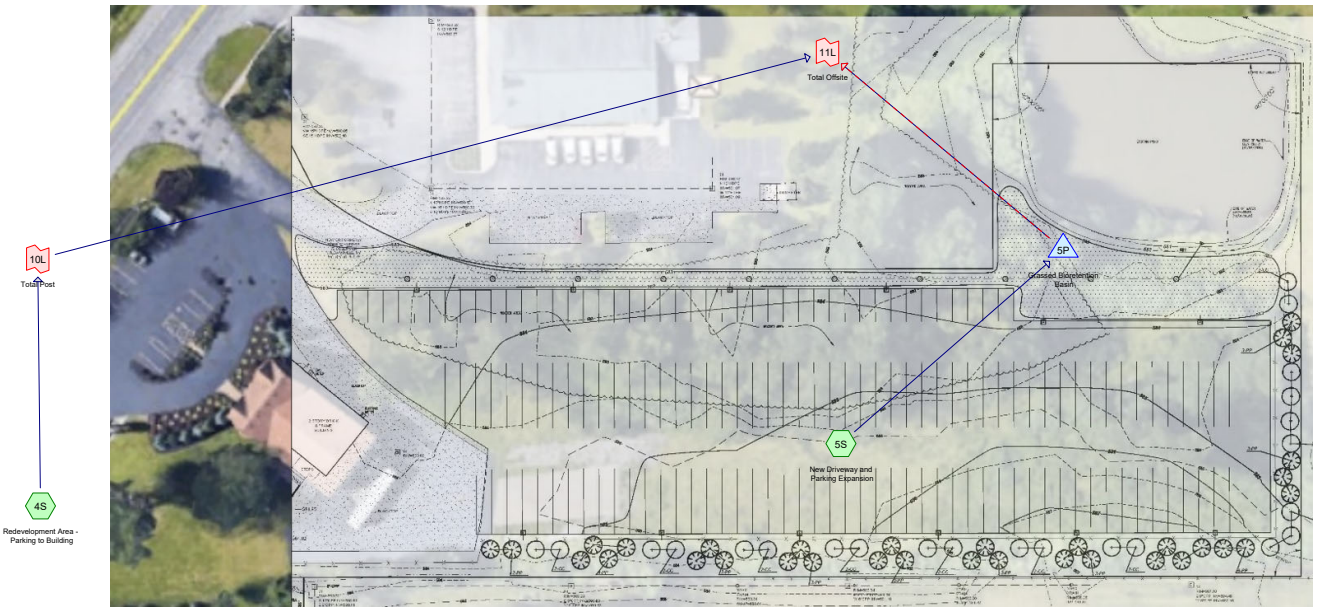
Inflow Area = 1.890 ac, 12.17% Impervious, Inflow Depth > 2.89" for 100-Year event
Inflow = 8.73 cfs @ 12.05 hrs, Volume= 0.456 af
Primary = 8.73 cfs @ 12.05 hrs, Volume= 0.456 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: Offsite/Pond Pre



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)



Subcat Reach Pond Link

Routing Diagram for West Herr Millersport Post
Prepared by Nussbaumer & Clarke, Inc., Printed 11/15/2020
HydroCAD® 10.00-26 s/n 04121 © 2020 HydroCAD Software Solutions LLC

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 7041 NY Erie

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.640	98	Paved parking, HSG D (5S)
0.230	98	Unconnected pavement, HSG D (4S)
1.870	**98**	**TOTAL AREA**

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
1.870	HSG D	4S, 5S
0.000	Other	
1.870		**TOTAL AREA**

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.640	0.000	1.640	Paved parking	5S
0.000	0.000	0.000	0.230	0.000	0.230	Unconnected pavement	4S
0.000	**0.000**	**0.000**	**1.870**	**0.000**	**1.870**	**TOTAL AREA**	

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	5P	580.75	580.50	23.0	0.0109	0.013	10.0	0.0	0.0

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=1.65"
Tc=5.0 min CN=98 Runoff=0.55 cfs 0.032 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=1.65"
Tc=5.0 min CN=98 Runoff=3.89 cfs 0.225 af

Pond 5P: Grassed Bioretention Basin Peak Elev=582.58' Storage=9,796 cf Inflow=3.89 cfs 0.225 af
Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Link 10L: Total Post Inflow=0.55 cfs 0.032 af
Primary=0.55 cfs 0.032 af

Link 11L: Total Offsite Inflow=0.55 cfs 0.032 af
Primary=0.55 cfs 0.032 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.256 af Average Runoff Depth = 1.65"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

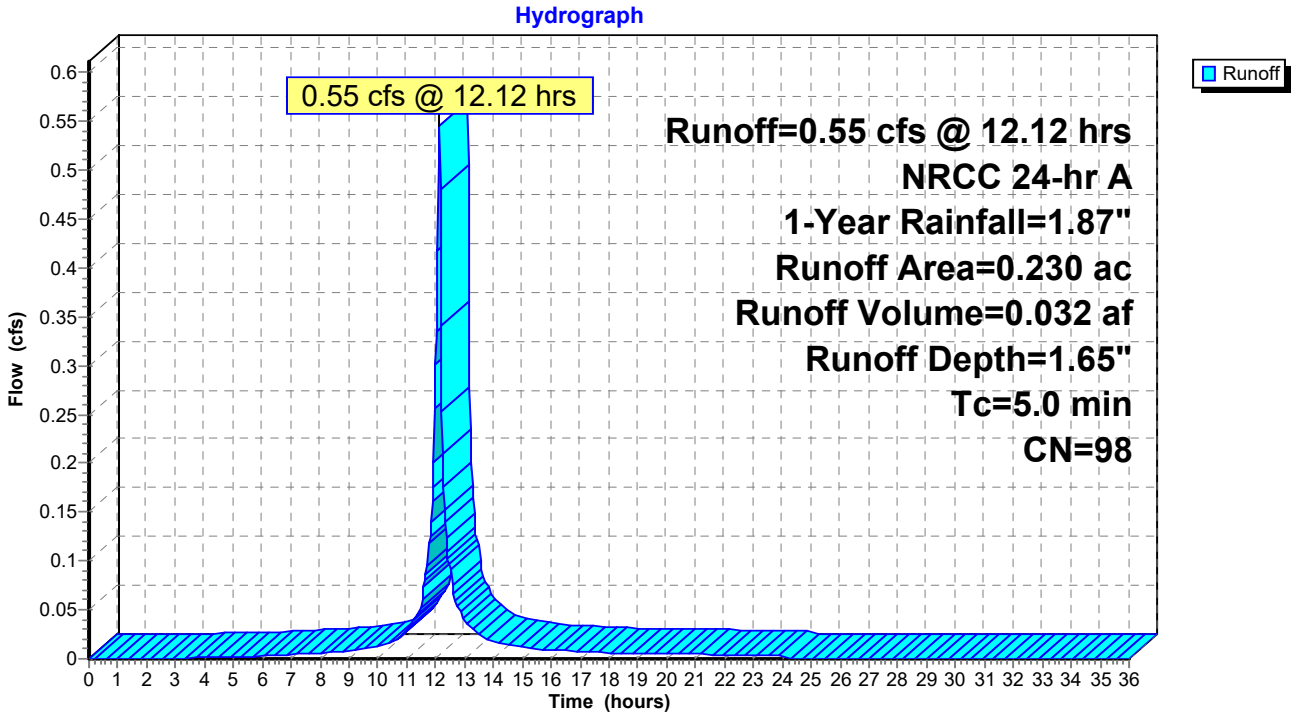
Runoff = 0.55 cfs @ 12.12 hrs, Volume= 0.032 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 1-Year Rainfall=1.87"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

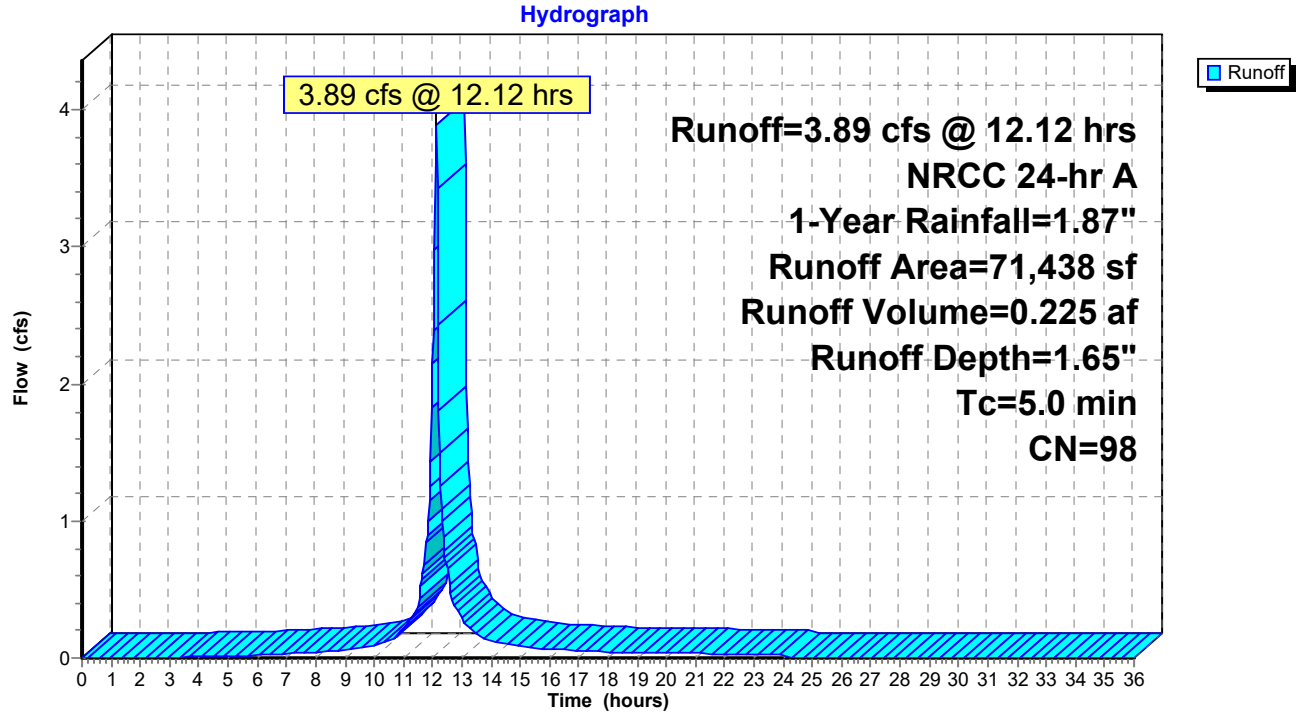
Runoff = 3.89 cfs @ 12.12 hrs, Volume= 0.225 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 1-Year Rainfall=1.87"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 1.65" for 1-Year event
Inflow = 3.89 cfs @ 12.12 hrs, Volume= 0.225 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 582.58' @ 24.30 hrs Surf.Area= 10,633 sf Storage= 9,796 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

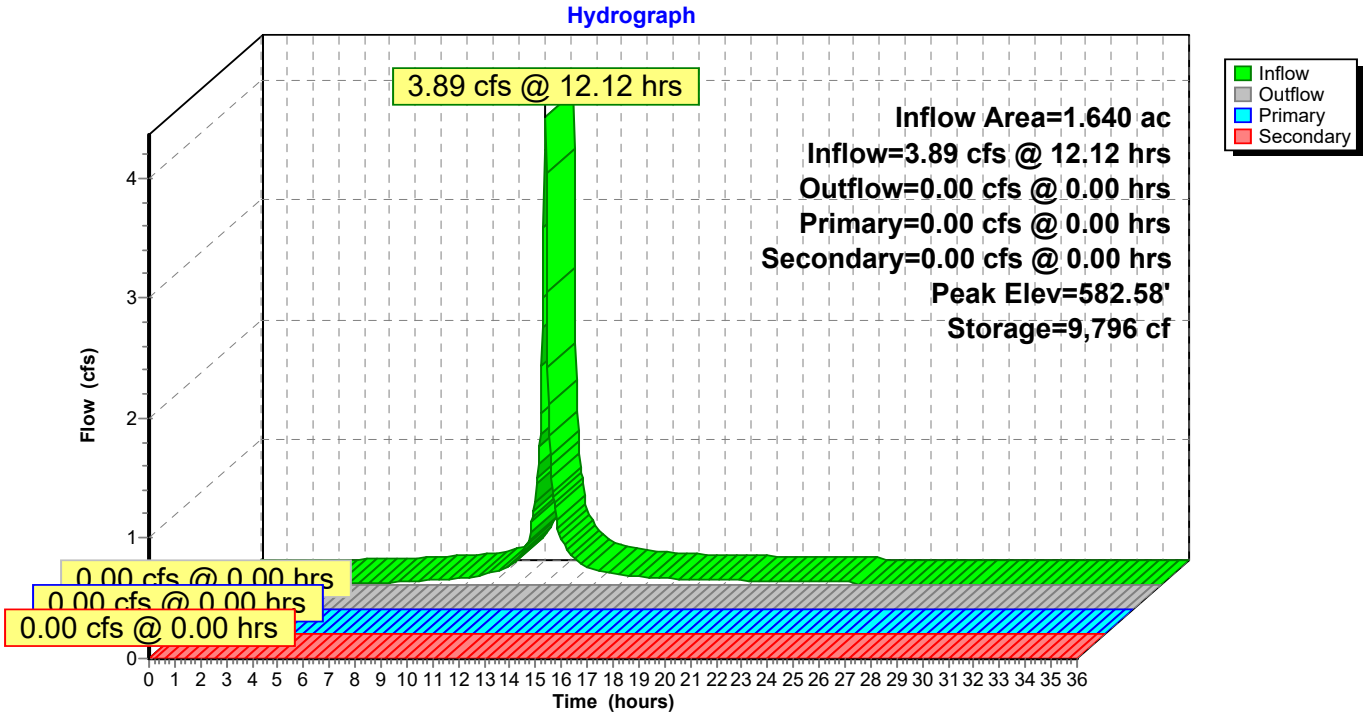
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=580.75' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=580.75' TW=0.00' (Dynamic Tailwater)
↑—**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**

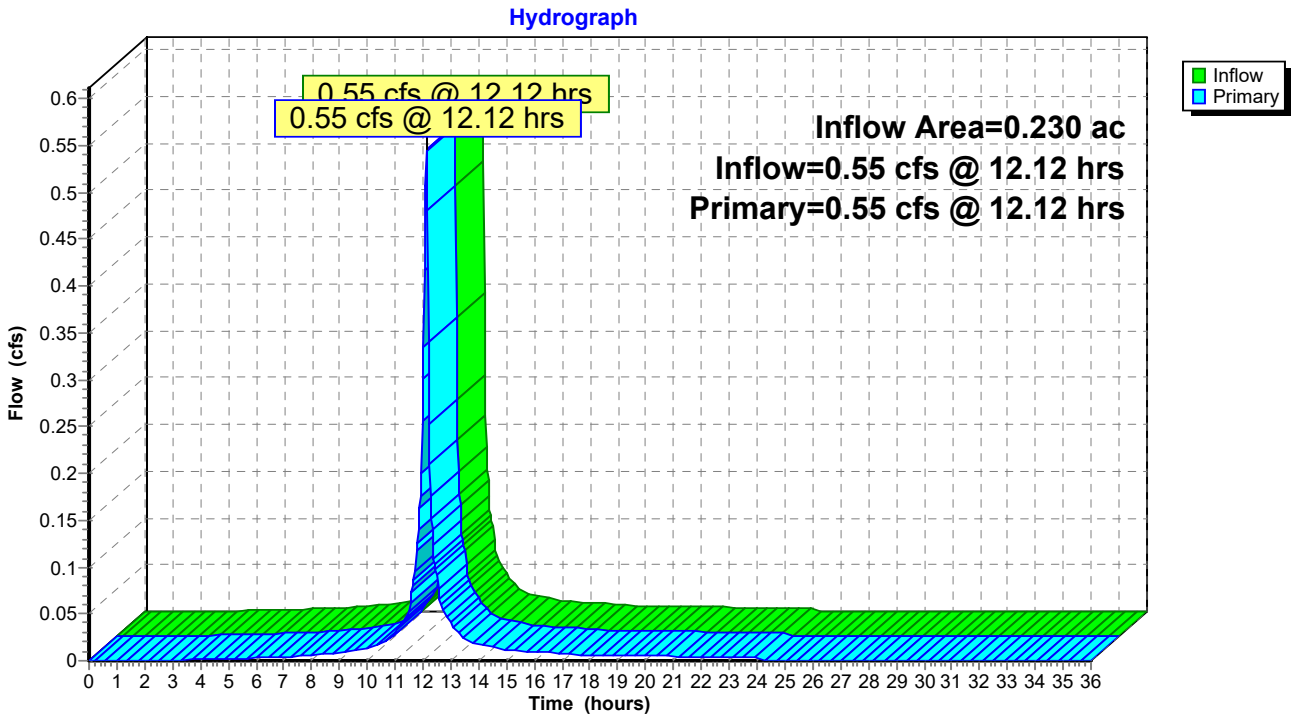
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 1.65" for 1-Year event
Inflow = 0.55 cfs @ 12.12 hrs, Volume= 0.032 af
Primary = 0.55 cfs @ 12.12 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



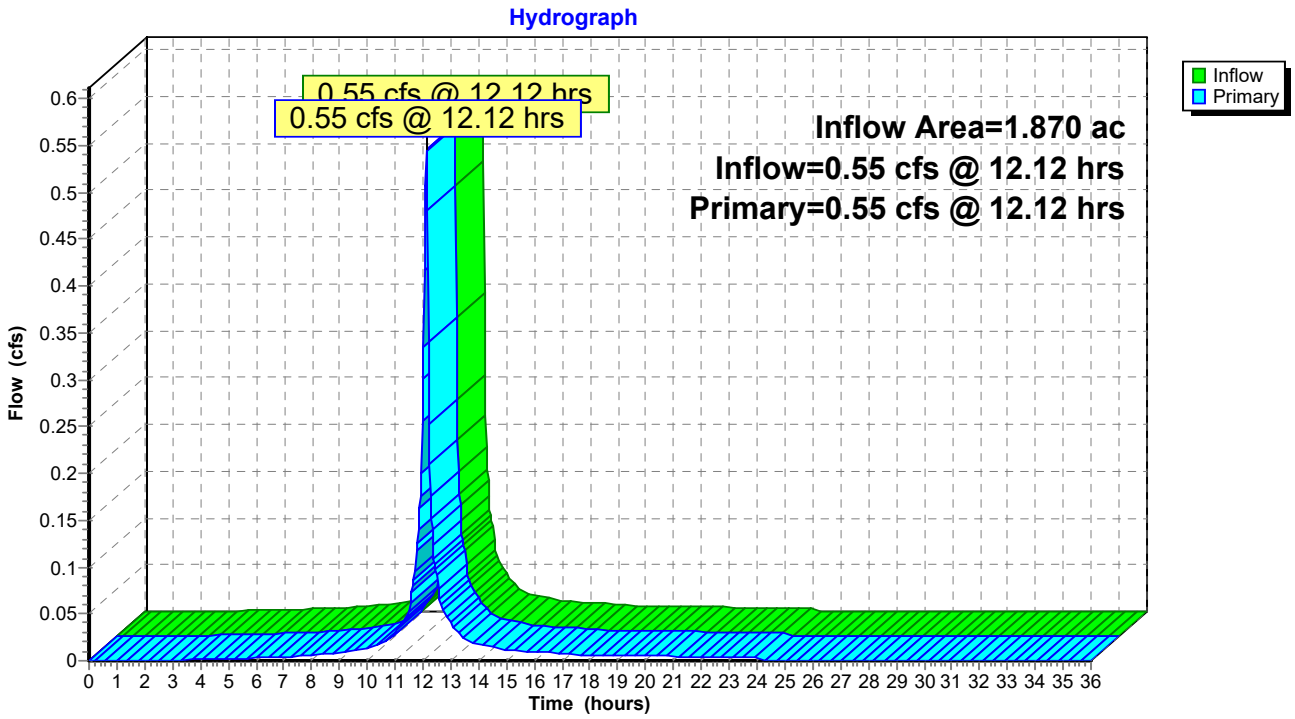
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 0.20" for 1-Year event
Inflow = 0.55 cfs @ 12.12 hrs, Volume= 0.032 af
Primary = 0.55 cfs @ 12.12 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=2.46"
Tc=5.0 min CN=98 Runoff=0.80 cfs 0.047 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=2.46"
Tc=5.0 min CN=98 Runoff=5.69 cfs 0.336 af

Pond 5P: Grassed Bioretention Basin Peak Elev=582.96' Storage=14,027 cf Inflow=5.69 cfs 0.336 af
Primary=0.05 cfs 0.016 af Secondary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.016 af

Link 10L: Total Post Inflow=0.80 cfs 0.047 af
Primary=0.80 cfs 0.047 af

Link 11L: Total Offsite Inflow=0.80 cfs 0.063 af
Primary=0.80 cfs 0.063 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.383 af Average Runoff Depth = 2.46"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

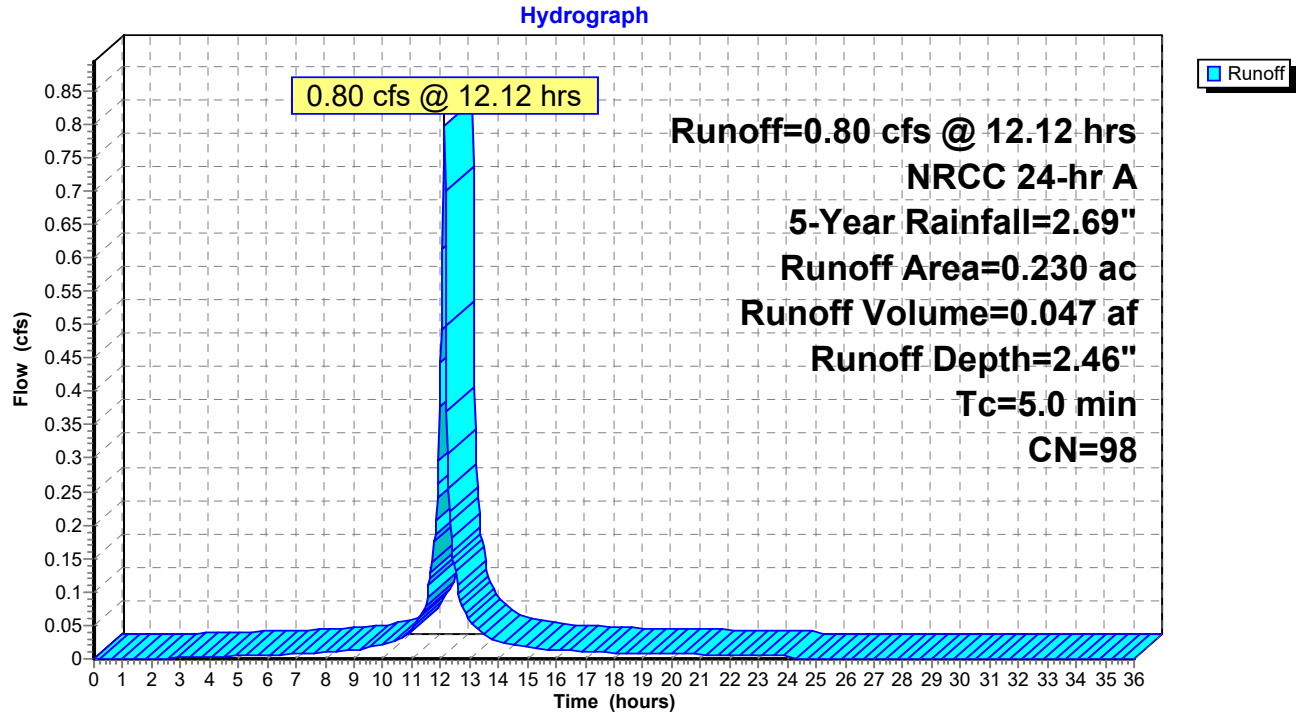
Runoff = 0.80 cfs @ 12.12 hrs, Volume= 0.047 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 5-Year Rainfall=2.69"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

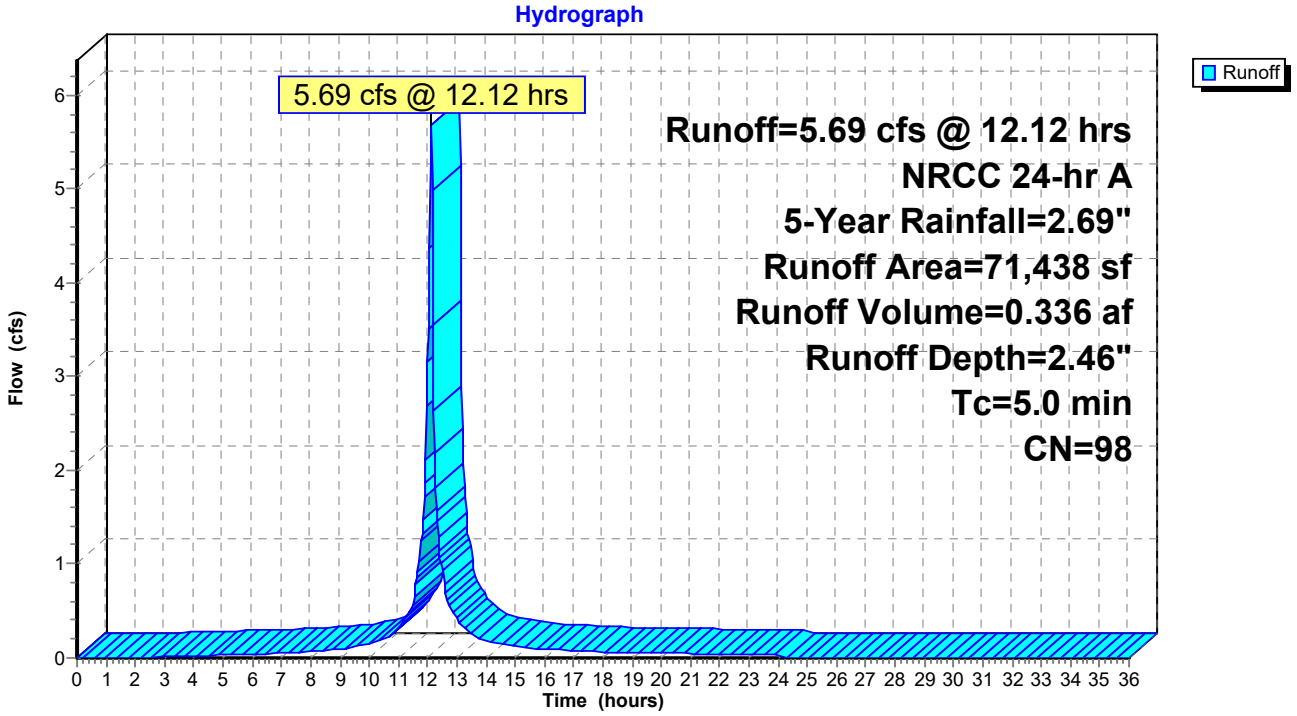
Runoff = 5.69 cfs @ 12.12 hrs, Volume= 0.336 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 5-Year Rainfall=2.69"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 2.46" for 5-Year event
Inflow = 5.69 cfs @ 12.12 hrs, Volume= 0.336 af
Outflow = 0.05 cfs @ 20.96 hrs, Volume= 0.016 af, Atten= 99%, Lag= 530.5 min
Primary = 0.05 cfs @ 20.96 hrs, Volume= 0.016 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 582.96' @ 20.96 hrs Surf.Area= 11,857 sf Storage= 14,027 cf

Plug-Flow detention time= 971.4 min calculated for 0.016 af (5% of inflow)
Center-of-Mass det. time= 575.5 min (1,333.2 - 757.7)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

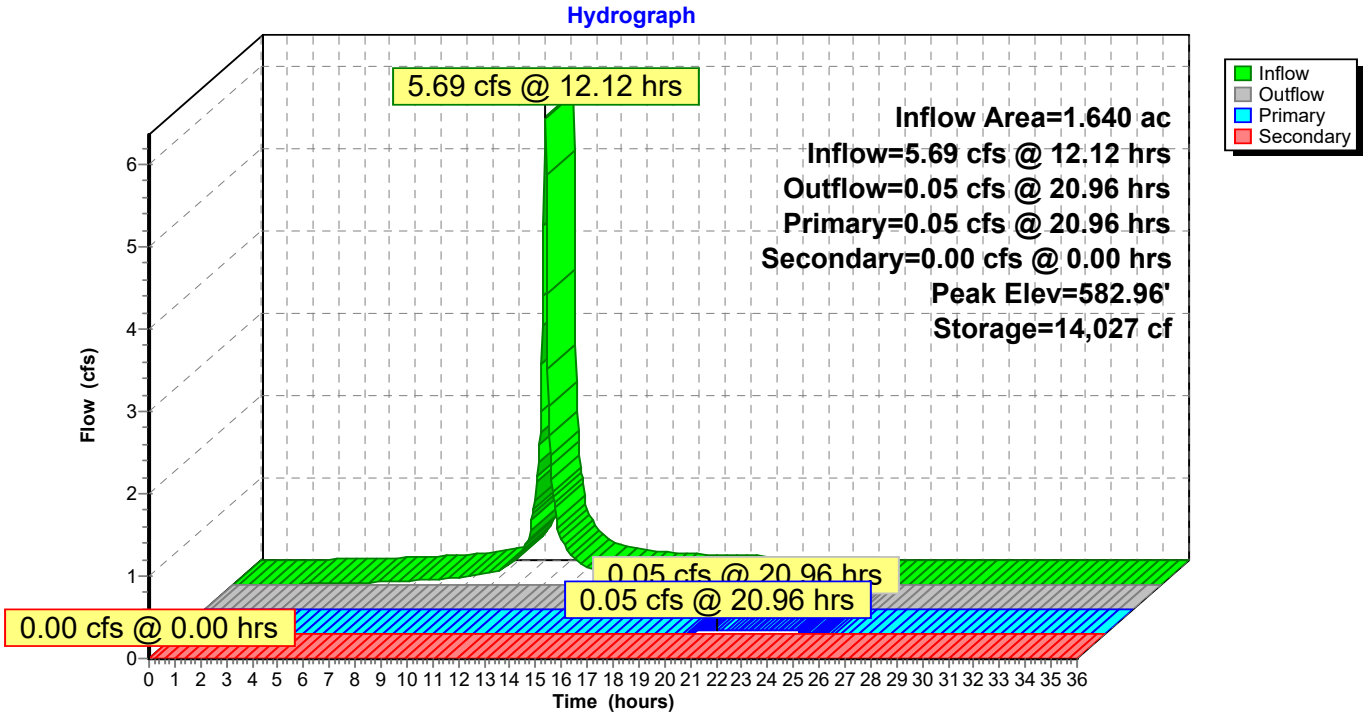
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.05 cfs @ 20.96 hrs HW=582.96' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.05 cfs of 2.77 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.05 cfs @ 0.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=580.75' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**

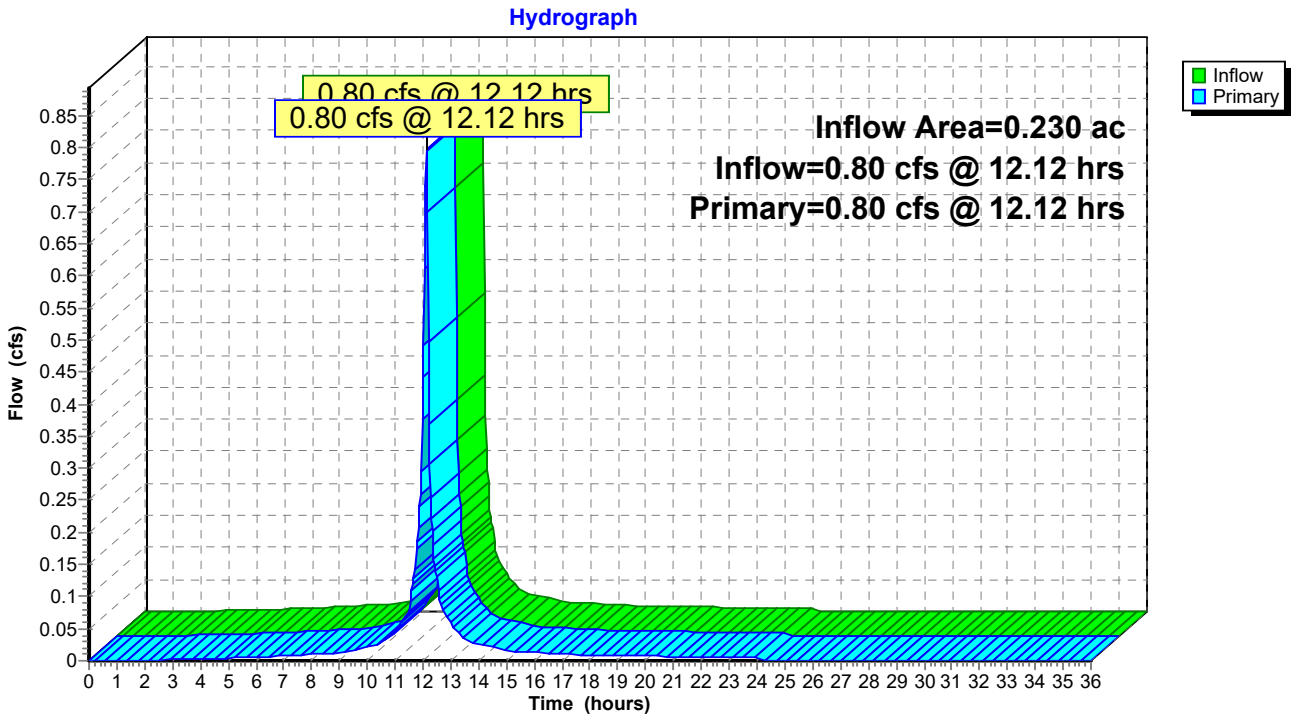
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 2.46" for 5-Year event
Inflow = 0.80 cfs @ 12.12 hrs, Volume= 0.047 af
Primary = 0.80 cfs @ 12.12 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



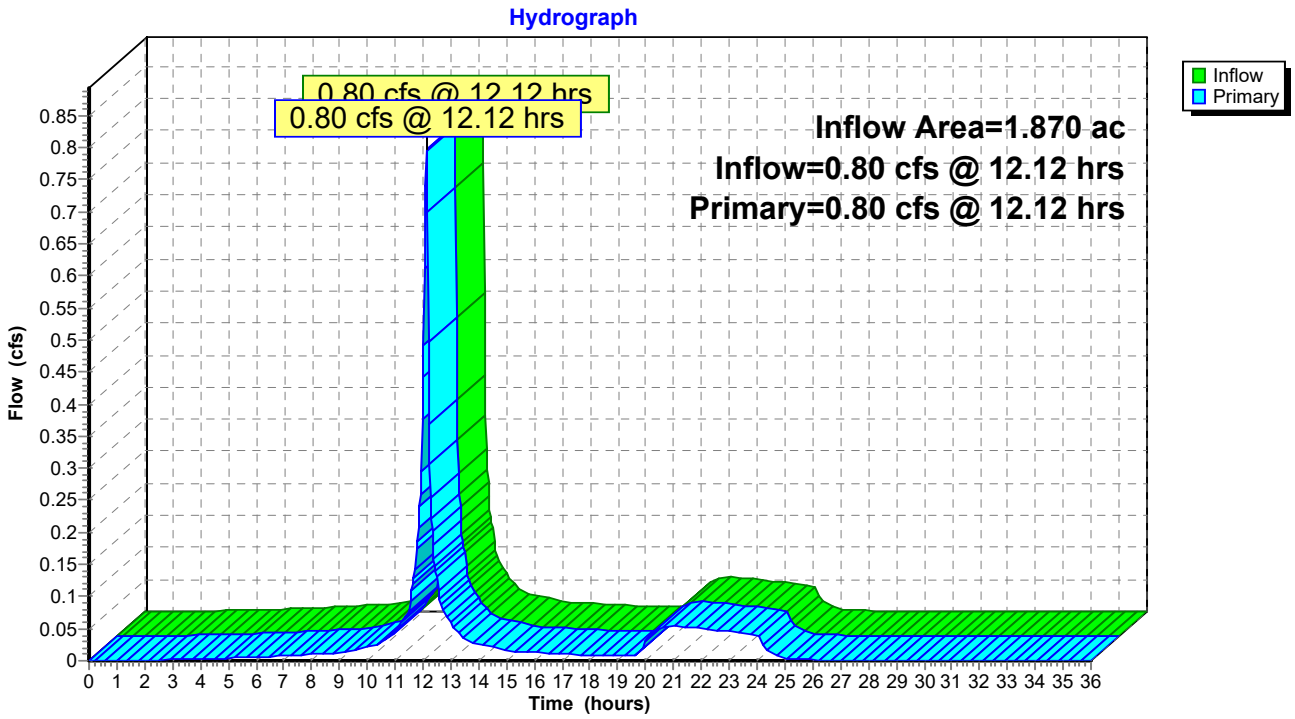
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 0.40" for 5-Year event
Inflow = 0.80 cfs @ 12.12 hrs, Volume= 0.063 af
Primary = 0.80 cfs @ 12.12 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=2.91"
Tc=5.0 min CN=98 Runoff=0.93 cfs 0.056 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=2.91"
Tc=5.0 min CN=98 Runoff=6.67 cfs 0.397 af

Pond 5P: Grassed Bioretention Basin Peak Elev=582.97' Storage=14,146 cf Inflow=6.67 cfs 0.397 af
Primary=0.21 cfs 0.077 af Secondary=0.00 cfs 0.000 af Outflow=0.21 cfs 0.077 af

Link 10L: Total Post Inflow=0.93 cfs 0.056 af
Primary=0.93 cfs 0.056 af

Link 11L: Total Offsite Inflow=0.93 cfs 0.133 af
Primary=0.93 cfs 0.133 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.453 af Average Runoff Depth = 2.91"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

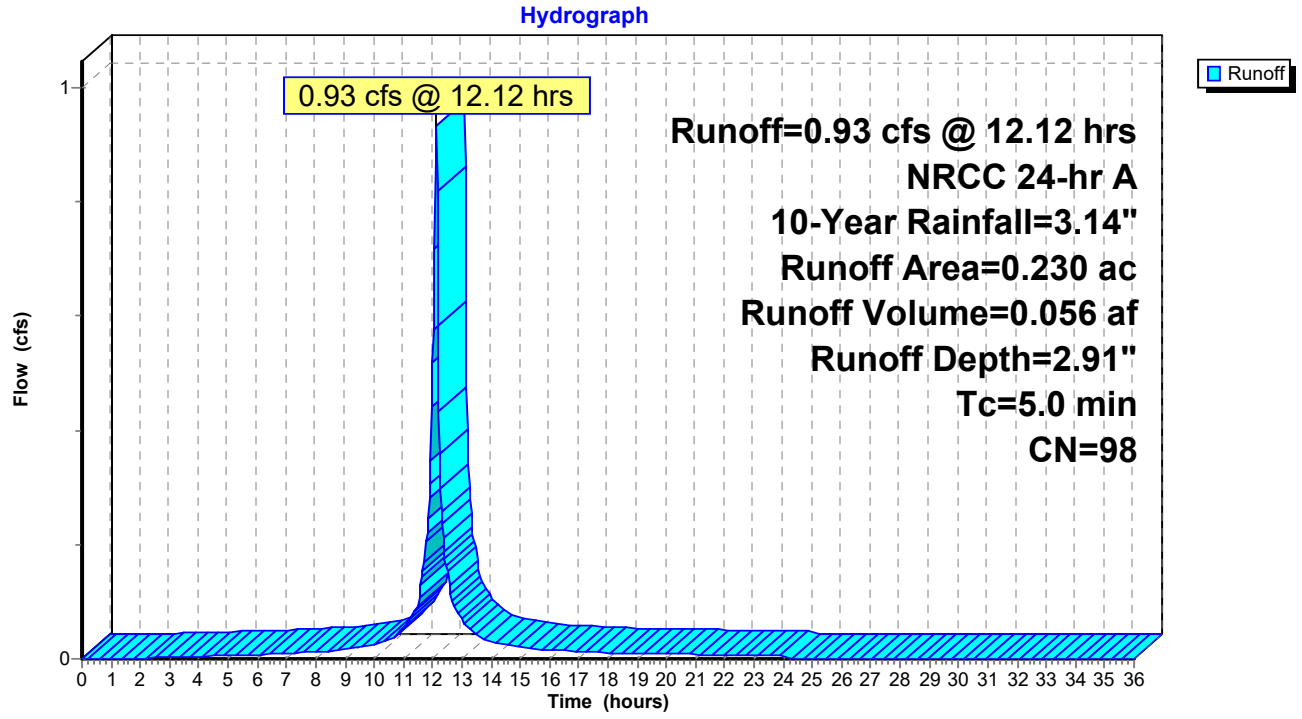
Runoff = 0.93 cfs @ 12.12 hrs, Volume= 0.056 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

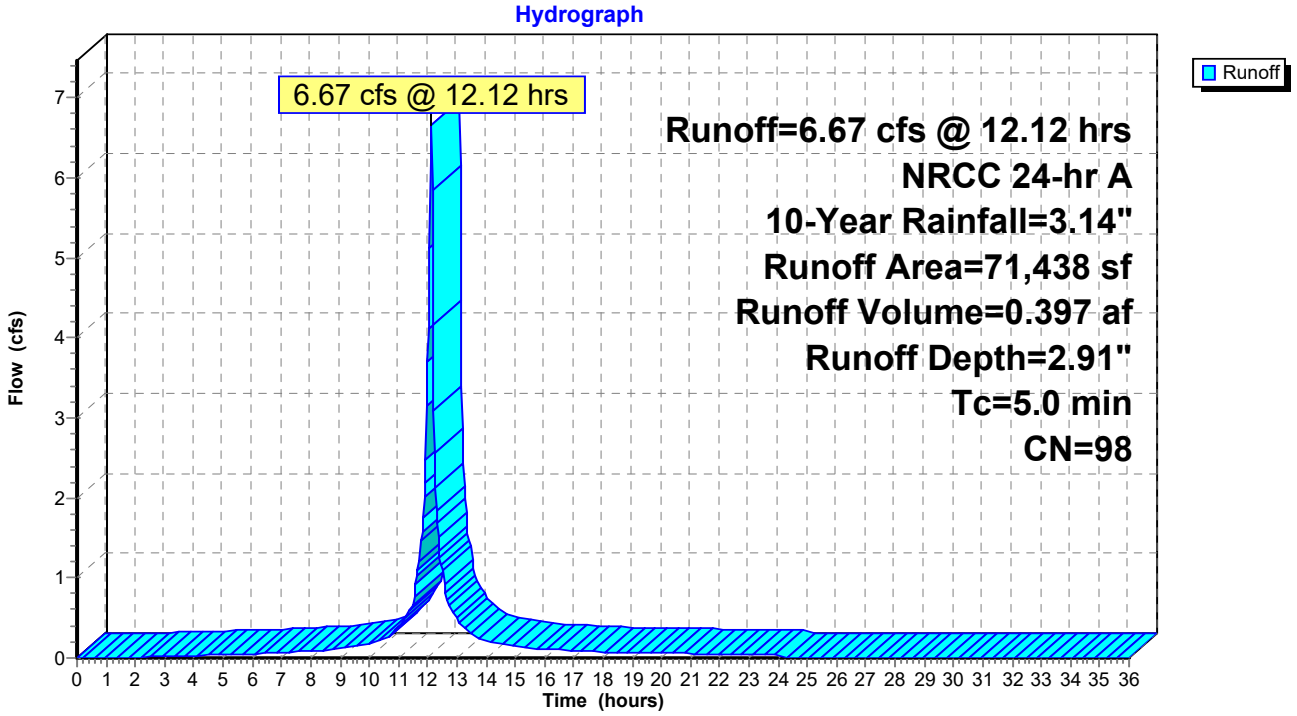
Runoff = 6.67 cfs @ 12.12 hrs, Volume= 0.397 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 2.91" for 10-Year event
Inflow = 6.67 cfs @ 12.12 hrs, Volume= 0.397 af
Outflow = 0.21 cfs @ 14.13 hrs, Volume= 0.077 af, Atten= 97%, Lag= 120.7 min
Primary = 0.21 cfs @ 14.13 hrs, Volume= 0.077 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 582.97' @ 14.13 hrs Surf.Area= 11,889 sf Storage= 14,146 cf

Plug-Flow detention time= 512.5 min calculated for 0.077 af (19% of inflow)
Center-of-Mass det. time= 302.4 min (1,057.1 - 754.6)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

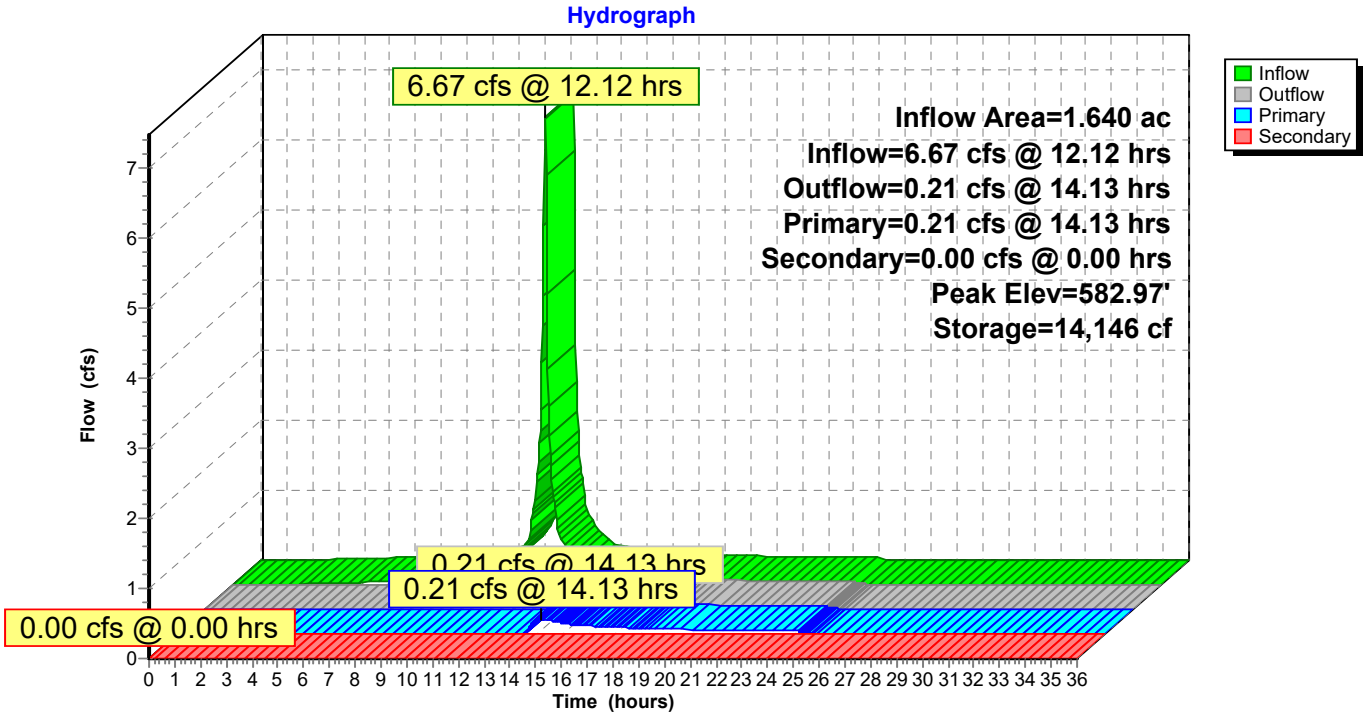
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.21 cfs @ 14.13 hrs HW=582.97' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.21 cfs of 2.78 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.21 cfs @ 0.41 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=580.75' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**

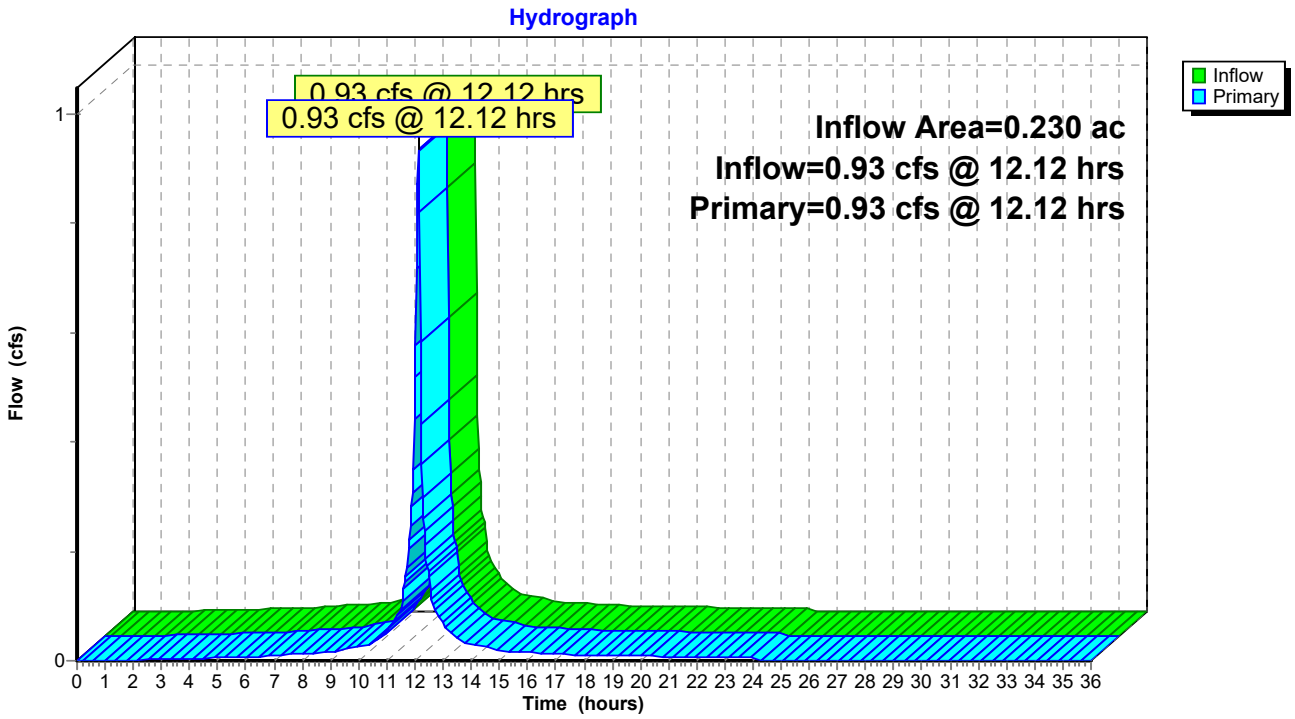
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 2.91" for 10-Year event
Inflow = 0.93 cfs @ 12.12 hrs, Volume= 0.056 af
Primary = 0.93 cfs @ 12.12 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



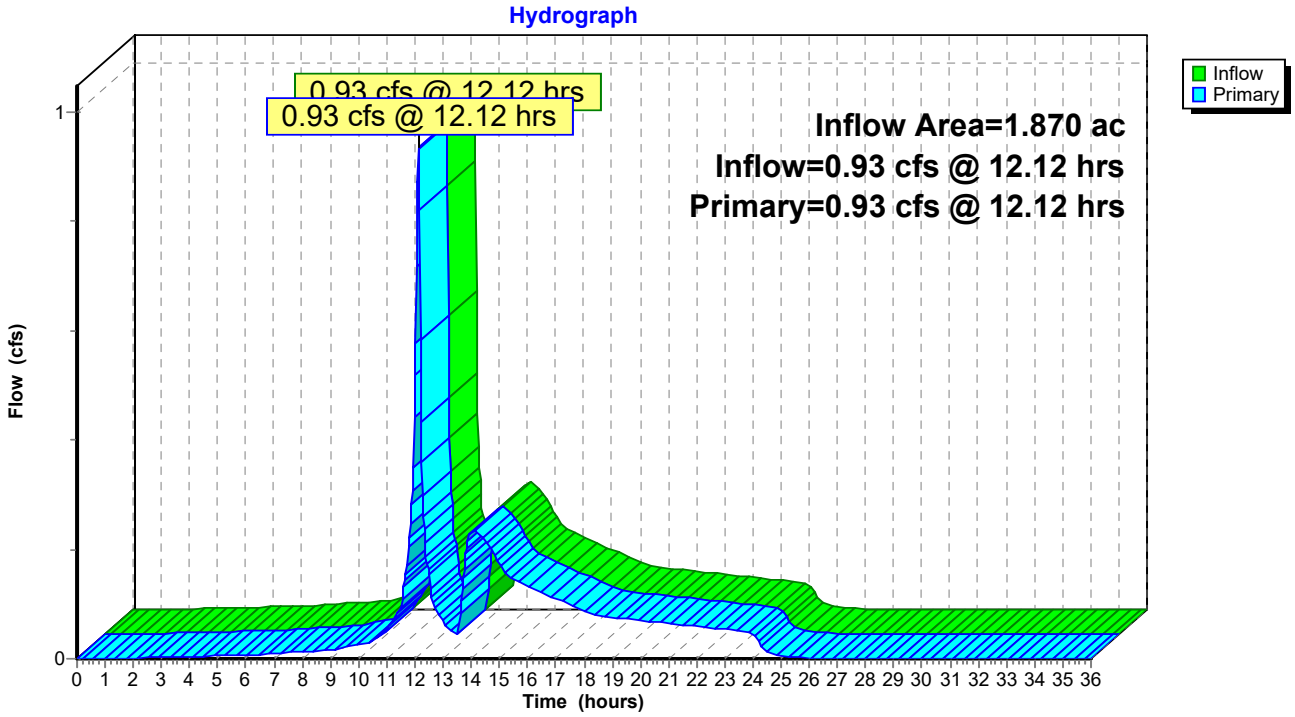
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 0.85" for 10-Year event
Inflow = 0.93 cfs @ 12.12 hrs, Volume= 0.133 af
Primary = 0.93 cfs @ 12.12 hrs, Volume= 0.133 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=3.61"
Tc=5.0 min CN=98 Runoff=1.15 cfs 0.069 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=3.61"
Tc=5.0 min CN=98 Runoff=8.18 cfs 0.493 af

Pond 5P: Grassed Bioretention Basin Peak Elev=583.00' Storage=14,542 cf Inflow=8.18 cfs 0.493 af
Primary=1.12 cfs 0.168 af Secondary=0.16 cfs 0.004 af Outflow=1.28 cfs 0.172 af

Link 10L: Total Post Inflow=1.15 cfs 0.069 af
Primary=1.15 cfs 0.069 af

Link 11L: Total Offsite Inflow=1.47 cfs 0.241 af
Primary=1.47 cfs 0.241 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.562 af Average Runoff Depth = 3.61"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

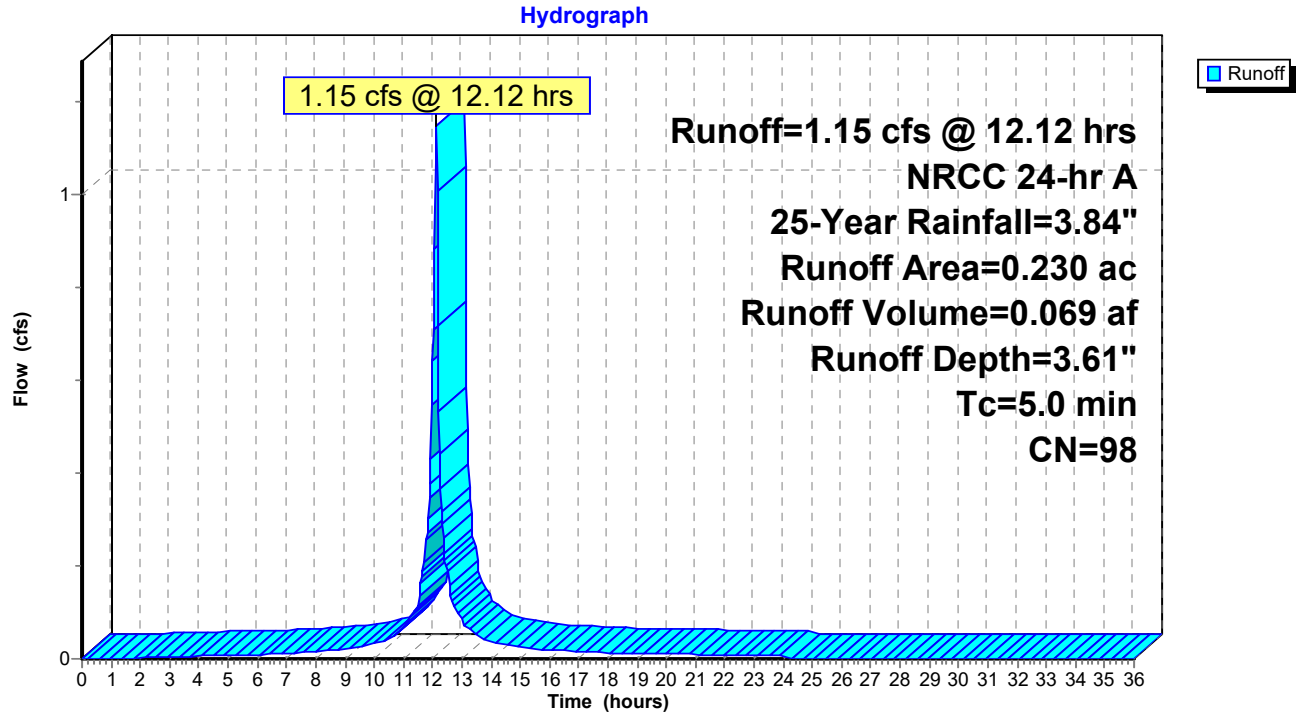
Runoff = 1.15 cfs @ 12.12 hrs, Volume= 0.069 af, Depth= 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 25-Year Rainfall=3.84"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

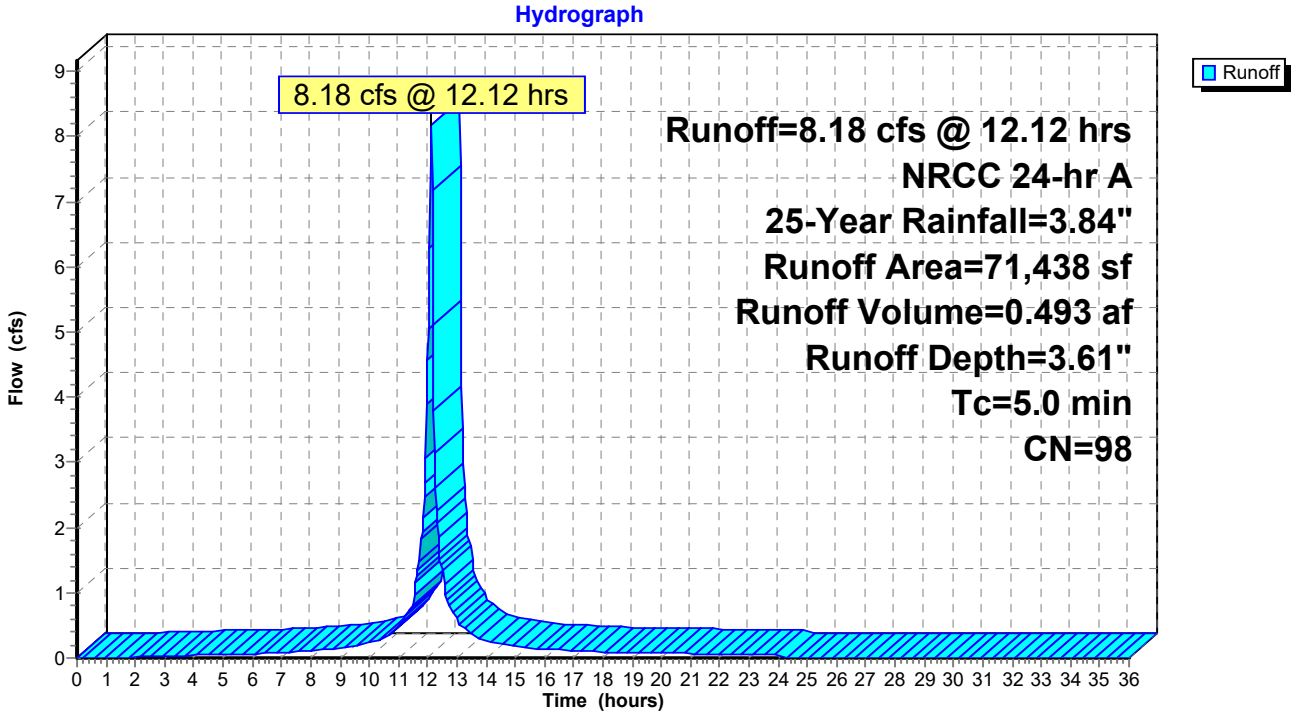
Runoff = 8.18 cfs @ 12.12 hrs, Volume= 0.493 af, Depth= 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 25-Year Rainfall=3.84"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 3.61" for 25-Year event
Inflow = 8.18 cfs @ 12.12 hrs, Volume= 0.493 af
Outflow = 1.28 cfs @ 12.54 hrs, Volume= 0.172 af, Atten= 84%, Lag= 25.7 min
Primary = 1.12 cfs @ 12.54 hrs, Volume= 0.168 af
Secondary = 0.16 cfs @ 12.54 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 583.00' @ 12.54 hrs Surf.Area= 11,997 sf Storage= 14,542 cf

Plug-Flow detention time= 319.8 min calculated for 0.172 af (35% of inflow)
Center-of-Mass det. time= 177.8 min (928.6 - 750.9)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

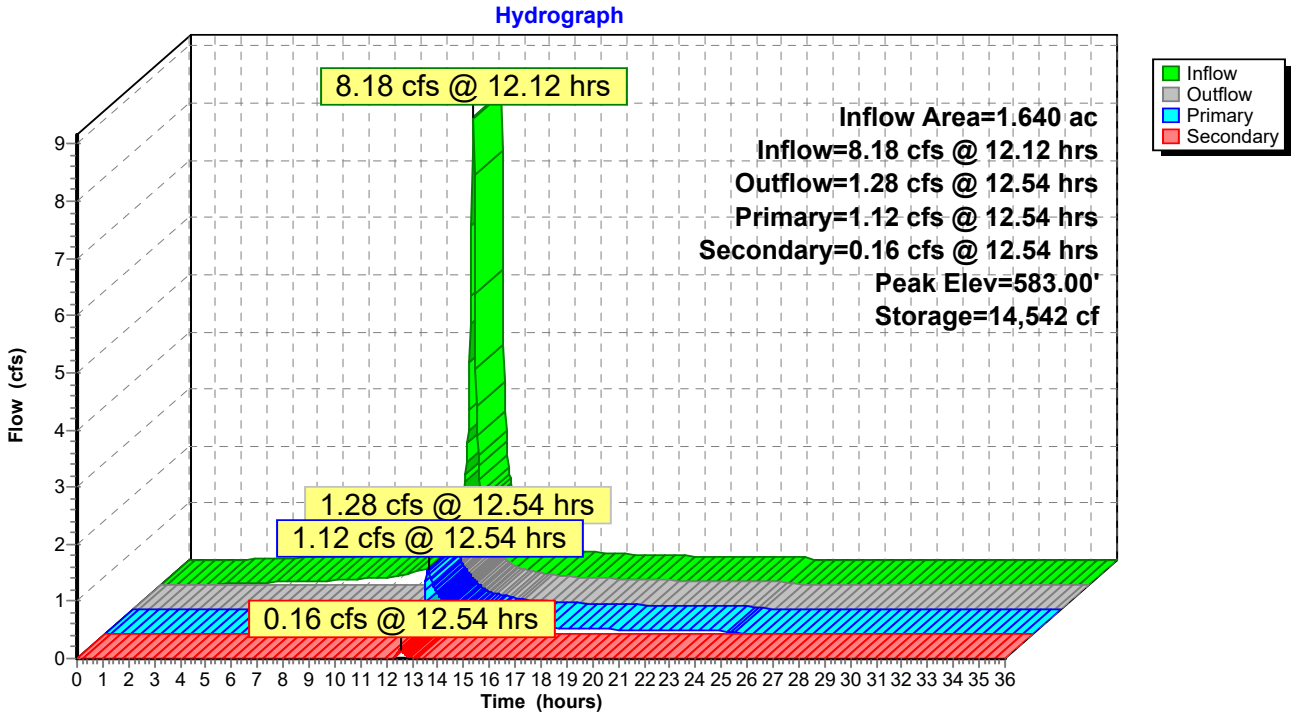
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.12 cfs @ 12.54 hrs HW=583.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.12 cfs of 2.81 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 1.12 cfs @ 0.72 fps)

Secondary OutFlow Max=0.16 cfs @ 12.54 hrs HW=583.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.16 cfs @ 0.34 fps)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**

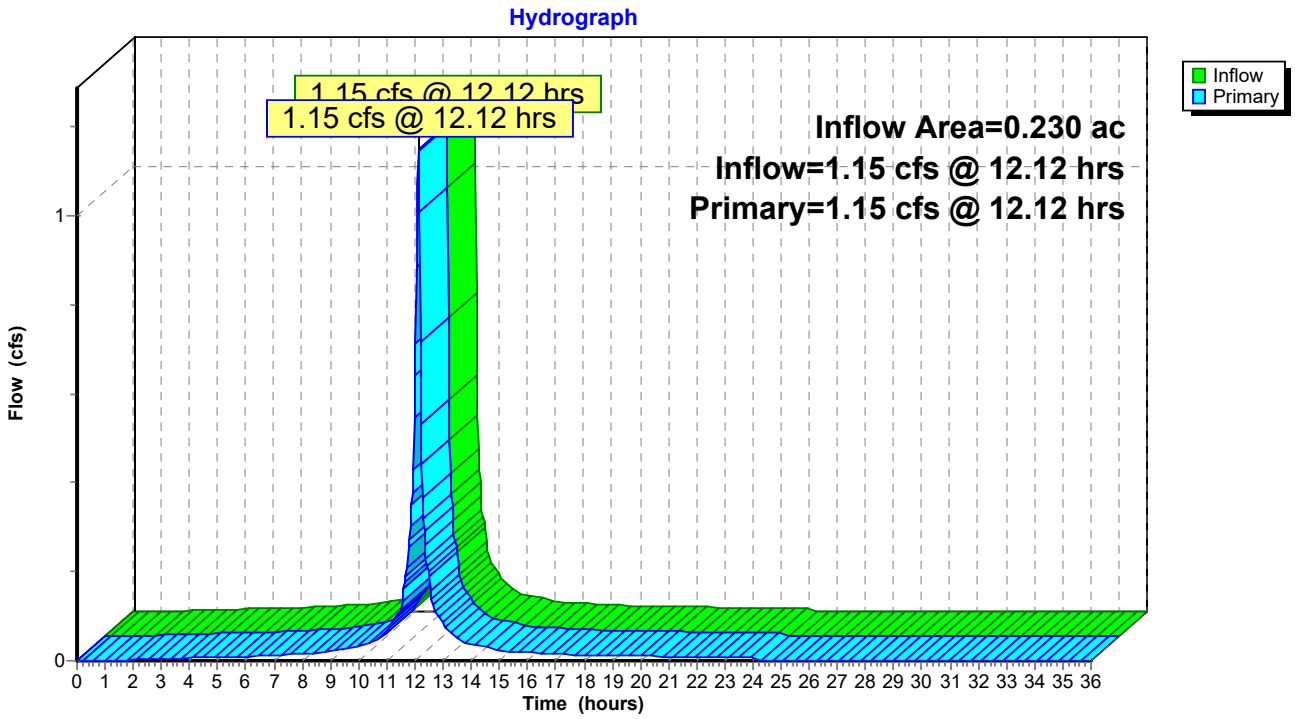
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 3.61" for 25-Year event
Inflow = 1.15 cfs @ 12.12 hrs, Volume= 0.069 af
Primary = 1.15 cfs @ 12.12 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



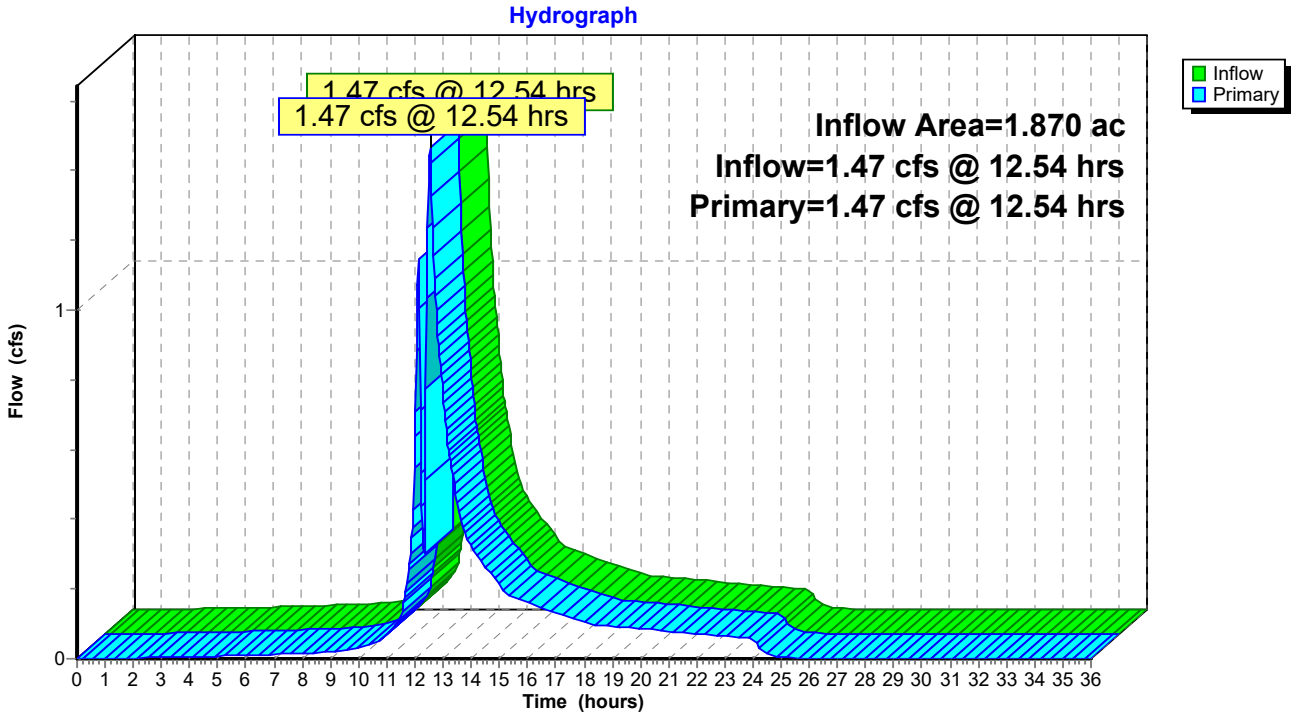
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 1.55" for 25-Year event
Inflow = 1.47 cfs @ 12.54 hrs, Volume= 0.241 af
Primary = 1.47 cfs @ 12.54 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=4.24"
Tc=5.0 min CN=98 Runoff=1.34 cfs 0.081 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=4.24"
Tc=5.0 min CN=98 Runoff=9.57 cfs 0.580 af

Pond 5P: Grassed Bioretention Basin Peak Elev=583.18' Storage=14,552 cf Inflow=9.57 cfs 0.580 af
Primary=2.95 cfs 0.230 af Secondary=5.62 cfs 0.029 af Outflow=8.56 cfs 0.260 af

Link 10L: Total Post Inflow=1.34 cfs 0.081 af
Primary=1.34 cfs 0.081 af

Link 11L: Total Offsite Inflow=9.18 cfs 0.341 af
Primary=9.18 cfs 0.341 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.661 af Average Runoff Depth = 4.24"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

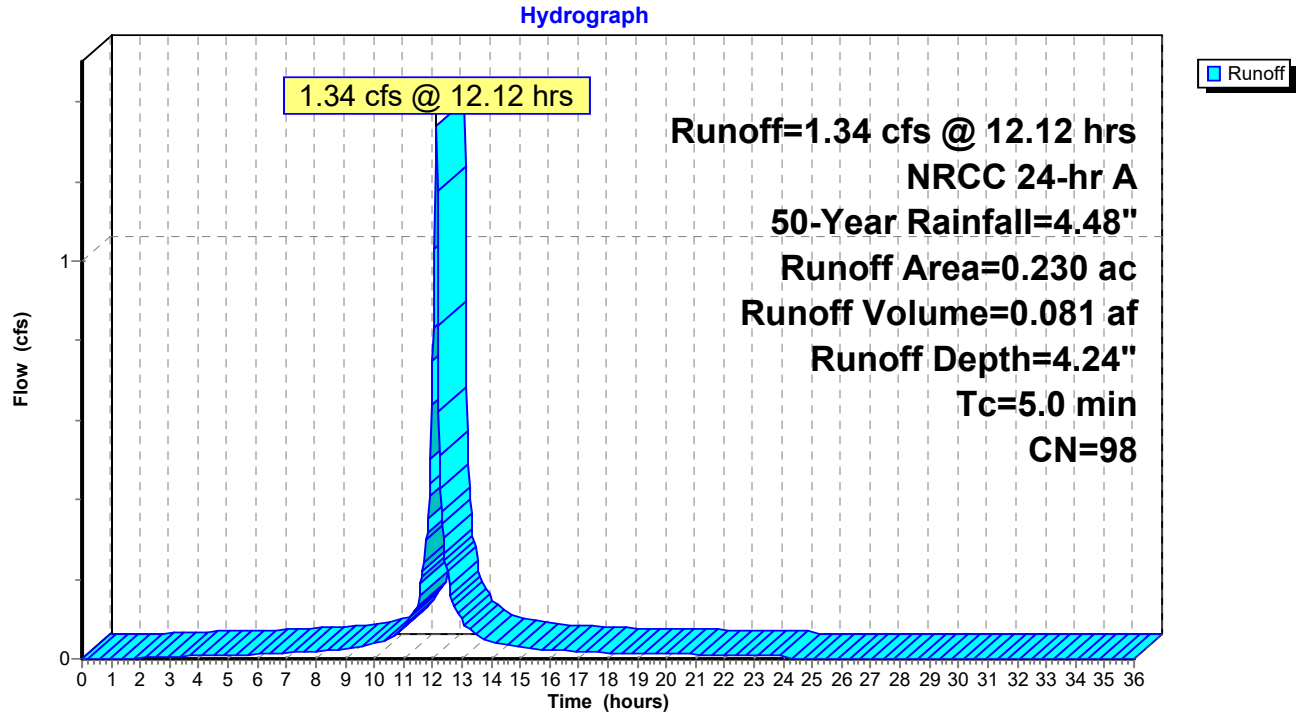
Runoff = 1.34 cfs @ 12.12 hrs, Volume= 0.081 af, Depth= 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 50-Year Rainfall=4.48"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

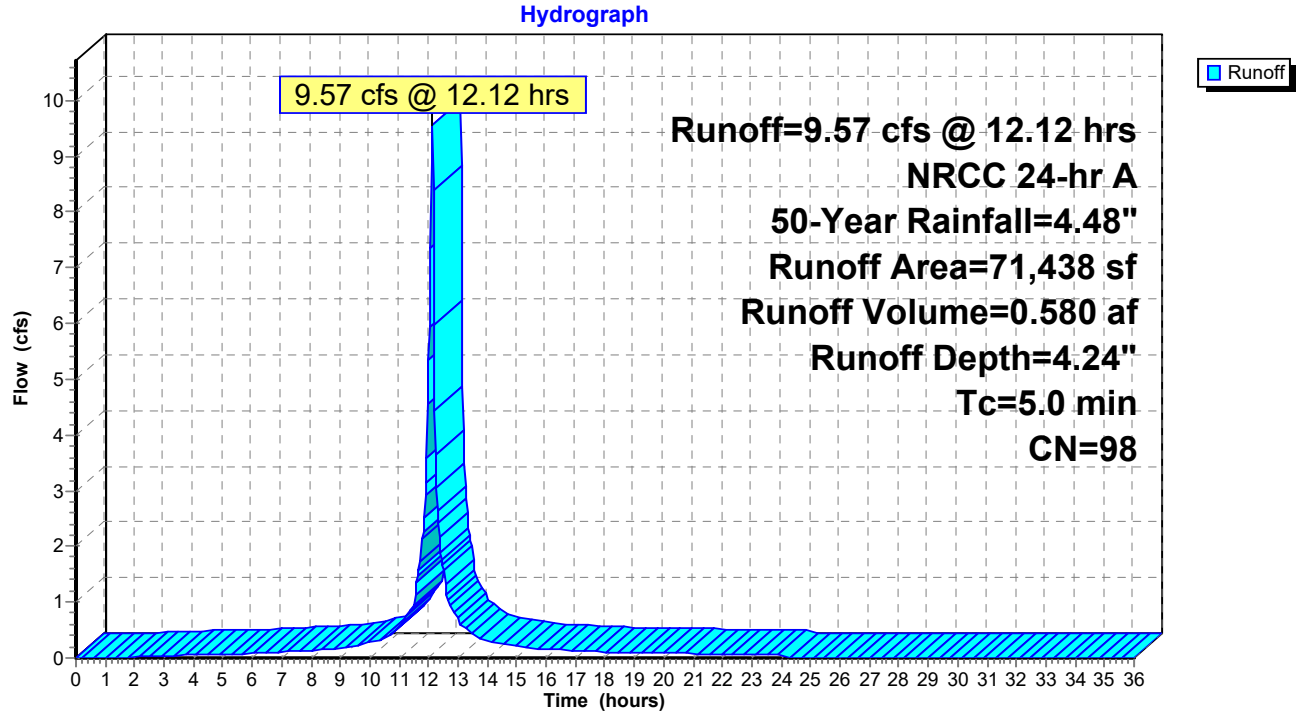
Runoff = 9.57 cfs @ 12.12 hrs, Volume= 0.580 af, Depth= 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 50-Year Rainfall=4.48"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

[93] Warning: Storage range exceeded by 0.18'
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 4.24" for 50-Year event
Inflow = 9.57 cfs @ 12.12 hrs, Volume= 0.580 af
Outflow = 8.56 cfs @ 12.21 hrs, Volume= 0.260 af, Atten= 11%, Lag= 5.6 min
Primary = 2.95 cfs @ 12.21 hrs, Volume= 0.230 af
Secondary = 5.62 cfs @ 12.21 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 583.18' @ 12.21 hrs Surf.Area= 12,000 sf Storage= 14,552 cf

Plug-Flow detention time= 255.7 min calculated for 0.259 af (45% of inflow)
Center-of-Mass det. time= 136.5 min (884.7 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

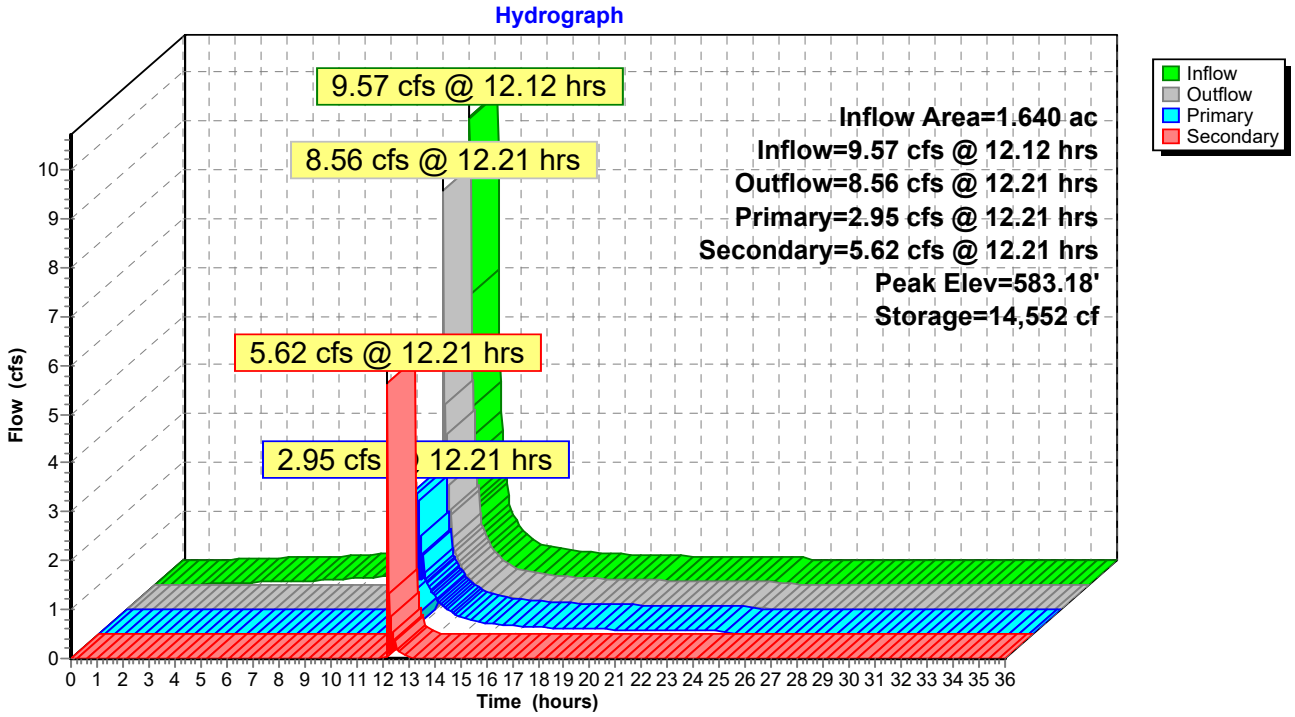
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=2.95 cfs @ 12.21 hrs HW=583.18' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.95 cfs @ 5.40 fps)
└**2=Orifice/Grate** (Passes 2.95 cfs of 11.66 cfs potential flow)

Secondary OutFlow Max=5.60 cfs @ 12.21 hrs HW=583.18' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 5.60 cfs @ 1.10 fps)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**
583.05	12,000	14,552
583.10	12,000	14,552
583.15	12,000	14,552
583.20	12,000	14,552

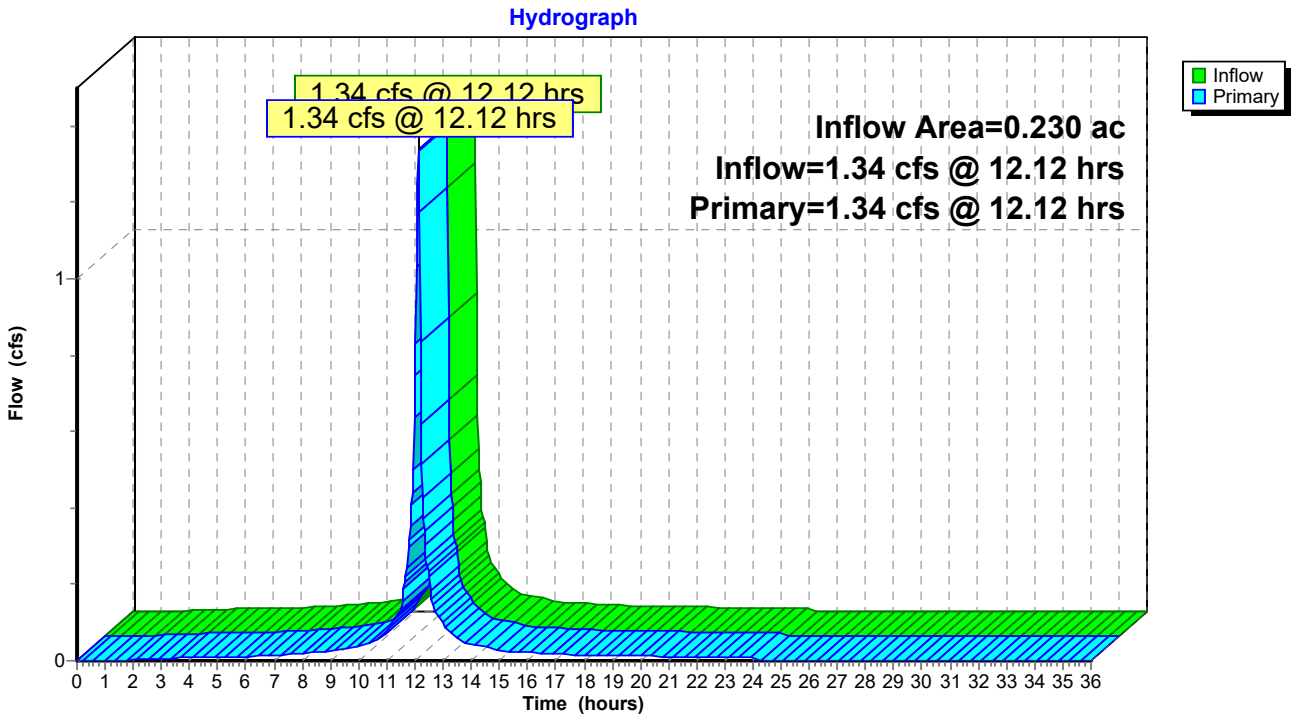
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 4.24" for 50-Year event
Inflow = 1.34 cfs @ 12.12 hrs, Volume= 0.081 af
Primary = 1.34 cfs @ 12.12 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



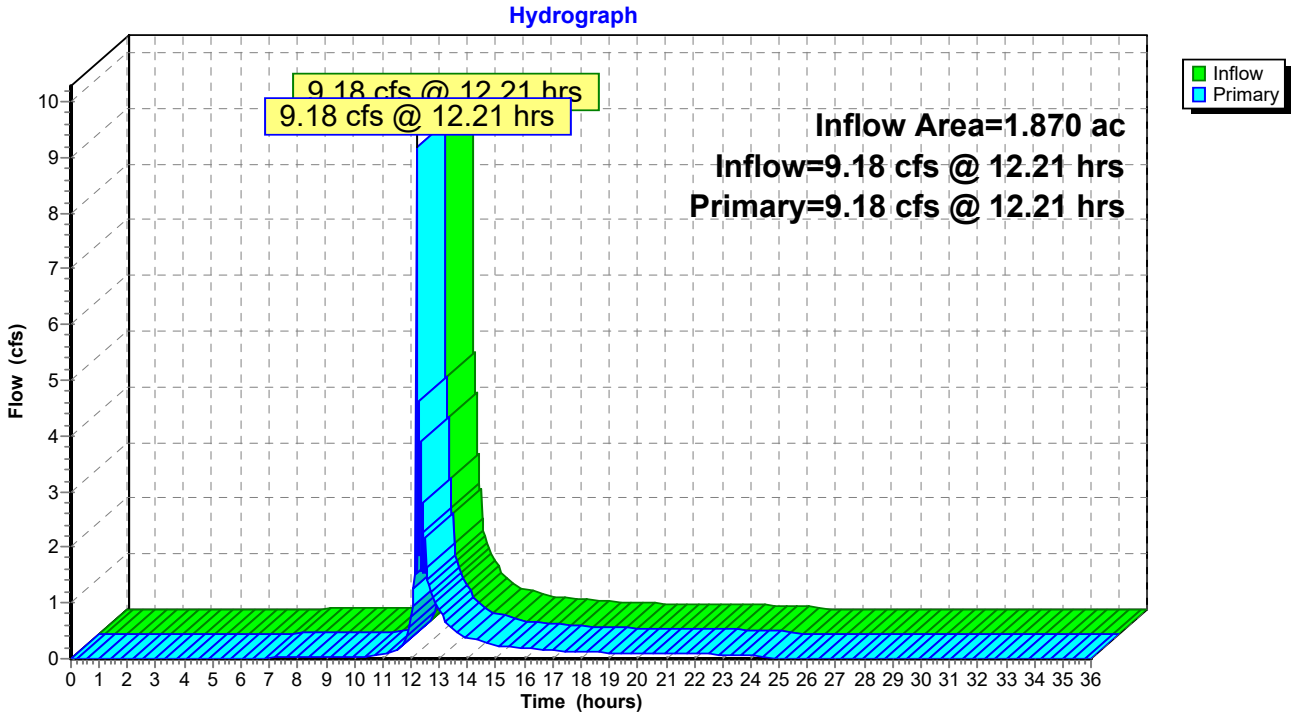
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 2.19" for 50-Year event
Inflow = 9.18 cfs @ 12.21 hrs, Volume= 0.341 af
Primary = 9.18 cfs @ 12.21 hrs, Volume= 0.341 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Time span=0.00-36.00 hrs, dt=0.03 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 4S: Redevelopment Area - Runoff Area=0.230 ac 100.00% Impervious Runoff Depth=4.99"
Tc=5.0 min CN=98 Runoff=1.57 cfs 0.096 af

Subcatchment 5S: New Driveway and Runoff Area=71,438 sf 100.00% Impervious Runoff Depth=4.99"
Tc=5.0 min CN=98 Runoff=11.19 cfs 0.682 af

Pond 5P: Grassed Bioretention Basin Peak Elev=583.28' Storage=14,552 cf Inflow=11.19 cfs 0.682 af
Primary=3.00 cfs 0.286 af Secondary=9.34 cfs 0.076 af Outflow=12.63 cfs 0.362 af

Link 10L: Total Post Inflow=1.57 cfs 0.096 af
Primary=1.57 cfs 0.096 af

Link 11L: Total Offsite Inflow=14.17 cfs 0.458 af
Primary=14.17 cfs 0.458 af

Total Runoff Area = 1.870 ac Runoff Volume = 0.778 af Average Runoff Depth = 4.99"
0.00% Pervious = 0.000 ac 100.00% Impervious = 1.870 ac

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 4S: Redevelopment Area - Parking to Building

Impervious redevelopment area - not directed to a practice.

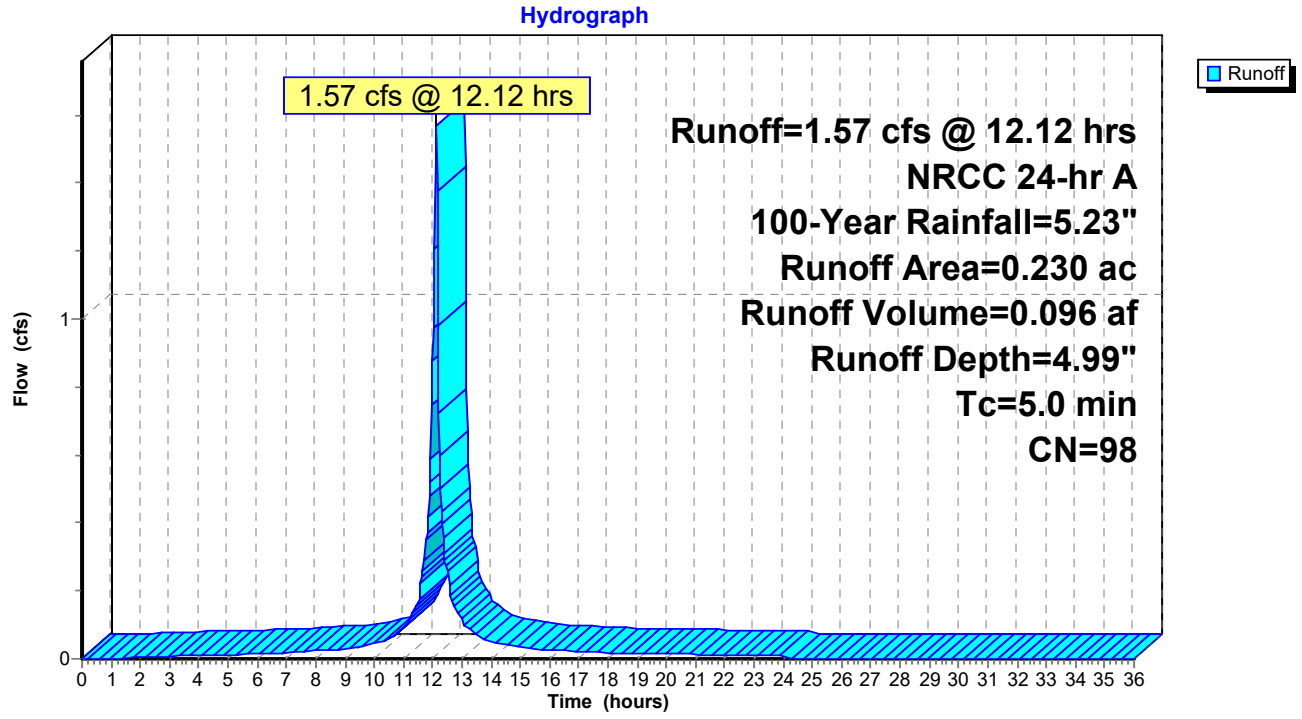
Runoff = 1.57 cfs @ 12.12 hrs, Volume= 0.096 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 100-Year Rainfall=5.23"

Area (ac)	CN	Description
0.230	98	Unconnected pavement, HSG D
0.230		100.00% Impervious Area
0.230		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Minimum**

Subcatchment 4S: Redevelopment Area - Parking to Building



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Subcatchment 5S: New Driveway and Parking Expansion

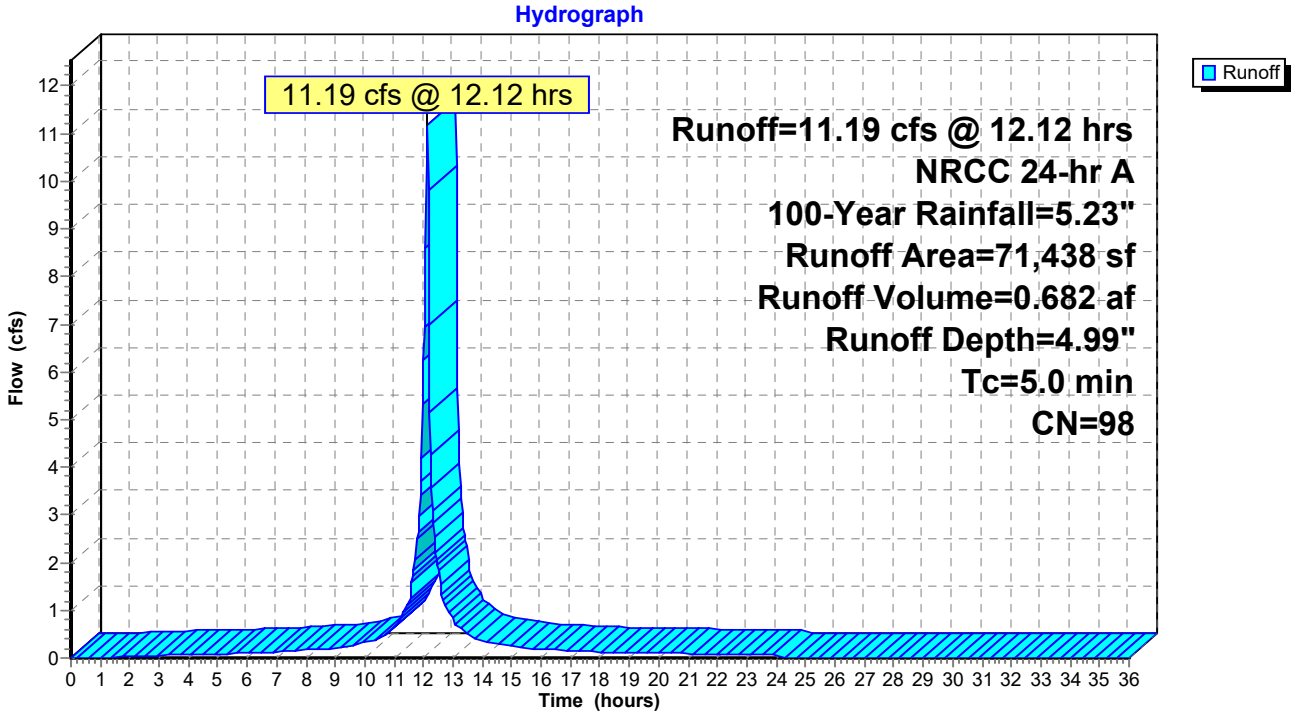
Runoff = 11.19 cfs @ 12.12 hrs, Volume= 0.682 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
NRCC 24-hr A 100-Year Rainfall=5.23"

Area (sf)	CN	Description
71,438	98	Paved parking, HSG D
71,438		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Overland Pavement Sheet flow to Swale**

Subcatchment 5S: New Driveway and Parking Expansion



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Pond 5P: Grassed Bioretention Basin

[93] Warning: Storage range exceeded by 0.28'
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=5)

Inflow Area = 1.640 ac,100.00% Impervious, Inflow Depth = 4.99" for 100-Year event
Inflow = 11.19 cfs @ 12.12 hrs, Volume= 0.682 af
Outflow = 12.63 cfs @ 12.13 hrs, Volume= 0.362 af, Atten= 0%, Lag= 0.8 min
Primary = 3.00 cfs @ 12.12 hrs, Volume= 0.286 af
Secondary = 9.34 cfs @ 12.13 hrs, Volume= 0.076 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs
Peak Elev= 583.28' @ 12.13 hrs Surf.Area= 12,000 sf Storage= 14,552 cf

Plug-Flow detention time= 218.8 min calculated for 0.362 af (53% of inflow)
Center-of-Mass det. time= 112.9 min (858.7 - 745.8)

Volume	Invert	Avail.Storage	Storage Description
#1	580.75'	14,552 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
580.75	4,746	0.0	0	0
581.75	7,164	40.0	2,382	2,382
582.50	10,374	100.0	6,577	8,959
583.00	12,000	100.0	5,594	14,552

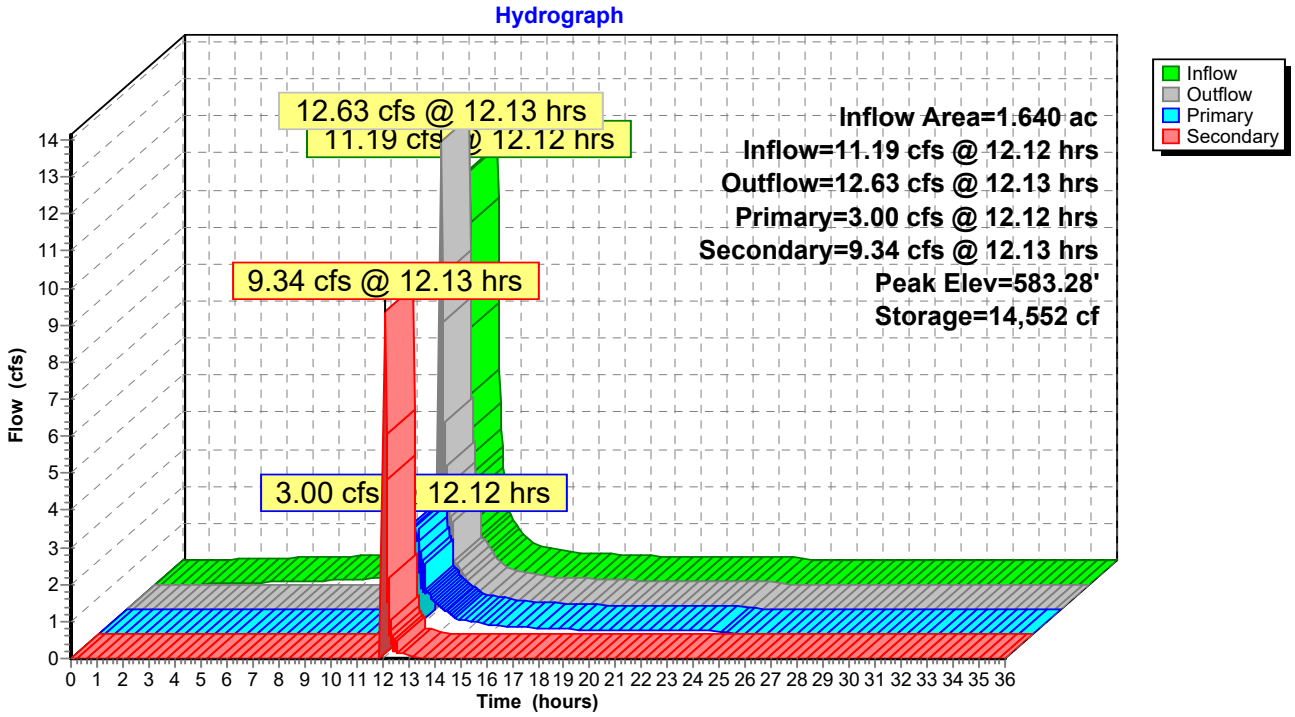
Device	Routing	Invert	Outlet Devices
#1	Primary	580.75'	**10.0" Round Culvert** L= 23.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 580.75' / 580.50' S= 0.0109 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Device 1	582.95'	**12.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Secondary	582.98'	**25.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=3.00 cfs @ 12.12 hrs HW=583.26' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 3.00 cfs @ 5.49 fps)
└**2=Orifice/Grate** (Passes 3.00 cfs of 17.38 cfs potential flow)

Secondary OutFlow Max=8.17 cfs @ 12.13 hrs HW=583.24' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 8.17 cfs @ 1.26 fps)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Pond 5P: Grassed Bioretention Basin



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Stage-Area-Storage for Pond 5P: Grassed Bioretention Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
580.75	4,746	0
580.80	4,867	96
580.85	4,988	195
580.90	5,109	296
580.95	5,230	399
581.00	5,351	505
581.05	5,471	613
581.10	5,592	724
581.15	5,713	837
581.20	5,834	952
581.25	5,955	1,070
581.30	6,076	1,190
581.35	6,197	1,313
581.40	6,318	1,438
581.45	6,439	1,566
581.50	6,560	1,696
581.55	6,680	1,828
581.60	6,801	1,963
581.65	6,922	2,100
581.70	7,043	2,240
581.75	7,164	2,382
581.80	7,378	2,746
581.85	7,592	3,120
581.90	7,806	3,505
581.95	8,020	3,900
582.00	8,234	4,307
582.05	8,448	4,724
582.10	8,662	5,152
582.15	8,876	5,590
582.20	9,090	6,039
582.25	9,304	6,499
582.30	9,518	6,970
582.35	9,732	7,451
582.40	9,946	7,943
582.45	10,160	8,445
582.50	10,374	8,959
582.55	10,537	9,482
582.60	10,699	10,012
582.65	10,862	10,551
582.70	11,024	11,099
582.75	11,187	11,654
582.80	11,350	12,217
582.85	11,512	12,789
582.90	11,675	13,369
582.95	11,837	13,956
583.00	**12,000**	**14,552**
583.05	12,000	14,552
583.10	12,000	14,552
583.15	12,000	14,552
583.20	12,000	14,552
583.25	12,000	14,552

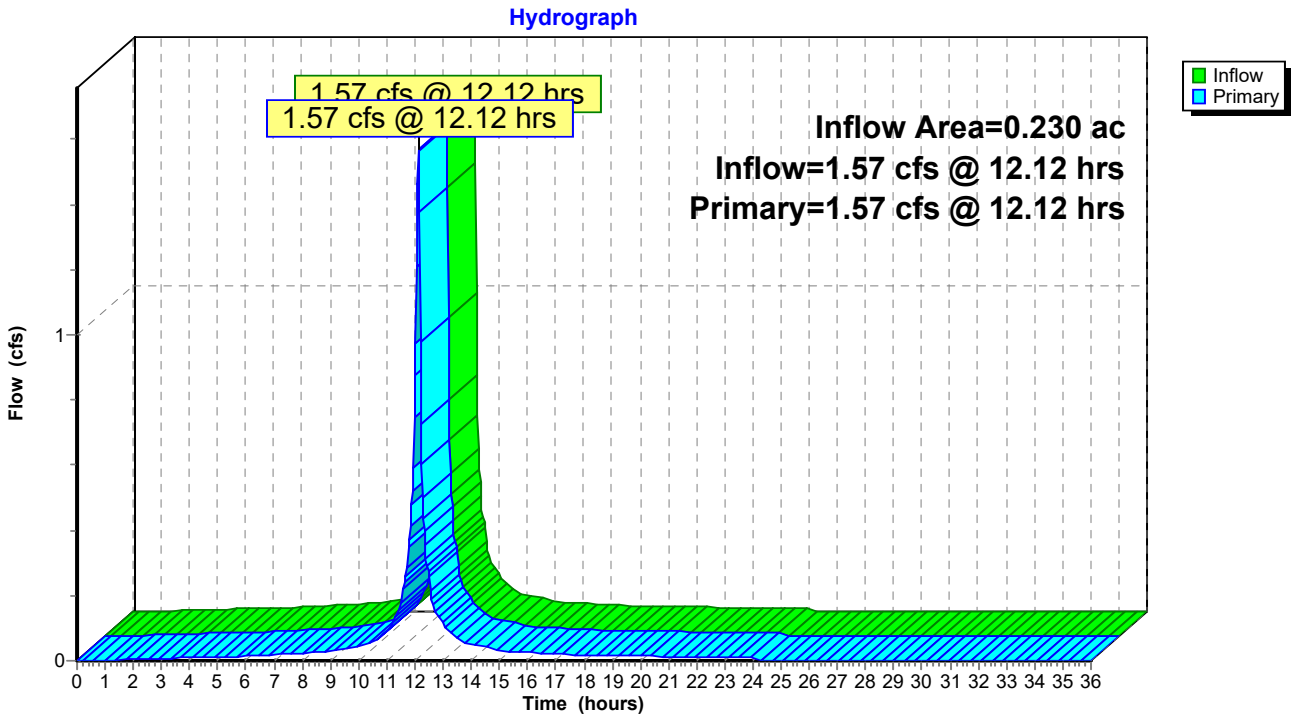
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 10L: Total Post

Inflow Area = 0.230 ac,100.00% Impervious, Inflow Depth = 4.99" for 100-Year event
Inflow = 1.57 cfs @ 12.12 hrs, Volume= 0.096 af
Primary = 1.57 cfs @ 12.12 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 10L: Total Post



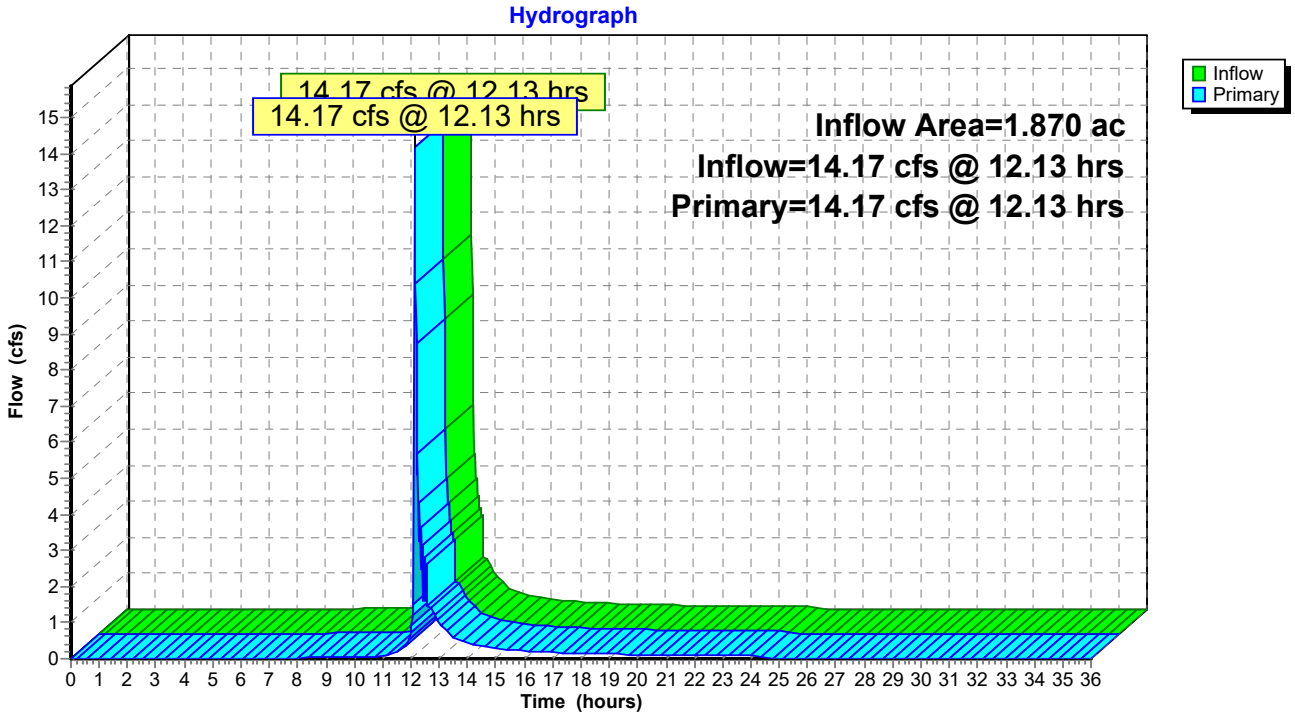
Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Summary for Link 11L: Total Offsite

Inflow Area = 1.870 ac,100.00% Impervious, Inflow Depth = 2.94" for 100-Year event
Inflow = 14.17 cfs @ 12.13 hrs, Volume= 0.458 af
Primary = 14.17 cfs @ 12.13 hrs, Volume= 0.458 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.03 hrs

Link 11L: Total Offsite



Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

West Herr - Millersport Hwy.
Stormwater Calculations

11/16/2020
File No. 20J5-0030

Water Quality Volume (WQ_v)

Redevelopment Area

The proposed construction includes both new development and redevelopment activities. Therefore, treatment is required for 25% of the existing, disturbed impervious area but new development must treat 100%.

WQ_v =	(P) (Rv) (A) / 12			Where:	WQ_v =	water quality volume (acre-ft)
					P =	90% rainfall event (inches)
P =	1	in			R_v =	0.05 + 0.009(I)
I =	100.0	%			I =	percent impervious cover (%)
A =	0.23	acres			A =	contributing drainage area (acres)
R_v =	0.95					
WQ_v =	0.018	acre-ft =	784	cf		
25% WQ_v =	**0.005**	**acre-ft =**	**196**	**cf**		

New Development Area

WQ_v =	(P) (Rv) (A) / 12			Where:	WQ_v =	water quality volume (acre-ft)
					P =	90% rainfall event (inches)
P =	1	in			R_v =	0.05 + 0.009(I)
I =	81.0	%			I =	percent impervious cover (%)
A =	1.96	acres			A =	contributing drainage area (acres)
R_v =	0.78					
WQ_v =	**0.127**	**acre-ft =**	**5,546**	**cf**		

TOTAL WQ_v required =	**0.132**	**acre-ft =**	**5,742**	**cf**	
WQ_v provided =	0.413	acre-ft =	18,000	cf	Grassed Bioretention
TOTAL WQ_v provided =	**0.413**	**acre-ft =**	**18,000**	**cf**	

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

West Herr - Millersport Hwy.
Stormwater Calculations

11/16/2020
File No. 20J5-0030

Runoff Reduction Volume (RR_v)

Runoff reduction is for new impervious cover only; redeveloped impervious cover is not included.

RR_v = (P) (Rv*) (Ai)/ 12

P =	1	in	RR_v =	Runoff reduction volume (acre-ft or cf)
R_v*=	0.95		P =	90% rainfall event (inches)
Aic =	1.961	acres	R_v*=	0.05 + 0.009(I) where I is 100% impervious
S =	0.20		Ai =	Impervious cover targeted for runoff reduction (ac)
Ai =	0.392		Aic =	Total area of new impervious cover (ac)
			S =	Specific reduction factor
				HSG A=0.55, HSG B=0.40, HSG C=0.30, HSG D=0.20

Min. RR_v required= 0.031 acre-ft = 1,353 cf

RR_v provided=	0.132	acre-ft =	5,742	cf	Grassed Bioretention
TOTAL RR_v provided=	**0.132**	**acre-ft =**	**5,742**	**cf**	

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

West Herr - Millersport Hwy.
Stormwater Calculations

11/16/2020
File No. 20J5-0030

Bioretention Pretreatment

Install pretreatment volume of 25% of WQv.

WQ_v= 5,742 cf
25% WQ_v = 1,435 cf

Perimeter Gravel Diaphragm with 25% WQ_v Storage:

			Where:	
L =	3,195	ft	L =	Length of diaphragm (length of bioretention adjacent to pavement for ESC).
w =	1	ft	w =	Minimum diaphragm width.
d =	0.45	ft	d =	Minimum required diaphragm depth. *$d = (0.25WQ_v)/(L*w)$*
$d_{provided}$ =	1	ft		

Pretreatment Volume Provided (25% WQ_v): 3,195 cf

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NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

West Herr - Millersport Hwy.
Stormwater Calculations

11/16/2020
File No. 20J5-0030

Required Storage Volume for Post-Construction Stormwater Management Practices (SMPs)

Grassed Bioretention Area

Area Treated:

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

P =	1	in		
I =	91.4	%		
A =	71,636	sf		
A =	1.645	acres		
R_v =	0.87			
$WQ_{v\ (Req.)}$	**0.120**	**acre-ft =**	**5,210**	**cf**

Where:
WQ_v = water quality volume (acre-ft)
P = 90% rainfall event (inches)
R_v = 0.05 + 0.009(I)
I = percent new impervious cover (%)
A = contributing drainage area (acres)

Af = (WQv) (df) / [(k) (hf + df) (tf)]

df =	0.75	
k =	0.5	
hf =	0.50	
tf =	1.67	
Af =	3,744	

Where:
Af = required bioretention surface area (sf)
WQv = water quality volume (cf)
df = depth of soil media (ft)
k = hydraulic conductivity (ft/day)
hf = average ponding height (ft)
tf = filter time (days)

V_{BIO} = A_{BIO} x [(k) (hf + df) (tf) / (df)]

A_{BIO} =	12,000	
V_{BIO} =	16,700	

V_{BIO} = actual bioretention volume provided (cf)
A_{BIO} = bioretention surface area provided (sf)

$WQ_v \leq$	16,700	cf
Af ≤	A_{BIO}	
Af ≤	12,000	sf

Contributing Drainage Area :
Perv. = 6,147 sf
Imp. = 65,489 sf

$WQ_{v\ (Provided)}$ = 0.383 acre-ft = 16,700 cf

$RR_{v\ (Provided)}$ = *40% of WQ_v storage volume provided or full WQ_v, whichever is less:*

40% WQ_v provided =	0.153	acre-ft =	6,680	cf
Full WQ_v =	0.132	acre-ft =	5,742	cf

TOTAL $WQ_{v\ (Provided)}$ =	**0.383**	**acre-ft =**	**16,700**	**cf**
TOTAL $RR_{v\ (Provided)}$ =	**0.132**	**acre-ft =**	**5,742**	**cf**

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NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS

West Herr - Millersport Hwy.
Stormwater Calculations

11/16/2020
File No. 20J5-0030

Channel Protection Volume (Cp_v)

Grassed Bioretention

$q_u = \frac{Qp}{(A)\ (Q_{1\text{-}yr})}$

Where:
^1Q_p = Peak 1-year post-developed flow (cfs)
$^1Q_{1\text{-}yr}$ = 1-yr post-developed runoff depth (inches)
^1A = Drainage area (acres)
q_u = Unit peak discharge (csm/in)
q_o = Peak outflow discharge (cfs)
q_i = Peak inflow discharge (cfs)

^1Q_p =	3.89	cfs
$^1Q_{1\text{-}yr}$ =	1.65	in
^1A =	1.64	ac

q_u = 917 csm/in

q_o / q_i = **0.02** Use q_u and Figure 8.5 (Detention Time vs. Discharge Ratios)

$V_s / V_r = 0.683 - 1.43(q_o/ q_i) + 1.64(q_o/ q_i)^2 - 0.804(q_o/ q_i)^3$

V_s / V_r = 0.655

Where:
V_s = Channel protection storage, Cpv (ac-ft or cf)
V_r = Volume of runoff (inches)
Cp_v = Channel protection volume (ac-ft or cf)
$Q_{1\text{-}yr}$ = 1-yr post-developed runoff depth (inches)
A = Drainage area (acres)

$Cp_v = \frac{(V_s / V_r)\ (Q_{1\text{-}yr})\ (A)}{12}$

Required Cp_v = **0.148** **ac-ft =** **6,452** ft^3

Cp_v Average Release Rate:
Release Rate = 0.075 cfs (over 24 hours)

WQ_v Provided =	0.383	acre-ft =	16,700	cf	*Grassed Bioretention*
Pretreatment Volume =	0.073	acre-ft =	3,195	cf	
WQ_v Required =	0.132	acre-ft =	5,742	cf	
NET Cp_v	**0.178**	**acre-ft =**	**7,763**	**cf**	

[1] *Input values from Subcatchment 5S in HydroCAD Post Model.*

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Compute Stream Channel Protection Volume, (Cp_v) (see Section 4.3 and Appendix B)

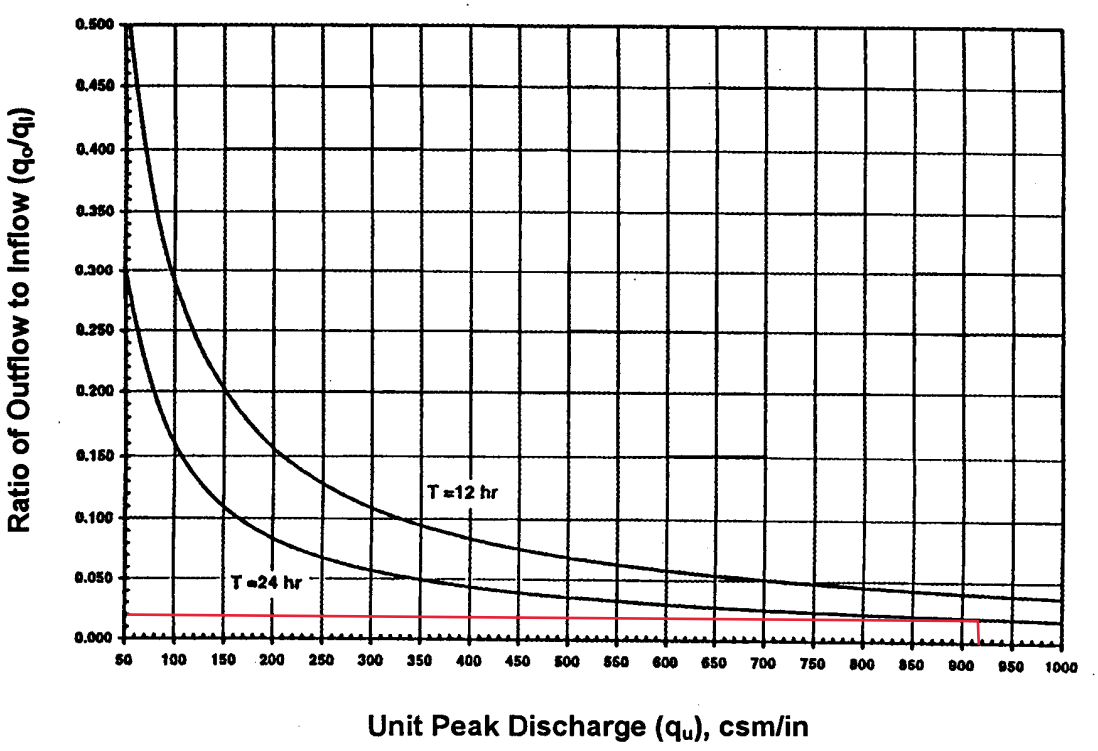
For stream channel protection, provide 24 hours of extended detention (T) for the one-year event.

Compute Channel Protection Storage Volume

First, determine the value of the unit peak discharge (q_u) using TR-55 and Type II Rainfall Distribution

- Initial abstraction (Ia) for CN of 78 is 0.564: [Ia = (200/CN - 2)]
- Ia/P = (0.564)/ 2.3 inches = 0.245
- T_c = 0.35 hours
- Using the above data and Exhibit 4-II from TR-55 (NRCS, 1986), q_u = 570 csm/in (cubic feet per second per square mile per year)
- Knowing q_u and T = 24 hours, find q_o/q_i using Figure 8.5 (also see methodology in Appendix B)
- Peak outflow discharge/peak inflow discharge (q_o/q_i) = 0.035
- $Vs/Vr = 0.683 - 1.43(q_o/q_i) + 1.64(q_o/q_i)^2 - 0.804(q_o/q_i)^3$ (from Appendix B)
  Where Vs equals channel protection storage (Cp_v) and Vr equals the volume of runoff in inches.

Figure 8.5 Detention Time vs. Discharge Ratios (Source: MDE, 2000)



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APPENDIX F

NYSDEC FORMS AND PERMIT (NOI, NOT, CERTIFICATION FORMS, MS4 ACCEPTANCE FORM, SPDES PERMIT)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

Owner/Operator Information

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

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.

First name | MI | Last Name

Signature | Date

Revised: January 2020

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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.**

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

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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

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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

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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;

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(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.

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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

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

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

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

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

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

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

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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

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

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

D. Maintaining Water Quality

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

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

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

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

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

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

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E. Eligibility Under This General Permit

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

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

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

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

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

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

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

2. *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*

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

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

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

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

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

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

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

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

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

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

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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:

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

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

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

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

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

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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

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

c. the final SWPPP has been prepared, and

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

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

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

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

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

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

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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*

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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

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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*

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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;

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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

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

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

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

B. Required SWPPP Contents

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

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

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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

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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;

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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.

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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

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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

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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.

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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:

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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

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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;

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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,

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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

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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.

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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:

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(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,

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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

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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

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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.

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R. Other Permits

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

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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

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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

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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.

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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.

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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 .

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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

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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.

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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

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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.

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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

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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

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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

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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

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APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

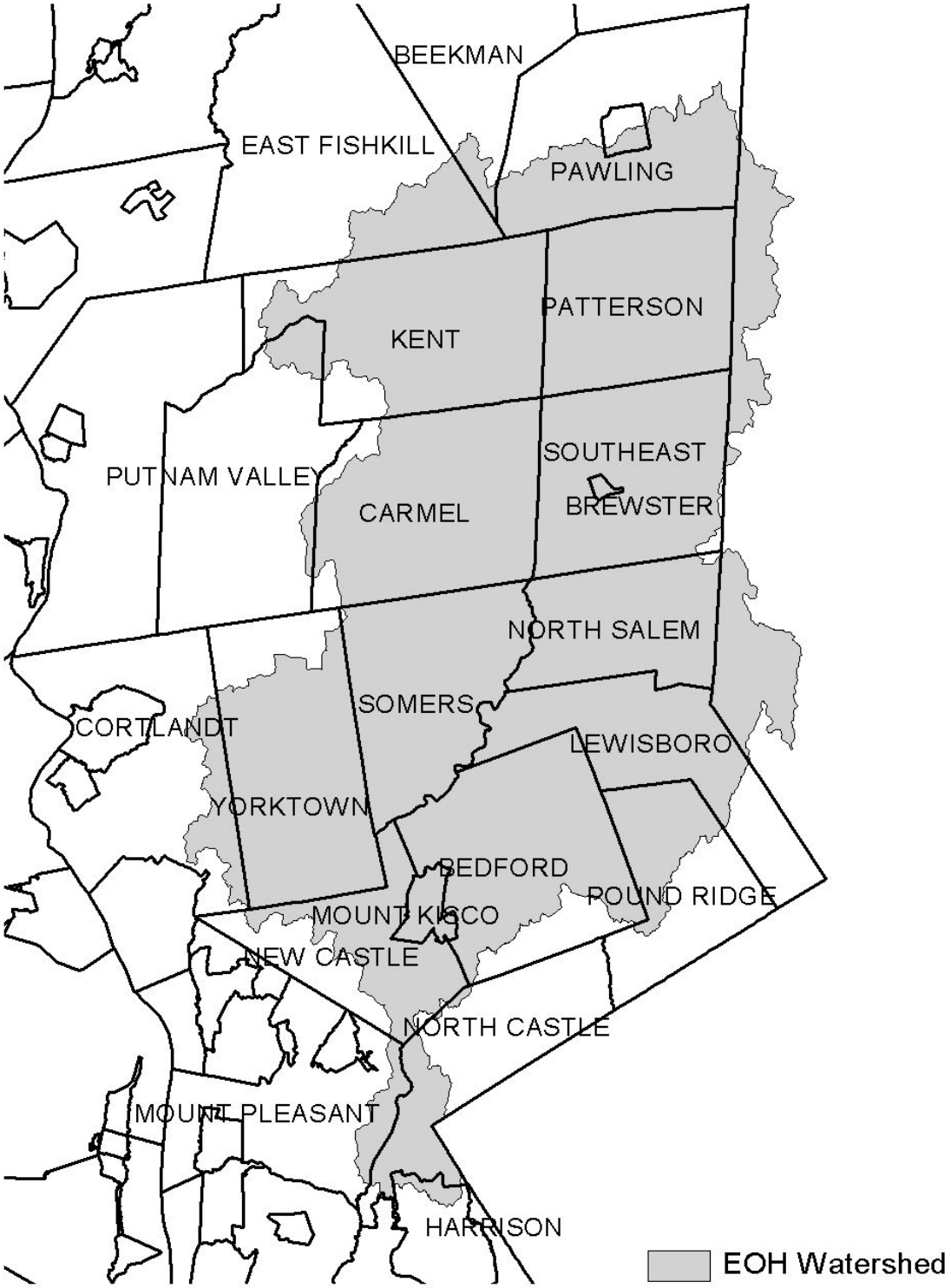
Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York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

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Appendix C

Figure 1 - New York City Watershed East of the Hudson



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Appendix C

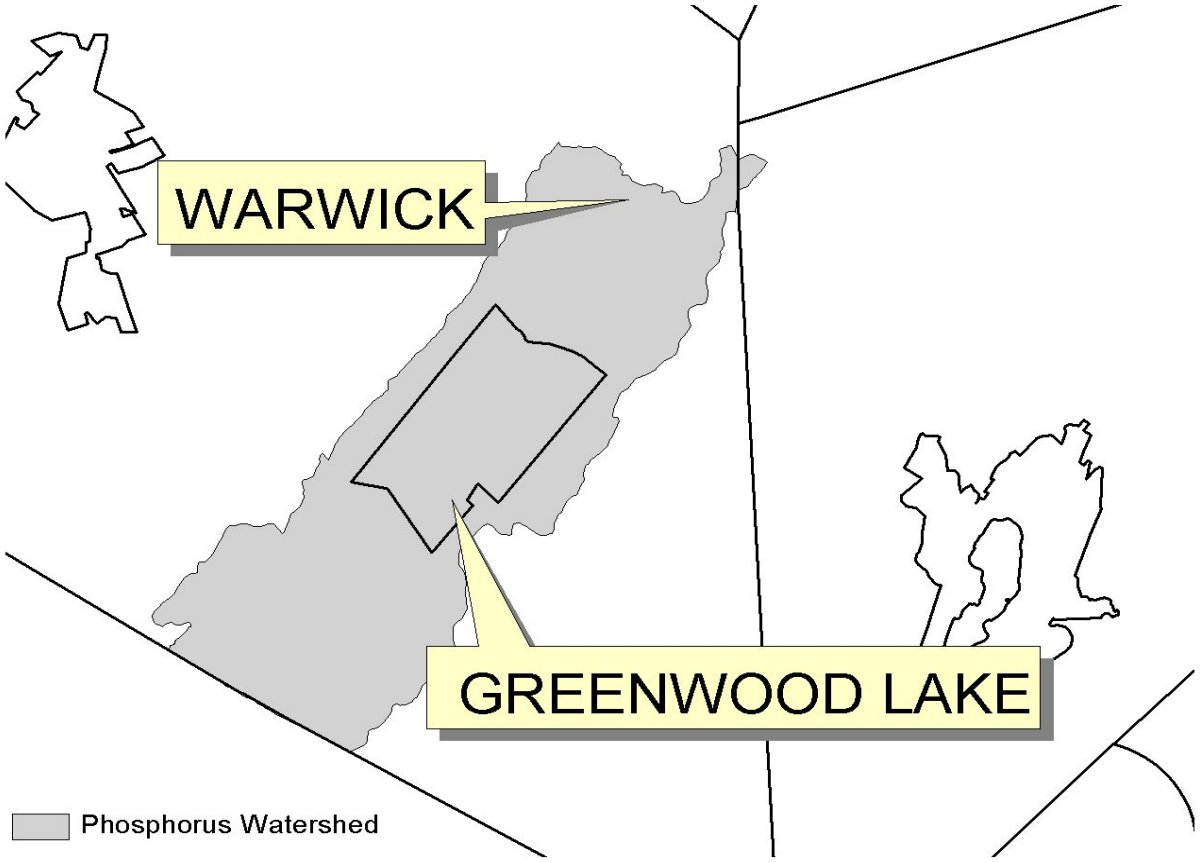
Figure 2 - Onondaga Lake Watershed



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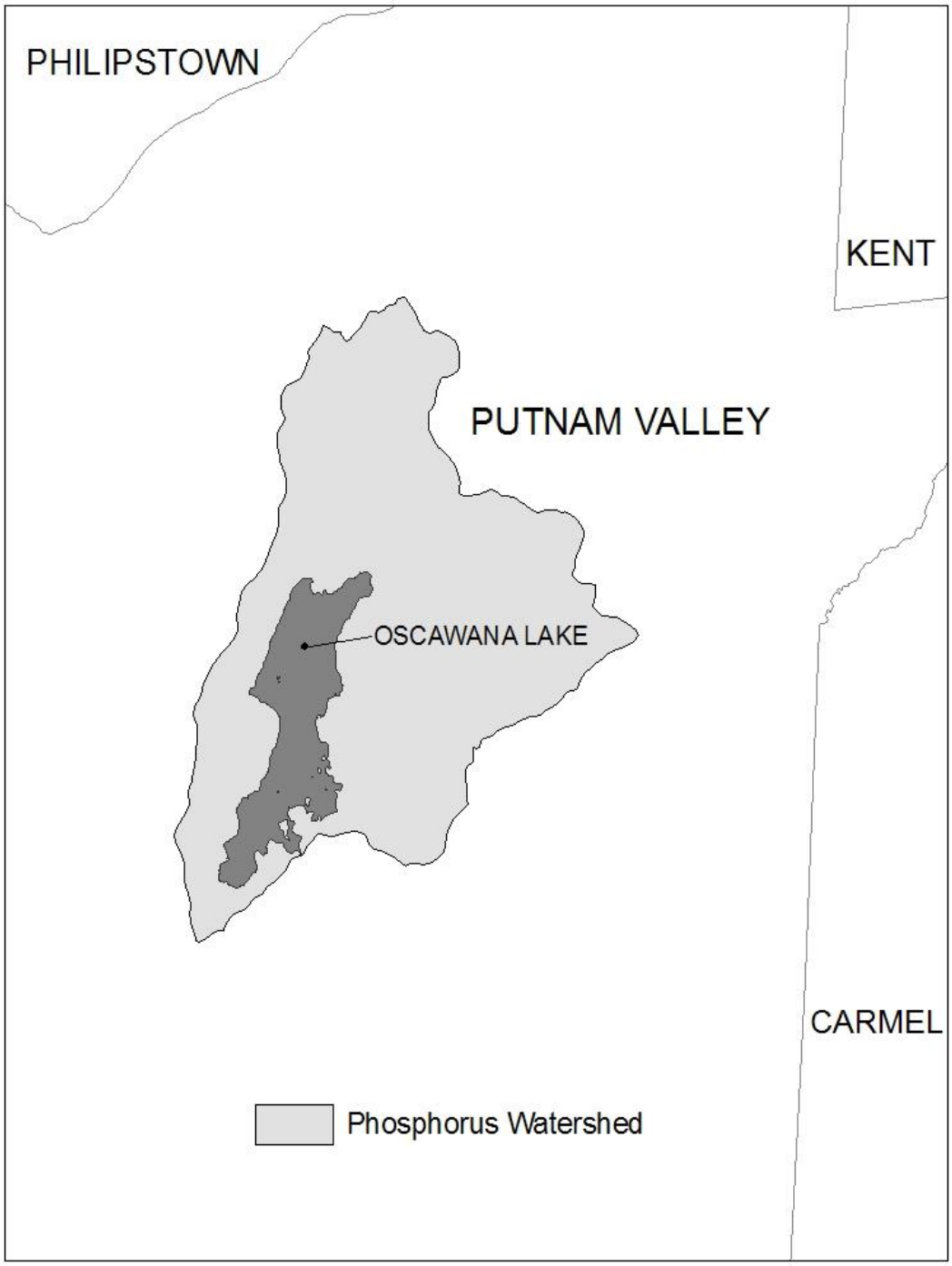
Appendix C

Figure 3 - Greenwood Lake Watershed



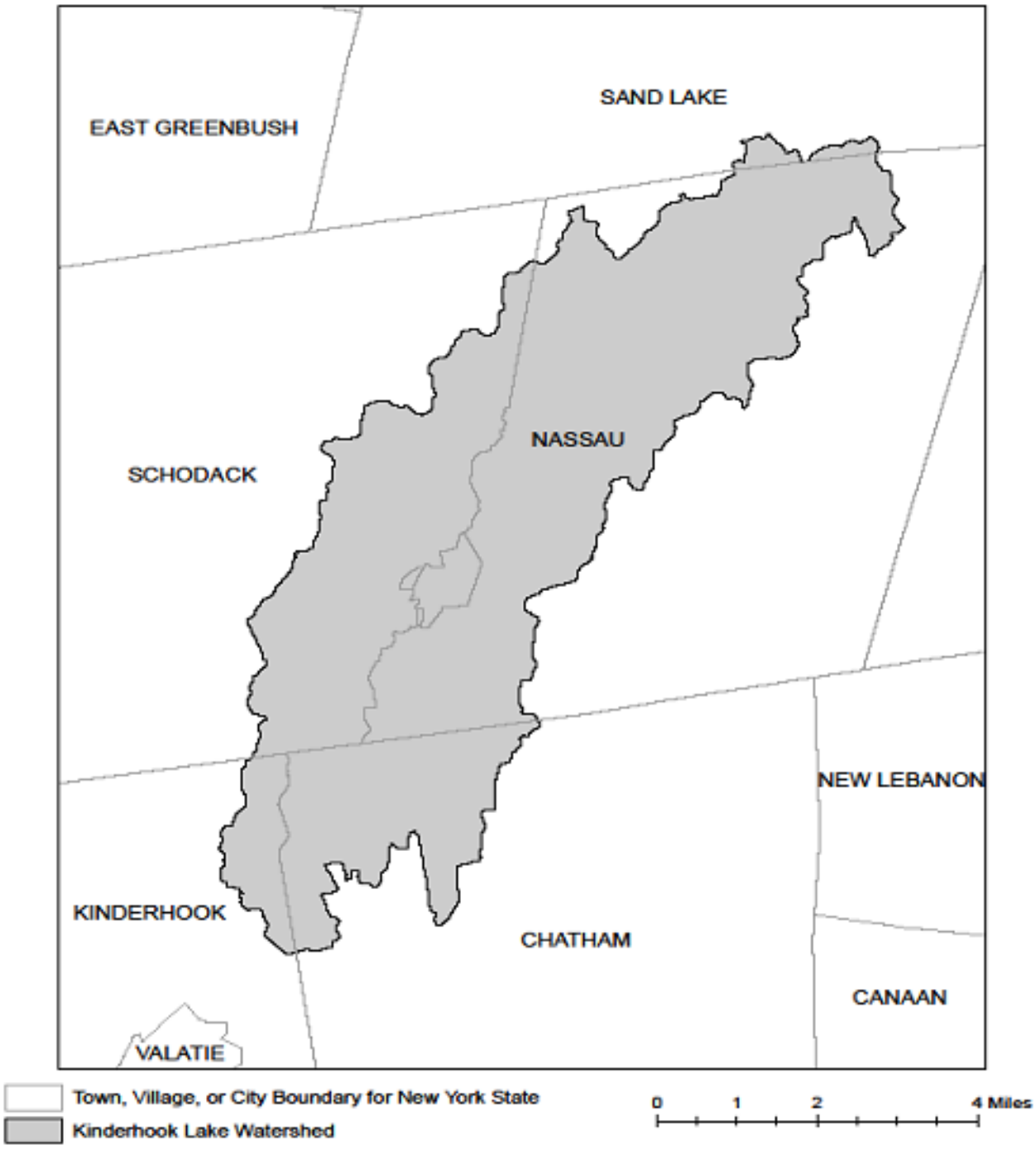
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Figure 4 - Oscawana Lake Watershed



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Figure 5 - Kinderhook Lake Watershed



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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

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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

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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

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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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

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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

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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

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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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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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: _____

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.

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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)

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name

Owner/Operator Mailing Address

City

State _____ Zip _____ - _____

Phone (Owner/Operator) _____ - _____ - _____ Fax (Owner/Operator) _____ - _____ - _____

Email (Owner/Operator)

FED TAX ID _____ - _____ (not required for individuals)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Project Site Information

Project/Site Name

Street Address (NOT P.O. BOX)

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

City/Town/Village (THAT ISSUES BUILDING PERMIT)

State N Y Zip - County DEC Region

Name of Nearest Cross Street

Distance to Nearest Cross Street (Feet)

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

Tax Map Numbers
Section-Block-Parcel

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
Ex. -73.749

Y Coordinates (Northing)
4
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**

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

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION

Number of Lots

- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

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

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

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
.	.	.	.

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
%	%	%	%

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

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

Start Date / / - **End Date** / /

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

Name

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**

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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?

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

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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

Contact Name (Last, Space, First)

Mailing Address

City

State Zip -

Phone - -

Fax - -

Email

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 **MI**

Last Name

Signature

Date / /

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

			.				**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)

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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

___.___ **acre-feet**

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

○ **Yes** ○ **No**

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

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

Minimum RRv Required

___.___ **acre-feet**

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

○ **Yes** ○ **No**

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

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

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

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

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

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

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

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

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

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

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

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **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

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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

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.

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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][ ][ ][ ][ ][ ][ ]

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Owner/Operator Certification

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

Print First Name

MI

Print Last Name

Owner/Operator Signature

Date

/ /

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
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:

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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)?

_____

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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:

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

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)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

Contractor/Subcontractor Certification Form

Each contractor and subcontractor responsible for installing, constructing, repairing, replacing, inspecting, or maintaining any erosion and sediment control measures or post-construction stormwater management practices identified in the SWPPP, shall sign below, attesting to the certification statement found in Section 8.0 of the SWPPP Report.

Contractor Name: _____

_____

Contractor Address: _____

_____

Contractor Phone Number: _____

Responsible for SWPPP elements including: _____

_____

Trained Contractor Name and Title: _____

_____ _____
Printed Name, Title Date

_____ _____
Signature Representing

Attachment: SP-2013-08B_application reports_012121 (22544 : Sp-2013-08B)

WEST HERR LINCOLN DEALERSHIP BUILDING ADDITION AND VEHICLE STORAGE LOT

2601, 2619 & 2635 MILLERSPORT HIGHWAY

TOWN OF AMHERST , ERIE COUNTY
STATE OF NEW YORK
NOVEMBER, 2020

LOCATION MAP
NOT TO SCALE

LIST OF DRAWINGS

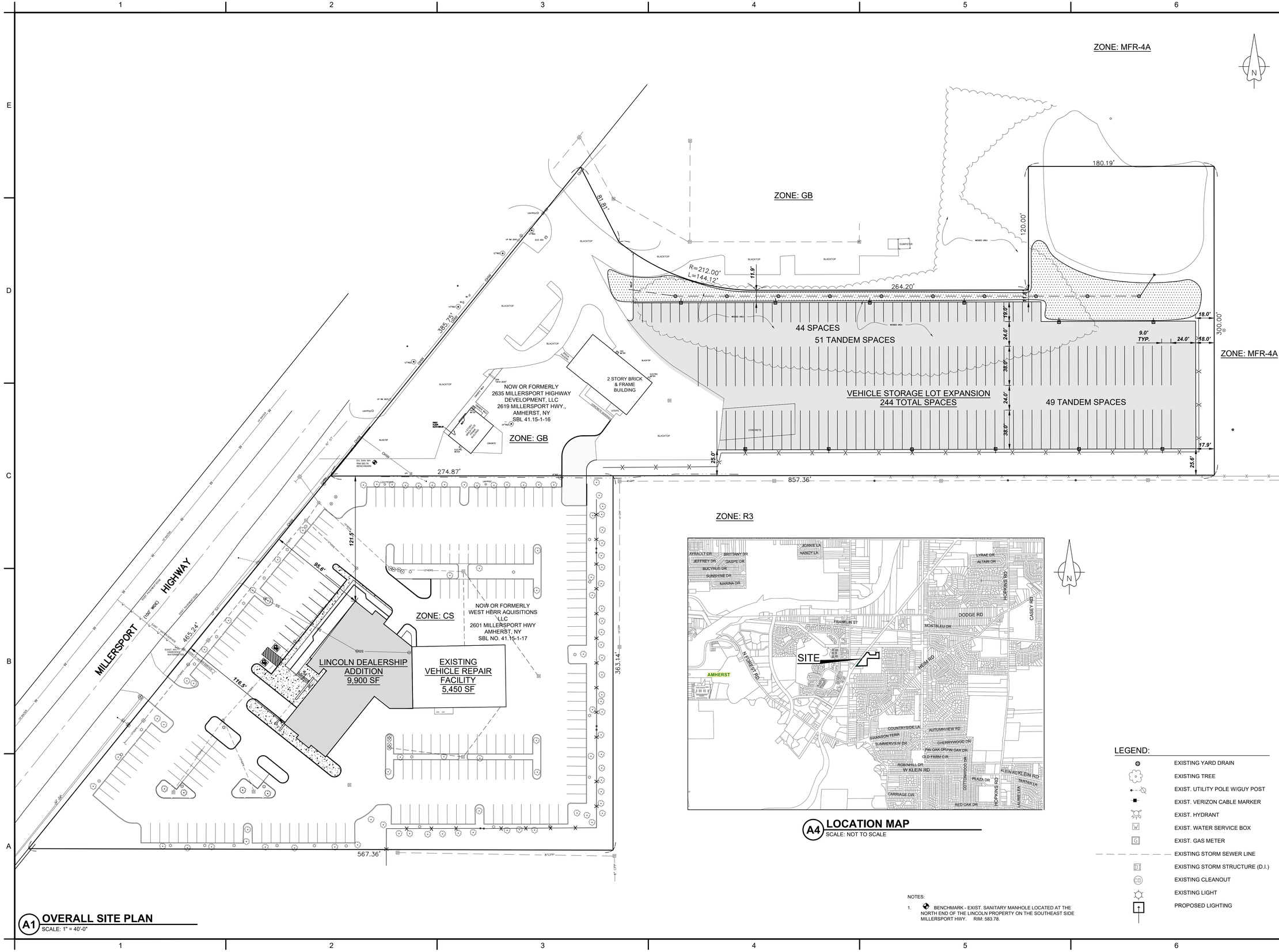
DWG	TITLE
G-100	COVER SHEET
C-101	OVERALL PROPOSED SITE PLAN
C-102	LINCOLN DEALERSHIP EXISTING CONDITIONS PLAN
C-103	LINCOLN DEALERSHIP DEMO SITE PLAN
C-104	LINCOLN DEALERSHIP SITE PLAN
C-105	LINCOLN DEALERSHIP GRADING, PAVING AND DRAINAGE PLAN
C-106	LINCOLN DEALERSHIP LANDSCAPE PLAN
C-107	LINCOLN DEALERSHIP SEDIMENT AND EROSION CONTROL PLAN
C-108	VEHICLE STORAGE LOT EXISTING CONDITIONS PLAN
C-109	VEHICLE STORAGE LOT SITE PLAN
C-110	VEHICLE STORAGE LOT GRADING, DRAINAGE AND PAVING PLAN
C-111	VEHICLE STORAGE LOT LANDSCAPE PLAN
C-112	VEHICLE STORAGE LOT SEDIMENT AND EROSION CONTROL PLAN
C-113	SITE DETAILS
C-114	BIORETENTION DETAILS
C-115	EROSION CONTROL DETAILS
E-100	LIGHTING AND PHOTOGRAMMATIC PLAN

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ENGINEERS AND SURVEYORS
EST. 1933
3556 Lake Shore Road, Suite 500 | Buffalo, NY 14219
(716) 827-8000 | (716) 826-7958 fax
www.nussclarke.com

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A CORPORATION REGISTERED TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK
CERTIFICATE NO. _____

20J5-0030

Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)
H:\Land Development\20\0030 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\G-100.dwg, 11/16/2020 VSARCIONE



A1 OVERALL SITE PLAN
SCALE: 1" = 40'-0"

A4 LOCATION MAP
SCALE: NOT TO SCALE

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED LIGHTING

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

OVERALL PROPOSED SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

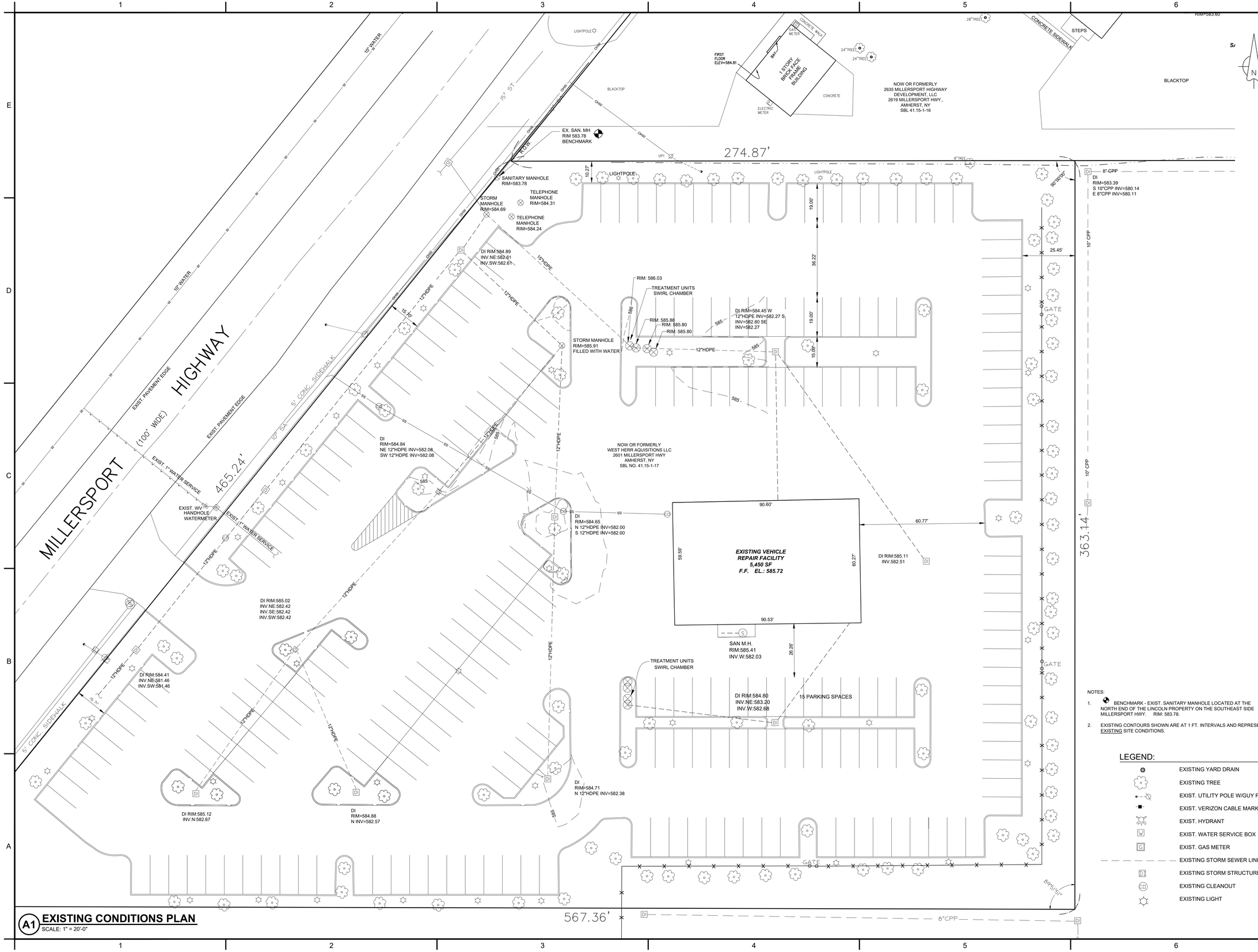
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STATE OF NEW YORK

UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	2 OF 17

C-101

Attachment: SP-2013-08B. drawings, 012121 (22544 : Sp-2013-08B)
K:\Land Development\20\0030 – West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARCONE



A1 EXISTING CONDITIONS PLAN

SCALE: 1" = 20'-0"

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
2. EXISTING CONTOURS SHOWN ARE AT 1 FT. INTERVALS AND REPRESENT EXISTING SITE CONDITIONS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT

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WEST HERR LINCOLN DEALERSHIP ADDITION
AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
EXISTING CONDITIONS PLAN

REVISIONS		
No.	DESCRIPTION	DATE
0		

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A CORPORATION REGISTERED TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK

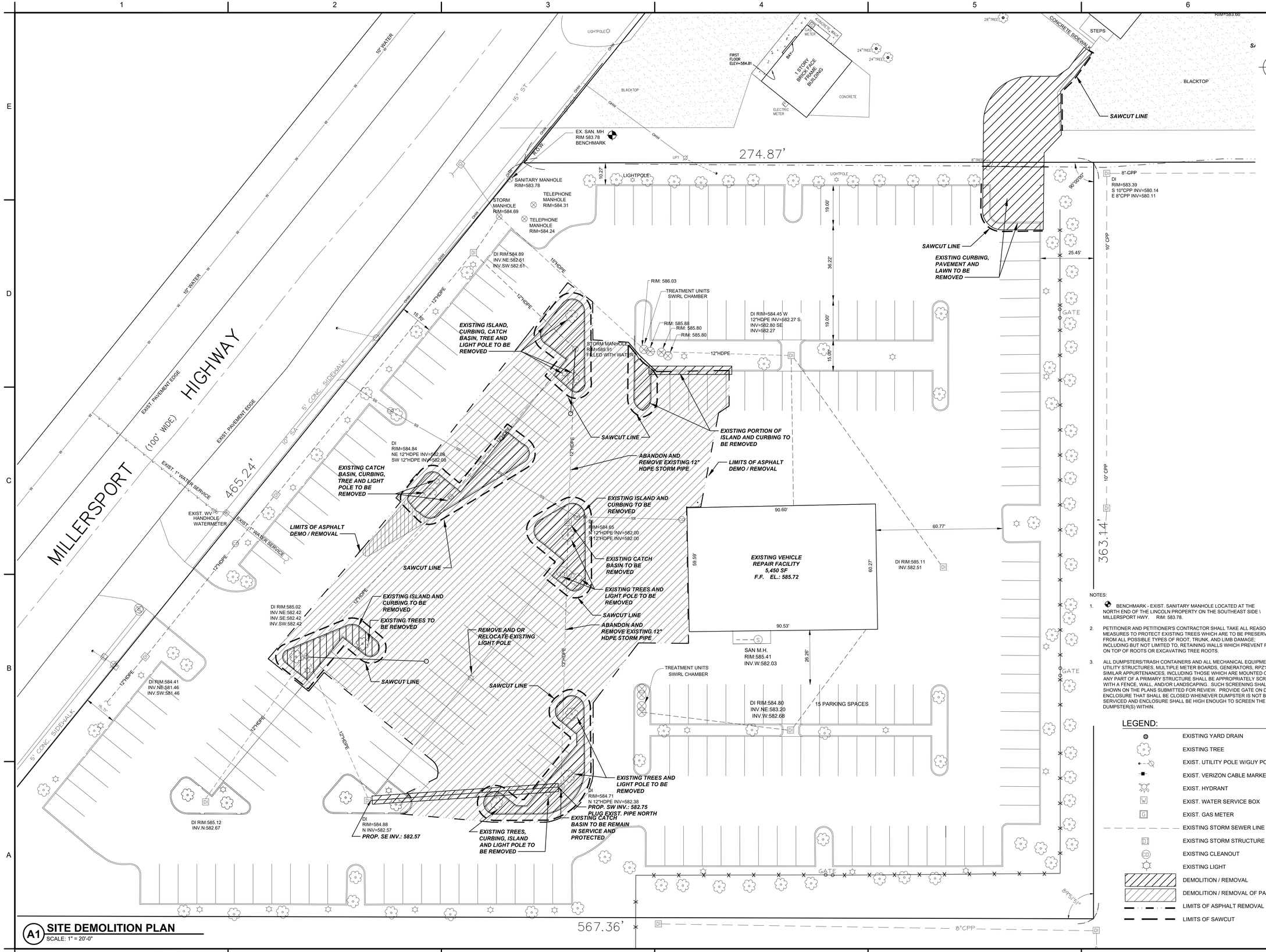
UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	3 OF 17

C-102

H:\Land Development\20\0030 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VGARSCIONE

Attachment: SP-2013-08B drawings 012121 (22544 : Sp-2013-08B)



A1 SITE DEMOLITION PLAN

SCALE: 1" = 20'-0"

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE \ MILLERSPORT HWY. RIM: 583.78.
2. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.
3. ALL DUMPSTERS/TRASH CONTAINERS AND ALL MECHANICAL EQUIPMENT, UTILITY STRUCTURES, MULTIPLE METER BOARDS, GENERATORS, RPZ'S, AND SIMILAR APPURTENANCES, INCLUDING THOSE WHICH ARE MOUNTED ON ANY PART OF A PRIMARY STRUCTURE SHALL BE APPROPRIATELY SCREENED WITH A FENCE, WALL, AND/OR LANDSCAPING. SUCH SCREENING SHALL BE SHOWN ON THE PLANS SUBMITTED FOR REVIEW. PROVIDE GATE ON DUMPSTER ENCLOSURE THAT SHALL BE CLOSED WHENEVER DUMPSTER IS NOT BEING SERVICED AND ENCLOSURE SHALL BE HIGH ENOUGH TO SCREEN THE DUMPSTER(S) WITHIN.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- DEMOLITION / REMOVAL
- DEMOLITION / REMOVAL OF PAVEMENT
- LIMITS OF ASPHALT REMOVAL
- LIMITS OF SAWCUT

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION

2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
DEMO SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

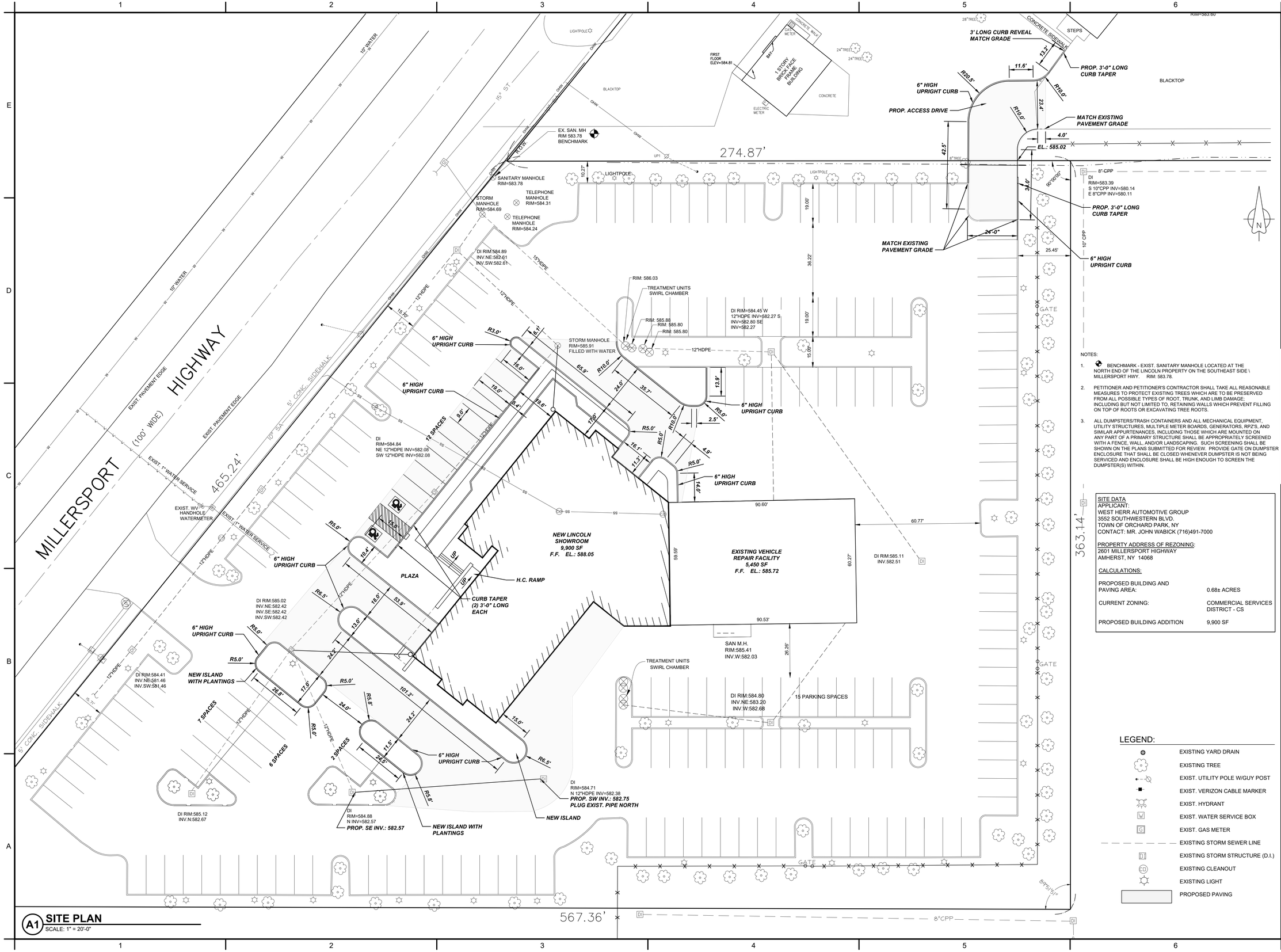
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PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	4 OF 17

C-103

H:\Land Development\V20\20J5-0030 - West Herr Automotive Group\V20 Working Drawings\V20 Discipline (DWG)\C-Civil\V20J5-0030 SITE PLAN.dwg 11/16/2020 VSABICONE
Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)



NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE \ MILLERSPORT HWY. RIM: 583.78.
2. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.
3. ALL DUMPSTERS/TRASH CONTAINERS AND ALL MECHANICAL EQUIPMENT, UTILITY STRUCTURES, MULTIPLE METER BOARDS, GENERATORS, RPZ'S, AND SIMILAR APPURTENANCES, INCLUDING THOSE WHICH ARE MOUNTED ON ANY PART OF A PRIMARY STRUCTURE SHALL BE APPROPRIATELY SCREENED WITH A FENCE, WALL, AND/OR LANDSCAPING. SUCH SCREENING SHALL BE SHOWN ON THE PLANS SUBMITTED FOR REVIEW. PROVIDE GATE ON DUMPSTER ENCLOSURE THAT SHALL BE CLOSED WHENEVER DUMPSTER IS NOT BEING SERVICED AND ENCLOSURE SHALL BE HIGH ENOUGH TO SCREEN THE DUMPSTER(S) WITHIN.

SITE DATA
APPLICANT:
WEST HERR AUTOMOTIVE GROUP
3552 SOUTHWESTERN BLVD.
TOWN OF ORCHARD PARK, NY
CONTACT: MR. JOHN WABICK (716)491-7000

PROPERTY ADDRESS OF REZONING:
2601 MILLERSPORT HIGHWAY
AMHERST, NY 14068

CALCULATIONS:

PROPOSED BUILDING AND PAVING AREA:	0.68± ACRES
CURRENT ZONING:	COMMERCIAL SERVICES DISTRICT - CS
PROPOSED BUILDING ADDITION	9,900 SF

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED PAVING

A1 **SITE PLAN**
SCALE: 1" = 20'-0"

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WEST HERR LINCOLN DEALERSHIP ADDITION
AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

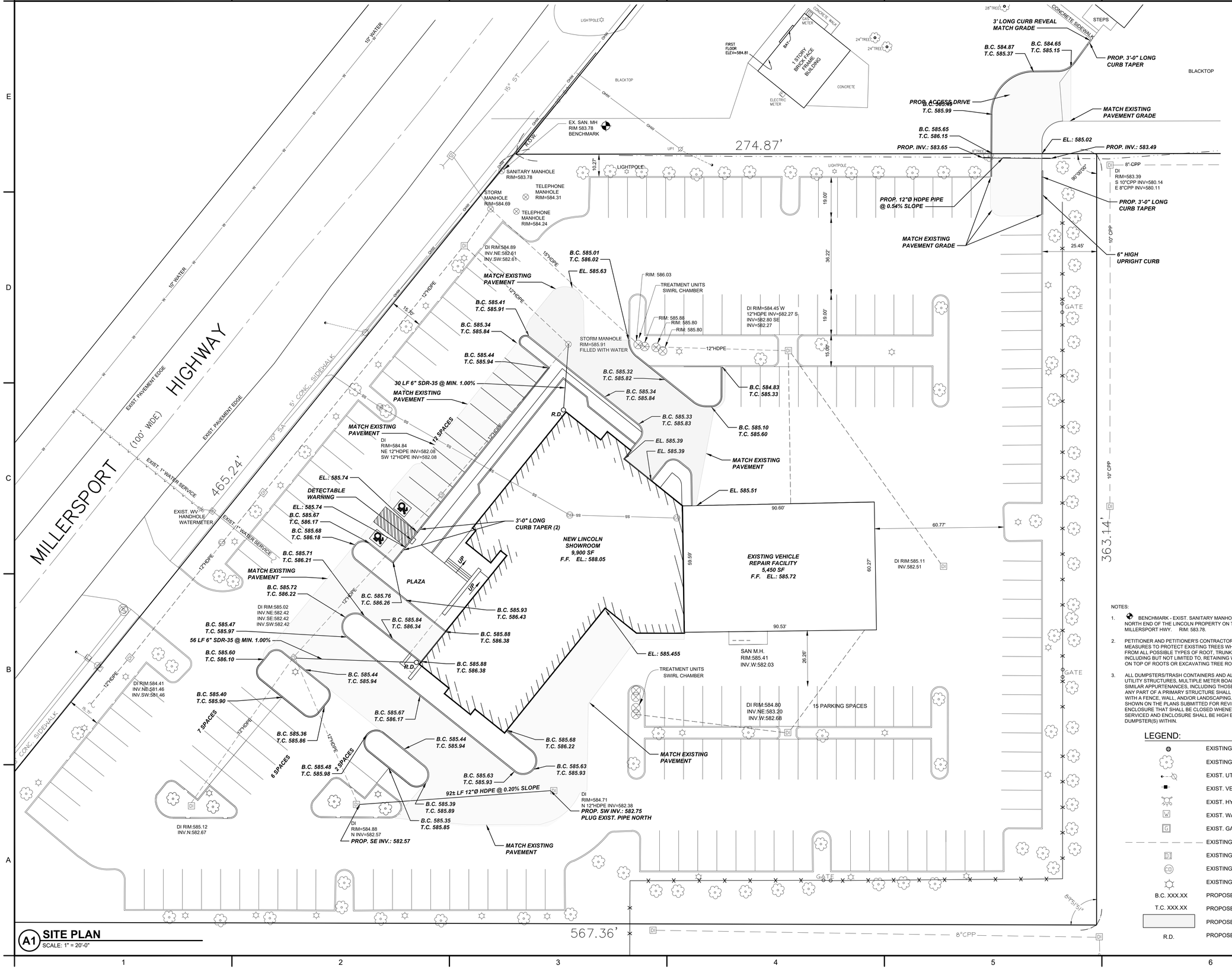
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PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	5 OF 17

C-104

Attachment: SP-2013-08B drawings, 012121 (22544 : Sp-2013-08B)
H:\Land Development\20\0030 - West Herr Automotive Group V5\0 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg, 11/16/2020 VSABOONE



NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE \ MILLERSPORT HWY. RIM: 583.78.
2. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.
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LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- B.C. XXX.XX — PROPOSED BOTTOM OF CURB
- T.C. XXX.XX — PROPOSED TOP OF CURB
- PROPOSED PAVING
- R.D. — PROPOSED ROOF DRAIN

A1 **SITE PLAN**
SCALE: 1" = 20'-0"

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
GRADING, PAVING AND DRAINAGE PLAN

REVISIONS

No.	DESCRIPTION	DATE
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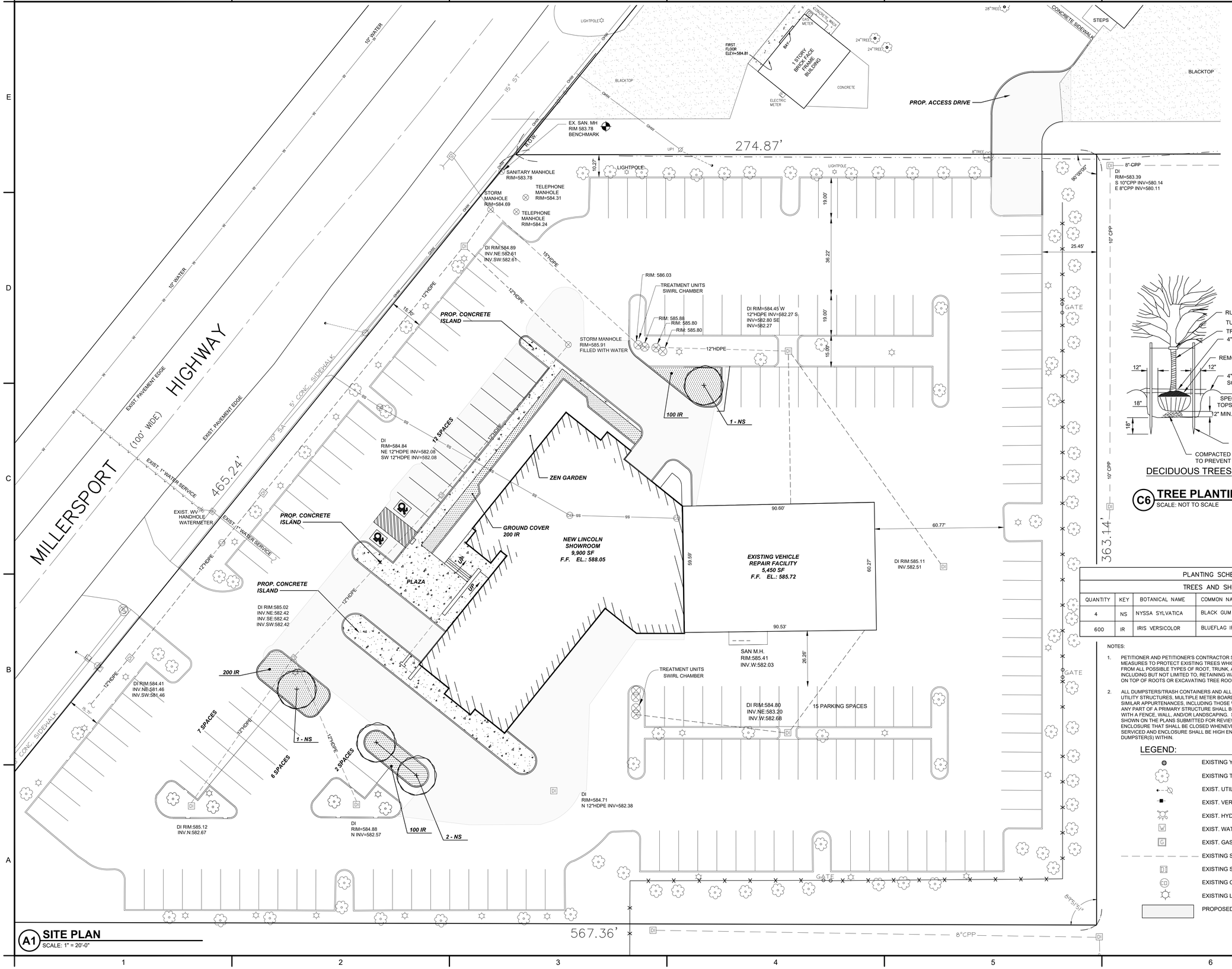
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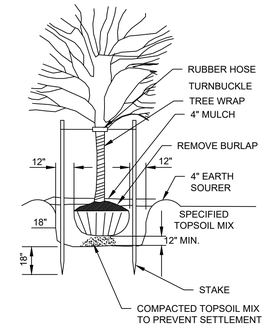
PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	= 1 INCH
SHEET No.	6 OF 17

C-105

H:\Land Development\20\0030 - West Herr Automotive Group,VS\ Working Drawings,VS\ Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARGIONE
Attachment: SP-2013-08B drawings 012121 (22544 : Sp-2013-08B)



A1 SITE PLAN
SCALE: 1" = 20'-0"



DECIDUOUS TREES

C6 TREE PLANTING DETAIL
SCALE: NOT TO SCALE

PLANTING SCHEDULE				
TREES AND SHRUBS				
QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE
4	NS	NYSSA SYLVATICA	BLACK GUM	2 1/2" CAL.
600	IR	IRIS VERSICOLOR	BLUEFLAG IRIS	2" PLUG 2' O.C.

NOTES:

1. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.
2. ALL DUMPSTERS/TRASH CONTAINERS AND ALL MECHANICAL EQUIPMENT, UTILITY STRUCTURES, MULTIPLE METER BOARDS, GENERATORS, RPZ'S, AND SIMILAR APPURTENANCES, INCLUDING THOSE WHICH ARE MOUNTED ON ANY PART OF A PRIMARY STRUCTURE SHALL BE APPROPRIATELY SCREENED WITH A FENCE, WALL, AND/OR LANDSCAPING. SUCH SCREENING SHALL BE SHOWN ON THE PLANS SUBMITTED FOR REVIEW. PROVIDE GATE ON DUMPSTER ENCLOSURE THAT SHALL BE CLOSED WHENEVER DUMPSTER IS NOT BEING SERVICED AND ENCLOSURE SHALL BE HIGH ENOUGH TO SCREEN THE DUMPSTER(S) WITHIN.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED PAVING

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
LANDSCAPE PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

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PROJECT NUMBER	20J5-0030
DATE	11-13-20
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DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	
	= 1 INCH
SHEET No.	7 OF 17

C-106

Attachment: SP-2013-08B drawings, 012121 (22544 : Sp-2013-08B)
K:\Land Development\20\0030 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARCONE

A1 SITE PLAN
SCALE: 1" = 20'-0"

EROSION CONTROL LEGEND:

- SF — PROPOSED SILT FENCE OR FILTREXX SOXX (SEDIMENT CONTROL)
- CL — PROPOSED CLEARING LIMITS
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- FFIP — FILTER FABRIC INLET PROTECTION

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- W — EXIST. WATER SERVICE BOX
- G — EXIST. GAS METER
- EXISTING STORM SEWER LINE
- DI — EXISTING STORM STRUCTURE (D.I.)
- PROPOSED PAVING

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

LINCOLN DEALERSHIP
SEDIMENT AND EROSION CONTROL PLAN

REVISIONS

No.	DESCRIPTION	DATE
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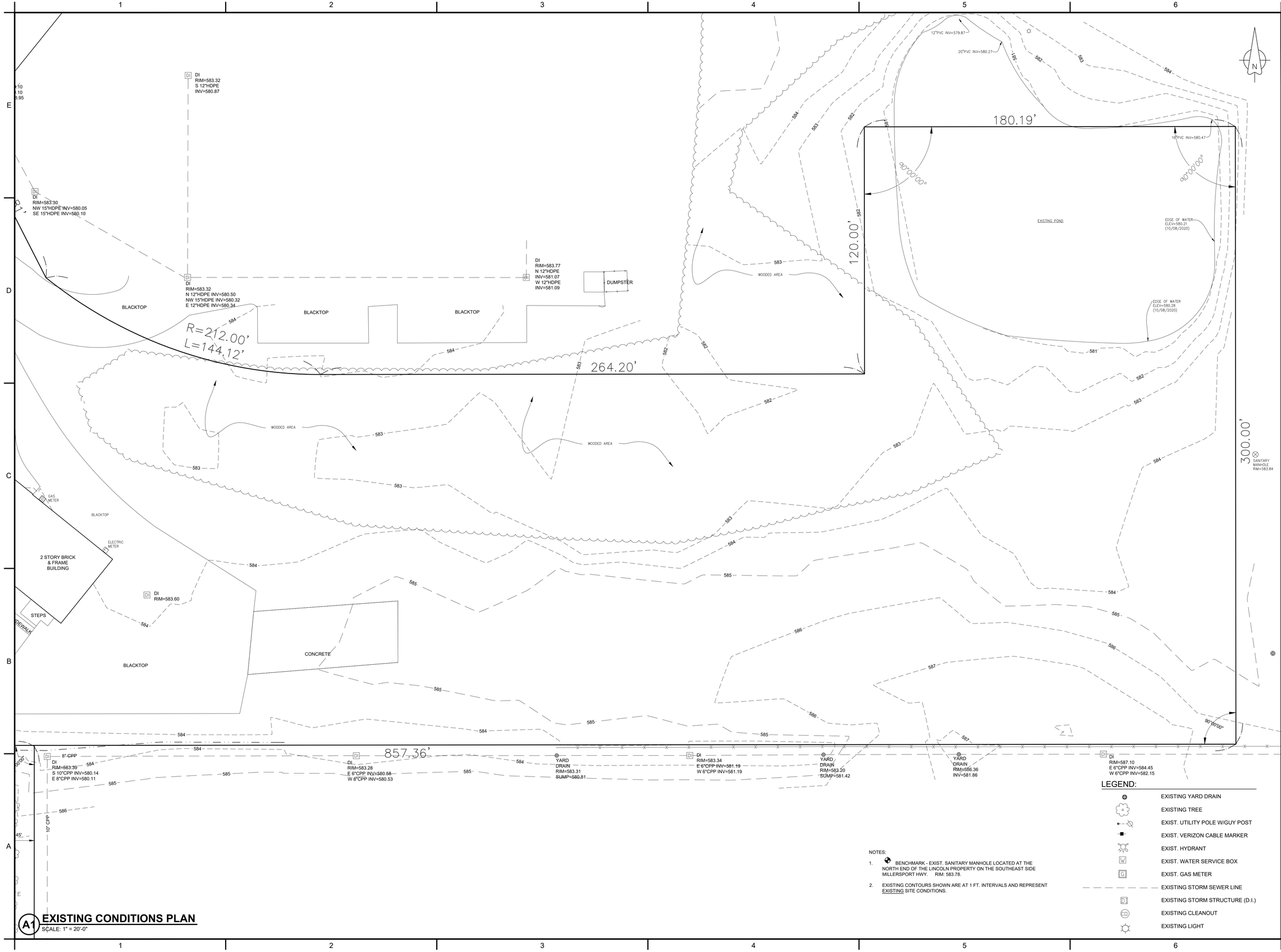
NUSSBAUMER & CLARKE, INC.
A CORPORATION REGISTERED TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK

UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209. PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	
	= 1 INCH
SHEET No.	8 OF 17

C-107

Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)
H:\Land Development\20J\0030 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\Civ-Con\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARCIONE



A1 **EXISTING CONDITIONS PLAN**
SCALE: 1" = 20'-0"

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
2. EXISTING CONTOURS SHOWN ARE AT 1 FT. INTERVALS AND REPRESENT EXISTING SITE CONDITIONS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT
EXISTING CONDITIONS PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

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& LAND SURVEYING IN THE
STATE OF NEW YORK

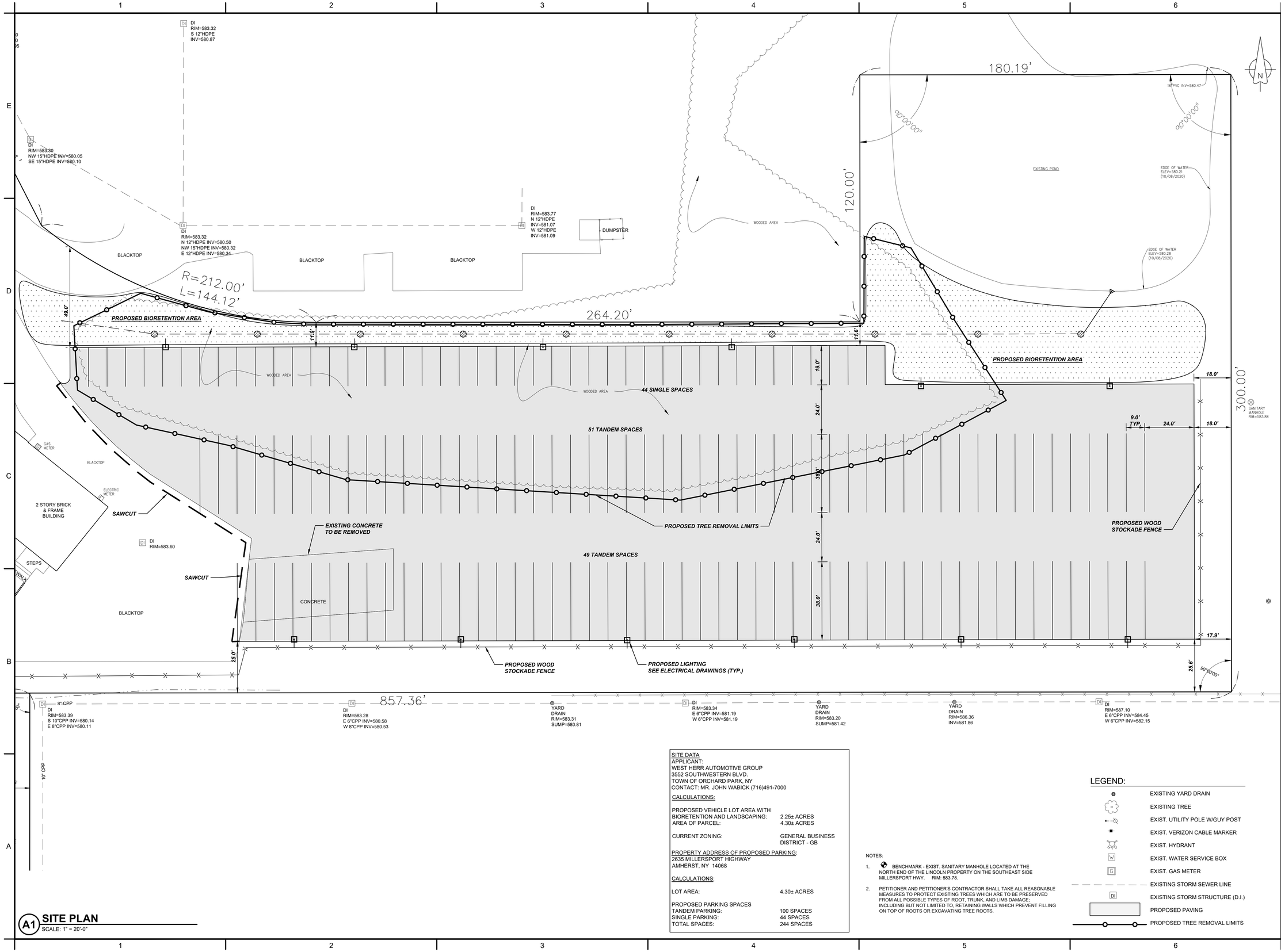
UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209. PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	9 OF 17

C-108

H:\Land Development\20J\0030 - West Herr Automotive Group\V5 Working Drawings\V2 Disciplines (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARCIONE

Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)



A1 SITE PLAN

SCALE: 1" = 20'-0"

SITE DATA
APPLICANT:
WEST HERR AUTOMOTIVE GROUP
3552 SOUTHWESTERN BLVD.
TOWN OF ORCHARD PARK, NY
CONTACT: MR. JOHN WABICK (716)491-7000

CALCULATIONS:

PROPOSED VEHICLE LOT AREA WITH BIORETENTION AND LANDSCAPING:	2.25± ACRES
AREA OF PARCEL:	4.30± ACRES
CURRENT ZONING:	GENERAL BUSINESS DISTRICT - GB

PROPERTY ADDRESS OF PROPOSED PARKING:
2635 MILLERSPORT HIGHWAY
AMHERST, NY 14068

CALCULATIONS:

LOT AREA:	4.30± ACRES
PROPOSED PARKING SPACES	
TANDEM PARKING:	100 SPACES
SINGLE PARKING:	44 SPACES
TOTAL SPACES:	244 SPACES

NOTES:

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2. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX (W)
- EXIST. GAS METER (G)
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.) (DI)
- PROPOSED PAVING
- PROPOSED TREE REMOVAL LIMITS

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

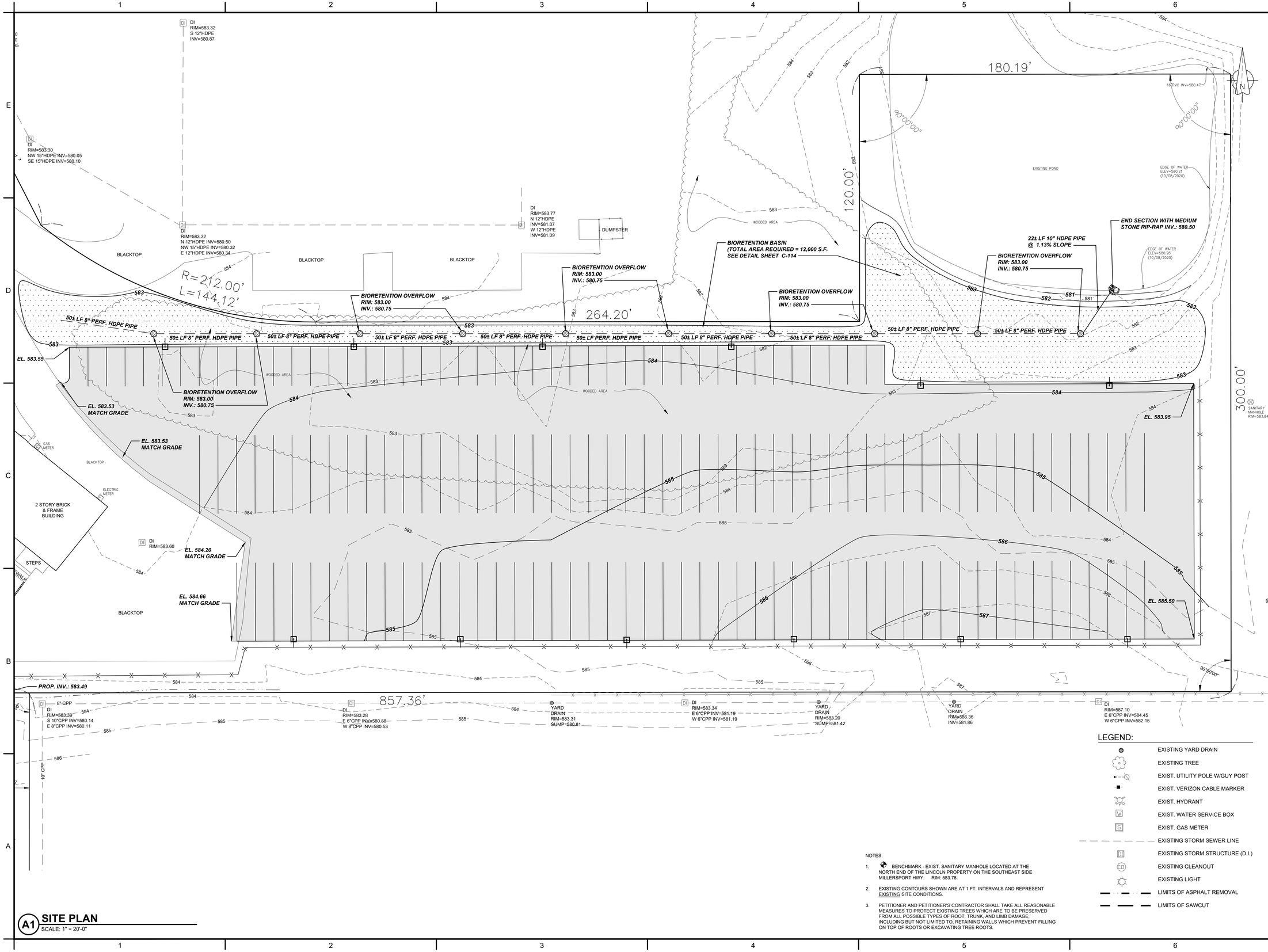
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PROJECT NUMBER	20J5-0030
DATE	11-13-20
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DESIGNED BY	VBS
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APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	10 OF 17

C-109

Attachment: SP-2013-08B. drawings. 012121 (22544 : Sp-2013-08B)
K:\Land Development\20\0030 – West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 SITE PLAN.dwg 11/16/2020 VSARCONE



A1 SITE PLAN

SCALE: 1" = 20'-0"

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- LIMITS OF ASPHALT REMOVAL
- LIMITS OF SAWCUT

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
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3. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION

2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT GRADING, DRAINAGE AND PAVING PLAN

REVISIONS

No.	DESCRIPTION	DATE
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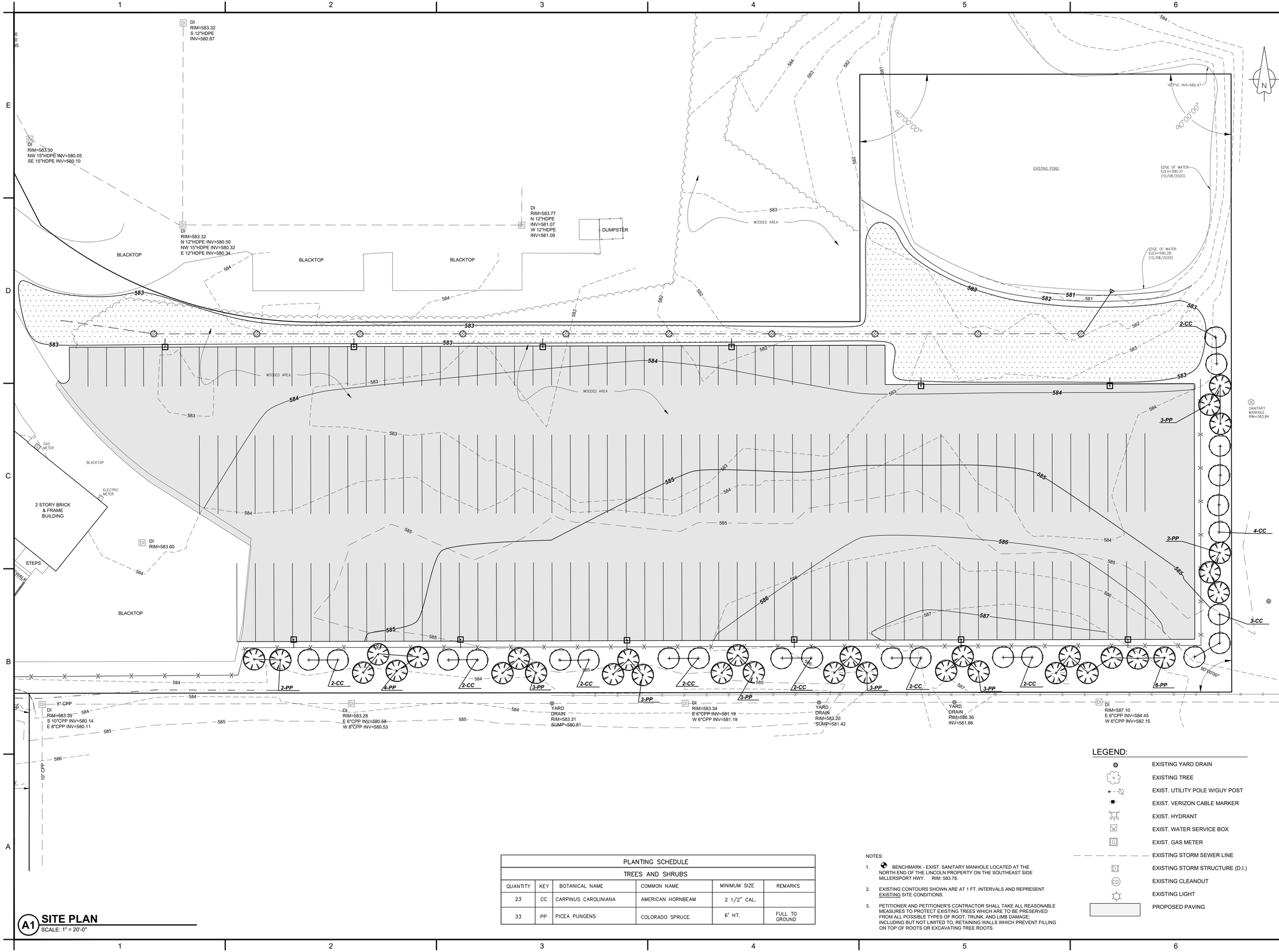
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PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
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CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	11 OF 17

C-110

Attachment: SP-2013-08B drawings 012121 (22544 : Sp-2013-08B)



A1 SITE PLAN

SCALE: 1" = 20'-0"

PLANTING SCHEDULE					
TREES AND SHRUBS					
QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	REMARKS
23	CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2" CAL.	
33	PP	PICEA PUNGENS	COLORADO SPRUCE	6' HT.	FULL TO GROUND

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
2. EXISTING CONTOURS SHOWN ARE AT 1 FT. INTERVALS AND REPRESENT EXISTING SITE CONDITIONS.
3. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED PAVING

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION

2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT LANDSCAPE PLAN

REVISIONS		
No.	DESCRIPTION	DATE
0		

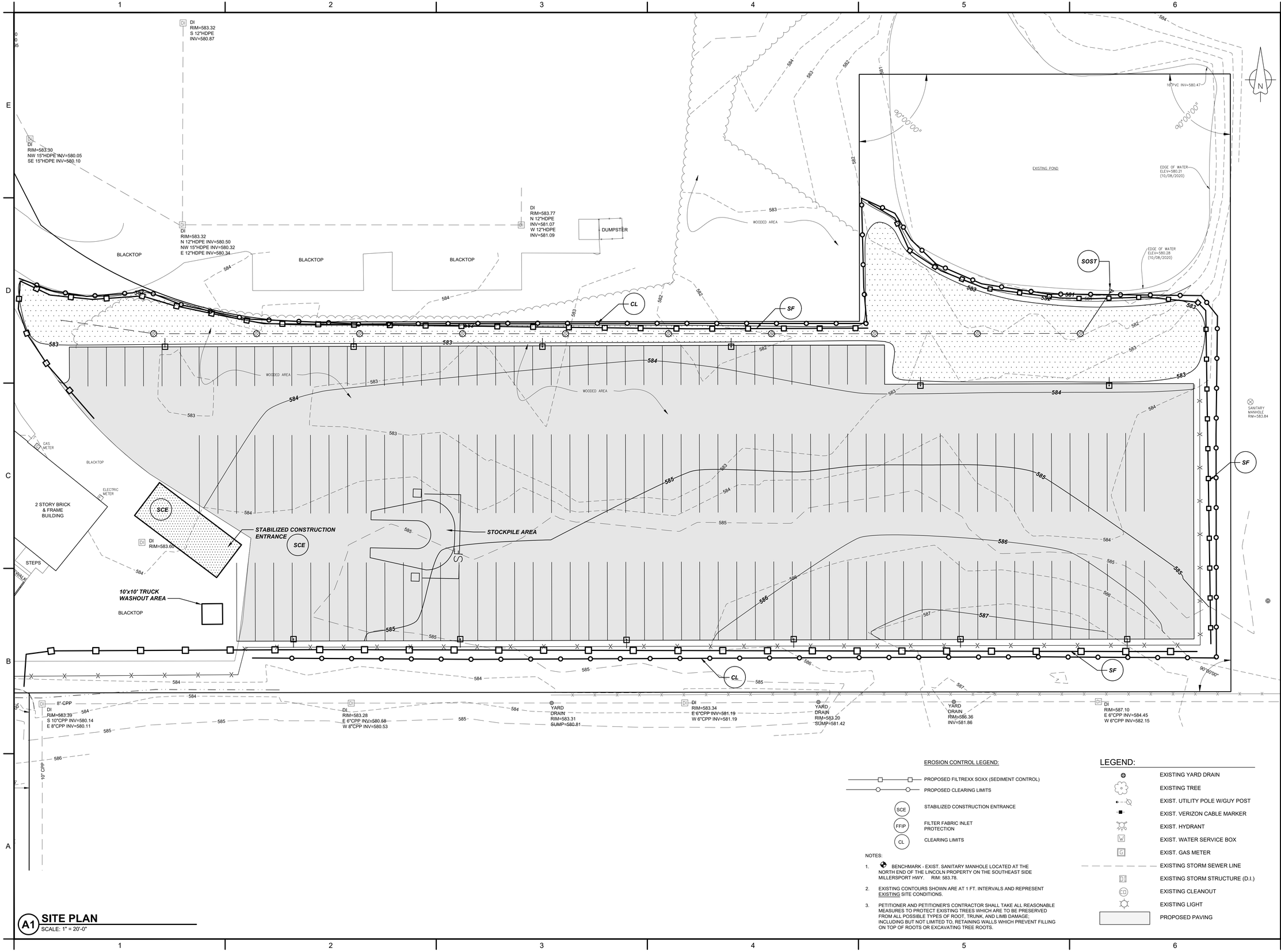
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PROJECT NUMBER	20J5-0030
DATE	----
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	RJP
APPROVED BY	--
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	12 OF 17

C-111

Attachment: SP-2013-08B. drawings. 012121 (22544 : Sp-2013-08B)



A1 SITE PLAN

SCALE: 1" = 20'-0"

EROSION CONTROL LEGEND:

- PROPOSED FILTREXX SOXX (SEDIMENT CONTROL)
- PROPOSED CLEARING LIMITS
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- FFIP — FILTER FABRIC INLET PROTECTION
- CL — CLEARING LIMITS

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.
2. EXISTING CONTOURS SHOWN ARE AT 1 FT. INTERVALS AND REPRESENT EXISTING SITE CONDITIONS.
3. PETITIONER AND PETITIONER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED PAVING

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1933
3556 Lake Shore Road, Suite 500 | Buffalo, NY 14219
(716) 827-8000 | (716) 826-7958 fax
www.nussclarke.com

WEST HERR LINCOLN DEALERSHIP ADDITION
AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

VEHICLE STORAGE LOT
SEDIMENT AND EROSION CONTROL PLAN

REVISIONS

No.	DESCRIPTION	DATE
0		

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A CORPORATION REGISTERED TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK

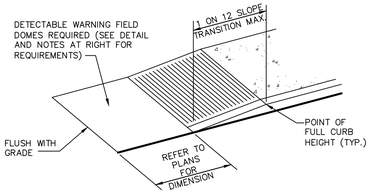
NUSSBAUMER AND CLARKE, INC. INCORPORATED SEAL 1933 BUFFALO, N.Y.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209. PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	----
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	RJP
APPROVED BY	--
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	13 OF 17

C-112

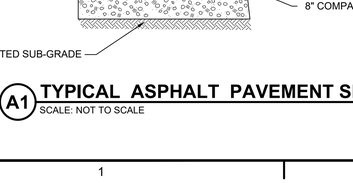
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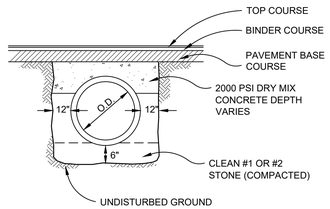
SIDEWALK RAMP NOTES:

1. THE TYPE AND LOCATION SHOWN ON THE PLANS ARE FOR INFORMATION ONLY. THE FINAL TYPE AND LOCATION SHALL BE DESIGNATED BY THE ENGINEER IN CHARGE.
2. THE SURFACE OF ALL SIDEWALK CURB RAMPS SHALL BE STABLE, FIRM, AND SLIP RESISTANT. A COARSE BROOM FINISH PERPENDICULAR TO THE RAMP SLOPE IS ACCEPTABLE ON CEMENT CONCRETE CURB RAMPS.
3. THE NORMAL PAVEMENT EDGE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
4. THE SIDE SLOPE SHALL BE 1:12 FOR A MAXIMUM WIDTH OF 6 FT. EXCEPT: A WHEN THE SIDE SLOPE IS NEXT TO A LANDSCAPED PARKWAY, THE MAXIMUM WIDTH = 4 FT. B WHEN THE SIDE SLOPE ENCOMPASSES A SIGNAL POLE, UTILITY POLE, ETC., THE MAXIMUM WIDTH = 4 FT. C WHERE THE TOP OF THE SIDE SLOPE IS WITHIN 1 FT.OF THE P.T., USE THE P.T. AS THE TOP OF SLOPE. AT A CORNER WHERE THE CURB RADIUS IS 25 FT. OR D LESS, A SINGLE RAMP (EITHER TYPE A, B, OR C) LOCATED DIAGONALLY, CAN OFTEN SERVE CROSSWALKS IN TWO DIRECTIONS. HOWEVER, A SINGLE RAMP SHALL ONLY BE USED WHERE THERE IS A MINIMUM CLEAR SPACE OF 48 INCHES FALLING ENTIRELY WITHIN THE PROJECTION OF THE INTERSECTING CURBS. WHERE THE RADIUS EXCEEDS 25 FT. OR THE MINIMUM 48 INCH CLEAR SPACE IS UNACHIEVEABLE, THEN SEPARATE RAMPS SHOULD BE PROVIDED FOR EACH CROSSWALK.

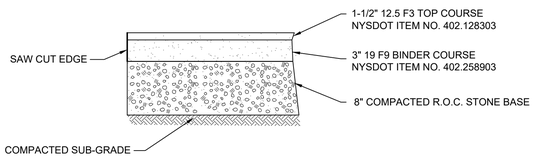
D1 HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE



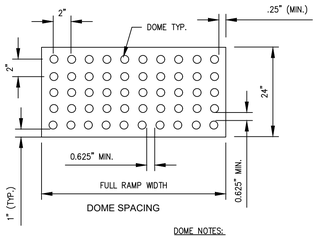
C1 TYPICAL SECTION FOR EARTH BACKFILL
SCALE: NOT TO SCALE

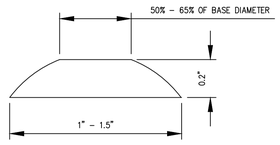


B1 STORM SEWER TRENCH DETAIL UNDER PAVEMENT
SCALE: NOT TO SCALE



A1 TYPICAL ASPHALT PAVEMENT SECTION
SCALE: NOT TO SCALE

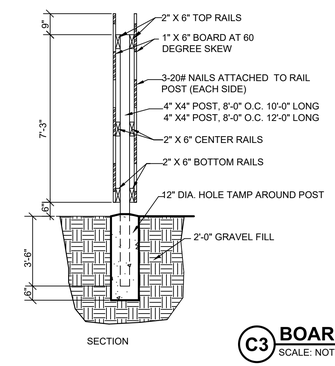




DOME NOTES:

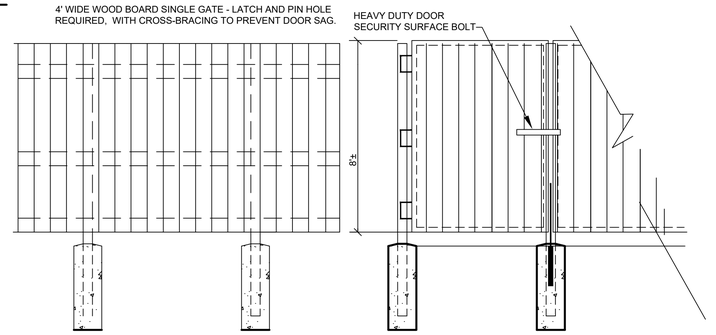
1. THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE, THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING FIELD (THE DOMES AND THE ENTIRE 24" LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.
2. THE SIZE OF THE DETECTABLE WARNING FIELD SHALL BE 24" IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUSIVE OF SIDE FLARES.
3. LOCATION OF DETECTABLE WARNINGS. DETECTABLE WARNINGS SHALL BE LOCATED SO THAT THE EDGE OF THE WARNING FIELD NEAREST TO THE ROADWAY OR STREET SURFACE IS 6" TO 9" (12" WHERE TRAVERSABLE CURB IS USED) FROM THE EDGE OF THE ROADWAY/STREET, OR FROM THE FRONT OF THE DROPPED CURB, WHERE A DROPPED CURB CONTINUES ACROSS THE BOTTOM OF THE SIDEWALK CURB RAMP.
4. THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 16" TO 19" FROM THE FACE OF THE GATE ARM. WHERE THERE IS NO GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE TRACKS SHALL BE 15 FEET FROM THE CENTERLINE OF THE NEAREST TRACK.
5. DOME ALIGNMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL.
6. COLOR REQUIREMENTS. THE DETECTABLE WARNING FIELD SHALL BE THE COLOR SPECIFIED IN THE CONTRACT DOCUMENTS OR SHALL VISUALLY CONTRAST WITH THE ADJOINING CURB RAMP, OR OTHER ADJACENT WALKWAY SURFACES WHERE THERE IS NO CURB RAMP. EITHER LIGHT-ON DARK, OR DARK-ON-LIGHT AS DEFINED IN THE AMERICANS WITH DISABILITIES ACCESSIBILITY GUIDELINES (ADAAG).
7. PAYMENT LINES ARE THE 24" DIMENSION SHOWN IN THE DETAILS EXTENDING THE FULL WIDTH OF THE CURB RAMP AND/OR APPLICABLE SURFACES.
8. OMIT DETECTABLE WARNINGS WHERE THERE WILL BE LESS THAN 24" OF SPACE BETWEEN THE DETECTABLE WARNING FIELDS.

D2 DETECTABLE WARNING FIELD DETAIL
SCALE: NOT TO SCALE

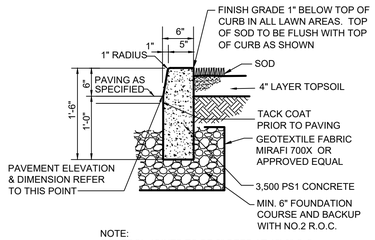


SINGLE GATE

4' WIDE WOOD BOARD SINGLE GATE - LATCH AND PIN HOLE REQUIRED, WITH CROSS-BRACING TO PREVENT DOOR SAG.

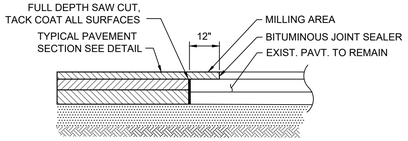


C3 BOARD ON BOARD WOOD FENCE DETAIL
SCALE: NOT TO SCALE

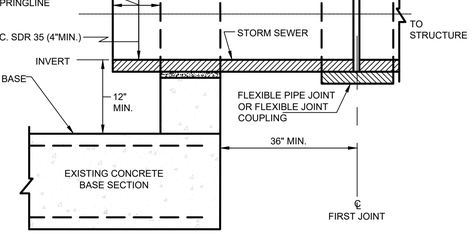


NOTE:
CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. BOTHWAYS - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700

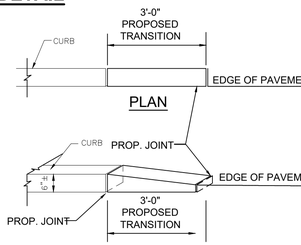
B2 TYPICAL CURB DETAIL
SCALE: NOT TO SCALE



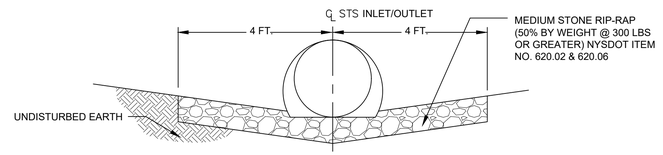
A2 PAVEMENT MILLING AND OVERLAY
SCALE: NOT TO SCALE



D4 CONNECTION TO EXISTING DROP INLET
SCALE: NOT TO SCALE



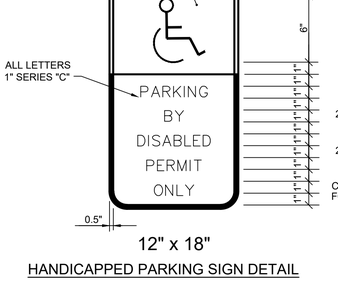
C1 CURB TRANSITION DETAIL
SCALE: NOT TO SCALE



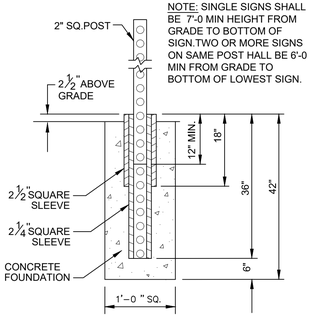
STONE FILLING ITEM	SEE NOTES	STONE SIZE	PERCENT OF TOTAL BY WEIGHT	NYSDOT ITEM NO.
MEDIUM	1, 2	HEAVIER THAN 100 POUNDS	50-100	620.04
		SMALLER THAN 6-INCH	0-10	

NOTES:
1. MATERIALS SHALL CONTAIN LESS TAHN 20 PERCENT OF STONES WITH A RATIO OF MAXIMUM TO MINIMUM DIMENSIONS GREATER THAN THREE.
2. MATERIALS SHALL CONTAIN A SUFFICIENT AMOUNT OF STONES SMALLER THAN THE AVERAGE STONE SIZE TO FILL IN THE SPACES BETWEEN THE LARGER STONES.

A4 RIP-RAP DETAIL
SCALE: NOT TO SCALE



12" x 18"
HANDICAPPED PARKING SIGN DETAIL

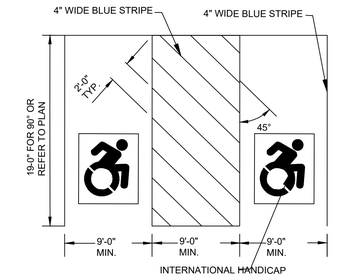


TYPICAL SIGN POST INSTALLATION

GENERAL HANDICAP SIGN NOTES:

1. TOP PORTION OF FTP-25 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
2. BOTTOM PORTION OF FTP-25 SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
3. FTP-25 SHALL BE FABRICATED ON ONE PANEL.
4. THE SIGN SHALL BE PLACED A MINIMUM OF 3' FROM THE WHEEL STOP OR THE BACK OF CURB (WHERE APPLICABLE).

D6 TYPICAL BOLLARD DETAIL W/SIGN POST
SCALE: NOT TO SCALE



NOTE: ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH A SLOPE OF 1.5% (2% MAXIMUM) (EXAMPLE: 1.92 INCHES MAX. VERTICAL IN 8 FEET HORIZONTAL) OR 1:50 IN ALL DIRECTIONS. THIS INCLUDES BOTH "RUNNING SLOPES" AND "CROSS SLOPES."

GENERAL HANDICAP SIGN NOTES:

1. TOP PORTION OF FTP-25 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
2. BOTTOM PORTION OF FTP-25 SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
3. FTP-25 SHALL BE FABRICATED ON ONE PANEL.
4. THE SIGN SHALL BE PLACED A MINIMUM OF 3' FROM THE WHEEL STOP OR THE BACK OF CURB (WHERE APPLICABLE).

C6 STRIPING DETAIL FOR HANDICAP PARKING
SCALE: NOT TO SCALE

GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF CLARENCE STANDARD DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AMHERST ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUNTERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
3. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 53 RELATING TO CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND APPEALS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
5. UNSUITABLE MATERIALS SUCH AS FROZEN ORGANIC AND/OR VEGETABLE MATERIAL, DEBRIS, TREES, LUMBER, LARGE STONES OR CLODS (6.0" OR LARGER), MUCK, PEAT, ORGANIC SILT WILL NOT BE ACCEPTABLE FILL AND CERTAIN MAN-MADE DEPOSITS OF INDUSTRIAL WASTE, SLUDGE OR LANDFILL MAY ALSO BE DETERMINED AS UNSUITABLE HAZARDOUS MATERIAL.
6. THE COMPACTION OF ALL MATERIALS WILL OCCUR AT 6" INCREMENTS.
7. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO INSTALL ADDITIONAL STONE CRADLE AS ORDERED BY THE ENGINEER.

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WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

SITE DETAILS

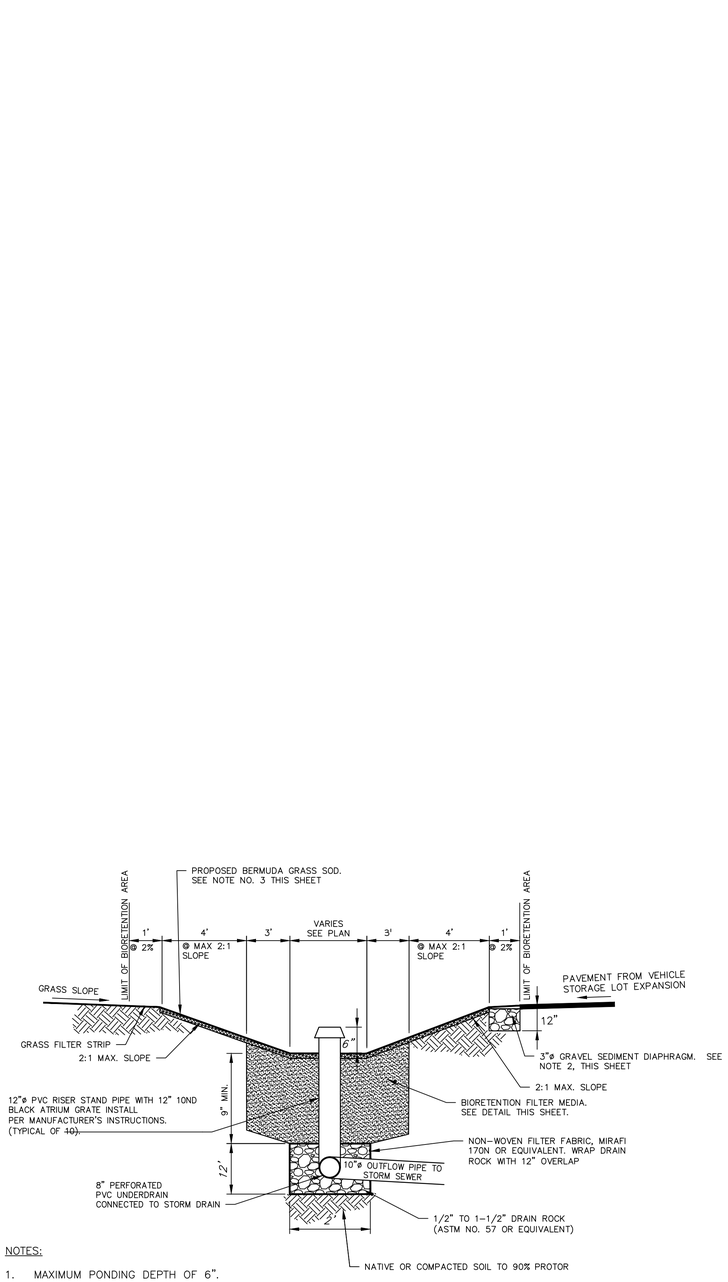
REVISIONS		
No.	DESCRIPTION	DATE
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CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	14 OF 17

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H:\Land Development\20J\0030 – West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 DETAILS.dwg 11/16/2020 JSARCIONE
Attachment: SP-2013-08B drawings 012121 (22544 : Sp-2013-08B)



NOTES:

1. MAXIMUM PONDING DEPTH OF 6".
2. 3"ø GRAVEL PRE-TREATMENT DIAPHRAGM SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF BASIN SOUTH EDGE (ADJACENT TO NEW PAVEMENT). DIAPHRAGM SHALL BE MINIMUM 1-FOOT WIDE.
3. PROPOSED BERMUDAGRASS SOD COVER (TYP. 12,000 SF). SOD MUST BE INSTALLED FOR GRASSED BIORETENTION, SEEDED GRASS IS NOT PERMITTED. SEE STORMWATER POLLUTION PREVENTION PLAN FOR BLUEGRASS SPECIFICATIONS.

A1 GRASSED BIORETENTION BASIN DETAIL
SCALE: NOT TO SCALE

1. THE BIORETENTION SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.
2. THE USDA TEXTURAL CLASSIFICATION OF THE PLANTING SOIL FOR THE BIORETENTION SOIL MIXTURE SHALL BE LOAMY SAND OR SANDY LOAM. PLANTING SOIL SHALL BE SALVAGED OR FURNISHED. PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

ITEM	PERCENT BY WEIGHT	TEST METHOD
SAND (0.42 – 2.0 MIN.)	60 – 85%	AASHTO T88
SILT (0.050 – 0.002 MM)	0 – 50% < 20%	AASHTO T88
CLAY (LESS THAN 0.002 MM)	10 – 20% < 5%	AASHTO T88
ORGANIC MATTER	5 – 10%	AASHTO T194

3. THE TEXTURAL ANALYSIS FOR THE PLANTING SOIL SHALL BE AS FOLLOWS:

ASTM E11 SIEVE SIZE	MINIMUM PERCENT PASSING BY WEIGHT
2 IN.	100
NO. 4	90
NO. 10	80

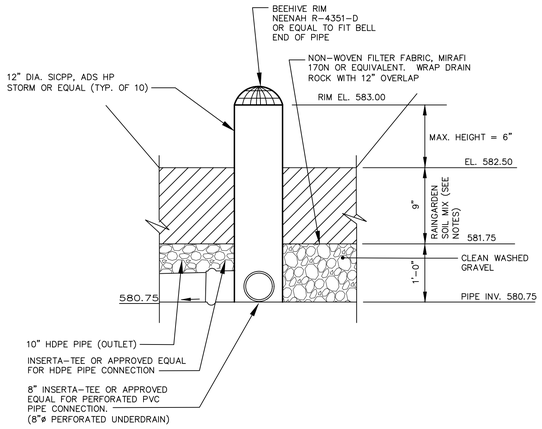
4. THE BIORETENTION SOIL MIXTURE SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

ITEM	CRITERIA	TEST METHOD
CORRECTED PH	5.5 – 7.5	ASTM D4972
MAGNESIUM	MINIMUM 32 PPM	*
PHOSPHORUS (PHOSPHATE - P_2O_5)	NOT TO EXCEED 69 PPM	*
POTASSIUM (K_2O)	MINIMUM 78 PPM	*
SOLUBLE SALTS	NOT TO EXCEED 500 PPM	*

* USE AUTHORIZED SOIL TEST PROCEDURES.

5. THE BIORETENTION SOIL MIXTURE SHALL BE MIXED TO A HOMOGENEOUS CONSISTENCY TO THE SATISFACTION OF THE ENGINEER.

A3 BIORETENTION SOIL MIXTURE NOTES
SCALE: NOT TO SCALE



A5 BIORETENTION OVERFLOW STRUCTURE DETAIL
SCALE: NOT TO SCALE

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WEST HERR LINCOLN DEALERSHIP ADDITION
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2601, 2619 & 2635 MILLERSPORT HIGHWAY

BIORETENTION DETAILS

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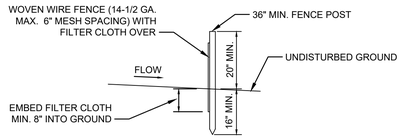
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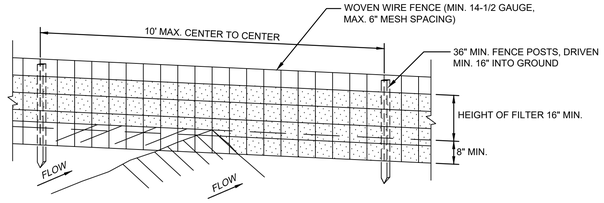
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SHEET No.	15 OF 17

C-114

H:\Land Development\20J\0030 – West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 DETAILS.dwg 11/16/2020 YSARCONE
Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)



SECTION



PERSPECTIVE VIEW

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

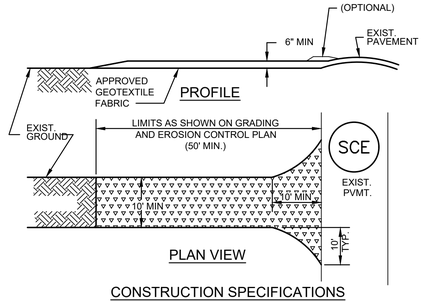
POSTS:
STEEL EITHER T OR U TYPE OR 2"X2" HARDWOOD.
FENCE:
WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH:
FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT:
GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

D1 SILT FENCE DETAILS

SCALE: NOT TO SCALE

SF

CONTRACTOR HAS THE OPTION TO USE FILTREXX SEDIMENT CONTROL "SOXX" IN PLACE OF OR COMBINED WITH SILT FENCE AT HIS/HER DISCRETION. SEE DETAIL THIS SHEET.



PLAN VIEW

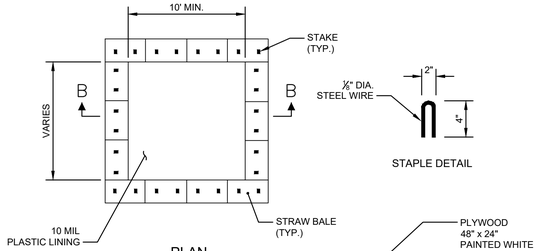
CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQ'D, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESI-DENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQ'D ON A SINGLE FAMILY RESIDENCE LOT.
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 1:5 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. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQ'D, 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 EVENT.

C2 STABILIZED CONSTRUCTION ENTRANCE DETAILS

SCALE: NOT TO SCALE

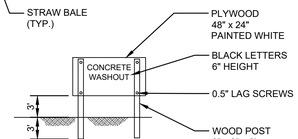
SCE



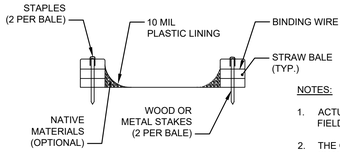
PLAN

STAPLE DETAIL

TYPE "ABOVE GRADE" WITH STRAW BALES



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



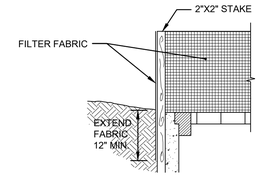
SECTION B-B

NOTES:

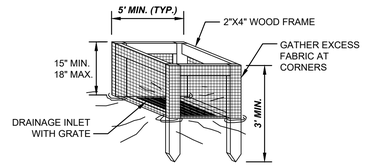
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

D4 CONCRETE TRUCK WASH OUT DETAIL

SCALE: NOT TO SCALE

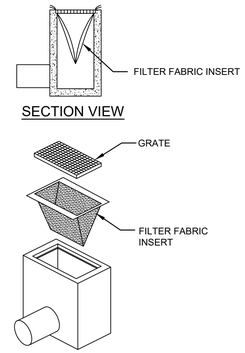


SECTION VIEW



PERSPECTIVE VIEW

SILT FENCE INLET PROTECTION (FOR UNPAVED AREAS)



SECTION VIEW

PERSPECTIVE VIEW

FILTER FABRIC INLET PROTECTION (FOR PAVED AREAS)

SILT FENCE INLET PROTECTION NOTES:

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"X4" 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"X4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

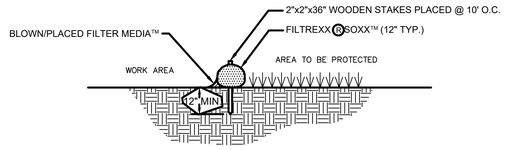
FILTER FABRIC INLET PROTECTION NOTES:

1. INSPECT ON A WEEKLY BASIS AND REMOVE SILT AS NECESSARY.

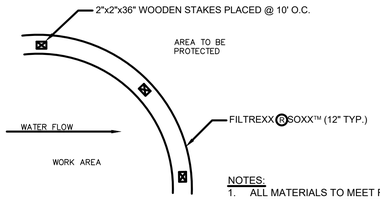
C5 FILTER FABRIC INLET PROTECTION DETAIL

SCALE: NOT TO SCALE

FFIP



SECTION



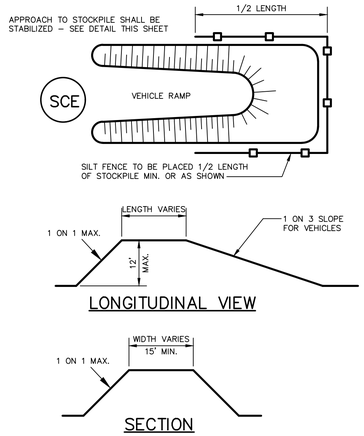
PLAN

NOTES:

1. ALL MATERIALS TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIALS TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

A1 FILTREXX® SEDIMENT CONTROL

SCALE: NOT TO SCALE



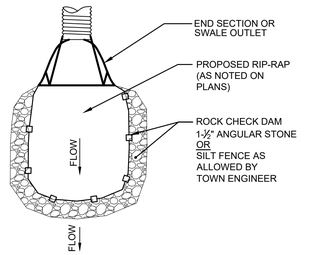
LONGITUDINAL VIEW

SECTION

A3 TOPSOIL STOCKPILE DETAILS

SCALE: NOT TO SCALE

SCE



1. SEDIMENT SHALL BE REMOVED WHEN IT HAS ACCUMULATED TO A DEPTH OF WHERE THE RIP-RAP IS NOT VISIBLE AND/OR NO LONGER FUNCTIONS AS A FLOW DISSIPATER. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT, AND REPAIRS MADE AS NEEDED.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

A4 SWALE OUTLET SEDIMENT TRAP

SCALE: NOT TO SCALE

SOST

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH SWPPP REQUIREMENTS INCLUDING HIRING A SWPPP INSPECTOR TO PERFORM WEEKLY INSPECTIONS. INSPECTOR SHALL BE NOTIFIED AT LEAST ONE (1) WEEK PRIOR TO ANY CLEARING.
2. SURVEY AND STAKEOUT FOR CLEARING, STRIPPING AND EROSION CONTROL ACTIVITIES.
3. INSTALL EROSION AND SEDIMENT CONTROLS.
4. PERFORM THE NECESSARY WORK TO ENSURE PROPER SURFACE DRAINAGE WHILE MAINTAINING EROSION AND SEDIMENT CONTROL AS DEFINED BY TOWN SPECIFICATIONS AND DESIGN DRAWINGS.
5. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, SOIL STOCKPILES AND EXPOSED SOIL SHOULD BE STABILIZED BY SEED AND MULCH OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
6. NOTIFY SEDIMENT CONTROL INSPECTOR AND OBTAIN APPROVAL BEFORE PROCEEDING FURTHER.
7. SITE PREPARATION AND CONSTRUCTION SHALL NOT ADVERSELY AFFECT THE FREE FLOW OF STORM RUNOFF OR WATER COURSES.
8. UPON COMPLETION OF UTILITY INSTALLATION, RESTORATION SHALL COMMENCE.
9. EROSION AND SEDIMENT CONTROLS ARE TO BE REMOVED AS THEIR USEFULLNESS DIMINISH. AT ALL INSTANCES, NOTIFY THE SEDIMENT CONTROL INSPECTOR AND OBTAIN WRITTEN APPROVAL BEFORE REMOVAL OF ANY EROSION AND SEDIMENT CONTROL DEVICE OR MECHANISM.
10. PROPER SURFACE DRAINAGE MUST BE INSTALLED PRIOR TO CONSTRUCTION OF THE UTILITIES.
11. NO MORE THAN 5 ACRES CAN BE DISTURBED AT ANY GIVEN TIME WITHOUT PRIOR WRITTEN PERMISSION FROM THE MUNICIPALITY.
12. THE CLEARING LIMITS MAY NOT BE REVISED WTIHOUT APPROVAL OF THE TOWN.
13. THE TOWN SHALL BE COPIED ON ALL SWPPP REPORTS.
14. IMMEDIATE RESTORATION OF ALL DISTURBED AREAS WILL BE REQUIRED, INCLUDING RETURNING TO ORIGINAL GRADE, SEEDING WITH NATIVE, APPROPRIATE SEED MIX, AND MULCHING WITH STRAW.

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1933
3556 Lake Shore Road, Suite 500 | Buffalo, NY 14219
(716) 827-8000 | (716) 826-7958 fax
www.nussclarke.com

WEST HERR LINCOLN DEALERSHIP ADDITION AND STORAGE LOT EXPANSION
2601, 2619 & 2635 MILLERSPORT HIGHWAY

EROSION CONTROL DETAILS

REVISIONS

No.	DESCRIPTION	DATE
0		

NUSSBAUMER & CLARKE, INC.
A CORPORATION REGISTERED TO PRACTICE PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK

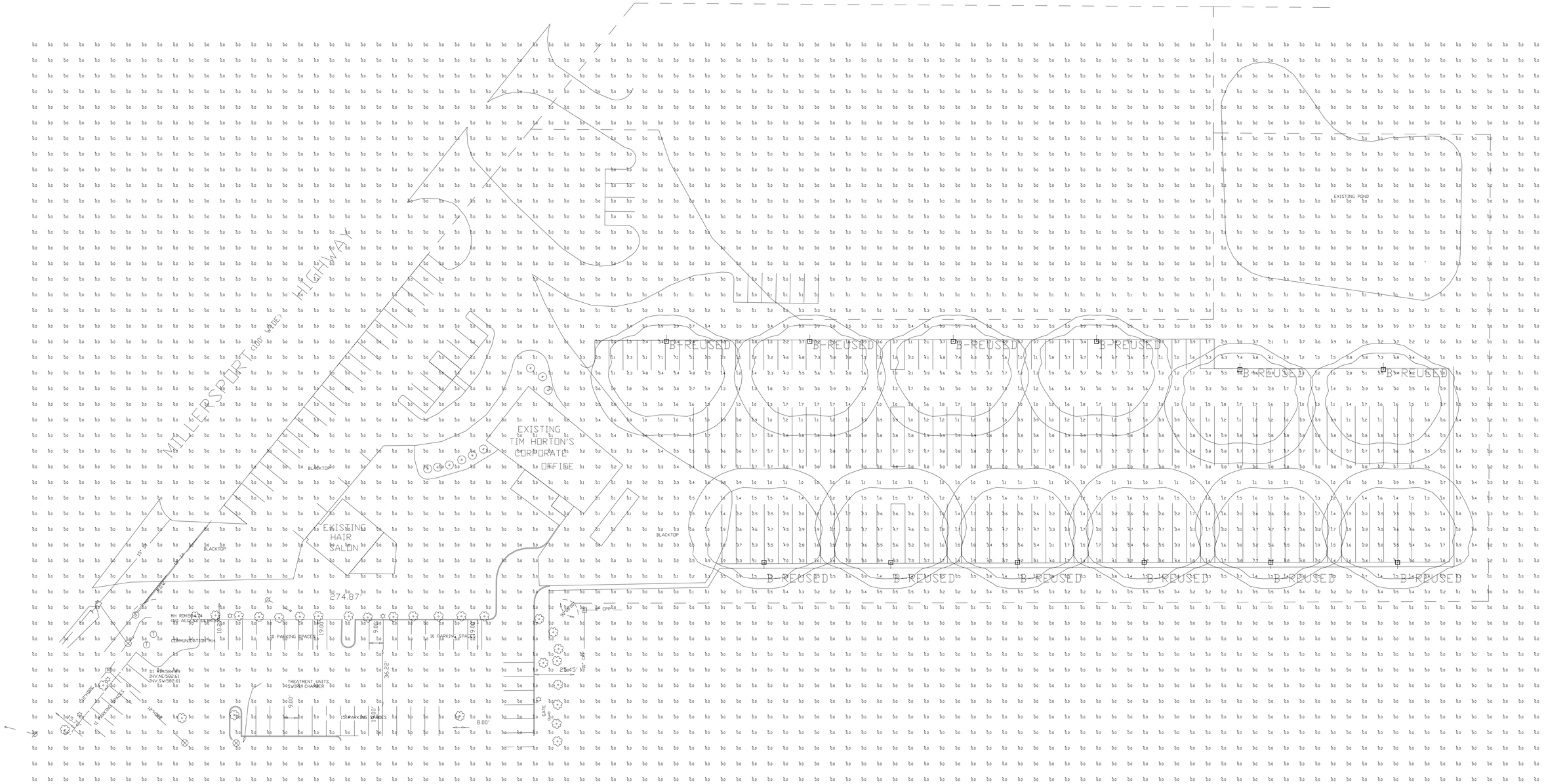
UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	20J5-0030
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	16 OF 17

C-115

K:\Land Development\20\0030 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C-Civil\20J5-0030 DETAILS.dwg 11/16/2020 VSARCONE

Attachment: SP-2013-08B .drawings. 012121 (22544 : Sp-2013-08B)





Initial Footcandle levels at grade.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS AT 4' ABOVE GRADE	Illuminance	Fc	0.38	9.4	0.0	N.A.	N.A.
STORAGE LOT	Illuminance	Fc	2.17	9.4	0.5	4.34	18.80

NOTE: All fixtures are reused from lower parking lot.

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum. Lumens	Arr. Watts
	12	B-REUSED	SINGLE	XGBM-FT-LED-LW-CW-SINGLE- NEW POLE-22' MH	1.000	N.A.	15019	140.5

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.

Total Project Watts_1
Total Watts = 1686

E-100

Lithonia Lighting
Acuity Brands
American Innovation Through Technology
A SmartVision for the Future
10000 ALLIANCE RD. CINCINNATI, OHIO 45242 USA
(513) 793-3200 • FAX (513) 793-4023

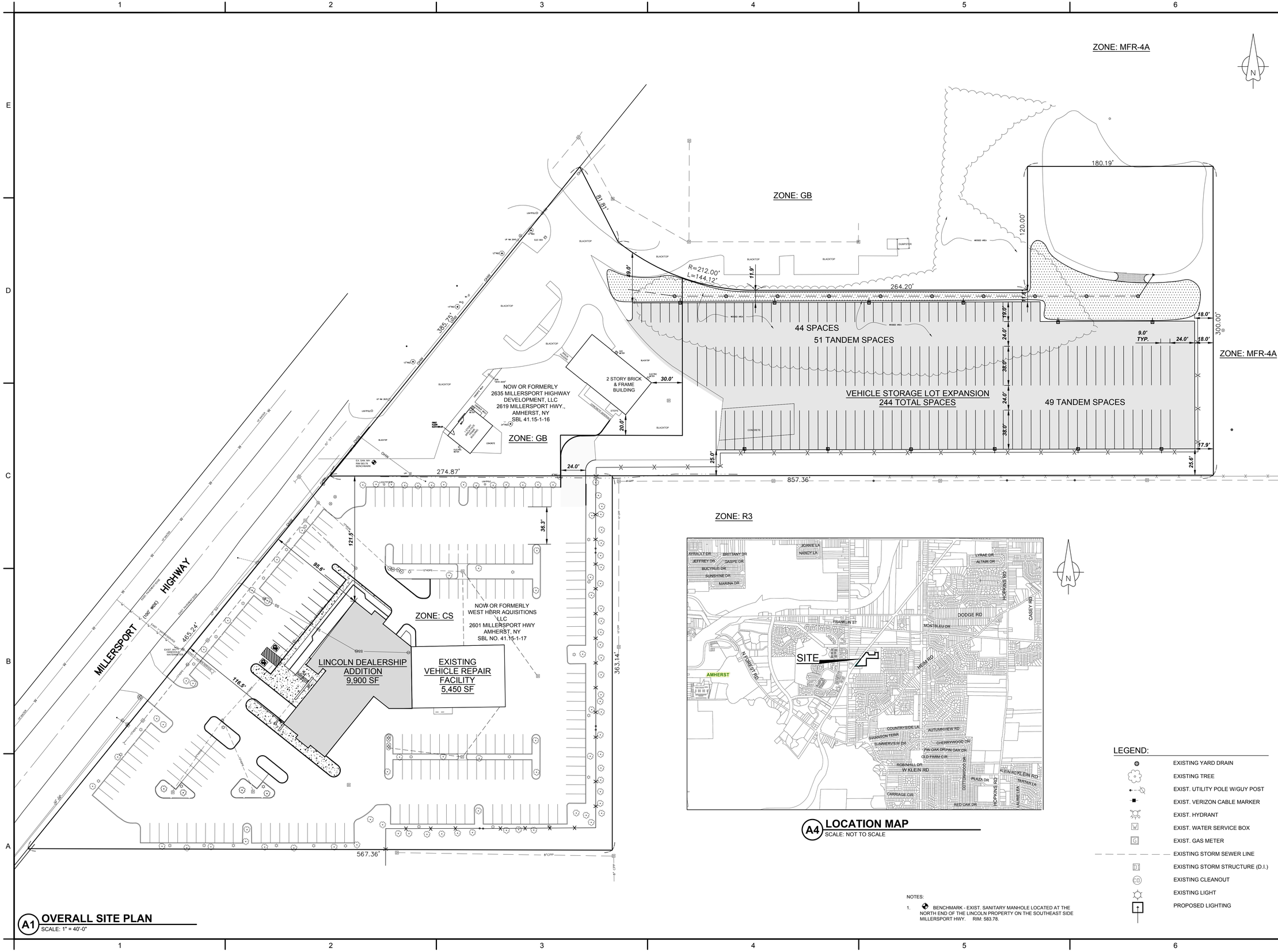
LIGHTING PROPOSAL LD-120380-10A

MILLERSPORT USED BACKLOT PHASE 2
WILLIAMSVILLE, NY

BY:AHK	DATE:2-24-14	REV:10/8/20	SHEET 1 OF 1

SCALE: 1"=30' 0 30

Attachment: SP-2013-088 drawings 012121 (22544 : Sp-2013-088)



A1 OVERALL SITE PLAN
SCALE: 1" = 40'-0"

A4 LOCATION MAP
SCALE: NOT TO SCALE

NOTES:

1. BENCHMARK - EXIST. SANITARY MANHOLE LOCATED AT THE NORTH END OF THE LINCOLN PROPERTY ON THE SOUTHEAST SIDE MILLERSPORT HWY. RIM: 583.78.

LEGEND:

- EXISTING YARD DRAIN
- EXISTING TREE
- EXIST. UTILITY POLE W/GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- EXISTING STORM SEWER LINE
- EXISTING STORM STRUCTURE (D.I.)
- EXISTING CLEANOUT
- EXISTING LIGHT
- PROPOSED LIGHTING

NUSSBAUMER & CLARKE, INC.
ENGINEERS AND SURVEYORS
EST. 1933
3556 Lake Shore Road, Suite 500 | Buffalo, NY 14219
(716) 827-8000 | (716) 826-7958 fax
www.nussclarke.com

CEDAR VALLEY APARTMENTS
AND STORAGE LOT EXPANSION
HAMBURG, NY

OVERALL PROPOSED SITE PLAN

REVISIONS

No.	DESCRIPTION	DATE
1	REVISED PER AMHERST TSB COMMENT	12/01/20

NUSSBAUMER & CLARKE, INC.
A CORPORATION REGISTERED TO
PRACTICE PROFESSIONAL ENGINEERING
& LAND SURVEYING IN THE
STATE OF NEW YORK

NUSSBAUMER AND CLARKE, INC. INCORPORATED 1933 SEAL BUFFALO, N.Y.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS ENGINEERING DRAWING IS A VIOLATION OF SECTION 7209. PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT NUMBER	10J5-0025
DATE	11-13-20
DRAWN BY	VBS
DESIGNED BY	VBS
CHECKED BY	MCD/RJP
APPROVED BY	MTM
SCALE:	AS NOTED
	= 1 INCH
SHEET No.	2 OF 17

C-101

H:\Land Development\10J0025 - West Herr Automotive Group\05 Working Drawings\02 Discipline (DWG)\C - Civil\10J5-0025 - SITE - PLAN.dwg 12/7/2020 9:54:40 AM EST

Attachment: SP-2013-08B_drawings_012121 (22544 : Sp-2013-08B)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor
Daniel C. Howard, AICP
Planning Director
Ellen M. Kost, AICP
Assistant Planning Director

January 28, 2021

West Herr Automotive Group
c/o Sean Hopkins, Esq.
5500 Main St, Ste. 343
Williamsville, NY 14221

SUBJECT: MAJOR SITE PLAN REVIEW PROPOSED AUTOMOBILE DEALERSHIP BUILDING AND VEHICLE STORAGE EXPANSION, SP-2013-08B; PROPERTY LOCATED AT 2601 MILLERSPORT HIGHWAY AND UNIFIED DEVELOPMENT WITH SP-1988-57_C, 2619-2635 MILLERSPORT HIGHWAY.

Dear Sir/Madam:

At its meeting of January 21, 2021 the Planning Board postponed the public hearing at your request.

This request will be placed on the Planning Board agenda for the March 18, 2021 meeting.

Should you have any questions regarding the Planning Board's decision, please do not hesitate to call us.

Very truly yours,

Daniel C. Howard, AICP
Planning Director

DH/ac
X:\Current_Planning\Files\Site Plans\2013\SP-2013-08_B_(2601_Millersport_Hwy)_2020\SP-2013-08B__Postponed Letter_012121.doc
cc: Robert Pidanick, Nussbaumer & Clarke, Inc., 3556 Lake Shore Rd, Ste. 5000, Buffalo, NY 14219

Attachment: SP-2013-08B postponed letter 012121 (22544 : Sp-2013-08B)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

ADOPTED

Meeting: 01/21/21 06:30 PM
Department: Planning
Category: Subdivisions & Relief from Conditions
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 22546

PLANNING BOARD ITEM (ID # 22546)

Preliminary Plat for 26-Lot Heim Road Subdivision, SUB-2020-03PP

Property located at 775 Heim Road
Essex Homes, Petitioner

ATTACHMENTS:

- SUB-2020-03PP_application reports_012121 (PDF)
- SUB-2020-03PP_drawings_012121 (PDF)
- SUB-2020-03PP_neg_dec_012121 -(SEQR) (PDF)
- SUB-2020-03PP signed neg dec 012121 (PDF)

Preliminary Plat Application
Fair Woods Estates Subdivision
Location: 775 Heim Road
Applicant: Essex Homes of WNY Inc.

TOWN OF AMHERST PLANNING DEPARTMENT

Application Subdivision Review

For Official Use

File # _____ **Acreage** 6.9 ac **Fee $** _____

Type of Subdivision Application (check one):

Sketch Plan	
Preliminary Plat	✓
Final Plat	

Address Verified by Assessor's Office

_____
Verified By Date

		Fill In Applicable Fees
Sketch Plan	$1,150.00	
Preliminary Plat		
1 acre of less	$1,250.00	$1,250.00
Each Additional acre or fraction thereof	$ 650.00/acre	$3,900.00
Amendments to Subdivisions	$1,150.00	
Request for Relief of / or Change to Conditions of Subdivision Approval	$1,150.00	
Request for Extension of Subdivision Approval	$ 450.00	
Stormwater Pollution Prevention Plan		
1-4.99 Acres	$ 500.00	
5-10 Acres	$ 750.00	$750.00
>10 Acres	$1,000.00	
Affidavit Fee for Public Hearing	$ 15.00	$15.00
Final Plat	$ 450.00	
	TOTAL FEE:	$5,915.00

Materials Received by Planning Department

_____
RECEIVED BY DATE

Materials Accepted by Town Clerk & Fee Paid

_____
RECEIVED BY DATE

To Be Completed By Applicant

Petitioner: Name: Essex Homes of WNY c/o Robert Savarino

Address: 8940 Main Street

Clarence NY 14031
city state zip code

Phone: 716-635-0550 Fax: _____ E Mail: robert.savarino@ccim.net

Rev. 12/08
P/Currplan/Application Forms Working Document/Subdivision App.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Representative: (Architect, Engineer, Landscape Architect, Surveyor, or Attorney):

Address: Sean W. Hopkins, Esq., Hopkins, Sorgi & McCarthy, PLLC

5500 Main Street, Suite 343

Williamsville NY 14221

city state zip code

Project Engineer:
Patrick Sheedy Jr., P.E
Carmina Wood Morris DPC
487 Main Street, Suite 500
Buffalo, NY 14203
Tel: 716.842.3165 [Ext. 123]
E-mail: psheedy@cwm-ae.com

Phone: 716-510-4338 Fax:

E Mail: shopkins@hsr-legal.com

Subdivision Name: Fair Woods Estates Subdivision

Subdivision Location & Address: 775 Heim Road Getzville, NY 14068

Town of Amherst, Erie County, New York

Number of Sublots: 26 sublots (24 lots for detached single family homes)

Land is Presently Zoned Residential District Three ("R-3")

A completed Short Environmental Assessment Form as prepared pursuant to the State Environmental Quality Review Act ("SEQRA") is attached as Exhibit "1". The Planning Board granted Sketch Plan Approval for the proposed residential subdivision during its meeting on October 15, 2020 and a copy of the resolution adopted by the Planning Board is attached as Exhibit "2". A reduced size copy of the Preliminary Plat prepared by Carmina Wood Morris, DPC is attached as Exhibit "3." A reduced size copy of the Boundary and Topographic Survey prepared by GPI Engineering and Surveying is provided at Exhibit "4".

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Exhibit 1 – Short Environmental Assessment Form as prepared pursuant to the State Environmental Quality Review Act ("SEQRA") with Attached Page 5[a] and Attachment "A" consisting of Jurisdictional Determination Issued by the United States Army Corps of Engineers on August 17, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Short Environmental Assessment Form with Page 5[a] and Attachments "A" Date: November 16, 2020

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:
Fair Woods Estates Subdivision

Project Location (describe, and attach a location map):
775 Heim Road - Town of Amherst - Erie County

Brief Description of Proposed Action:
Proposed 26 lot residential subdivision consisting of 24 single-family homes on individual lots as well as extension of Fair Woods Drive as a public roadway such it will connect to Heim Road. The proposed action has been defined broadly to include all required discretionary approvals and permits as well as all proposed site improvements including proposed detached single family homes, a public roadway extension, driveways, lighting, a stormwater management system, wetland impacts and all required utility improvements. The project purpose is to develop the Project Site for Single Family Residential Use per the recommended land use in Figure 6 of the Town's adopted Comprehensive Plan. The proposed subdivision is an Unlisted Action. The Project Sponsor believes the proposed residential subdivision will not result in any potentially significant adverse environmental impacts and that the issuance of a negative declaration by the Town of Amherst Planning Board pursuant to the State Environmental Quality Review Act ("SEQRA") is both appropriate and justified.

Name of Applicant or Sponsor:	Telephone: 716-510-4338
Essex Homes of WNY, Inc. c/o Sean Hopkins, Esq.	E-Mail: shopkins@hsr-legal.com

Address:
5500 Main Street, Suite 343

City/PO:	State:	Zip Code:
Williamsville	New York	14221

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Planning Board - Preliminary and Final Plat; NYSDEC - SPDES & DSCA; ECWA - Water; and Building Department - building permits.	☐	☑

3. a. Total acreage of the site of the proposed action? 6.90 acres
   b. Total acreage to be physically disturbed? 5.87 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 6.90 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other(Specify): Town of Amherst Peanut Line Right-of-Way
   ☐ Parkland

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations? The Project Site is properly zoned Residential District Three ("R-3") pursuant to the Town of Amherst Zoning Map.	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☑	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO ☑	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO ☑	YES ☐	
b. Are public transportation services available at or near the site of the proposed action?	☑	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO ☐	YES ☑	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO ☐	YES ☑	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO ☐	YES ☑	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO ☑	YES ☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? [There are not any jurisdictional federal wetlands on the Project Site per the Jurisdictional Determination issued by the USACE on August 17, 2020.]	NO ☐	YES ☑	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____	☐	☑	

[Note: A copy of the Jurisdictional Determination issued by the United States Army Corps of Engineers on August 17, 2020 is provided at Attachment "A" of this Short Environmental Assessment Form.]

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☑ Wetland ☐ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe:		
The proposed on-site stormwater management system will discharge to the existing storm sewer along Heim Road.		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	☐	☑
If Yes, explain the purpose and size of the impoundment: An onsite detention pond is proposed to detain stormwater runoff for water quality purposes and to retain water to outlet at a flowrate permissible by the Town of Amherst stormwater regulations and the stormwater management standards of the NYSDEC.		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	☑	☐
If Yes, describe:		
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	☑	☐
If Yes, describe:		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Essex Homes of WNY Inc. Date 11/16/20

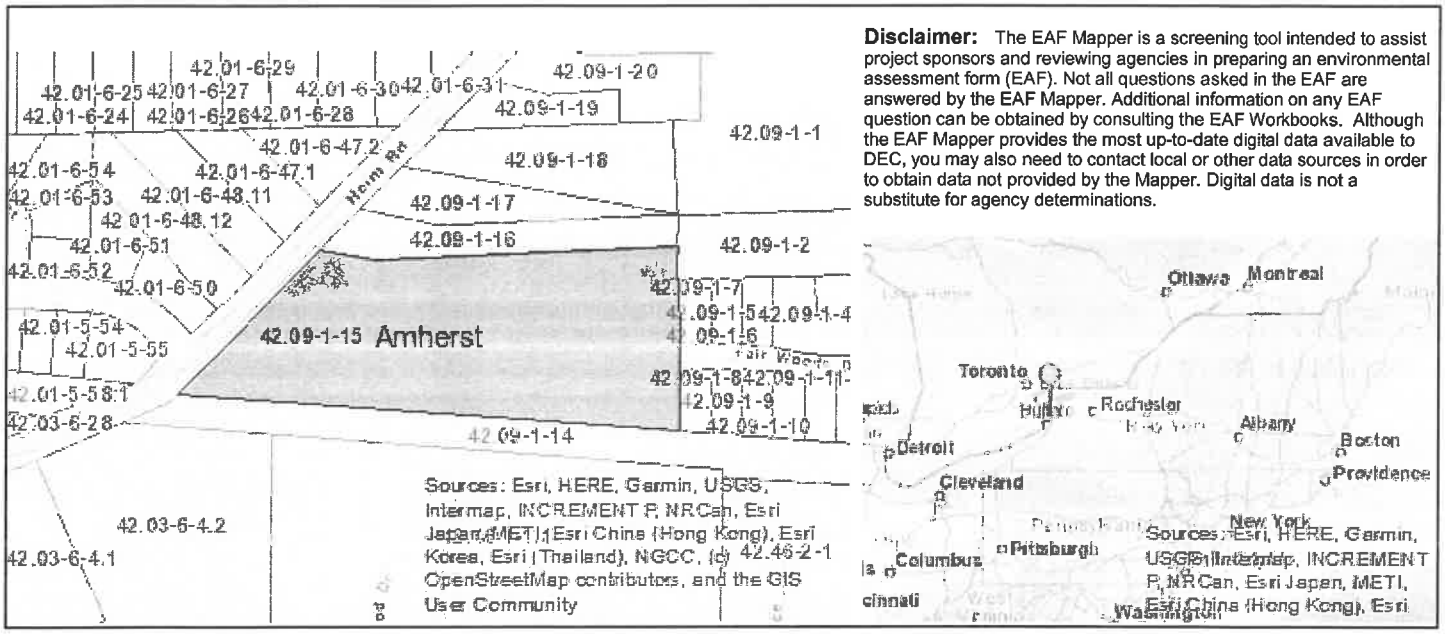
Signature: _____ Title: Project Engineer

Patrick Sheedy, Jr., P.E., Carmina Wood Morris DPC

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

EAF Mapper Summary Report

Friday, June 19, 2020 8:10 AM



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

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	No
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

TOWN OF AMHERST ATTACHMENT
State Environmental Quality Review
ENVIRONMENTAL ASSESSMENT FORM

1. For each applicable category of proposed <u>new</u> structures, including additions to existing structures, provide the following information for all soil types on the project site (*according to Soil Survey of Erie County, NY; Table 11, Building Site Development, pp 294-305):*

Soil Name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
Cheektowaga fine sandy loam	✓				
Elnora loamy fine sand			✓		✓
Cosad loamy fine sand			✓		✓

2. If the Soil survey indicates either "severe" or "moderate" suitability for the proposed types of construction, a geotechnical and hydrological analysis based on one test per 3.5 acres of project area must be provided (per Town Board resolution, 3/17/03, amended 6/16/03).

_____ Geotechnical report attached ✓ Not applicable

3. Is your property located: On Youngs Road between Dodge and Klein Roads? ☐ Yes ☑ No
On Wehrle Dr. between Spindrift Dr. and Oakwood Rd? ☐ Yes ☑ No

If so, the property may be within an area of the Town that is affected by a moratorium on connections to the sanitary sewer system.

4. Are there alternative locations on the site for this project? ☐ Yes ☑ No

5. Location and size of real property owned by petitioner within one (1) mile of subject proposal:
775 Heim Road - 6.90 acres

6. Are you aware of current or future plans or intentions by others in the Town of Amherst to develop property within 1000± ft. of the present project request: ☐ Yes ☑ No

Describe _____

(Potential environmental impacts from adjacent or nearby projects undergoing the approval process will receive a coordinated environmental review to determine cumulative effects on common receivers (e.g. traffic and drainage corridors) and other relevant environmental concerns.)

7. Maximum number of vehicular trips to be generated per hour upon completion of project 24
Source: ITE Trip Generator

8. Will blasting occur during construction? ☐ Yes ☑ No

9. Does the project propose to connect and be tributary to the public sanitary sewer system? ☑ Yes ☐ No

10. Proposed net additional gallons per day (gpd) of sanitary sewer discharge upon completion of project:

7,920 average flow 33,818 peak flow.

(Please note that average flows of 2,500 gpd or greater will require an Engineer's Report that includes a detailed downstream sewer capacity analysis and the identification of and commitment to required I/I offset work during peak wastewater flow conditions.)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Attachment "A" of Short Environmental Assessment Form - Jurisdictional Determination Issued by the United States Army Corps of Engineers on August 17, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Attachment A of Short Environmental Assessment Form
Jurisdictional Determination Issued by the United States
Army Corps of Engineers dated August 17, 2020

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BUFFALO DISTRICT
1776 NIAGARA STREET

August 17, 2020

Regulatory Branch

SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

Rob Savarino
Essex Homes of WNY
8940 Main Street
Clarence, New York 14031

Dear Mr. Savarino:

This pertains to the wetland delineation submitted on behalf of Essex Homes of WNY by Earth Dimensions, Inc for a jurisdictional determination for a 6.92 acre parcel located at 775 Heim Road, Town of Amherst, Erie County, New York.

Section 404 of the Clean Water Act 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 boundary as shown on the attached wetland delineation map dated January 16, 2020. This verification was confirmed on August 17, 2020 and 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 and additional impacts are proposed for waters of the United States. Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act 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.

I have determined that there is no clear surface water connection or ecological continuum between Wetlands W1 and W2 on the parcel and a surface tributary system to a navigable water of the United States. Therefore, these waters are considered isolated, non-navigable, intrastate waters and not regulated under Section 404 of the Clean Water Act. Accordingly, you do not need Department of the Army authorization to commence work in these areas.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Regulatory Branch
SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

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 jurisdictional determination for the subject parcel. If you object to this determination, 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 determination, 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:

Jacob Siegrist
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: 513-684-2699 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 October 12, 2020.

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:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Essex Homes of WNY	File Number: LRB-2020-00174	Date: August 17, 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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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	Jacob Siegrist 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: 513-684-2699 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.		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 8/17/2020
ORM Number: 2020-00174 Essex Homes (Heim Road)
Associated JDs: N/A
Review Area Location[1]: State/Territory: New York City: Amherst County/Parish/Borough: Erie (775 Heim Road)
Center Coordinates of Review Area: Latitude 43.0216 Longitude -78.7429

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A	N/A	N/A.	N/A.	N/A

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	N/A

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	See above.
N/A	N/A	N/A.	N/A.	See above.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1 (PFO)	2.44	acre(s)	(b)(1) Non-adjacent wetland.	W1 is a PFO wetland that is 2.44 acres in size and starts on the North property line and extends to the South, offsite and directly abuts the abandoned/removed "Peanut" railroad line. During the July 14, 2020 site visit, it was observed W1 abuts a swale that drains to the West through a 18 inch C.M.P. culvert. The water heads North in a closed, piped stormwater system before it outlets into Ditch 25, 2-4 miles away along Millersport Highway ((Email from Mr. Jeffrey Szatkowski of the Town of Amherst (July 29, 2020)). On the North side of the property,W1 ends at the adjacent property line because the area is maintained lawn. The swale is not a waters because it lacks an OHW and bed/banks. No other drainageways or streams were observed in the vicinity of W1 during the site visit. To the South of the "peanut" line are residential apartments. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. No wetlands exist on the other side of the peanut line All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.
W2 PFO	0.63	acre(s)	(b)(1) Non-adjacent wetland.	W2 is a PFO wetland that is 0.63 acres in size and located in the Northwest corner of the property. During the July 14, 2020 site visit, the boundary was walked and no drainageways or streams were located within the vicinity of the wetland. On the North side of the property,W2 ends at the adjacent

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
				property because the area is maintained lawn. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Wetland delineation conducted by Earth Dimensions, Inc, was submitted on January 28, 2020 with accurate, completed data sheets, photographs, NWI map, web soil survey with hydric soil ratings and other supporting information
This information is sufficient for purposes of this AJD.
Rationale: NA

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).

☒ Photographs: Aerial and Other: Global Earth, ESRI, Google Earth aerial review*

☒ Corps site visit(s) conducted on: July 14, 2020

☐ Previous Jurisdictional Determinations (AJDs or PJDs): None

☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*

☒ USDA NRCS Soil Survey: Web Soil Survey*

☒ USFWS NWI maps: Reviewed

☒ USGS topographic maps: Clarence Center, New York Quad*

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	ORM maps
State/Local/Tribal Sources	N/A.
Other Sources	NYSDEC Freshwater Wetland Maps – no State regulated wetlands are within the vicinity of the delineated parcel

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: Evaluation of the on-site conditions as presented in the submittal and substantiated by the photographs and data summary sheets appear to be clear and straight-forward.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

The review area is relatively small (6.92 acres) and does not present complicated details. The delineated parcel is surrounded by commercial and residential development on all sides. A review of in-house resources, USDWS NWI Maps, USGS Quad Map, NRCS Web Soil Survey and NYSDEC Environmental Resource Mapper indicated no mapped wetlands or streams are located within the vicinity of the delineated parcel. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separted from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters. Therefore, W1 and W2 are not jurisdictional waters of the United States.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Essex Homes-Heim Rd
DA#2020-00174
Erie County
W11K19b Quad:Clarence Center 775 Heim Road
Sheet 1 of 5

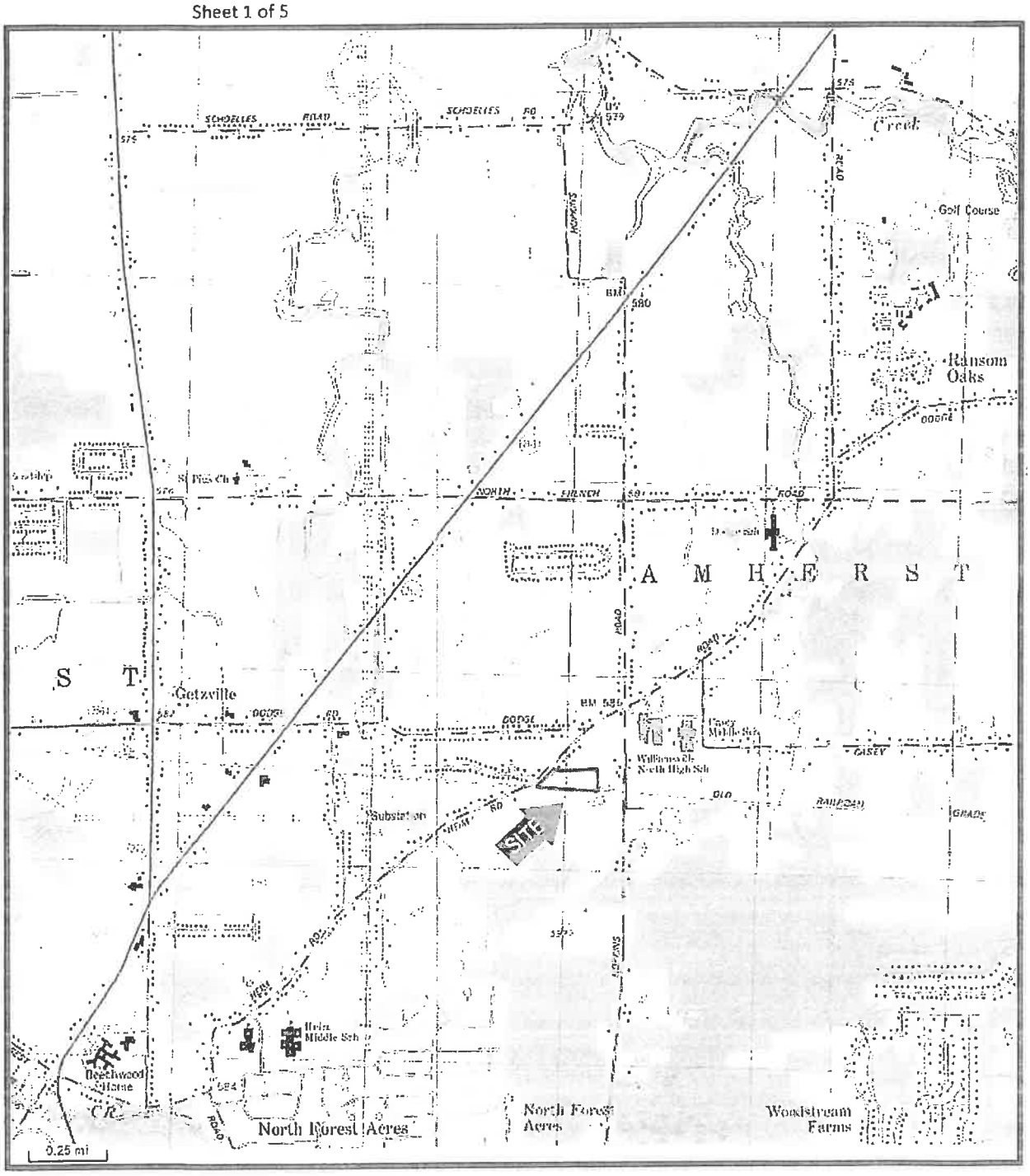


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / 2002 DeLorme

775 Heim Road

Town of Amherst, Erie County, New York

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Essex Homes-Heim Rd
DA#2020-00174
Erie County
W11K19b Quad:Clarence Center 775 Heim Road
Sheet 2 of 5

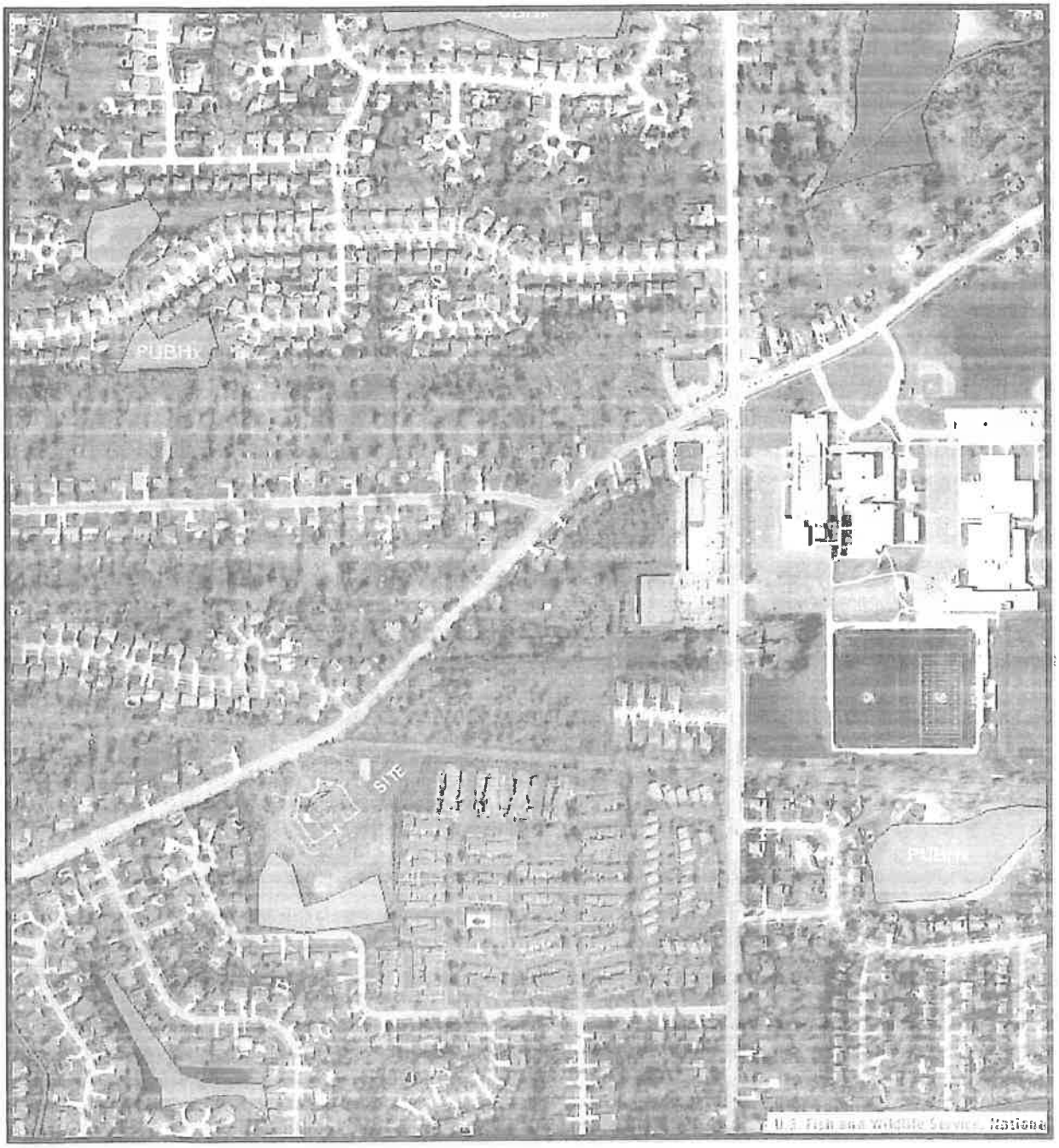


FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 01/16/2020)

775 Heim Road

Town of Amherst, Erie County, New York

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

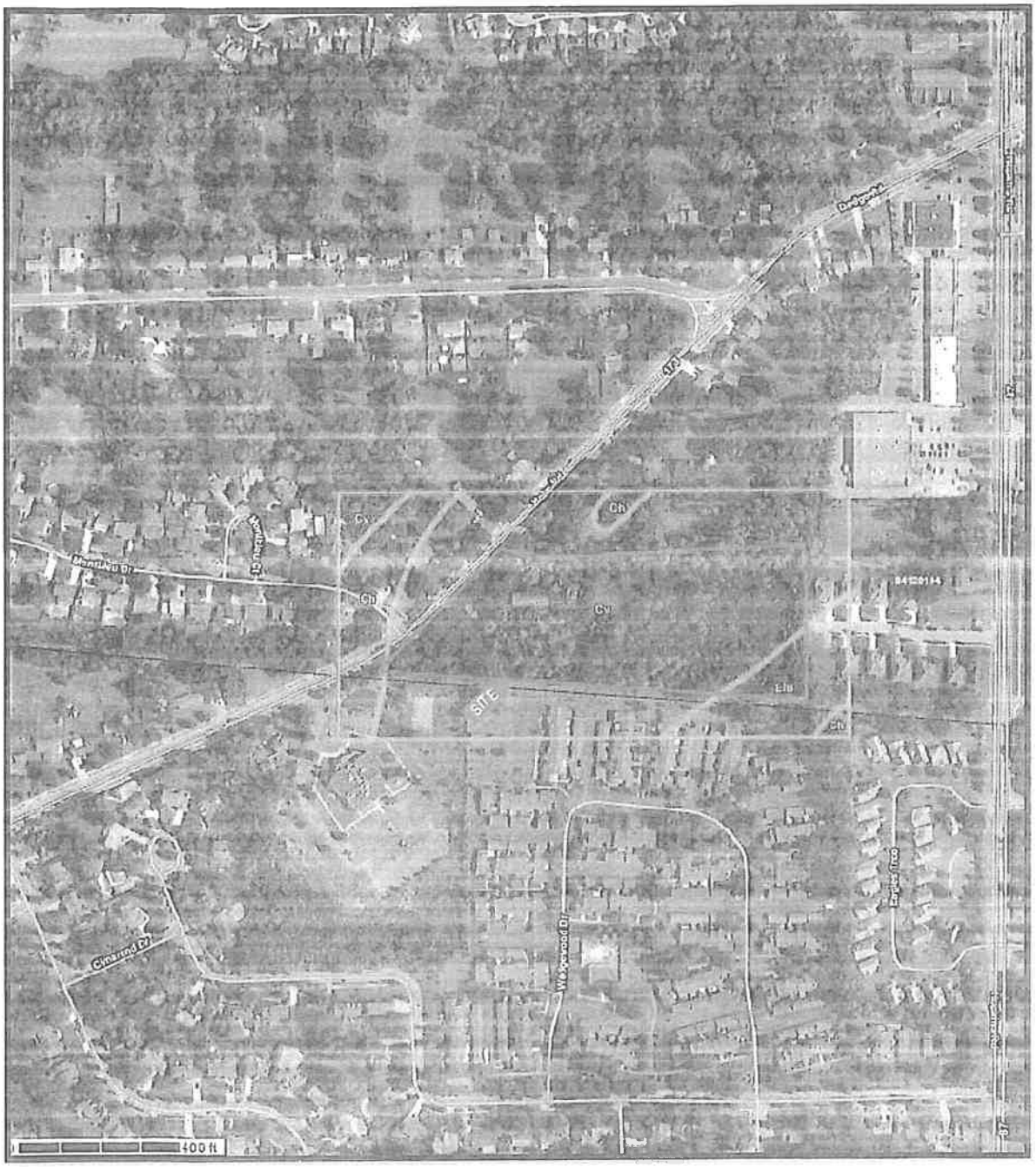


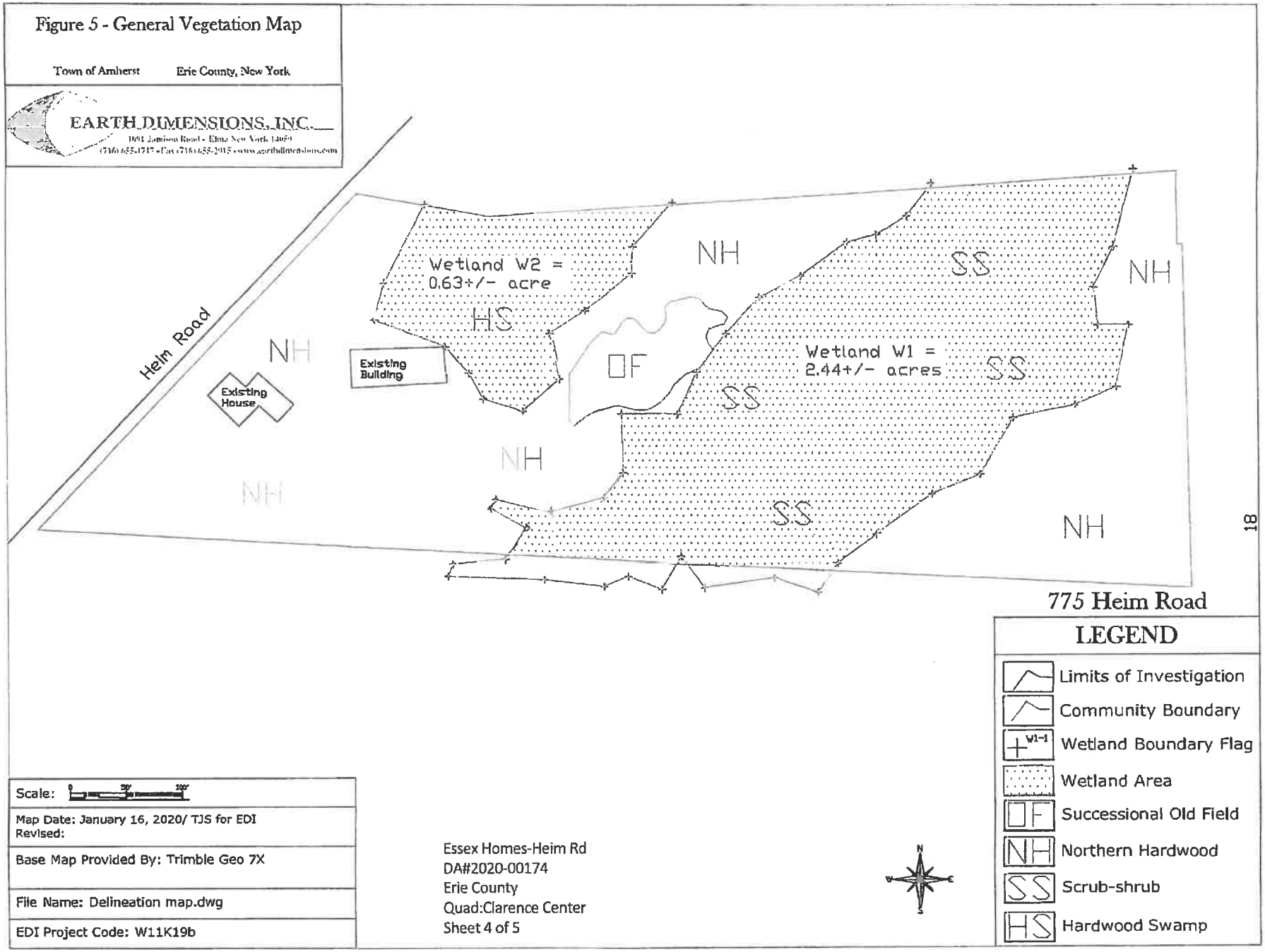
FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 01/16/2020)

775 Heim Road

Town of Amherst, Erie County, New York

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

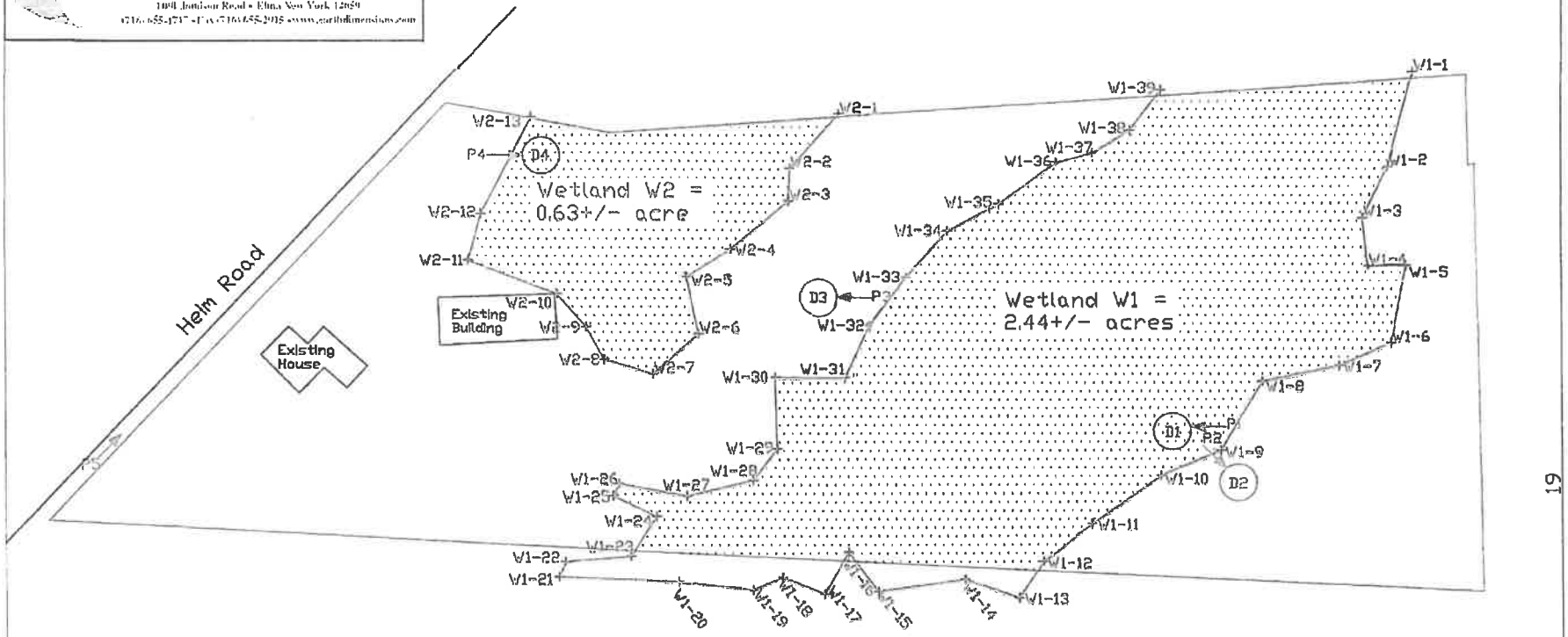


Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2015 www.earthdimensions.com



775 Heim Road

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale:	0 50' 100'
Map Date: January 16, 2020/ TJS for EDI Revised:	
Base Map Provided By: Trimble Geo 7X	
File Name: Delineation map.dwg	
EDI Project Code: W11K19b	

Essex Homes-Heim Rd
DA#2020-00174
Erie County
Quad:Clarence Center
Sheet 1 of 5

19

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Exhibit 2 – Resolution Adopted by the Planning Board Granting Sketch Plan Approval for the Proposed 26 Lot Subdivision as Adopted on October 15, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

TOWN OF AMHERST
PLANNING BOARD
SKETCH PLAN RESOLUTION
SUB-2020-03SK

PETITIONER
Essex Homes of WNY, Inc.
Robert Savarino
8940 Main Street
Clarence, NY 14031

PROPERTY LOCATION
775 Heim Road

OCT 22'20 PM 1:50 ROVD

WHEREAS the Town of Amherst Planning Board on Thursday, October 15, 2020 held a public hearing on a 26-lot Heim Road subdivision, and

WHEREAS the Planning Board has reviewed plans and specifications for the proposed Subdivision, and

WHEREAS the Subdivision has been referred to the Town's various review agencies, and

WHEREAS the Planning Board finds that:

1. The proposed subdivision is consistent with the intent, objectives and specific requirements of the Zoning Ordinance.

2. Adequate services and utilities are or will be available prior to occupancy.

3. The Subdivision is consistent with all other applicable laws.

4. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers review will be required since wetlands have been identified on the parcel.

NOW THEREFORE BE IT RESOLVED that the Planning Board, in accordance with Section 8-7 of the Zoning Ordinance and Part III of the Subdivision Regulations approves said Subdivision subject to the follow conditions:

1. That all comments submitted by Erie County Division of Highways be addressed.

2. That all comments submitted by the Town of Amherst Highway Department be addressed.

NOW THEREFORE BE IT FURTHER RESOLVED that the extension of Fair Woods Drive be classified as a local street and that sidewalks are required, and that the required ramps and/or curb cuts to meet ADA compliance be included and constructed with the P.I.P. for the roadway utilities.

NOW THEREFORE BE IT FURTHER RESOLVED that a lighting district is required for the proposed subdivision.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

TOWN OF AMHERST
PLANNING BOARD
SKETCH PLAN RESOLUTION
SUB-2020-03SK

PETITIONER
Essex Homes of WNY, Inc.

PROPERTY LOCATION
775 Heim Road

30T22'20 PM DEC 2020

NOW THEREFORE BE IT FURTHER RESOLVED that recreation fees are required for the proposed subdivision lots in accordance with the adopted fee schedule.

The foregoing resolution was adopted by the Town of Amherst Planning Board, October 15, 2020; moved by Gelber; seconded by Giuliani; ayes 6, noes 1 (Gill).

Robert J. Gilmour, Chair — 10-22-20 Date

RR/ac
X:\Current_Planning\Files\Subdivisions\SUB-2020\SUB-2020-03_(775_Heim_Rd)_2020\SUB-2020-03SK_(775_Heim_Rd)_2020\SUB-2020_03SK_Resolution_101520.doc

cc: Town Clerk
Commissioner of Building
Town Engineer
Highway Superintendent
Fire Chiefs Council
Chris Wood, PE, Carmina Wood Morris, DPC, 487 Main Street, Suite 600, Buffalo, NY 14203
Rob Savarino, Essex Homes of WNY, Inc., 8940 Main Street, Clarence, NY 14031
Sean Hopkins, Esq., Hopkins Sorgi & McCarthy, 5500 Main St., Suite 343, Williamsville, NY 14221

Approved Plan: Carmina Wood Morris, DPC
Received: August 24, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Exhibit 3 – Reduced Size Copy of Preliminary Plat [Drawing C-100] for Fair Woods Estates Subdivision Prepared by Carmina Wood Morris DPC dated November 16, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

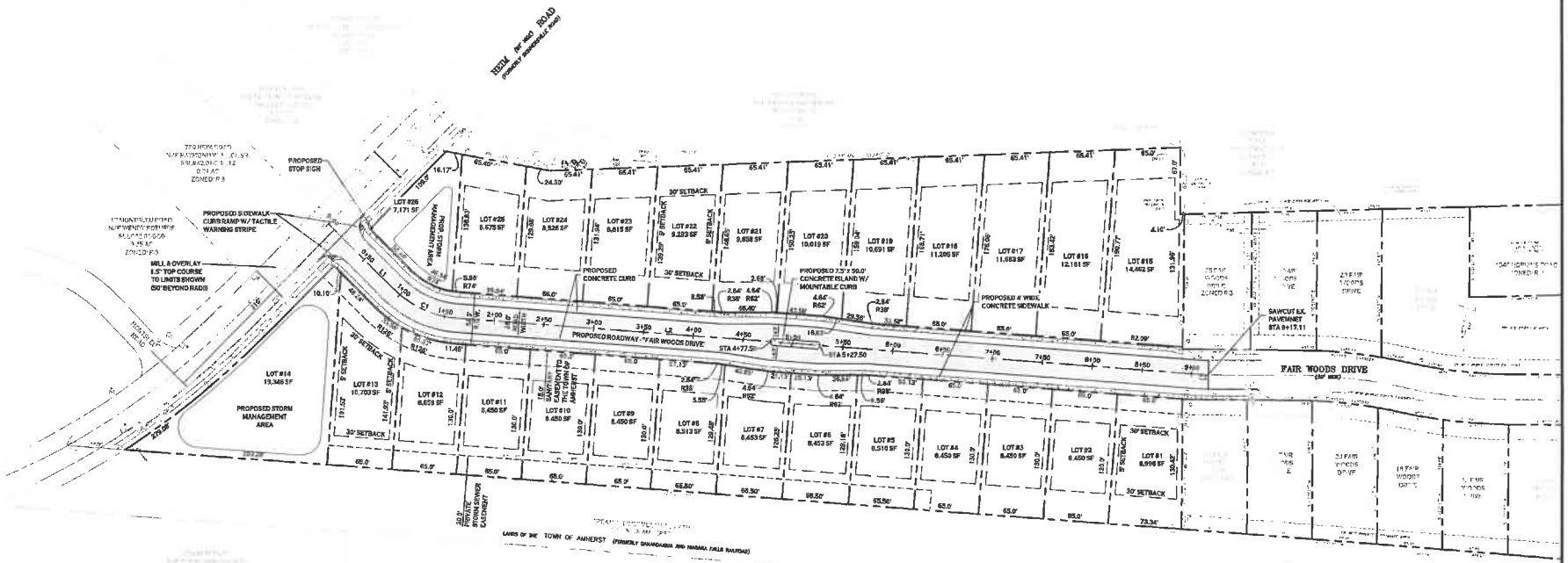
© Carmina Wood Morris DPC All rights reserved. Reuse of these documents without the expressed written permission of Carmina Wood Morris DPC is prohibited. WARNING: It is violation of article 145 section 7209 and 7301 of the New York State Education law for any person, unless acting under the direction of a registered architect, licensed engineer or land surveyor to alter this drawing. In addition each N.A.I.C.P.S. or L.L.S. under who, his or her seal, signature, the date, the notation "altered by" and a specific description of the alteration.

SITE NOTES:

1. ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
2. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
3. ALL HANDICAP RAMPS AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPES WHERE ENTERING PARKING AREAS/DRIVEWAYS/ROADWAYS.
4. CONCRETE SIDEWALK FRONTING LOTS 14, 16 AND 22 SHALL BE INSTALLED WITH THE ROADWAY AND UTILITY WORK INCLUSIVE OF THE PIP.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL, AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR / DEVELOPER / OWNER.
9. EXISTING CURB AT PROPOSED DRIVEWAY ENTRANCE AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED.



PRELIMINARY PLAT

SCALE: 1"=50'

SITE DATA TABLE ZONING

MIN. LOT WIDTH = 65 FT INTERIOR LOTS
MIN. LOT WIDTH = 75 FT CORNER LOTS

MIN. LOT AREA = 8,450 SF INTERIOR LOTS
MIN. LOT AREA = 9,750 SF CORNER LOTS

FRONT SETBACK = 30 FT
SIDE SETBACK = 9 FT
REAR SETBACK = 30 FT

MAXIMUM LOT COVERAGE = 35%
MAXIMUM BUILDING HEIGHT = 35 FT

MINIMUM FLOOR AREA = 1,200 SF (1 STORY)
MINIMUM FLOOR AREA = 1,200 SF (2 STORIES)

CURVE TABLE

CURVE	LENGTH (ft)	RADIUS (ft)	DELTA ANGLE
C1	70.69	100	40° 30' 10"
C2	13.63	200	3° 54' 21"

LINE TABLE

LINE	LENGTH (ft)	BEARING
L1	91.34	S 45° 14' 25" E
L2	741.44	S 85° 44' 42" E

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50 0 50 100Ft.

Carmina Wood Morris DPC
187 Main Street Suite 500
Buffalo, New York 14203
P 716.842.5166
F 716.842.0293

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/18/20
Drawn by: P. Shoody
Scale: As Noted

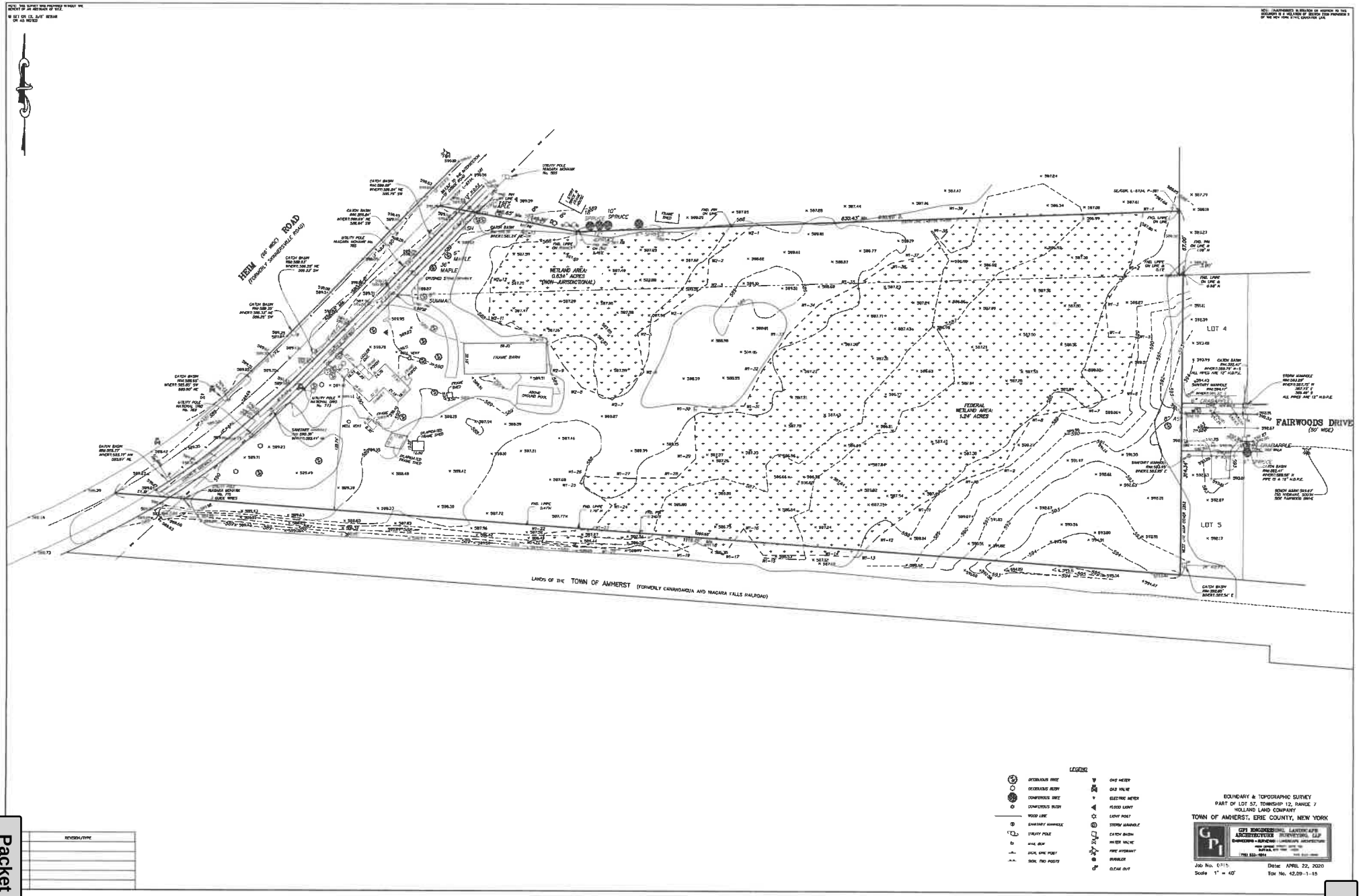
DRAWING NAME:
Preliminary Plat

DRAWING NO.
C-100
Project no.: 19.1

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Exhibit 4 – Boundary and Topographic Survey as Prepared by GPI Engineering & Surveying dated April 22, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC

Civil • Geotechnical
Structural • Architecture
Material Testing • Consulting

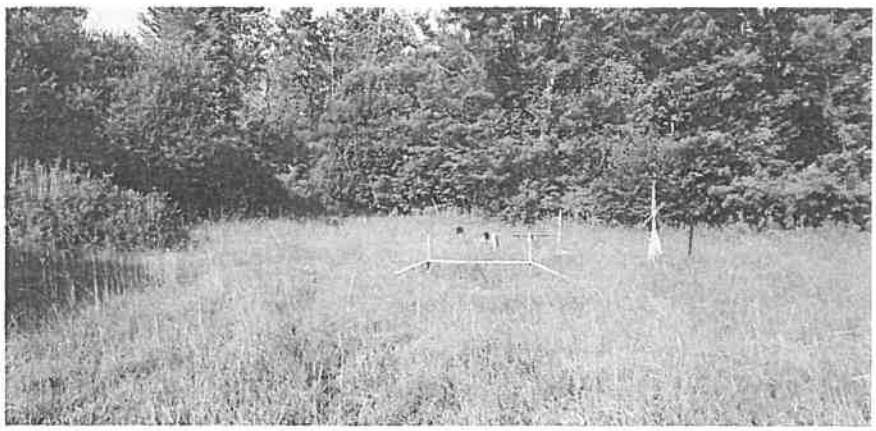
Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

Prepared for:
Essex Homes of WNY
8490 Main Street
Clarence, New York 14031

Prepared by:
Glynn Group Engineering & Architecture, PLLC
415 South Transit Street
Lockport, New York 14094





September 1, 2020

GLYNN GROUP ENGINEERING & ARCHITECTURE, PLLC
415 South Transit Street, Lockport, New York 14094
voice 716.625.6933 / fax 716.625.6983
www.glynngroup.com

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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- 1.1 Scope
- 1.2 Contract
- 1.3 Exclusions

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- 2.1 Site Description and Proposed Development
- 2.2 Geologic Setting

3.0 EXPLORATION AND TESTING
- 3.1 Methodology
- 3.2 Subsurface Conditions
- 3.3 Groundwater
- 3.4 Laboratory Testing

4.0 GEOTECHNICAL EVALUATION AND RECOMMENDATIONS
- 4.1 Foundations
- 4.2 Roadways
- 4.3 Excavation and Backfill
- 4.4 Expansive Soil Mitigation
- 4.5 Liquefaction Mitigation
- 4.6 Settlement
- 4.7 Seismic Site Class and Design Category
- 4.8 General Recommendations
- 4.9 Conclusion

APPENDICES

- A Subsurface Exploration Logs
- B Project Location Plan
- C Subsurface Exploration Plan
- D Laboratory Testing
- E Seismic Site Class and Design Category
- F Fill Specifications

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

1.0 INTRODUCTION

1.1 SCOPE

This report provides subsurface exploration data and geotechnical recommendations for the proposed development of the Heim Road Subdivision in the Town of Amherst, New York. Specifically, Glynn Group Engineering & Architecture, PLLC (GGEA) has provided the following scope of services:

1. Performed a site visit to examine site topography and establish ten (10) soil boring locations to provide a representative grid pattern throughout the limits of the proposed development. Six (6) borings were located on proposed lots and four (4) borings were located along the proposed roadway alignment.
2. Cleared underground utilities with Dig Safely New York.
3. Mobilized drilling subcontractor, Earth Dimensions, Inc. (EDI), with a track mounted ATV drill rig and support crew to perform SPT sampling in accordance with ASTM D-1586 "Standard Method for Penetration Test and Split Barrel Sampling of Soils".
4. Provided soil boring logs, prepared by EDI, to include SPT data, N values, soil classification, refusal depth and groundwater conditions.
5. Performed laboratory testing consisting of visual classification, moisture content, Atterberg Limits, shrinkage limits and grain size analysis to provide index properties of select recovered soil samples.
6. Prepared a geotechnical report in accordance with the 2020 NYS Residential Code to include allowable bearing capacity, foundation recommendations, construction recommendations, seismic site class and design category, groundwater mitigation, expansive soils mitigation, pavement recommendations and liquefaction mitigation.

1.2 CONTRACT

GGEA performed this study in accordance with a written proposal to Essex Homes of WNY, Inc. (Essex) dated June 29, 2020. GGEA received the notice to proceed via singed contract received from Mr. Robert Savarino on June 30, 2020. All services provided by GGEA are subject to the Standard Terms and Conditions included in the June 29, 2020 geotechnical proposal.

1.3 EXCLUSIONS

The project efforts exercised by GGEA include subsurface exploration, geotechnical analysis and design recommendations. The scope of this report specifically excludes any review of former site use, in particular, environmental or pollution related concerns.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

2.0 PROJECT BACKGROUND

2.1 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The project site encompasses approximately 6.9 acres and is located on the east side of Heim Road across from the Montbleu Drive intersection. The property extends from Heim Road eastward to the current dead end of Fair Woods Drive. The proposed construction is to consist of the westward extension of Fair Woods Drive to connect with Heim Road, resulting in the development of 22 residential lots, most of which will include single family wood framed homes with full basements. The site is flat, heavily wooded and will require significant clearing for development. An existing house, barn and pool are located at the west end of the property, which will be demolished to facilitate construction of the proposed subdivision. Significant debris associated with the existing residence is located throughout the western half of the property.

A Project Location Plan has been included in Appendix B and a Soil Boring Location Plan has been included in Appendix C.

2.2 GEOLOGIC SETTING

The subsurface conditions at this site are the result of the last glacial advance of the Pleistocene Epoch, referred to as the Wisconsinan Glacial Stage, which ended approximately 12,000 years ago and the subsequent geomorphological changes thereafter to approximately 10,000 years ago. As the glacier advanced across Western New York, the massive weight carved and crushed the underlying soil and rock to form glacial till, which typically consists of a dense matrix of silt, sand, rock and clay. Soil and rock were transported and deposited by the glacier and glacial meltwater as glacial drift. As the climate warmed and the glacier melted, vast quantities of meltwater were generated, which became impounded by the receding glacier and local topography to create proglacial lakes throughout much of the area. Sediments were deposited from these water bodies in the form of sands, silts and clays. The subsurface conditions encountered at the Heim Road Subdivision property consist of fine grained lake sediment associated with ancestral Lake Tonawanda overlying glacial drift and glacial till. The site is underlain by presumed dolostone of the Upper Silurian Salina Group at a depth of approximately 27 feet below the ground surface.

3.0 EXPLORATION AND TESTING

3.1 METHODOLOGY

The subsurface exploration consisted of ten (10) SPT soil borings performed at select accessible locations across the site to provide a representative subsurface profile. GGEA performed a site visit on July 20, 2020 to establish soil boring locations and assess drill rig access. Utility clearance was performed by EDI through Dig Safely New York.

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EDI mobilized a track mounted ATV drill rig to the site on August 14, 2020 to perform the subsurface exploration. Drilling was completed on August 17, 2020. Soil boring and sampling operations were performed using hollow stem augers to advance through overburden materials in accordance with the Standard Penetration Test Method ASTM D1586. Resistance values, or blow counts, were recorded for each six-inch advancement of a twenty-four inch long, two inch diameter split spoon sampler. N values were calculated based on the sum of the resistance values for the 6/12 and 12/18 inch sample intervals, providing for an indication of the in-situ relative density and strength of encountered soils. Rock coring was not performed, however auger refusal was encountered on presumed bedrock at borings B-1 and B-10. All data recorded during drilling operations can be found on the soil boring logs included in Appendix A.

Retrieved soil samples were logged and visually classified by EDI in accordance with the ASEE System of Definition for Visual Identification of Soils (Burmister Classification System) and ASTM D-2488 "Standard Practice for Description and Identification of Soils (Visual – Manual Procedure)". Recovered soil samples were visually examined by GGEA to establish Unified Soil Classification System (USCS) classifications in accordance with ASTM D-2488 "Description and Identification of Soils (Visual-Manual Procedure)" and select samples were subjected to geotechnical analysis in the GGEA laboratory, consisting of gradation (ASTM D422), plasticity index (ASTM D4318) and natural moisture content (ASTM D2216). Discrepancies observed between classifications noted on the EDI soil boring logs and those identified in this report are due to examination/testing in the GGEA laboratory and the assignment of USCS soil classifications.

3.2 SUBSURFACE CONDITIONS

The encountered native subsurface conditions were found to be typical for this area of Amherst and exhibited stiff cohesive strata in the upper +/- 10 feet followed by soft, wet, cohesive soil to a depth of approximately 25 feet. The cohesive soils were underlain by a thin layer of granular glacial drift and glacial till, followed by bedrock at a depth of approximately 27 feet. The subsurface conditions were found to vary somewhat at individual boring locations, however soils encountered at the east end of the site were found to be more granular and of better structural quality.

Topsoil was encountered at all boring locations and ranged in depth from a minimum of 0.6 feet at boring B-6 to a maximum of 1.8 feet at boring B-7. All encountered subsoil was presumed to be native with the exception of the soil encountered from 1.0 to 2.5 feet at boring B-9, which was found to be composed of grayish brown, moist, silty sand (SM) FILL with a trace of organic matter and wood fiber.

Specific subsurface conditions can be found on the soil boring logs included in Appendix A, however GGEA has summarized subsurface conditions for representative borings B-1, B-5 and B-6 as follows:

B-1 (east end of site)

0.0 – 1.2 ft	Dark brown, moist, compact, silty sand (SM) topsoil. N value of 13.
1.2 – 1.5 ft	Brown, faintly mottled, moist, compact, silty sand (SM). N value of 13.
1.5 – 5.0 ft	Brown, faintly mottled, moist, very stiff, lean clay (CL). N value of 29.

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5.0 – 8.0 ft	Brown, moist, very stiff, sandy silty clay with gravel (CL-ML). N values range from 27 to 23.
8.0 – 13.0 ft	Grayish brown, extremely moist, stiff, sandy silty clay with gravel (CL-ML). N values range from 13 to 11.
13.0 – 26.3 ft	Brownish gray, extremely moist, dense, sandy silt with gravel (ML). N values range from 40 to 58.
> 26.3 ft	Presumed bedrock.

B-5 (center of site)

0.0 – 0.7 ft	Dark brown, moist, loose, silty sand (SM) topsoil. N value of 7.
0.7 – 1.2 ft	Grayish brown, faintly mottled, moist to extremely moist, loose, silty sand (SM). N value of 7.
1.2 – 2.0 ft	Grayish brown, distinctly mottled, moist, firm, lean clay (CL). N value of 7.
2.0 – 4.5 ft	Grayish brown, moist, very stiff, lean clay (CL). N value of 21.
4.5 – 7.8 ft	Reddish brown and grayish brown, varved, moist, stiff, lean clay (CL). N values range from 13 to 10.
7.8 – 10.0 ft	Grayish brown, extremely moist, firm, fat clay (CH). N value of 5.
10.0 – 14.8 ft	Grayish brown, wet, very soft, fat clay (CH). N values range from < 2 to 2.
14.8 – 18.0 ft	Grayish brown, wet, soft to firm, sandy silty clay with gravel (CL-ML). N value of 3.
18.0 – 19.4 ft	Grayish brown, extremely moist, very dense, sandy silt with gravel (ML). N value of > 50.

B-6 (center of site)

0.0 – 0.6 ft	Dark brown, moist, very loose to compact, silty sand (SM) topsoil. N value of 14.
0.6 – 1.5 ft	Grayish brown, faintly mottled, moist, compact, silty sand (SM). N value of 14.
1.5 – 2.5 ft	Grayish brown, distinctly mottled, moist, stiff, lean clay (CL). N value of 14.
2.5 – 5.8 ft	Grayish brown, moist, very stiff, lean clay (CL). N values range from 27 to 26.
5.8 – 9.0 ft	Reddish brown and grayish brown, varved, moist, stiff to firm, lean clay (CL). N values range from 14 to 5.
9.0 – 20.0 ft	Grayish brown, extremely moist to wet, very soft, lean clay (CL). N values range from 2 to < 2.

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Note that fat clay (CH) was encountered at boring B-5 from a depth of 7.8 to 14.8 feet. Fat clay (CH) provides a high potential for expansion and should be accounted for in the foundation design. Refer to sections 4.1 and 4.4 of this report.

It is GGEA's opinion the extent of this exploration was sufficient to accurately characterize the subsurface conditions and provide information necessary for the preparation of this report. The soil borings portray the subsurface conditions encountered at the soil boring locations at the time of exploration. The stratification lines shown on the soil boring logs are approximate, whereas in-situ the changes between strata may be more gradual.

3.3 GROUNDWATER

Groundwater was typically not encountered in the augers upon the completion of drilling efforts. With the exception of boring B-5, the augers did not remain in the ground for an extended period of time to allow groundwater to migrate through the soils and stabilize in the augers. Although the installation of groundwater monitoring wells or piezometers was not included in the scope of this exploration, the augers at boring B-5 were left in the ground for approximately 48 hours at a depth of 18.0 feet, resulting in a stabilized groundwater measurement of 16.2 feet. Based on the moisture content of recovered soil samples, seasonal groundwater fluctuations to approximately 10.0 feet below existing grade should be anticipated. Furthermore, perched groundwater should be anticipated within topsoil and surficial soils during seasonal wet periods or after storm events.

3.4 LABORATORY ANALYSIS

A total of four (4) soil samples were selected for geotechnical laboratory testing to establish USCS classifications and index properties for native soils. Testing consisted of Grain Size Analysis (ASTM D-422), Atterberg Limits (ASTM D-4318), Natural Moisture Content (ASTM D-2216) and Shrinkage Limit (ASTM D-4943). Specific laboratory test reports have been included in Appendix D. Laboratory test results have been summarized in the following table:

Lab No.	Boring No.	Depth (ft)	USCS	NMC (%)	LL	PL	PI	SHR
20-01	B-3	2.1 - 10.5	CL	22.0	39	19	20	12
20-02	B-5	7.8 - 14.8	CH	42.2	52	23	29	14
20-03	B-8	1.9 - 8.0 ft	CL	22.5	47	20	27	14
20-04	B-10	13.0 - 20.0	CL	41.2	22	43	21	NT

USCS = Unified Soil Classification System
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index

NMC = Natural Moisture Content
NT = Not Tested
NA = Not Applicable
SHR = Shrinkage Limit

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

4.0 GEOTECHNICAL EVALUATION AND RECOMMENDATIONS

4.1 FOUNDATIONS

With the exception of the eastern end of the site, the subsurface conditions at this property are of fair to poor structural quality. As identified at boring locations B-5, B-6, B-8 and B-10, soil strength changes from stiff (N =+/- 20) to firm (N=+/-5) at a depth of approximately 8 feet and further decreases to very soft (N < 2) below a depth of 10 feet. This significant reduction in soil strength presents a high probability for long term consolidation settlement of shallow foundations if not properly designed. Furthermore, the fat clay (CH) encountered at boring B-5 from 7.8 to 14.8 feet provides a high potential for volumetric change when subjected to fluctuations in moisture content. To ensure little to no settlement of the residences within the proposed subdivision, the houses should be founded on deep foundation systems consisting of helical piles installed into glacial till or driven piles installed to bedrock. However, the installation of deep foundation systems likely exceeds the project budget, therefore GGEA has developed a shallow foundation system that will provide for minimal settlement, pending design and construction is performed in strict conformance to the recommendations of this report. GGEA provides shallow foundation design and construction recommendations as follows:

1. Basement walls shall have a maximum height of 8.0 feet.
2. The foundation bearing elevation shall be limited to a maximum depth of 5.5 feet below existing grade.
3. The allowable bearing capacity for design of strip and spread footings shall not exceed 1,500 psf.
4. Basement strip footings shall have dimensions of 24 inches wide x 12 inches thick and be reinforced with three (3) #4 bars continuously. Dimensions for garage and porch footings may be reduced, however the reinforcing steel shall remain.
5. Foundations should be advanced through topsoil, existing fill and poor quality surficial soil to engage competent native soil. Based on conditions encountered at the soil boring locations, excavation to a minimum depth of approximately 2.0 feet below existing grade is anticipated to engage competent soil.
6. Once the excavation has been advanced to the design bearing elevation, the bottom of the excavation should be thoroughly cleaned to remove any soil material that may have fallen to the bottom of the excavation during the excavation process. Furthermore, the foundation subgrade should be compacted to ensure the densification of any loose material that may have been disturbed during excavation activities. Compaction can be performed by "knuckling" with the underside of the excavator bucket. Densification of the subgrade will assure the development of the anticipated bearing strength and reduce settlement potential.
7. Foundations should be advanced to a minimum depth of > 3.5 feet below final grade to provide frost protection in accordance with regional frost depth regulations.
8. Although fat clay (CH) soils were encountered at boring B-5, they were encountered at a depth of 7.8 feet below the proposed construction depth. Excavated soils within the foundation construction depth were typically found to consist of lean clay (CL) and may be repurposed as

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foundation wall backfill. Foundation walls should be designed to resist lateral loading from CL backfill soil in accordance with section R404 of the 2020 NYS Residential Code.

9. Supplemental to foundation wall reinforcing required by the 2020 NYS Residential Code, GGEA recommends additional reinforcing in poured concrete walls consisting of two (2) # 4 diagonal bars placed at the corners of basement windows (forming an X beneath the window) and an additional #4 bar continuous beneath basement widows throughout the length of the foundation wall. This additional continuous #4 bar, in conjunction with the continuous #4 bar specified in table R404.1.2(1), provides for a total of two (2) continuous #4 bars at the top of the foundation wall. This additional reinforcing steel will help to control cracking related to stresses associated with concrete shrinkage.
10. The foundation design should include a foundation drainage system consisting of a perimeter perforated drain tile with sump pump discharge. Waterproofing of foundation walls should be performed in accordance with section R406 of the 2020 NYS Residential Code and include the use of a waterproofing membrane (such as Delta MS or equivalent). Foundation drainage stone should be wrapped in non-woven geotextile filtration fabric such as US Fabrics US120NW or equivalent.

4.2 ROADWAYS

Soil borings B-2, B-4, B-7 and B-9 were drilled to a depth of 6.0 feet each along the proposed roadway alignment. The borings typically revealed topsoil ranging in depth from 0.8 to 1.8 feet below existing grade, followed by loose silty sand (SM) to a depth of approximately 2.0 feet, where stiff to very stiff lean clay (CL) or compact silty sand (SM) is encountered. GGEA provides recommendations for the construction of flexible asphalt pavement roadways as follows:

1. Remove topsoil and poor quality subsoil. Based on conditions encountered at the soil boring locations, excavation to a depth of 18 to 24 inches below existing grade is anticipated.
2. Compact the exposed subgrade thoroughly with a smooth drum vibratory roller to produce a uniform density throughout the subgrade.
3. After the exposed subgrade is thoroughly densified, proof roll the subgrade with a fully loaded 10 wheel dump truck weighing at least 30 tons or a smooth drum roller having an effective force of at least 600 pounds per linear inch of roller width. Any area exhibiting weaving, yielding, rutting or boiling should be reworked and compacted to produce an acceptable response or over excavated and replaced with Structural Fill. The depth of the undercut and type of soil fill will depend on the soil material encountered, weather conditions and the bearing conditions at the base of the undercut. The top surface of the subgrade should be pitched to drain to prevent ponding of stormwater.
4. Install a separation geotextile to prevent granular base soil contamination from the underlying cohesive subgrade. Any granular base that becomes contaminated with soil during construction should be removed and replaced prior to installing pavement. GGEA recommends US Fabrics US 250 or equivalent.

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5. Install a granular base layer composed of properly placed and compacted Select Structural Fill. Compact the Select Structural Fill to 95 % of modified proctor (ASTM D-1557). Fill specifications have been included in Appendix F.
6. Special attention should be directed at the compaction of Select Structural Fill around catch basins and associated piping. Failure to properly compact the stone will likely result in pavement settlement around the catch basins and ponding of water.
7. Construct a flexible pavement system consisting of asphalt binder followed by asphalt top. GGEA provides recommended pavement sections as follows:

    12.0 inches Select Structural Fill – Compacted to 95 % Modified Proctor

    3.0 inches of Asphalt Concrete Binder (2008 NYSDOT item number 403.138902)

    1.5 inch of Asphalt Concrete Top (2008 NYSDOT item number 403.178902 or 403.198902)

In the event there is a prolonged time period between binder and top placement, such that daily activities occur over the binder surface, the surface must be power washed, not just swept, and a tack coat should be applied prior to installation of the top course. In addition, any yielding area of pavement binder should be removed and replaced prior to application of the top course.

4.3 EXCAVATION and BACKFILL

The soils encountered within the foundation construction depth of this project consist primarily of firm to stiff lean clay (CL). Excavation through these soils can be accomplished with minimal effort from standard excavation equipment.

Native soils may be used as foundation backfill pending walls are designed to resist lateral earth pressure from CL soils in accordance with Table R404 of the 2020 NYS Residential Code. Alternately, foundation walls can be backfilled with imported soils designed for the specific USCS classification in accordance with Table R404. Backfill should be placed in lifts, with a maximum thickness of 18 inches prior to compaction. Each lift should be compacted with extreme care not to damage the foundation walls. Backfill should not be performed until the first floor deck is framed, however backfill may be placed at basement corners to assist in first floor deck framing. Placement of backfill along the full length of basement walls prior to stabilization of the top of the walls by means of first floor deck construction may result in inward rotation or collapse of the foundation walls.

The soils encountered at this site should be classified by an OSHA competent person in accordance with 29 CFR, Part 1926, OSHA Subpart P, "Excavations and Trenches" prior to and during excavation. From the testing and exploration program, GGEA estimates the site soils within the construction depth of this project can be classified as Type B under the OSHA classification guidelines. However, this classification may change depending on other site criteria and moisture conditions at the time of construction. An OSHA competent person should judge the potential need for excavation bracing and excavation geometry in the field.

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4.4 EXPANSIVE SOIL MITIGATION

Some cohesive soils undergo volumetric change (shrinkage and swelling) with changes in moisture content and degree of saturation, which are commonly referred to as expansive soils. This condition primarily occurs with fat clay (CH) soil, which is a cohesive soil that exhibits a liquid limit of 50 or greater. The liquid limit is the water content, in percent, of a soil that defines the boundary between the plastic and viscous fluid states. Expansive soils can be found in many areas throughout Western New York and have been associated with foundation problems.

Laboratory testing was performed by GGEA on cohesive soil samples recovered from select boring locations, resulting liquid limits ranging from 39 to 52, plasticity indices ranging from 20 to 29 and USCS classifications of lean clay (CL) and fat clay (CH). Specifically, fat clay (CH) was encountered at boring B-5 from 7.8 to 14.8 feet. Laboratory test results have been included in Appendix D.

Shrinkage limit (ASTM D-4943) testing was performed on the lean clay (CL) encountered at boring B-3 from 2.1 to 10.5 feet, the fat clay (CH) encountered at boring B-5 from 7.8 to 14.8 feet and the lean clay (CL) encountered at boring B-8 from 1.9 to 8.0 feet. The shrinkage limit is the moisture content in which the soil will cease to decrease in volume as the moisture content continues to decrease. The soils were found to have shrinkage limit characteristics as follows:

Boring	USCS	Shrinkage Limit (%)	Linear Shrinkage (%)
B-3	CL	12	6.2
B-5	CH	14	13.4
B-8	CL	14	4.8

If the soil from 2.1 to 10.5 feet at boring B-3 was permitted to dry from the existing natural moisture content of 22.0 % to at or below the shrinkage limit of 12 %, the soil could theoretically produce a linear shrinkage of 6.2 %, which equates to 0.52 feet or 6.2 inches for the 8.4 foot vertical section of soil.

If the soil from 7.8 to 14.8 feet at boring B-5 was permitted to dry from the existing natural moisture content of 42.2 % to at or below the shrinkage limit of 14 %, the soil could theoretically produce a linear shrinkage of 13.4 %, which equates to 0.94 feet or 11.3 inches for the 7.0 foot vertical section of soil.

If the soil from 1.9 to 8.0 feet at boring B-8 was permitted to dry from the existing natural moisture content of 22.5 % to at or below the shrinkage limit of 14 %, the soil could theoretically produce a linear shrinkage of 4.8 %, which equates to 0.29 feet or 3.5 inches for the 6.1 foot vertical section of soil.

While it is highly unlikely the soil would dry below the shrinkage limit without a major climate change or site dewatering effort, even small changes in moisture content throughout a portion of a stratigraphic unit may produce volumetric changes to some extent. Maintaining consistent moisture content within the soil after construction will aid in limiting the potential volumetric change of soils at and below

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the foundation bearing grade. GGEA provides the following recommendations to maintain consistent soil moisture content:

1. In warm weather, inspect the soil around the foundation for signs of a gap forming between the soil and the foundation. If found, water the soils twice daily. The soil should be watered evenly one foot away from the foundation and not allowed to run directly into the gap. Provide a barrier against water loss by placing mulch or similar ground cover around the entire foundation perimeter.
2. Trees and landscaping plants should be kept as far from the foundation wall as their mature height. The roots from trees will consume water much faster than the surrounding areas allowing for some areas of clay to dry out and shrink while others will not. This in turn can lead to differential settlement of the structure. Existing roots near to the foundation should be cut and capped by a professional tree service.
3. Water trees and shrubs near to the foundation to preclude them taking excessive moisture out of the surficial soils. Fully grown trees can require as much as 75 gallons of water per day in dry periods.
4. Maintain consistent moisture in the soil by directing roof runoff to splash blocks a few feet away from the foundation. Allow this water to maintain an even level of saturation in the soils overlying the clay deposits.
5. In general, avoid any activity or operations in the vicinity of the building foundation that may promote long-term groundwater fluctuations. The proposed construction and any future adjacent construction should include measures to prevent significant changes in the surrounding subgrade moisture content.

Based on the laboratory test results, the lean clay (CL) soils encountered within 8.0 feet of the ground surface provide a low to moderate potential for expansion and the fat clay (CL) soils encountered below a depth of 8.0 feet provide for a moderate to high potential for expansion. Considering foundation construction will be limited to a maximum depth of 5.5 feet below existing grade, it is GGEA's opinion native soils may be repurposed as foundation backfill pending foundations are designed and constructed in accordance with the recommendations of this report.

4.5 LIQUEFACTION MITIGATION

Liquefaction is the process where saturated cohesionless (granular) soils, specifically, loose sands and silts, transform from a solid into a liquid as a result of an increase in the pore water pressure caused by repeated disturbance such as experienced during seismic events. Liquefaction results in an immediate loss of shear strength and bearing capacity, causing total and differential settling of the overlying structure.

The overburden soils at this site are primarily cohesive and do not provide a potential for liquefaction.

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4.6 SETTLEMENT

As stated in section 4.1 of this report, assurance of little to no settlement can only be provided through the installation of deep foundations systems to support the proposed residences. However, shallow foundations designed and constructed in accordance with the recommendations of this report should provide for total settlement of less than 1.0 inch and differential settlement of less than 0.5 inches.

4.7 SEISMIC SITE CLASS AND DESIGN CATEGORY

In accordance with Section 1613 (Earthquake Loads) of the 2020 NYS Building Code, GGEA has classified the site as Site Class E. The site classification is based on the summation of N values for the upper 100 feet of boring B-10 in accordance with equation 20.4-2 of ASCE 7.

The design spectral response accelerations have been calculated as 0.353 g for short period design spectral response acceleration (S_{DS}) and 0.142 g for one second design spectral response acceleration (S_{D1}). In accordance with Table R301.2.2.1.1 of the 2020 NYS Residential Code, using Risk Category II, the site is classified as Seismic Design Category C. See Appendix E for reference.

4.8 GENERAL FOUNDATION AND CONSTRUCTION RECOMMENDATIONS

GGEA provides general construction recommendations as follows:

1. No fill material or concrete should be placed in water, over saturated subgrade or over frozen subgrade.
2. Fine grained soils, such as those encountered at the proposed foundation bearing grade, will lose considerable strength and bearing capacity if subject to saturation. Also, they are susceptible to volumetric change with variation in moisture content. The accumulation of stormwater in the footing excavation and subsequent deterioration of the foundation subgrade during construction should not be permitted. The foundation excavation should include a temporary sump located outside of the building footprint to permit stormwater removal by means of a suction pump during construction.
3. Foundation excavations should not unnecessarily extend below the design subgrade elevation. If additional undercut is necessary to achieve a uniform bearing grade, the excavation bottom should be graded or stepped to a uniform elevation. Undercut "pockets" should be avoided.
4. Topsoil and organic soils should be removed beneath all load bearing areas.
5. The use of a "mud" mat should be considered to protect bearing grades during any extended period or when construction occurs during inclement weather.
6. The foundation bearing grades should not be allowed to freeze either prior to or after placement of concrete. Insulating blankets should be used to cover bearing grades plus a one foot perimeter outside forms or completed footings until backfill is placed.
7. The fill at grade elevation should be sloped to drain away from the foundation walls to eliminate the potential for standing water to accumulate along the foundation.

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8. The wall loads should be proportioned to create nearly equal contact pressures under the prescribed footing width of 24 inches and interior spread footings, which will serve to minimize differential settlement.
9. In accordance with section R403.1.5 of the 2020 NYS Residential Code, elevation transitions for foundation grades, such as from basement to garage, should be constructed in a stepped fashion with complete and intimate contact between the footing and the native soils throughout the entire length of the step. Bridging of concrete should not be permitted. As an alternate, the foundation wall may be designed as a structural, reinforced concrete beam to span the stepped footing transition.
10. Upon excavation of the foundation, if encountered subsurface conditions are found to be different than those identified on the soil boring logs and represented within this report, the bearing capacity of the subgrade will need to be reevaluated by a qualified Geotechnical Engineer. Likewise, the footing design may then require adjustment to accommodate for a change in bearing capacity or for soils of varying bearing capacity.
11. Conformance to OSHA standards is mandatory during excavation and trench work.
12. Grading and contouring efforts should take care to address existing site drainage conditions and mitigate any conflicts with the proposed site development and basement construction.

4.9 CONCLUSION

This completes the geotechnical evaluation for the proposed development of the Heim Road Subdivision in the Town of Amherst, New York. This report has been prepared based on the encountered subsurface conditions at the soil boring locations and pertinent data supplied by Essex. The information presented within this report is intended to serve as the basis for foundation design and should be communicated to the project architect or design professional. Please contact GGEA if major project changes are made or if encountered soils vary from conditions noted in this report.

Sincerely,



G. Edward Lover, P.G.
Senior Geologist
/gel

Mark W. Glynn, P.E.
Consulting Engineer, Principal

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Appendix A

Subsurface Exploration Logs

Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

September 1, 2020

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GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • EDI@earthdimensions.com

11K19c HOLE NO. B-1-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/14/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	3						Slightly moist dark brown (SILTY-SAND) topsoil with little silt, trace to little organic matter, loose, granluar soil structure, (SM).	Sandy topsoil with little silt, trace to little organic matter to 1.2 feet over water sorted and deposited sand with little silt to 1.8 feet over clayey lake sediment to 5.0 feet over silty glacial drift with little sand, trace to little clay, trace gravel to 13.0 feet over coarse silty glacial till with little to some gravel, little sand to auger refusal.
	16		6			13			
				7					
					7			1.2	
	2	12						Slightly moist faintly mottled grayish brown (SILTY-SAND) with mostly fine size sand, little silt, compact, weakly blocky soil structure, (SM).	
	22		14			29			
				15					
					21			1.5	
	3	10						Slightly moist faintly mottled brown (SILTY-CLAY) very stiff, blocky soil structure, (CL).	
5	24		14			27			
				13					
					15			2.5	
	4	8						Slightly moist to moist faintly mottled brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
	24		11			23			
				12					
					12			5.0	
	5	5						Moist brown (SAND-SILT-CLAY) with 5 to 10% gravel, little sand, trace to little clay, very stiff, massive soil structure, (ML-CL).	
	20		5			13			
				8					
10					12			grades downward to 8.0	
	6	6						Extremely moist grayish brown (SAND-SILT-CLAY) with 5 to 10% gravel, little sand, trace to little clay, stiff, massive soil structure, (ML).	
	18		5			11			
				6					
					5			grades downward to 13.0	
	7	18						Extremely moist to moist brownish gray gravelly (SANDY-SILT) with 15 to 25% gravel, little sand, trace clay, dense, very dense below 18.0 feet with brittle consistence, massive soil structure, (ML).	
	22		22			40			
				18					
15					26				
	8	20							
	20		24			58			
				34					
20					35				

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian Bartron, (cns) SHEET 1 OF 2

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11K19c HOLE NO. B-1-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/14/20

DEPTH IN FT | BLOWS ON SAMPLER | SN REC | 0/6 | 6/12 | 12/18 | 18/24 | N | LITH | DESCRIPTION AND CLASSIFICATION | WATER TABLE AND REMARKS

SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
9	20						Extremely moist to moist brownish gray gravelly (SANDY-SILT) with 15 to 25% gravel, little sand, trace clay, dense, very dense below 18.0 feet with brittle consistence, massive soil structure, (ML).	
4		50/5					26.3 Advanced augers to refusal at 26.3 feet.	

25
30
35
40

N=NUMBER OF BLOWS TO DRIVE 2" SPOON 12" WITH 140 lb. WT. FALLING 30" PER BLOW

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11K19c HOLE NO. B-2-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/14/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Moist dark brown (SILTY-SAND) topsoil with little silt, trace to little organic matter, very loose, granular soil structure, (SM).	Sandy topsoil with little silt, trace to little organic matter to 0.8 feet over water sorted and deposited sand with little silt, trace organic matter to 2.3 feet over clayey lake sediment to end of boring.
	20		3			7			
				4					
					4			0.8	
	2	6						Moist faintly mottled grayish brown (SILTY-SAND) with mostly fine size sand, little silt, trace organic matter, loose, weakly blocky soil structure, (SM).	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to end of boring at 6.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
	22		8			19			
				11					
					14			2.3	
	3	9						Moist grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	No water at completion.
5	24		14			29			
				15					
					18			6.0	
								Advanced augers to refusal at 6.0 feet.	
10									
15									
20									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

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11K19c HOLE NO. B-3-20 SURF. ELEVATION _

PROJECT 775 Helm Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/14/20

DEPTH IN FT | BLOWS ON SAMPLER

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Dry to slightly moist dark brown (SILTY-SAND) topsoil with 0 to 3% gravel, little silt, trace to little organic matter, very loose, granular soil structure, (SM).	Sandy topsoil with little silt, trace to little organic matter to 1.0 feet over water sorted and deposited sand with little silt to 2.1 feet over clayey lake sediment to 10.5 feet over silty glacial drift with little sand, trace to little clay, trace gravel to 13.8 feet over silty glacial till with little sand, trace to little gravel to end of boring.
	22		5			13			
				8					
					8				
	2	72							
	24		13			26			
				13					
					19				
	3	7							
5	22		10			22			
				12					
					16				
	4	5							
	24		8			20			
				12					
					15				
	5	5							
	24		6			14			
				8					
10					9				
	6	5							
	24		6			17			
				11					
					9				
	7	12							
	16		49						
				50/5					
15									
	8	40							
	8		50/2						
20									

Clear transition to 1.0

Moist faintly mottled light brown (SILTY-SAND) with mostly fine size sand, little silt, compact, thinly bedded below 1.8 feet, (SM).

2.1

Moist grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).

6.0

Moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) very stiff, stiff below 8.0 feet, thinly laminated with very thin coarse silt lenses, (CL).

clear transition to 10.5

Extremely moist grayish brown (SAND-SILT-CLAY) with 5 to 10% gravel, little sand, trace to little clay, very stiff, massive soil structure, (ML-CL).

clear transition to 13.8

Slightly moist grayish brown (SANDY-SILT) with 5 to 15% gravel, little sand, very dense with brittle consistence, massive soil structure, (ML).

18.7

Boring completed at 18.7 feet.

N=NUMBER OF BLOWS TO DRIVE 2" SPOON 12" WITH 140 lb. WT. FALLING 30" PER BLOW

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11K19c HOLE NO. B-4-20 SURF. ELEVATION —

PROJECT 775 Helm Road Subdivision LOCATION —
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/14/20

DEPTH IN FT | BLOWS ON SAMPLER

SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
1	2						Slightly moist dark brown (SILTY-SAND) topsoil with little silt, trace to little organic matter, very loose, granluar soil structure, (SM). 0.9	Sandy topsoil with little silt, trace to little organic matter to 0.8 feet over water sorted and deposited sand with little silt to 1.5 feet over clayey lake sediment to end of boring.
21		3			9			
			6					
				5				
2	8							
17		10			27		Slightly moist to moist faintly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, loose, weakly blocky soil structure, (SM). 1.5	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to end of boring at 6.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
			17					
				19				
3	6							
24		7			17			
			10					
				11				
							clear transition to 2.5	No water at completion.
							Slightly moist to moist faintly mottled grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
							grades downward to 4.0	
							Moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL). 6.0	
							Boring completed at 6.0 feet.	

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

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11K19c HOLE NO. B-5-20 SURF. ELEVATION —

PROJECT 775 Heim Road Subdivision LOCATION —
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Moist dark brown (SILTY-SAND) topsoil with little silt and organic matter, very loose, granular soil structure, (SM).	Sandy topsoil with little silt and organic matter to 0.7 feet over water sorted and deposited sand with little silt to 1.2 feet over clayey lake sediment to 14.8 feet over silty glacial drift with little sand and clay, trace gravel to 18.0 feet over silty glacial till with little to some gravel, little sand to end of boring.
	20		3			7			
				4					
					5				
	2	8						0.7	
	24		9			21		Moist to extremely moist faintly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, loose, weakly blocky soil structure, (SM).	
				12					
					14				
	3	6						clear transition to 1.2	
5	24		5			13		Moist distinctly mottled grayish brown (SILTY-CLAY) stiff, blocky soil structure, (CL).	
				8					
					10				
	4	6						clear transition to 2.0	
	24		5			10		Moist grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
				5					
					6				
	5	3						clear transition to 4.5	
	24		3			5			
				2					
10					3				
	6	1						Moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
	24		1			<2			
				1/12					
	7	WH						clear transition to 7.8	
	22		1			2		Extremely moist to wet, wet below 11.0 feet, grayish brown (SILTY-CLAY) firm, soft below 10.0 feet, very soft below 11.0 feet, thinly laminated with very thin coarse silt lenses, (CH).	
				1					
					1				
	8	WH						clear transition to 14.8	
15	18		1			3		Wet to extremely moist grayish brown (SAND-SILT-CLAY) with 5 to 10% gravel, little sand and clay, firm, weakly stratified to massive soil structure, (ML-CL).	
				2					
					3				
	9	12						grades downward to 18.0	
	15		41						
				50/5					
20									

N=NUMBER OF BLOWS TO DRIVE 2" SPOON 12" WITH 140 lb. WT. FALLING 30" PER BLOW

LOGGED BY Brian Bartron, (cns) SHEET 1 OF 2

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

EARTH DIMENSIONS, INC.
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(716) 655-1717 • EDI@earthdimensions.com

11K19c HOLE NO. B-5-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/14/20 COMPLETED 08/17/20

DEPTH IN FT	SN / REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
								Extremely moist grayish brown to brownish gray gravelly (SANDY-SILT) with 15 to 25% gravel, little sand, very dense with brittle consistence, massive soil structure, (ML).	
								19.4	
								Boring completed at 19.4 feet.	
25									
30									
35									
40									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian Bartron, (cns) SHEET 2 OF 2

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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(716) 655-1717 • EDI@earthdimensions.com

11K19c HOLE NO. B-6-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Slightly moist dark brown (SILTY-SAND) topsoil with little silt, trace to little organic matter, very loose, granular soil structure, (SM). 0.6	Sandy topsoil with little silt, trace to little organic matter to 0.6 feet over water sorted and deposited sand with little silt to 1.5 feet over clayey lake sediment to end of boring.
	15		7			14			
				7					
					7				
	2	13							
	20		13			27			
				14					
					20				
	3	8							
5	22		12			26			
				14					
					17				
	4	5							
	24		7			14			
				7					
					8				
	5	4							
	24		3			5			
				2					
					2				
10	6	1							
	24		1			2			
				1					
					1				
	7	1						Moist to extremely moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) stiff, firm below 8.0 feet, thinly laminated with very thin coarse silt lenses, (CL). grades downward to 9.0	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to 12.0 feet and 5.0-foot interval sampling to end of boring at 20.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
	20		1/12			<2		Extremely moist to wet grayish brown (SILTY-CLAY) very soft, weakly thinly laminated with very thin coarse silt lenses, (CL).	No water at completion.
					1				
15									
	8	WH							WH: Sampler penetration with weight of rods and hammer.
	24		WH			<1			
				WH					
20					1			Boring completed at 20.0 feet. 20.0	

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian Bartron, (cns) SHEET 1 OF 1

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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(716) 655-1717 • EDI@earthdimensions.com

11K19c HOLE NO. B-7-20 SURF. ELEVATION —

PROJECT 775 Helm Road Subdivision LOCATION —
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Slightly moist dark brown to dark grayish brown (SILTY-SAND) topsoil with little silt and organic matter, very loose, granluar soil stuructre, (SM).	Sandy topsoil with little silt and organic matter to 1.8 feet over water sorted and deposited sand with little silt to end of boring.
	21		4			8		1.8	
				4				Slightly moist to moist distinctly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, loose, weakly blocky soil structure, (SM).	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to end of boring at 6.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
					7			3.0	
	2	6						Slightly moist faintly mottled grayish brown (SILTY-CLAY) stiff, blocky soil structure, (CL).	No water at completion.
	16		7			14		3.8	
				7				Moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
					10			6.0	
	3	6						Boring completed at 6.0 feet.	
5	19		10			25			
				15					
					18				
10									
15									
20									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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11K19c HOLE NO. B-8-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	2						Slightly moist dark brown (SILTY-SAND) topsoil with little silt and organic matter, very loose, granular soil structure, (SM).	Sandy topsoil with little silt and organic matter to 0.8 feet over water sorted and deposited sand with little silt to end of boring.
	14		6			15		0.8	
				9				Slightly moist faintly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, loose, weakly blocky soil structure, (SM).	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to 12.0 feet and 5.0-foot interval sampling to end of boring at 20.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
					8			clear transition to 1.9	
	2	6						Slightly moist distinctly mottled grayish brown (SILTY-CLAY) stiff and very stiff, blocky soil structure, (CL).	
	22		8			18		3.0	No water at completion.
				10				Slightly moist to moist faintly mottled alternating layers of reddish brown and grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
					12			grades downward to 8.0	WH: Sampler penetration with weight of rods and hammer.
	3	6						Moist to extremely moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) stiff, thinly laminated with very thin coarse silt lenses, (CL).	
5	24		9			22		grades downward to 10.0	
				13				Extremely moist to wet grayish brown (SILTY-CLAY) soft and very soft, weakly thinly laminated with very thin coarse silt lenses, (CL).	
					12				
	4	5							
	24		10			20			
				10					
					9				
	5	5							
	24		4			8			
				4					
10					5				
	6	2							
	24		2			3			
				1					
					2				
	7	1							
	24		1			2			
				1					
15					1				
	8	WH							
	24		1			<2			
				1/12					
20								Boring completed at 20.0 feet. 20.0	

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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(716) 655-1717 • EDI@earthdimensions.com

11K19c HOLE NO. B-9-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	4						Moist dark gray (SILTY-SAND) topsoil with 3 to 7% gravel, little silt, trace to little organic matter, loose, weakly granular soil structure, (SM).	Sandy topsoil fill with little silt, trace to little organic matter, trace gravel to 1.0 feet over sandy soil fill with little silt, trace organic matter and wood fiber to 2.5 feet over water sorted and deposited sand with little silt to 4.3 feet over clayey lake sediment to end of boring.
	18		5			9			
				4					
					5			1.0	
	2	10						Moist grayish brown (SILTY-SAND) fill with little silt, trace organic matter and wood fiber, loose, massive soil structure, (SM).	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to end of boring at 6.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
	10		7			15			
				8					
					3			2.5	
	3	5						Moist faintly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, compact, thinly bedded, (SM).	Note: Boring drilled ten feet east of staked location.
5	22		7			16			
				9				clear transition to 4.3	No water at completion.
					13				
								Moist faintly mottled brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL).	
10								6.0	
								Boring completed at 6.0 feet.	
15									
20									

N=NUMBER OF BLOWS TO DRIVE 2" SPOON 12" WITH 140 lb. WT. FALLING 30" PER BLOW

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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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11K19c HOLE NO. B-10-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1 18	2	4	6	7	10		Moist dark brown (SILTY-SAND) topsoil with little silt, trace to little organic matter, very loose, granluar soil structure, (SM). 0.8	Sandy topsoil with little silt, trace to little organic matter to 0.8 feet over water sorted and deposited sand with little silt to 3.7 feet over clayey slack water sediment to 23.0 feet over silty glacial drift with little to some clay, trace to little gravel to 26.0 feet over apparent silty glacial till to auger refusal.
	2 14	7	7	8	7	15		Moist to slightly moist faintly mottled light grayish brown (SILTY-SAND) with mostly fine size sand, little silt, compact, weakly blocky soil structure becoming thinly bedded below 2.2 feet, (SM). clear transition to 3.7	
5	3 20	7	9	12	14	21		Moist faintly mottled to 6.0 feet grayish brown (SILTY-CLAY) very stiff, thinly laminated with very thin coarse silt lenses and nearly vertical gray desiccation cracks, (CL). 7.0	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to 12.0 feet and 5.0-foot interval sampling to auger refusal at 27.7 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
	4 24	7	11	14	20	25			
10	5 24	8	7	7	8	14		Moist to extremely moist alternating layers of reddish brown and grayish brown (SILTY-CLAY) stiff, thinly laminated with very thin coarse silt lenses, (CL).	No water at completion.
	6 21	3	3	3	3	6		13.0	WH: Sampler penetration with weight of rods and hammer.
15	7 24	1	1	1	1	2		Extremely moist to wet grayish brown (SILTY-CLAY) very soft, weakly thinly laminated with very thin coarse silt lenses, (CL).	
20	8 24	WH	WH	1	1	<2			

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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11K19c HOLE NO. B-10-20 SURF. ELEVATION _

PROJECT 775 Heim Road Subdivision LOCATION _
Town of Amherst, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 08/17/20 COMPLETED 08/17/20

DEPTH IN FT	SN REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
								Extremely moist to wet grayish brown (SILTY-CLAY) very soft, weakly thinly laminated with very thin coarse silt lenses, (CL).	WH: Sampler penetration with weight of rods and hammer.
								grades downward to 23.0	
	9	WH						Wet grayish brown (SAND-SILT-CLAY) with 3 to 7% gravel, little to some clay, trace to little silt, very soft to soft, weakly stratified to massive soil structure, (ML-CL).	
	22		WH			<2		clear transition to 26.0	
25				1				Apparent silty glacial till.	
					4			27.7	
								Advanced augers to refusal at 27.7 feet.	
30									
35									
40									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian Bartron, (cns) SHEET 2 OF 2

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix B

Project Location Plan

Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

September 1, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

GGE
ENGINEERING · DESIGN
GLYNN GEOTECHNICAL ENGINEERING
415 S. TRANSIT STREET
LOCKPORT, NEW YORK 14094
VOICE (716) 625 - 6933 / FAX (716) 625-6983
www.glynngroup.com

PROJECT: HEIM ROAD SUBDIVISION				SHEET NO.: S1
SUBJECT: PROJECT LOCATION PLAN				
CLIENT: ESSEX HOMES OF WNY				
PROJ. NO.: 20-1113	SCALE: 1" = 400'	DATE: 09.01.20	BY: GEL	

Appendix C

Subsurface Exploration Plan

Heim Road Subdivision
Town of Amherst, New York

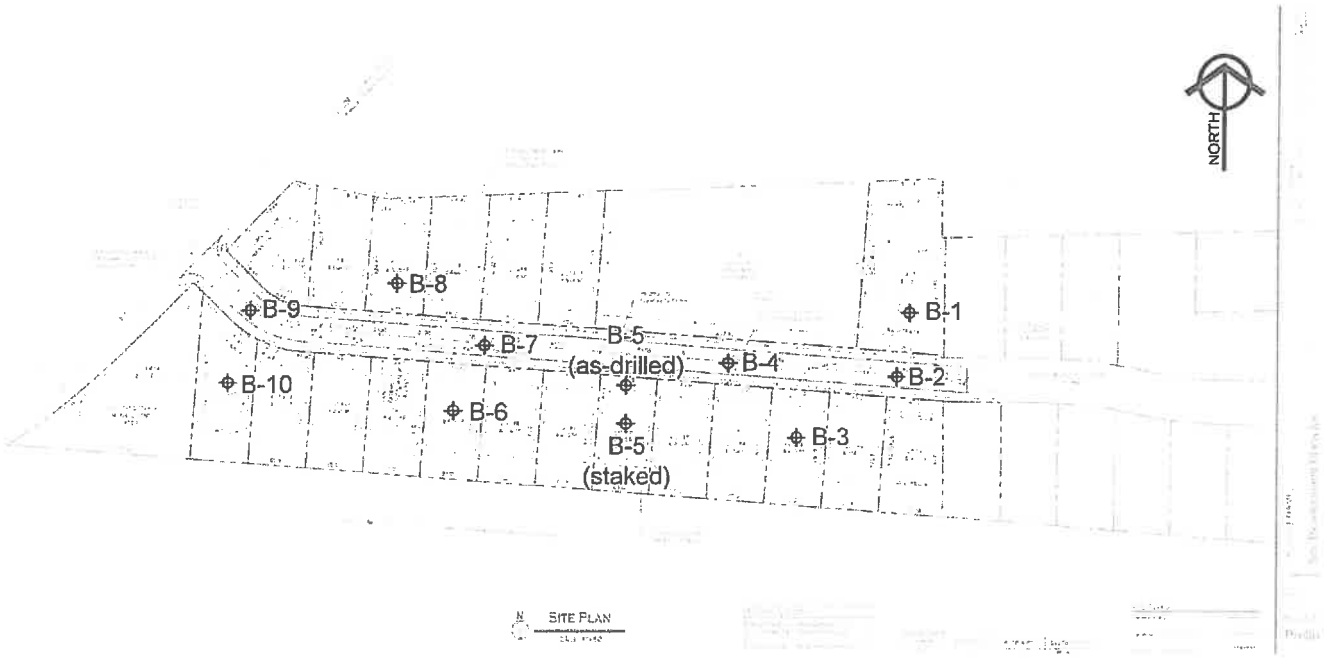
Geotechnical Engineering Report

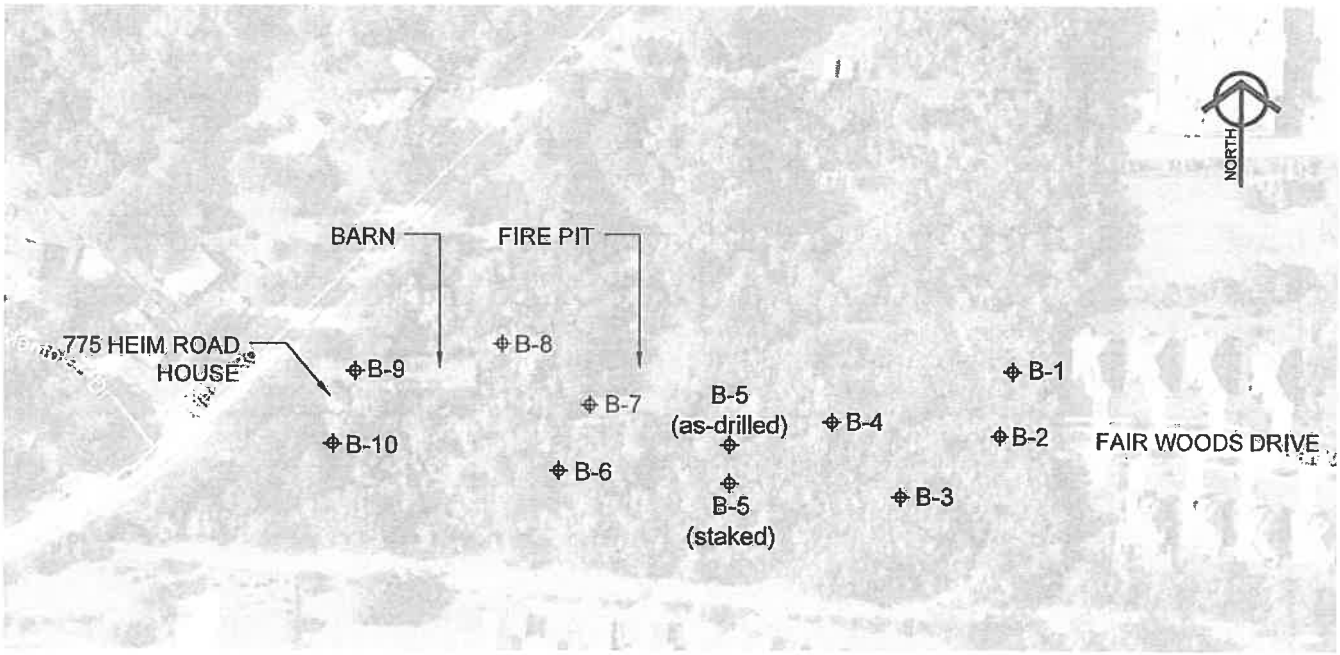
GGEA 20-1113

September 1, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC





GGE ENGINEERING · DESIGN GLYNN GEOTECHNICAL ENGINEERING 415 S. TRANSIT STREET LOCKPORT, NEW YORK 14094 VOICE (716) 625 - 6933 / FAX (716) 625-6983 www.glynngroup.com	PROJECT: HEIM ROAD SUBDIVISION			SHEET NO.: S2
	SUBJECT: BORING LOCATION PLAN			
	CLIENT: ESSEX HOMES OF WNY			
	PROJ. NO.: 20-1113	SCALE: 1"= 200'-0"	DATE: 07.17.20	BY: GEL

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix D

Laboratory Testing

Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

September 1, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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GRAIN SIZE ANALYSIS
ASTM D-422

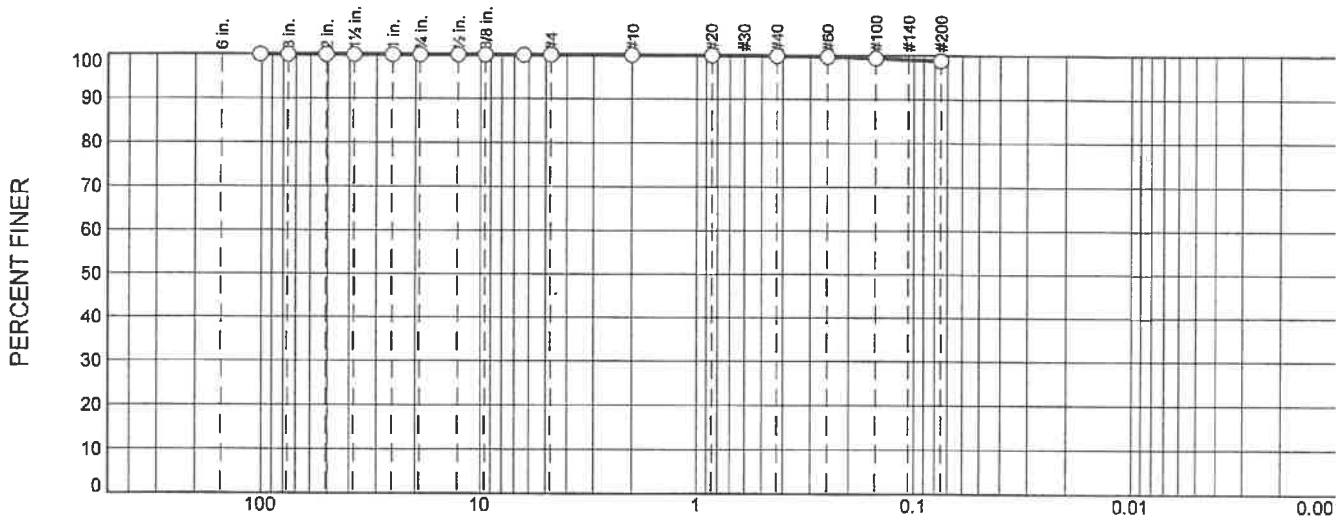
Project: Heim Road Subdivision

Project No.: 20-1113

Client: Essex Homes of WNY

Location: B-3 (S2, S3, S4, S5)
Sample Number: 20-01 **Depth:** 2.1 - 10.5 ft

Date: 8/28/2020



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	0.1	1.0	98.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
4"	100.0		
3"	100.0		
2"	100.0		
1-1/2"	100.0		
1-0"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
1/4"	100.0		
#4	100.0		
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.7		
#100	99.4		
#200	98.8		

* (no specification provided)

Material Description

lean clay

Atterberg Limits

PL= 19 LL= 39 PI= 20

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO= A-6(21)

Remarks

Natural Moisture content = 22.0 %
Shrinkage Limit = 11.73 %

Figure

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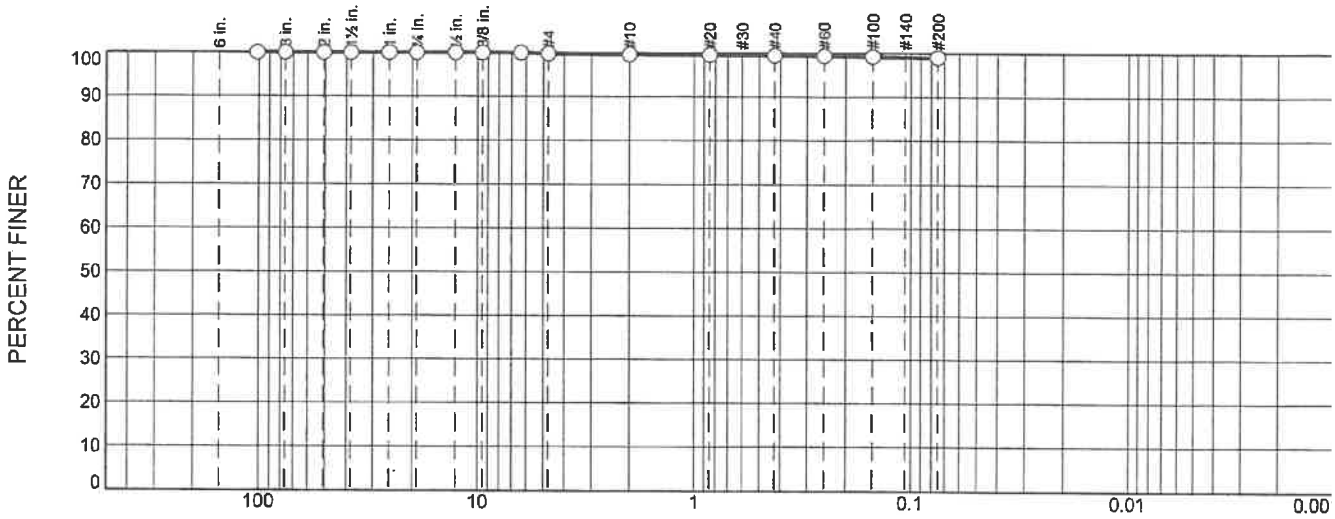
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GRAIN SIZE ANALYSIS
ASTM D-422

Project: Heim Road Subdivision **Project No.:** 20-1113

Client: Essex Homes of WNY

Location: B-5 (S5, S6, S7)
Sample Number: 20-02 **Depth:** 7.8 - 14.8 ft **Date:** 8/28/2020



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.2	0.2	0.2	0.4	99.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
4"	100.0		
3"	100.0		
2"	100.0		
1-1/2"	100.0		
1-0"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
1/4"	100.0		
#4	99.8		
#10	99.6		
#20	99.5		
#40	99.4		
#60	99.3		
#100	99.2		
#200	99.0		

* (no specification provided)

Material Description

fat clay

Atterberg Limits

PL= 23 LL= 52 PI= 29

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(33)

Remarks

Natural Moisture Content = 42.22 %
Shrinkage Limit = 14.31 %

Figure

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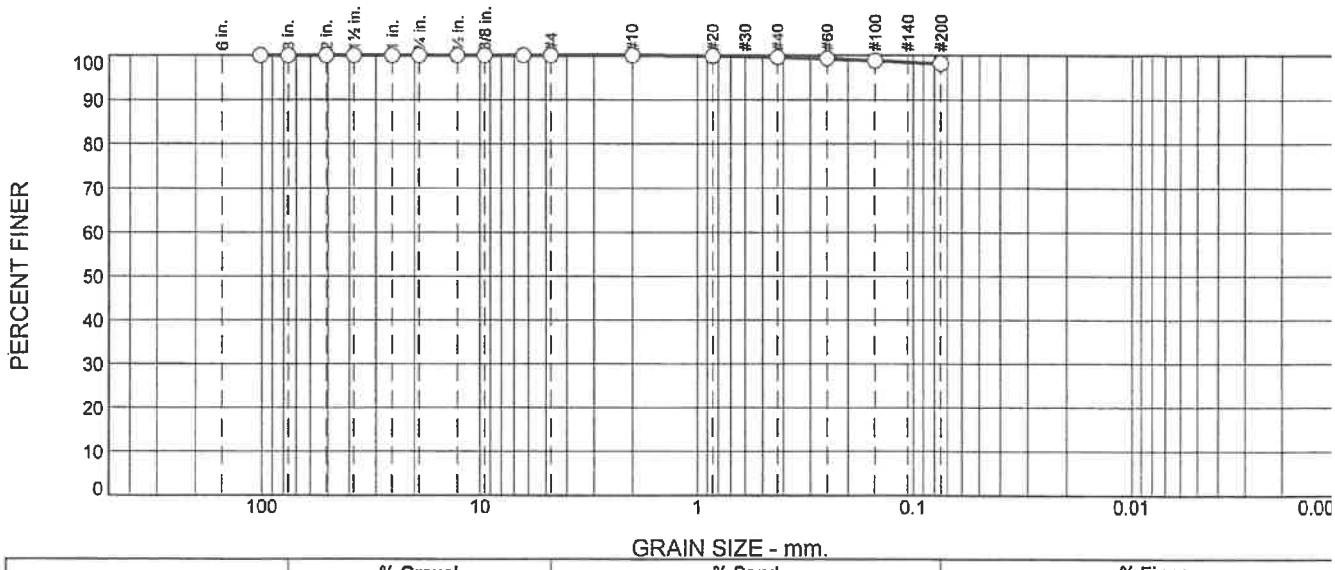
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GRAIN SIZE ANALYSIS
ASTM D-422

Project: Heim Road Subdivision **Project No.:** 20-1113

Client: Essex Homes of WNY

Location: B-8 (S2, S3, S4)
Sample Number: 20-03 **Depth:** 1.9 - 8.0 ft **Date:** 8/28/2020



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	1.5	98.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
4"	100.0		
3"	100.0		
2"	100.0		
1-1/2"	100.0		
1-0"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
1/4"	100.0		
#4	100.0		
#10	100.0		
#20	99.8		
#40	99.6		
#60	99.2		
#100	98.7		
#200	98.1		

* (no specification provided)

Material Description

lean clay

Atterberg Limits

PL= 20 LL= 47 PI= 27

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(29)

Remarks

Natural Moisture Content = 22.48 %
Shrinkage Limit = 14.32 %

Figure

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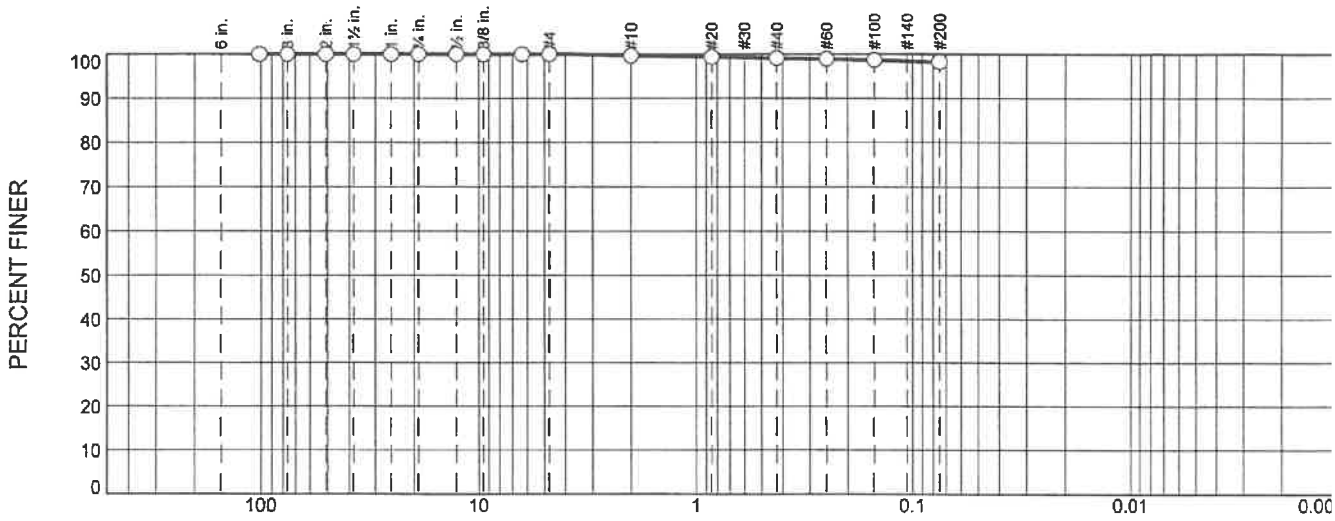
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GRAIN SIZE ANALYSIS
ASTM D-422

Project: Heim Road Subdivision **Project No.:** 20-1113

Client: Essex Homes of WNY

Location: B-10 (S7, S8)
Sample Number: 20-04 **Depth:** 13.0 - 20.0 ft **Date:** 8/28/2020



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	0.6	0.8	98.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
4"	100.0		
3"	100.0		
2"	100.0		
1-1/2"	100.0		
1-0"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
1/4"	100.0		
#4	100.0		
#10	99.6		
#20	99.4		
#40	99.0		
#60	98.9		
#100	98.6		
#200	98.2		

* (no specification provided)

Material Description

lean clay

Atterberg Limits

PL= 22 LL= 43 PI= 21

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(23)

Remarks

Natural Moisture Content = 41.2 %

Figure

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Appendix E

Seismic Site Class and Design Category

Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

September 1, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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Project : Heim Road Subdivision
Client: Essex Homes of WNY
GGEA # : 20-1113
Date: 09.01.20

B-10

Depth (di)	N Value (Ni)
3.7	13
3.3	21
3	14
3	6
2	2
9	1
3.7	5
72.3	100

ASCE 7-10
Equation 20.4.2

$$N = \frac{100}{\sum \frac{di}{Ni}} = 8$$

ASCE 7-10
Table 20.3-1

$N < 15$ **SITE CLASS E**

2020 NYS Building Code Section 1613

F_a =	2.5	Site coefficient Table 1613.2.3(1)
F_v =	3.5	Site coefficient Table 1613.2.3(2)
S_s =	0.212	Mapped accelerations short periods Figure 1613.2.1(1)
S_1 =	0.061	Mapped accelerations 1 sec period Figure 1613.2.1(2)
S_{MS} =	0.530	Maximum spectral response short periods equation 16-36
S_{M1} =	0.214	Maximum spectral response 1 sec periods equation 16-37
S_{DS} =	0.353	Design spectral response short periods equation 16-38
S_{D1} =	0.142	Design spectral response 1 sec periods equation 16-39

Risk Category = II

In accordance with Table R301.2.2.1.1
Seismic Design Category = C

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Appendix F

Fill Specifications

Heim Road Subdivision
Town of Amherst, New York

Geotechnical Engineering Report

GGEA 20-1113

September 1, 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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Structural Fill

All soil and/or crushed rock material with the exception
of those with USCS classifications of
CH, MH, OH, OL, ML and CL-ML.

Place material in 9 inch lifts (loose) and compact to 95 % of modified proctor (ASTM D-1557) maximum dry density within 2 % of optimum moisture content.

The material should be compacted using a smooth drum vibratory roller (for large applications) or a reversible vibratory plate tamper (for smaller applications) such as a Bomag BPR 35/60 or similar (weight > 400 lbs).

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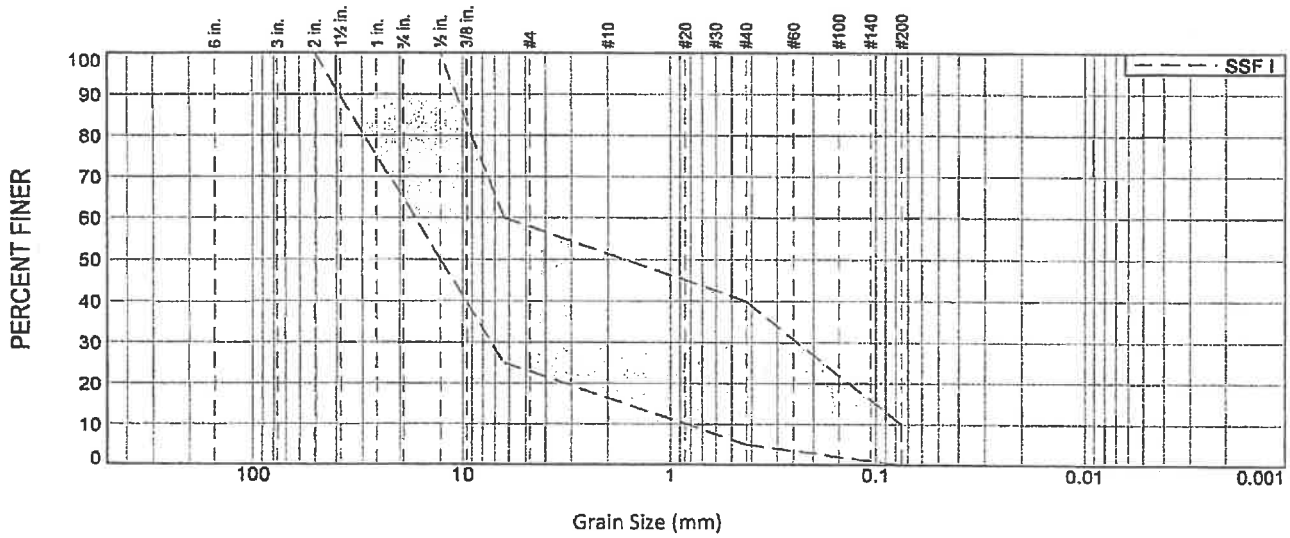
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Select Structural Fill

NYSDOT Item No. 304.12 Subbase Course, Type 2

Sieve Size	Required % Passing
2 inch	100
1/4 inch	25 - 60
No. 40	5 - 40
No. 200	0 - 10



In addition to the above specification, material shall also meet the well graded qualifications of ASTM D-2487, such that USCS classification = GW, GW-GM, SW or SW-SM.

Place material in 9 inch lifts (loose) and compact to 95 % of modified proctor (ASTM D-1557) maximum dry density within 2 % of optimum moisture content.

The material should be compacted using a smooth drum vibratory roller (for large applications) or a reversible vibratory plate tamper (for smaller applications) such as a Bomag BPR 35/60 or similar (weight > 400 lbs).

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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BUFFALO DISTRICT
1776 NIAGARA STREET

August 17, 2020

Regulatory Branch

SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

Rob Savarino
Essex Homes of WNY
8940 Main Street
Clarence, New York 14031

Dear Mr. Savarino:

This pertains to the wetland delineation submitted on behalf of Essex Homes of WNY by Earth Dimensions, Inc for a jurisdictional determination for a 6.92 acre parcel located at 775 Heim Road, Town of Amherst, Erie County, New York.

Section 404 of the Clean Water Act 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 boundary as shown on the attached wetland delineation map dated January 16, 2020. This verification was confirmed on August 17, 2020 and 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 and additional impacts are proposed for waters of the United States. Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act 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.

I have determined that there is no clear surface water connection or ecological continuum between Wetlands W1 and W2 on the parcel and a surface tributary system to a navigable water of the United States. Therefore, these waters are considered isolated, non-navigable, intrastate waters and not regulated under Section 404 of the Clean Water Act. Accordingly, you do not need Department of the Army authorization to commence work in these areas.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Regulatory Branch
SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

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 jurisdictional determination for the subject parcel. If you object to this determination, 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 determination, 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:

Jacob Siegrist
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: 513-684-2699 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 October 12, 2020.

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:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Essex Homes of WNY	File Number: LRB-2020-00174	Date: August 17, 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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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	Jacob Siegrist 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: 513-684-2699 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.		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 8/17/2020
ORM Number: 2020-00174 Essex Homes (Heim Road)
Associated JDs: N/A
Review Area Location[1]: State/Territory: New York City: Amherst County/Parish/Borough: Erie (775 Heim Road)
Center Coordinates of Review Area: Latitude 43.0216 Longitude -78.7429

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A	N/A	N/A.	N/A.	N/A

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	N/A

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	See above.
N/A	N/A	N/A.	N/A.	See above.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1 (PFO)	2.44	acre(s)	(b)(1) Non-adjacent wetland.	W1 is a PFO wetland that is 2.44 acres in size and starts on the North property line and extends to the South, offsite and directly abuts the abandoned/removed "Peanut" railroad line. During the July 14, 2020 site visit, it was observed W1 abuts a swale that drains to the West through a 18 inch C.M.P. culvert. The water heads North in a closed, piped stormwater system before it outlets into Ditch 25, 2-4 miles away along Millersport Highway ((Email from Mr. Jeffrey Szatkowski of the Town of Amherst (July 29, 2020)). On the North side of the property,W1 ends at the adjacent property line because the area is maintained lawn. The swale is not a waters because it lacks an OHW and bed/banks. No other drainageways or streams were observed in the vicinity of W1 during the site visit. To the South of the "peanut" line are residential apartments. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. No wetlands exist on the other side of the peanut line All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.
W2 PFO	0.63	acre(s)	(b)(1) Non-adjacent wetland.	W2 is a PFO wetland that is 0.63 acres in size and located in the Northwest corner of the property. During the July 14, 2020 site visit, the boundary was walked and no drainageways or streams were located within the vicinity of the wetland. On the North side of the property,W2 ends at the adjacent

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
				property because the area is maintained lawn. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Wetland delineation conducted by Earth Dimensions, Inc, was submitted on January 28, 2020 with accurate, completed data sheets, photographs, NWI map, web soil survey with hydric soil ratings and other supporting information

This information is sufficient for purposes of this AJD.
Rationale: NA

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
☒ Photographs: Aerial and Other: Global Earth, ESRI, Google Earth aerial review*
☒ Corps site visit(s) conducted on: July 14, 2020
☐ Previous Jurisdictional Determinations (AJDs or PJDs): None
☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
☒ USDA NRCS Soil Survey: Web Soil Survey*
☒ USFWS NWI maps: Reviewed
☒ USGS topographic maps: Clarence Center, New York Quad*

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	ORM maps
State/Local/Tribal Sources	N/A.
Other Sources	NYSDEC Freshwater Wetland Maps – no State regulated wetlands are within the vicinity of the delineated parcel

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: Evaluation of the on-site conditions as presented in the submittal and substantiated by the photographs and data summary sheets appear to be clear and straight-forward.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

The review area is relatively small (6.92 acres) and does not present complicated details. The delineated parcel is surrounded by commercial and residential development on all sides. A review of in-house resources, USDWS NWI Maps, USGS Quad Map, NRCS Web Soil Survey and NYSDEC Environmental Resource Mapper indicated no mapped wetlands or streams are located within the vicinity of the delineated parcel. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separted from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters. Therefore, W1 and W2 are not jurisdictional waters of the United States.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Essex Homes-Heim Rd
DA#2020-00174
Erie County
W11K19b Quad:Clarence Center 775 Heim Road
Sheet 1 of 5

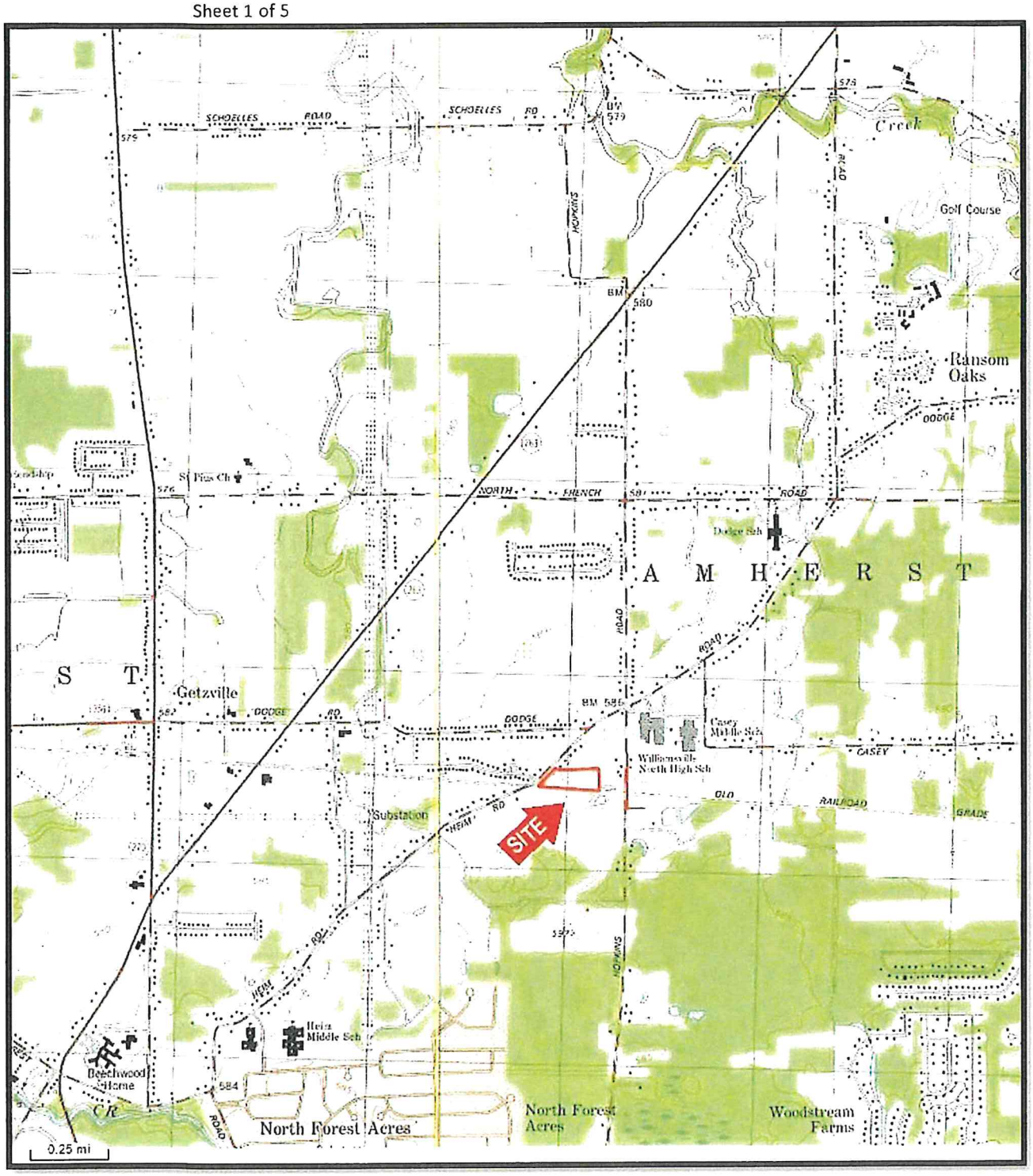


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / 2002 DeLorme

775 Heim Road

Town of Amherst, Erie County, New York

EARTH DIMENSIONS, INC.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Essex Homes-Heim Rd
DA#2020-00174
Erie County
W11K19b Quad:Clarence Center 775 Heim Road
Sheet 2 of 5



FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 01/16/2020)

775 Heim Road

Town of Amherst, Erie County, New York

EARTH DIMENSIONS, INC.

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FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 01/16/2020)

775 Heim Road

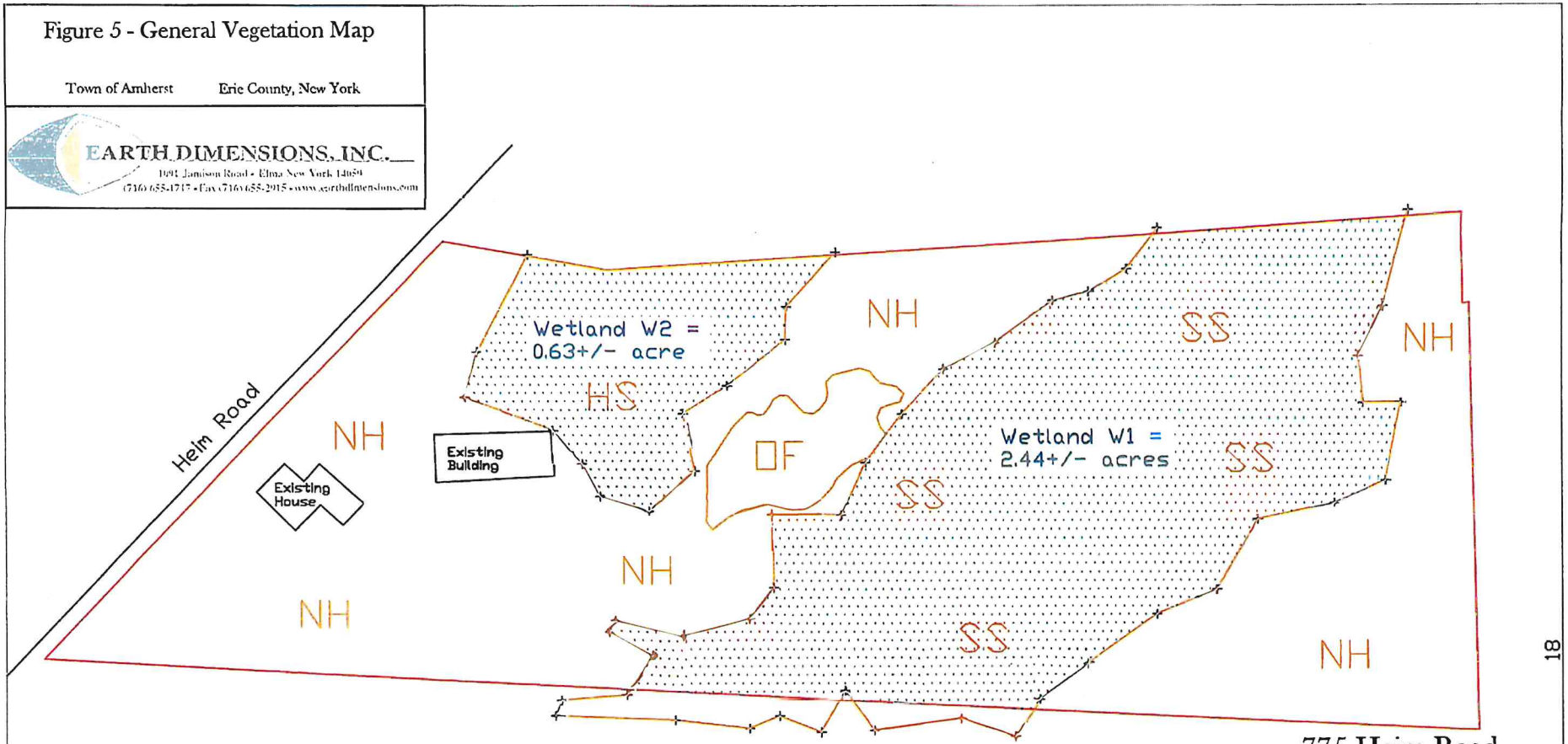
Town of Amherst, Erie County, New York

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Figure 5 - General Vegetation Map

Town of Amherst Erie County, New York

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1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com



775 Heim Road

LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- NH Northern Hardwood
- SS Scrub-shrub
- HS Hardwood Swamp

Scale: 0 50' 100'
Map Date: January 16, 2020/ TJS for EDI Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation map.dwg
EDI Project Code: W11K19b

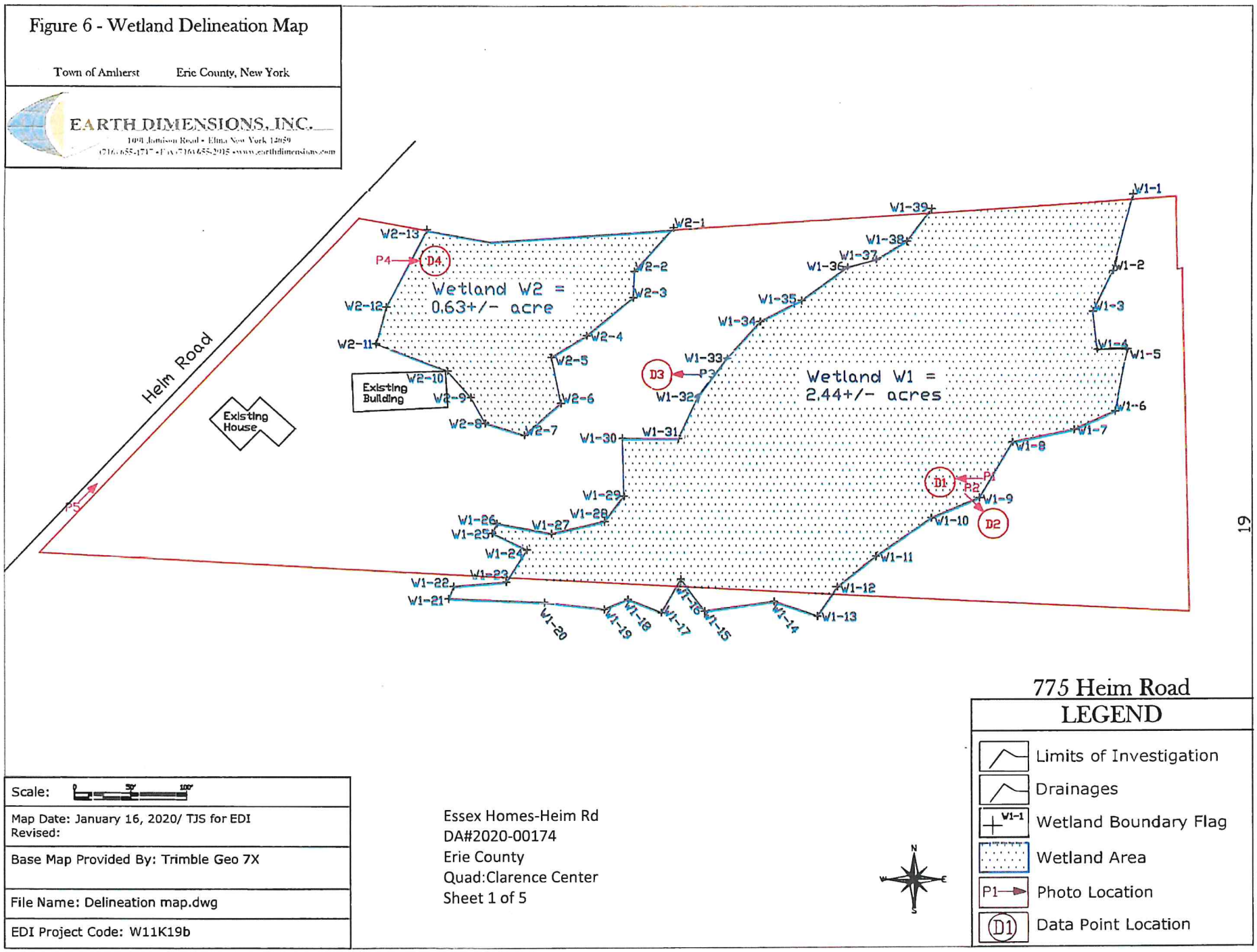
Essex Homes-Heim Rd
DA#2020-00174
Erie County
Quad:Clarence Center
Sheet 4 of 5

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Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

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775 Heim Road

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale:	30' 100'
Map Date: January 16, 2020/ TJS for EDI Revised:	
Base Map Provided By: Trimble Geo 7X	
File Name: Delineation map.dwg	
EDI Project Code: W11K19b	

Essex Homes-Heim Rd
DA#2020-00174
Erie County
Quad:Clarence Center
Sheet 1 of 5

N W E S

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Carmina · Wood · Morris DPC

487 Main Street Suite 600 Buffalo, New York 14203 P: 716.842.3165 F: 716.842.0263 W: cwm-ae.com

STORMWATER POLLUTION PREVENTION PLAN
for
CONSTRUCTION ACTIVITIES

At

Fair Woods Estates Subdivision
775 Heim Road

Town of Amherst, Erie County, New York

Prepared for

Essex Homes of WNY

8940 Main Street
Clarence, NY 14031

Prepared by

Carmina Wood Morris, D.P.C.

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263



November 2020

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101 SCOPE

A. **PURPOSE:** Essex Homes of WNY (EH) 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 EH; and/or liquidated damages. This section provides a descriptive explanation of EH'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 mailed to the NYSDEC at least 5 business days prior to any earth-disturbing activities (this time frame may increase to 60 business days if a full review of the SWPPP is determined necessary by 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

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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 inspector**s 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 post the NOI at the construction site along with any building permits.

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

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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. **General Construction Site Inspection and Maintenance Requirements**

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

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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.

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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.

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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 **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

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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;

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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.

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.

l. **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

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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 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 will be withheld until all provisions of the SWPPP have been submitted, completed and accepted by the Operator.

102 PROJECT NAME AND LOCATION

Fair Woods Estates Subdivision

775 Heim Road

Town of Amherst, County of Erie, New York

Easting: 195193

Northing: 4770006

Estimated Area of Site ≈ 6.90 acres

Estimated Area to be disturbed by Construction Activities ≈ 6.80 acres

A general location map is included as Appendix A.

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103 OPERATOR'S NAME AND ADDRESS

Essex Homes of WNY

8940 Main Street

Clarence, NY 14031

Contact Person: Robert Savarino

Telephone: 716-635-0550

104 PROJECT DESCRIPTION

This project is a development of a 6.90 acre site located on the east side of Heim Road in the Town of Amherst for a single family subdivision. Construction will consist of a proposed public roadway, public storm sewer, sanitary sewer and water mains, lighting and landscaping improvements. These improvements are an extension of a previously constructed road and subdivision on Fair Woods Drive. Twenty six (26) lots are proposed for the roadway extension, twenty four (24) of which will be building lots. Two lots will be used for stormwater management areas. Currently the site consists of a single family house but the majority of the site is undeveloped woodlands, wetlands and open grass areas. Approximately 3.07 acres of the site are designated as wetlands, none of which were determined to be federally jurisdictional. The proposed site development area to be disturbed for this project is approximately 6.80 acres when construction is completed.

Soil disturbing activities will include:

A. Construction of temporary construction exit points

B. Clearing & grubbing of the site within disturbance limits

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

D. Installation of storm sewer pipes and inlets

E. Construction of utilities

F. Construction of curb and roadway

G. Final grading & landscaping

H. Construction of houses

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This project is owned by Essex Homes of WNY and will be developed by the same. The work area consists of approximately 6.90 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 initial runoff curve number for the pre-construction site is "CN" = 79. The post-construction runoff curve number for the site will be "CN" = 86. The site is 6.90 acres of which approximately 6.80 acres will be disturbed by construction activities.

See soils information located in Appendix I.

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 this site will discharge to the drainage system on Heim Road which is believed to ultimately discharge to Ellicott Creek.

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

The assessed property is not shown on the NYSHPO map as an archeologically sensitive area.

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111 WETLANDS AND/OR OTHER SURFACE WATERS

3.07 acres of wetlands were previously delineated on site by Earth Dimensions, Inc., none of which were determined jurisdictional. A USACOE wetland jurisdictional determination letter is included in Appendix J 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. Permanent seeding and planting of all unpaved areas using the hydromulching grass seeding technique.

D. Mulching exposed areas.

E. Vegetation preservation in undisturbed areas.

F. 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.

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112.2 STRUCTURAL PRACTICES

Structural practices for this site include:

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:

A. Install temporary construction exits at locations shown on the Demolition & Erosion Control Plan Sheet.

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

C. Clear & Grub site.

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

E. Commence site grading.

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

G. Installation of proposed utilities

H. Finalize pavement subgrade preparation.

I. 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.

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J. Dust control.

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

L. Install base material as required for pavement.

M. Carry out final grading and seeding and planting.

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

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

P. 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 in multiple directions and ultimately flows into one of two onsite wetland areas. An isolated high point in the center of the site splits the two wetland areas. Based on the provided survey it appears no onsite stormwater runoff enters the storm sewer system on either Heim Road or Fair Woods Drive.

Stormwater runoff collected onsite as a result of the proposed development will be routed through the proposed storm sewer system consisting of a bioretention area, wet detention pond, perforated underdrain HDPE pipe connected by the proposed roadway catch basins and smooth interior HDPE stormwater pipe connected by a series of manholes located north of the northern curbline of the proposed roadway. The roadway catch basins are placed appropriately along the curbing of the proposed roadway. Side yard swales between building lots are proposed to direct stormwater runoff away from future houses and into the storm sewer system. The bioretention area on site is designed to provide 100% of the required runoff reduction volume (RRv) for the 5.87 acre tributary area. The soils in the vicinity of the bioretention area are mainly USDA hydrologic group 'D' and therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention area will consist of 6" perforated HDPE underdrains in 12" of drainage gravel, followed by filter fabric and then finally 18" minimum of planting soil. Overflow yard drains will be installed to allow 6"

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maximum ponding for RRv treatment. Stormwater detention is required per NYSDEC standards and specifications. A 12" outlet control pipe will be provided within the pond to attenuate proposed runoff to required existing conditions prior to discharge off site. A 20' long stone emergency spillway is proposed to direct stormwater overflow into the existing Town ditch area to the south, in the event the 100-year storm event is exceeded. Discharge from the detention pond will outlet to an existing Erie County catch basin along the east side of Heim Road.

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 area will be provided as a "green infrastructure" practice to provide runoff reduction meet the Chapter 4 requirements for the currently undeveloped areas. The required water quality volume (WQv) will be treated in the wet detention pond, designed in accordance with Chapter 6 requirements. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The existing site has a pre-development total of 0.14 acres of impervious cover. The amount of impervious cover post-development is 2.30 acres, an increase of 2.16 acres in impervious area. The post-development impervious cover is the total of the roadway and sidewalk areas as well as an estimate of future house areas. The proposed wet detention pond is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates, as well as the below stated Town stormwater runoff requirements.

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.
    - A reduced amount of impervious area is to be constructed on site due to the nature of this residential development.
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.

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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 greater than the WQv required, use of standard SMPs to treat the remaining WQv is not 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 required RRv for contributing WQv runoff area for the development. The bioretention area will provide 1,613 cf RRv. The minimum RRv required is 1,586 cf. The wet detention pond will treat 11,201 cf of WQv. The required WQv = 8,766 cf. The RRv reduced in the bioretention area added to the WQv treated in the pond is greater than the required WQv, therefore these practices are acceptable.

Channel Protection:

The NYSDEC requires that 24-Hour extended detention be provided for the proposed 1-year storm event. A volume of 6,969 cf is accommodated in the retention basin at elevation 586.91.

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 18,422 cf is accommodated in the retention basin at elevation 588.13.

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.

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A volume of 37,707 cf is accommodated in the retention basin at elevation 589.74.

Town of Amherst Requirement:
The Town of Amherst requires that the 25-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event. This volume of 26,316 cf is accommodated in the detention basin at elevation 588.84. At this elevation, the outlet discharge will be restricted to 2.66 cfs from the pond, which is less than the existing 10-year peak runoff outflow of 13.08 cfs of the overall site.

Refer to engineer's report for storm sewer design, 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 generated during the excavation of the development's building and utilities installation. 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.

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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)

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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. From SWPPP-9 "Reportable Quantity Release Form" must be filled out.

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.

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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 Town of Amherst. All changes to the SWPPP must be approved by the Town of Amherst prior to applying changes to the SWPPP in the field.

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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. Copies of the report forms to be completed by the inspector are included in this SWPPP.

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.

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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.

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

    - Inspect catch basins, storm manholes, treatment structures, storm piping and stormwater pond for debris and accumulation of sediment.
    - Remove and properly dispose of any collected debris and sediment in accordance with applicable state, federal and local regulations.
    - Flush piping with water if necessary to remove accumulated sediment.
    - Clean treatment structures per manufacturer's recommendations
    - Check all stone outfall structures for erosion and re-stone if necessary to prevent further erosion.

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- 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 forms found in this SWPPP shall be used by the inspectors to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.

These 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:

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- 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.

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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.

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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 sawdust, acid neutralizing powder, 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

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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

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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 Amherst. 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

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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 powder, 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

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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:

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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 frequency of inspections for the stormwater pond shall match the frequencies listed on the "Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist" in Appendix L of the SWPPP. The frequency of inspections for the bioretention areas shall match the frequencies listed on the "Bioretention Operation, Maintenance and Management Inspection Checklist" in Appendix L of the SWPPP.

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.

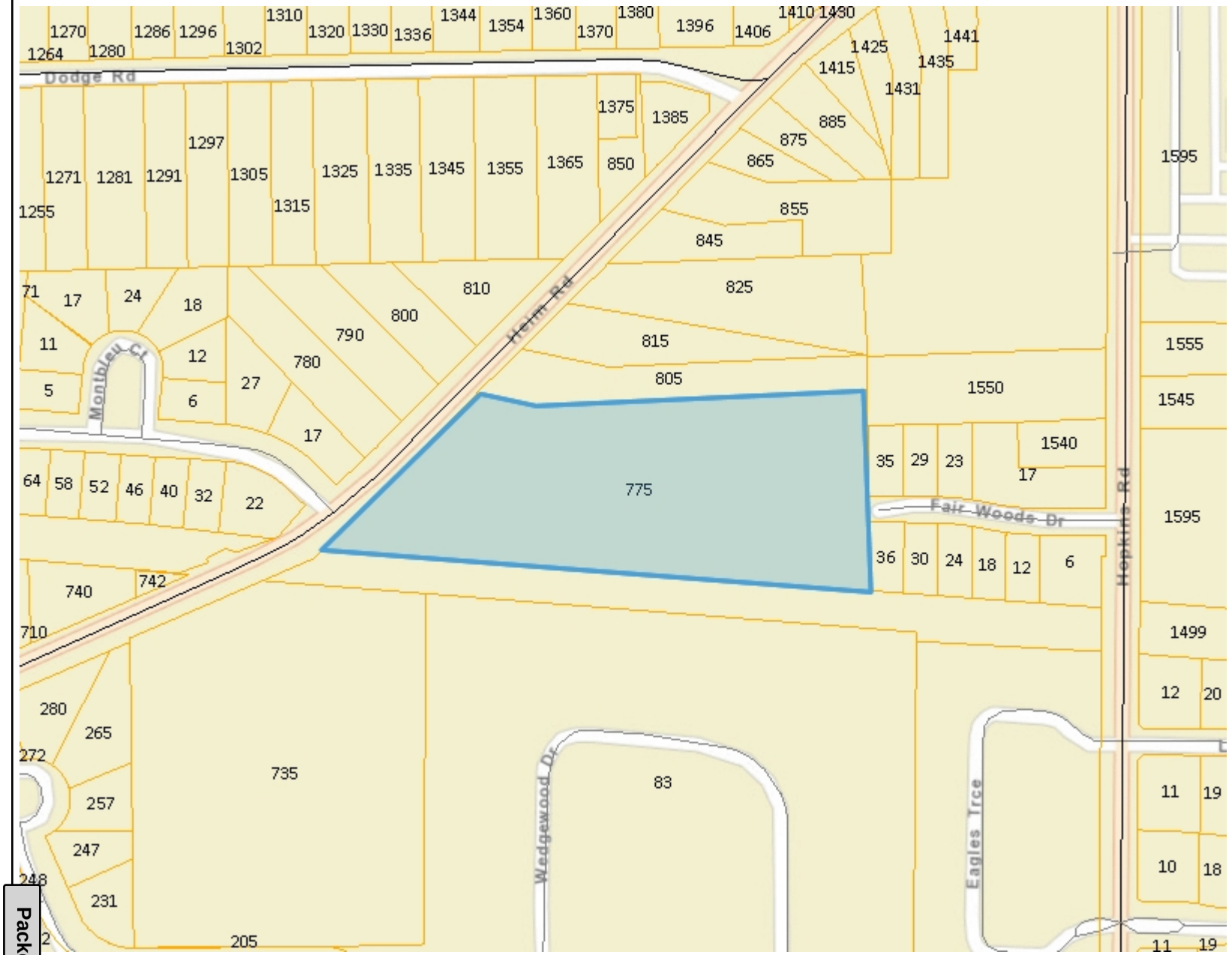
Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix A

Site Location Map

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Erie County On-Line Mapping Application





Legend

- Parcels
- Streets and Highways
  - Interstate
  - Primary State Road
  - Secondary State Road
  - County Road
  - Local Road

0.07 0.1 Miles

VGS_1984_Web_Mercator_Auxiliary_Sphere

HIS 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: 4,514

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Stormwater Interactive Map



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	195193.521	**Northing:**	4770006.166
Longitude/Latitude	**Longitude:**	-78.741	**Latitude:**	43.022

The approximate address of the point you clicked on is:
1-99 Fair Woods Dr, Buffalo, New York, 14221

County: Erie
Town: Amherst
USGS Quad: CLARENCE CENTER

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: AMHERST
SWIS: 142200
Regulated: Automatic

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix B

NYSDEC Notice of Intent (NOI)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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)
Essex Homes of WNY

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

Owner/Operator Contact Person First Name
Robert

Owner/Operator Mailing Address
8940 Main Street

City
Clarence

State
NY

Zip
14031-____

Phone (Owner/Operator)
716-635-0550

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)
robert.savarino@ccim.net

FED TAX ID
__-_____ (not required for individuals)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Project Site Information

Project/Site Name

Fair Woods Estates Subdivision

Street Address (NOT P.O. BOX)

775 Heim Road

Side of Street

○ **North** ○ **South** ● **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Amherst

State: NY | Zip: 14068 - | County: Erie | DEC Region: 9

Name of Nearest Cross Street

Fair Woods Drive

Distance to Nearest Cross Street (Feet)

0

Project In Relation to Cross Street

○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel

42.09-1-15

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

Ex. -73.749

Y Coordinates (Northing)

4

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**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ● SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ● SINGLE FAMILY SUBDIVISION — Number of Lots: 26
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

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

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

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
6.9	6.8	0.1	2.3

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

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

A	B	C	D
%	%	%	100 %

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

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

Start Date	End Date
05/01/2021	05/01/2022

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Name

Ellicott 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**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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?

Town of Amherst

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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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 Morris, DPC

Contact Name (Last, Space, First)
Wood Christopher

Mailing Address
487 Main Street, Suite 500

City
Buffalo

State NY Zip 14203-

Phone 716-842-3165

Fax 716-842-2065

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-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name Christopher **MI**

Last Name Wood

Signature

Date 06/22/2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Post-construction Stormwater Management Practice (SMP) Requirements

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

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

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

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

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

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

Total WQv Required

0.201 **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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)	
RR Techniques (Area Reduction)				
○ Conservation of Natural Areas (RR-1)		and/or		
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or		
○ Tree Planting/Tree Pit (RR-3)		and/or		
○ Disconnection of Rooftop Runoff (RR-4)		and/or		
RR Techniques (Volume Reduction)				
○ Vegetated Swale (RR-5)				
○ Rain Garden (RR-6)				
○ Stormwater Planter (RR-7)				
○ Rain Barrel/Cistern (RR-8)				
○ Porous Pavement (RR-9)				
○ Green Roof (RR-10)				
Standard SMPs with RRv Capacity				
○ Infiltration Trench (I-1)				
○ Infiltration Basin (I-2)				
○ Dry Well (I-3)				
○ Underground Infiltration System (I-4)				
○ Bioretention (F-5)			0.07	
○ Dry Swale (O-1)				
Standard SMPs				
○ Micropool Extended Detention (P-1)				
○ Wet Pond (P-2)			2.23	
○ 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)				

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

0.037 **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

0.036 **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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

0.164 **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).

0.201

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

0.160 **acre-feet**

CPv Provided

0.160 **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

13.08 **CFS**

Post-development

2.25 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

30.83 **CFS**

Post-development

5.95 **CFS**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Essex Homes of WNY

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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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][ ][ ][ ][ ][ ][ ]

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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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: Robert

MI:

Print Last Name: Savarino

Owner/Operator Signature: 

Date: 06 / 22 / 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix C

MS4 SWPPP Acceptance Form

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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:	Essex Homes of WNY
2. Contact Person:	Robert Savarino
3. Street Address:	8940 Main Street
4. City/State/Zip:	Clarence, NY 14031
II. Project Site Information	
5. Project/Site Name:	Fair Woods Estates Subdivision
6. Street Address:	775 Heim Road
7. City/State/Zip:	Amherst, NY 14068
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:	

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix D

Engineer's Report

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Carmina · Wood · Morris DPC

487 Main Street Suite 600 Buffalo, New York 14203 P: 716.842.3165 F: 716.842.0263 W: cwm-ae.com

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

ENGINEER'S REPORT
for

Fair Woods Estates Subdivision

775 Heim Road

Town of Amherst, Erie County, New York

Prepared for

Essex Homes of WNY

8940 Main Street
Clarence, NY 14031

Prepared by

Carmina Wood Morris, D.P.C.

487 Main Street, Suite 500
Buffalo, NY 14203

Telephone: (716) 842-3165
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November 2020



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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Section 1 - Location & Description

This project is a development of a 6.90 acre site located on the east side of Heim Road in the Town of Amherst for a single family subdivision. Construction will consist of a proposed public roadway, public storm sewer, sanitary sewer and water mains, lighting and landscaping improvements. These improvements are an extension of a previously constructed road and subdivision on Fair Woods Drive. Twenty six (26) lots are proposed for the roadway extension, twenty four (24) of which will be building lots. Two lots will be used for stormwater management areas. Currently the site consists of a single family house but the majority of the site is undeveloped woodlands, wetlands and open grass areas. Approximately 3.07 acres of the site are designated as wetlands, none of which were determined to be federally jurisdictional. The proposed site development area to be disturbed for this project is approximately 6.80 acres when construction is completed.

Section 2 - Water Service

An existing 8" public PVC water main is located along the west side of Heim Road that will be the source of water for this project. Approximately 930 LF of new 8" AWWA C-900 PVC water main will be installed along the public roadway and connected to both the existing watermain along Heim Road as well as the existing 8" PVC watermain along the south side of Fair Woods Drive. New ¾" Type 'k" copper services will tap the new 8" main and be installed for building each lot. Two (2) new public fire hydrants will be installed with maximum spacing not to exceed 400 feet.

Pipe material for the new main, hydrant installation and all fittings, valves, etc. will be in accordance with Erie County Water Authority (ECWA) standards. Per hydrant flow test provided by ECWA, the existing static pressure in the 8" PVC water main on Heim Road was approximately 97 psi and the residual pressure was 92 psi. The proposed main, hydrant branches and hydrants will be installed and tested in accordance with ECWA Standard Specifications. Inspection and certification of the installation and testing of the water samples will be done by the ECWA. There are no conflicts with existing utilities in the area, the land is currently vacant. The proposed water main will maintain physical separation from other utilities as specified per Ten States Standards.

Domestic Summary:

Peak Operating Demand:	72 gpm
Water Main:	8" PVC on Heim Road
Static Pressure:	97 psi (8" PVC on Heim Road per ECWA)

See attached water demand calculations in Appendix A for additional information.

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The proposed main, hydrant branches and hydrants will be installed and tested in accordance with ECWA Standard Specifications. Inspection and certification of the installation and testing of the water samples will be done by ECWA.

Section 3 - Sanitary Sewer Service

Proposed is 890 lf of 8" SDR-35 PVC public sanitary sewer, connected to the existing 8" sanitary sewer main along the east side of Heim Road. The proposed sewer extension will run along the south side of the proposed roadway extension. Each proposed building lot will wye connect to the proposed 8" sanitary sewer via a 6" SDR-35 PVC sanitary lateral at 1.0% minimum slope.

Design Parameters
3-bedroom house: 330 gal/day/house x 24 houses = 7,920 gpd

7,920 gpd * 4.29 = 26,992 gpd *use peaking factor of 4.29

The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC.

Downstream sewer capacity analysis is included within the Appendix of this report.

Section 4 - Storm Sewer Service

The existing site currently sheet drains in multiple directions and ultimately flows into one of two onsite wetland areas. An isolated high point in the center of the site splits the two wetland areas. Based on the provided survey it appears no onsite stormwater runoff enters the storm sewer system on either Heim Road or Fair Woods Drive.

Stormwater runoff collected onsite as a result of the proposed development will be routed through the proposed storm sewer system consisting of a bioretention area, wet detention pond, perforated underdrain HDPE pipe connected by the proposed roadway catch basins and smooth interior HDPE stormwater pipe connected by a series of manholes located north of the northern curbline of the proposed roadway. The roadway catch basins are placed appropriately along the curbing of the proposed roadway. Side yard swales between building lots are proposed to direct stormwater runoff away from future houses and into the storm sewer system. The bioretention area on site is designed to provide 100% of the required runoff reduction volume (RRv) for the 5.87 acre tributary area. The soils in the vicinity of the bioretention area are mainly USDA hydrologic group 'D' and therefore the system will be installed with underdrains per NYSDEC requirements. The bioretention area will consist of 6" perforated HDPE underdrains in 12" of drainage gravel, followed by filter fabric and then finally 18" minimum of planting soil. Overflow yard drains will be installed to allow 6" maximum ponding for RRv treatment. Stormwater detention is required per NYSDEC standards and specifications. A 12" outlet control pipe will be provided within the pond to attenuate proposed runoff to required existing conditions prior to discharge off site. A 20' long stone emergency spillway is proposed to direct stormwater

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overflow into the existing Town ditch area to the south, in the event the 100-year storm event is exceeded. Discharge from the detention pond will outlet to an existing Erie County catch basin along the east side of Heim Road.

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 area will be provided as a "green infrastructure" practice to provide runoff reduction meet the Chapter 4 requirements for the currently undeveloped areas. The required water quality volume (WQv) will be treated in the wet detention pond, designed in accordance with Chapter 6 requirements. Runoff from the site was looked at as a whole for the calculation of volume attenuation requirements. The existing site has a pre-development total of 0.14 acres of impervious cover. The amount of impervious cover post-development is 2.30 acres, an increase of 2.16 acres in impervious area. The post-development impervious cover is the total of the roadway and sidewalk areas as well as an estimate of future house areas. The proposed wet detention pond is designed to accommodate the 1-year through 100-year storm events controlling the offsite runoff rate to less than the existing runoff rates, as well as the below stated Town stormwater runoff requirements.

Town of Amherst Requirement:
The Town of Amherst requires that the 25-year proposed storm event be attenuated with detention and that the outlet be restricted to the 10-year existing storm event. This volume of 26,316 cf is accommodated in the detention basin at elevation 588.84. At this elevation, the outlet discharge will be restricted to 2.66 cfs from the pond, which is less than the existing 10-year peak runoff outflow of 13.08 cfs of the overall site.

Detention Pond Summary:
Top of basin elevation = 590.00
Bottom of basin elevation = 579.00
Normal Water, WQv elevation = 586.00
WQv = Forebay + Permanent Pool = 1,799 + 4,527 = 6,326 cf
Max. pond storage volume = 37,707 cf @ 589.74
Emergency Spillway Elevation: 589.83

Water Quality Summary:
WQv req'd = 8,766 cf (0.190 ac-ft)
RRv min. req'd = 1,586 cf (0.034 ac-ft)
RRv provided - bioretention area = 1,613 cf (0.037 ac-ft)
WQv provided - detention pond = 11,201 cf (0.257 ac-ft)
Total RRv + WQv provided = 1,613 cf + 11,201 cf = 12,814 CF (0.294 ac-ft)

Bioretention: 100% of minimum post-development Runoff Reduction volume (RRv)
Area: 3,025 sf
Bottom Elevation: 589.50

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Fair Woods Estates Subdivision
11/16/2020
4 of 4

Detention: Comparison of the existing 1-year vs. the proposed 1-year runoff
Comparison of the existing 10-year vs. the proposed 10-year runoff
Comparison of the existing 10-year vs. the proposed 25-year runoff
Comparison of the existing 100-year vs. the proposed 100-year runoff

Runoff Summary:

Event	Ex. Runoff (cfs)*	Pro. Runoff (cfs)**	Result (cfs)
1-year	4.06	1.02	-3.04
2-year	6.19	1.46	-4.73
5-year	9.68	1.95	-7.73
10-year	13.08	2.25	-10.83
25-year	18.86	2.66	-16.20
50-year	24.30	4.12	-20.18
100-year	30.83	5.95	-24.88

* Existing runoff flowrate is the total of both the east and west subcatchments as shown Appendix B of this report.

**Proposed runoff flowrate is the rate controlled by the outlet pipe from the detention pond which discharges to an existing catch basin along Heim Road as shown Appendix B of this report.

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Appendix A

Sanitary Sewer and Water Demand Calculations

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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(716) 842-3165
FAX (716) 842-0263

Project No.: 19.190 Date: 11/16/2020
Project Name: Fair Woods Estates Subdivision
Project Address: 775 Heim Road Amherst, NY
Subject: Sanitary Sewage Calculations
Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

Fair Woods Estates

330 gal/d/unit x 24 unit = 7,920 gpd *use 330 gallons per day per 3-bedroom house

Total Site Sanitary Demand: = 7,920 gpd Average

* The hydraulic loading rate is per "Design Standards for Intermediate Sized Wastewater Treatment Systems" 2014, NYSDEC.

Find Peak Sanitary Demand:

Peaking Factor based on Population:
Total demand: 7,920 gpd / 100 gpcd = 79 per capita

Population (P) = 79 people

Peaking Factor : $(18 + \sqrt{P}) / (4 + \sqrt{P})$ where P is in thousands

Peaking Factor = 4.27

Peak Sanitary Demand = 7,920 x 4.27 = 33,818 gpd
= 0.034 MGD
= 0.052 cfs

Required Infiltration and Inflow Mitigation:

Peak Sanitary Flow = 33,818 gpd = 23.48 gpm

4:1 offset flow per NYSDEC requirements = 23.48 x 4 = 93.94 gpm req'd

Mitigation Credit = $250 / gpm

Mitigation Agreement Amount = $23,484.67

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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(716) 842-3165
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Project No.: 19.190 Date: 11/16/2020
Project Name: Fair Woods Estates Subdivision
Project Address: 775 Heim Road Amherst, NY
Subject: Domestic Water Demand Calculations
Sheet: 1 of 1

Domestic Water Demand Calculations:

Fair Woods Estates

Q = 6,270 gpd * use 100% of Total Sanitary Average Daily Demand

Q = 4.35 gpm * assume 24 hour day

Fair Woods Estates

Q_{peak} = 24 Units @ 3 gpm = 72 gpm Peak Demand
* use 3 gpm per unit (per ECDOH peak flow)

Headlosses:

Q_{peak} = 72 gpm
Pipe = 8 inch C-900 PVC C = 140
Length = 1,450 LF (approx. distance from HYD K05-A08 on Heim Rd to last prop. hydrant)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(1450)(57)^{1.85}}{(140)^{1.85}\ (8)^{4.866}} = 0.18 \text{ ft} = 0.08 \text{ psi}$$

Δ elev = 4 ft = 1.73 psi *approximate 4' elev. increase from HYD K05-A08 to last prop. hydrant
Total Losses = 1.8 psi
Static Pressure = 97 psi *per ECWA
Residual Pressure in main @ last prop. Hydrant = 97 - 1.8 = 95.2 psi

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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Project No.: 19.190 Date: 11/16/2020
Project Name: Fair Woods Estates Subdivision
Project Address: 775 Heim Road Amherst, NY
Subject: Fire Flow Demand Calculations
Sheet: 1 of 1

Peak Domestic Demand:

Fair Woods Estates

24 Units @ 3 gpm = 72 gpm Peak Domestic Demand

* use 3 gpm per unit (per ECDOH peak flow)

Water Demand Calculations (fire):

Fire Flow, Q	=	1000	gpm	* per ISO Guidelines	
Elev. @ ex. residual hyd. M04-G45	=	588	ft		
Static pressure @ ex. hyd. M04-G45	=	97	psi	* per ECWA	
Elev. @ connection:	=	590	ft		
Δ elev ex. hyd. M04-G45 to connection	=	2.00	= 0.87 psi	(positive is decrease in pressure from static) (negative is increase in pressure from static)	
Static pressure @ connection	=	96.1	psi		
Elev. @ furthest pro. hydrant	=	592	ft		
Δ elev connection point to furthest hydrant	=	2	= 0.9 psi	(positive is decrease in pressure from static) (negative is increase in pressure from static)	

Find residual at furthest hydrant using fire flow:

Headlosses:

Q_{peak} = 1000 gpm

Pipe = 8 inch C-900 PVC C = 140

Length = 675 LF (approx. distance from connection to furthest pro. hydrant)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(675)(1000)^{1.85}}{(140)^{1.85}\ (8)^{4.866}} = 10.80 \text{ ft} = 4.7 \text{ psi}$$

Residual pressure at furthest pro. Hydrant = Static pressure at connection - headloss - Δ elev
= 96.1 - 4.7 - 0.9
= 90.6 psi

Find residual at furthest hydrant using total flow:

Total flow = Fire Flow + Peak Domestic Flow = 1072 gpm

Headlosses:

Q_{peak} = 1072 gpm

Pipe = 8 inch C-900 PVC C = 140

Length = 675 LF (approx. distance from connection to furthest pro. hydrant)

$$H_L = \frac{10.44\ L\ Q^{1.85}}{C^{1.85}\ D^{4.866}} = \frac{10.44(675)(1057)^{1.85}}{(140)^{1.85}\ (8)^{4.866}} = 12.28 \text{ ft} = 5.3 \text{ psi}$$

Residual pressure at furthest pro. Hydrant = Static pressure at connection - headloss - Δ elev
= 96.1 - 5.3 - 0.9
= 90.0 psi

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Downstream Sewer Capacity Analysis

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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DOWNSTREAM SANITARY SEWER CAPACITY ANALYSIS REPORT

for

Fair Woods Estates Subdivision

775 Heim Road

Town of Amherst, Erie County, New York

Prepared for

Essex Homes of WNY

8940 Main Street
Clarence, NY 14031

Prepared by

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November 2020



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Project Description

This project is a development of a 6.90 acre site located on the east side of Heim Road in the Town of Amherst for a single family subdivision. Construction will consist of a proposed public roadway, public storm sewer, sanitary sewer and water mains, lighting and landscaping improvements. These improvements are an extension of a previously constructed road and subdivision on Fair Woods Drive. Twenty six (26) lots are proposed for the roadway extension, twenty four (24) of which will be building lots. Two lots will be used for stormwater management areas. Currently the site consists of a single family house but the majority of the site is undeveloped woodlands, wetlands and open grass areas. Approximately 3.07 acres of the site are designated as wetlands, none of which were determined to be federally jurisdictional. The proposed site development area to be disturbed for this project is approximately 6.80 acres when construction is completed.

Proposed is 890 lf of 8" SDR-35 PVC public sanitary sewer, connected to the existing 8" sanitary sewer main along the east side of Heim Road. The proposed sewer extension will run along the south side of the proposed roadway extension. Each proposed building lot will wye connect to the proposed 8" sanitary sewer via a 6" SDR-35 PVC sanitary lateral at 1.0% minimum slope. Wastewater from the proposed subdivision will flow north along Heim Road (8") to Dodge Road (18"), then flows west until Campbell Blvd (48"), then flow north until North French Road (30" to 48"), then flow west until Sunridge Road (48"). Wastewater will flow north along Sunridge Drive until ultimately reaching the Town of Amherst Wastewater Treatment Facility. Refer to the sewer interceptor map located in the TECSmith monitoring section of the downstream sewer capacity analysis report.

A nearby submitted, 29 lot subdivision project located at 1965, 1701 and 1721 Dodge Road, is upstream of this Fair Woods Estates proposed subdivision project and is included in the sanitary capacity analysis below.
330 gpd/3-bdrm house x 29 houses = 9,570 gpd x 4.25 = 26,640 gpd x 1.547 = 0.041 cfs

Node 1 – 1490 Dodge Road (8"):

Existing Peak Flow measured (wet weather event)	= 0.065 cfs (0.042 mgd)*
Proposed Dodge Road Subdivision Peak Flow	= 0.041 cfs
Proposed Fair Woods Estates Peak Flow	= 0.052 cfs**
Proposed Total Peak Flow	= 0.158 cfs

Theoretical capacity of existing 8" VTP pipe @ 0.47% = 0.769 cfs

Conclusion: The proposed total peak flow is less than the capacity of the 8" pipe, therefore there is sufficient capacity. At no time during the monitoring period did flow depth exceed the pipe diameter at Node 1 of the downstream monitoring points during the rain events monitored.

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Node 2 – Dodge Road (24”):

Existing Peak Flow measured (wet weather event)	= 1.993 cfs (1.288 mgd)*
Proposed Dodge Road Subdivision	= 0.041 cfs
Proposed Fair Woods Estates Peak Flow	= 0.052 cfs**
Proposed Total Peak Flow	= 2.086 cfs

Theoretical capacity of existing 24” RCP pipe @ 0.08% = 6.926 cfs

Conclusion: The proposed total peak flow is less than the capacity of the 24” pipe, therefore there is sufficient capacity. At no time during the monitoring period did flow depth exceed the pipe diameter at Node 2 of the downstream monitoring points during the rain events monitored.

Node 3 – 540 Campbell Blvd (30”):

Existing Peak Flow measured (wet weather event)	= 1.562 cfs (1.010 mgd)*
Proposed Dodge Road Subdivision Peak Flow	= 0.041 cfs
Proposed Fair Woods Estates Peak Flow	= 0.052 cfs**
Proposed Total Peak Flow	= 1.655 cfs

Existing Peak Flow measured (overall)	= 3.833 cfs (2.478 mgd)*
Proposed Dodge Road Subdivision Peak Flow	= 0.041 cfs
Proposed Fair Woods Estates Peak Flow	= 0.052 cfs**
Proposed Total Peak Flow	= 3.926 cfs

Theoretical capacity of existing 30” RCP pipe @ 0.04% = 8.880 cfs

Conclusion: The proposed total peak flow is less than the capacity of the 30” pipe, therefore there is sufficient capacity. At no time during the monitoring period did flow depth exceed the pipe diameter at Node 3 of the downstream monitoring points during the rain events monitored.

Foot Notes:

Downstream capacity node information provided by Town of Amherst

*Converted from measurements in TECSmith report dated 7/22/20

** See Sanitary Sewage Demand Calculations

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

TECSmith Monitoring Report

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

TECsmith

TECSMITH, Inc.
PO Box 383
Elma, New York 14059-0383
Tel: 716-462-0382
Fax: 716-687-1418

Date: July 22, 2020

SANITARY SEWER FLOW CAPACITY STUDY – Summary Review

Prepared For: 1695, 1701, & 1721 Dodge Road Capacity Analysis

Christopher Wood
487 Main Street, Suite 600
Buffalo, New York 14203
P: (716) 842-3165
F: (716) 842-0263

Project Name: 1695, 1701, & 1721 Dodge Road Capacity Analysis

Flow Monitoring Period: June 22, 2020 to July 20, 2020

Rain Events (> 0.5-inches) Monitored: June 23 (0.54”), July 11 (1.21”) and July 16 (0.86”)

Number of Monitoring Nodes: Three (3) downstream manholes

Node Locations and Descriptions:

- Node 1 1490 Dodge Rd (8")
- Node 2 Dodge Rd 24in (24")
- Node 3 540 Campbell Blvd (30")

Summary Conclusion:

Based on the data presented in this report, specifically the flow depth measurements recorded (see graphs below)

- At no time did the flow depth exceed pipe diameter at any of the downstream monitoring points during the rain events monitored.
- At no time during the monitoring period did the flow at any point slow or stall which would have caused a backup or flooding at the manhole.

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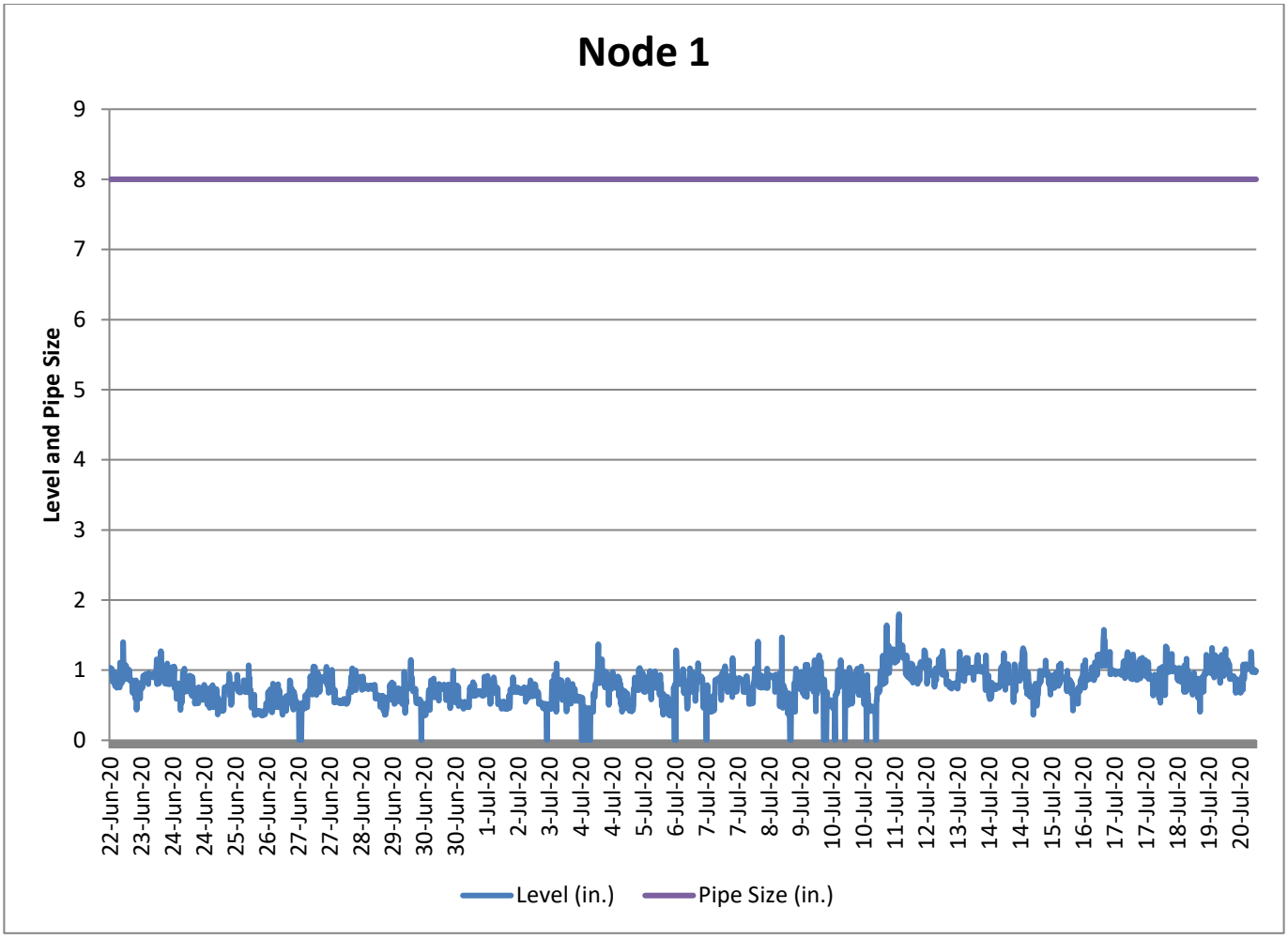
TECsmith

TECSMITH, Inc.
PO Box 383
Elma, New York 14059-0383
Tel: 716-462-0382
Fax: 716-687-1418

Depth of Flow Capacity Summary:

Depth of flow capacity is based on diameter of pipe. See graphs below.

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 1.

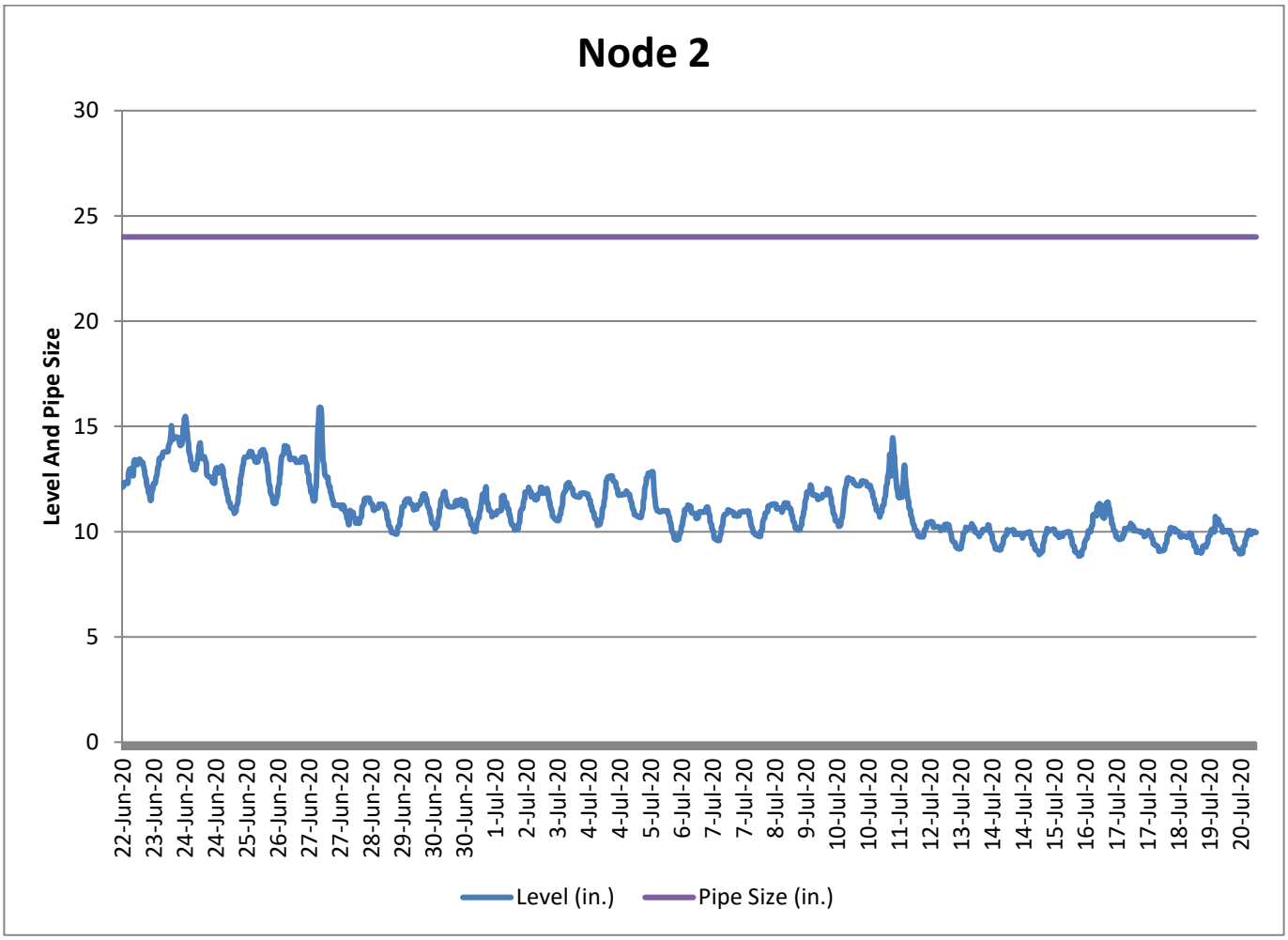


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TECsmith

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Elma, New York 14059-0383
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Fax: 716-687-1418

- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 2.

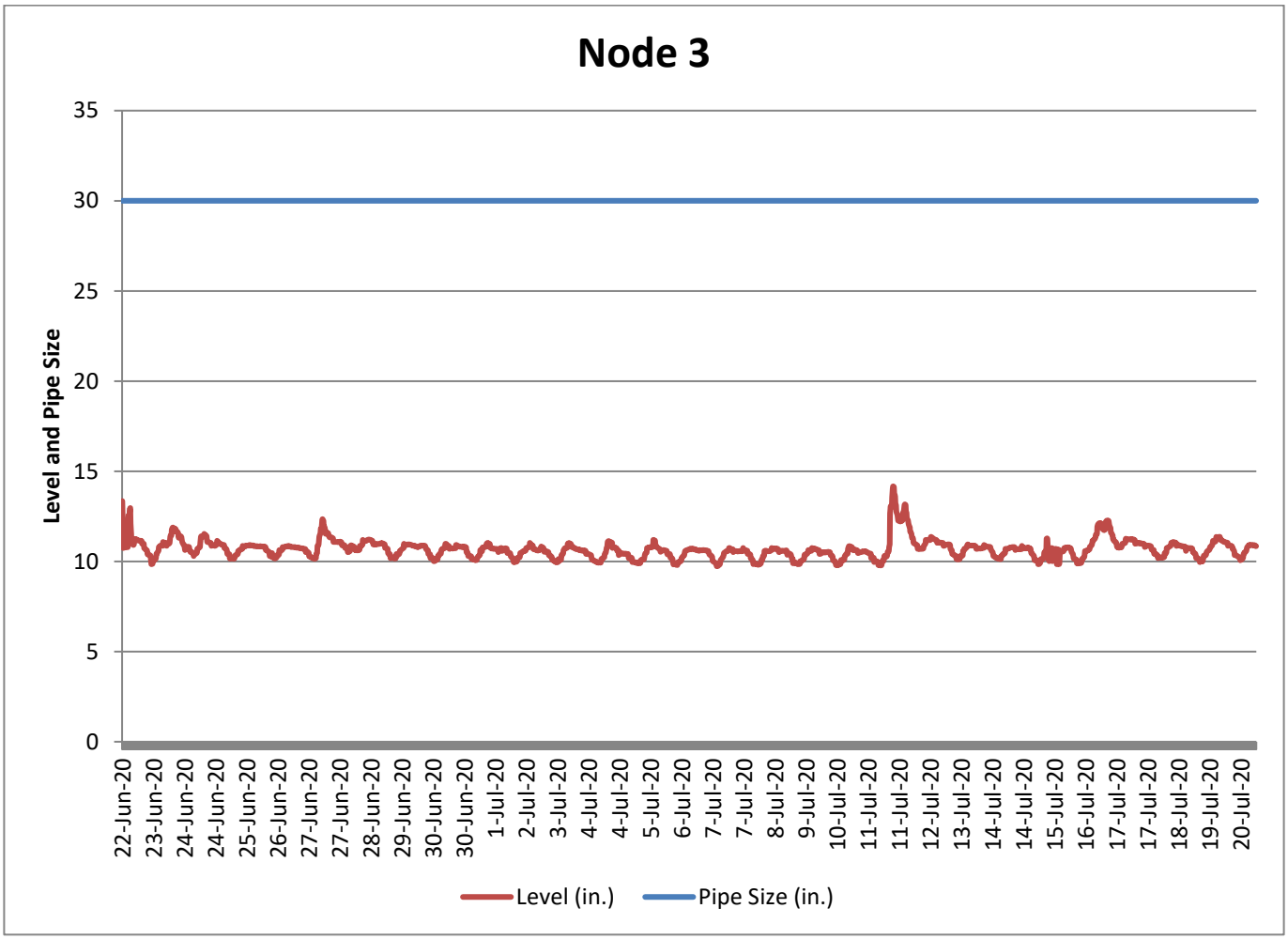


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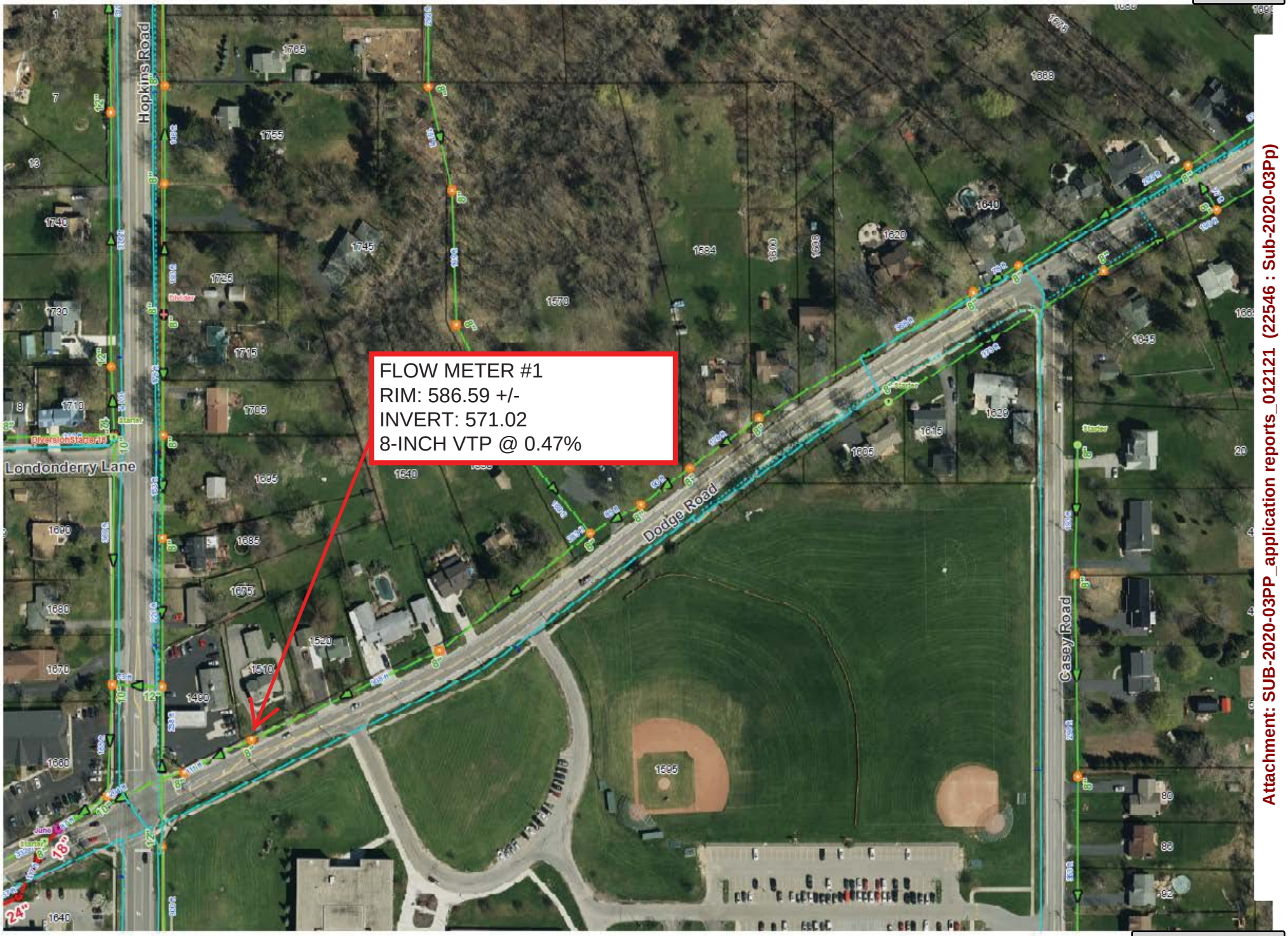
- At no time during the monitoring period did depth of flow exceed pipe diameter at Node 3.



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Date	Node 1			Node 2			Node 3			Rain₂
	1490 Dodge Rd (8")			Dodge Rd 24in (24")			540 Campbell Blvd (30")			
	FLOW (GAL x 1,000)	PEAK FLOW (MGD)	PEAK LEVEL (IN)	FLOW (GAL x 1,000)	PEAK FLOW (MDG)	PEAK LEVEL (IN)	(GAL x 1,000)	PEAK FLOW (MDG)	PEAK LEVEL (IN)	(inches)
6/22/2020	7.886	0.027	1.401	117.910	0.234	13.455	111.909	0.353	13.339	***0.12***
6/23/2020	12.444	0.027	1.271	233.872	0.268	15.032	208.750	0.234	11.887	***0.54***
6/24/2020	7.183	0.017	1.053	231.119	0.277	15.482	208.312	0.225	11.535	***0***
6/25/2020	7.379	0.020	1.071	217.895	0.244	13.893	202.230	0.209	10.917	***0***
6/26/2020	4.979	0.014	0.856	224.919	0.248	14.075	230.079	2.478	10.860	***0***
6/27/2020	8.195	0.019	1.054	212.059	0.286	15.914	212.565	0.308	12.352	***0.4***
6/28/2020	8.238	0.018	1.027	182.308	0.194	11.597	208.636	0.217	11.219	***0.1***
6/29/2020	7.858	0.021	1.146	179.950	0.199	11.794	208.987	0.388	10.972	***0***
6/30/2020	7.366	0.018	0.992	184.625	0.201	11.906	200.652	0.210	10.972	***0***
7/1/2020	8.392	0.017	0.921	207.267	0.471	12.132	215.086	0.355	11.030	***0***
7/2/2020	7.432	0.016	0.898	195.613	0.428	12.104	255.632	0.800	11.031	***0***
7/3/2020	6.923	0.017	1.096	194.799	0.390	12.319	264.361	0.743	11.010	***0***
7/4/2020	8.573	0.025	1.368	194.697	0.217	12.650	230.156	0.648	11.127	***0***
7/5/2020	9.891	0.024	1.031	191.328	0.221	12.846	248.421	0.626	11.200	***0***
7/6/2020	9.447	0.023	1.285	173.172	0.187	11.259	269.375	0.666	10.712	***0***
7/7/2020	7.048	0.020	1.171	176.184	0.408	11.146	247.219	0.854	10.751	***0***
7/8/2020	7.748	0.033	1.469	176.253	0.190	11.371	232.576	0.499	10.747	***0***
7/9/2020	11.636	0.026	1.212	187.179	0.208	12.216	219.077	0.330	10.747	***0***
7/10/2020	11.273	0.026	1.141	199.520	0.360	12.568	218.240	0.313	10.848	***0***
7/11/2020	16.114	0.042	1.799	499.778	1.288	14.465	246.139	0.743	14.163	***1.21***
7/12/2020	17.885	0.032	1.285	513.334	0.754	11.128	233.217	0.685	12.042	***0***
7/13/2020	15.030	0.028	1.265	397.693	0.520	10.380	245.493	0.706	10.948	***0.47***
7/14/2020	12.420	0.030	1.313	374.892	0.515	10.093	254.342	1.200	10.859	***0***
7/15/2020	12.738	0.025	1.139	380.318	0.607	10.155	234.341	0.691	11.274	***0***
7/16/2020	15.772	0.037	1.575	467.525	0.832	11.401	256.020	1.010	12.271	***0.86***
7/17/2020	17.861	0.040	1.262	480.668	0.645	10.743	241.068	0.430	11.911	***0.03***
7/18/2020	14.416	0.026	1.338	406.119	0.618	10.191	311.284	0.669	11.073	***0***
7/19/2020	15.683	0.033	1.317	432.552	0.693	10.729	251.302	0.435	11.369	***0.21***
7/20/2020	9.035	0.032	1.264	236.633	0.593	10.049	150.264	0.348	10.925	***0***
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Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



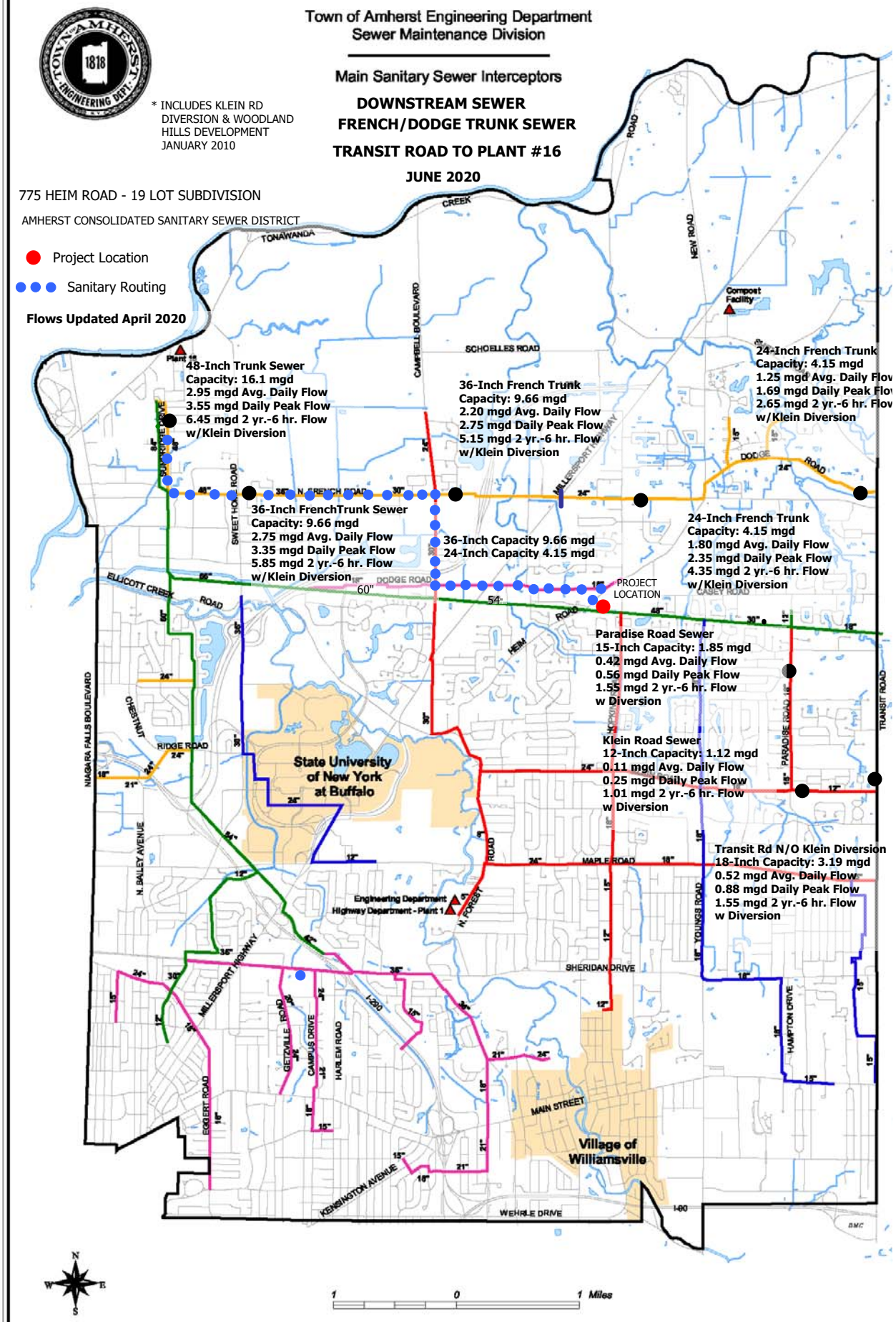
Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix B

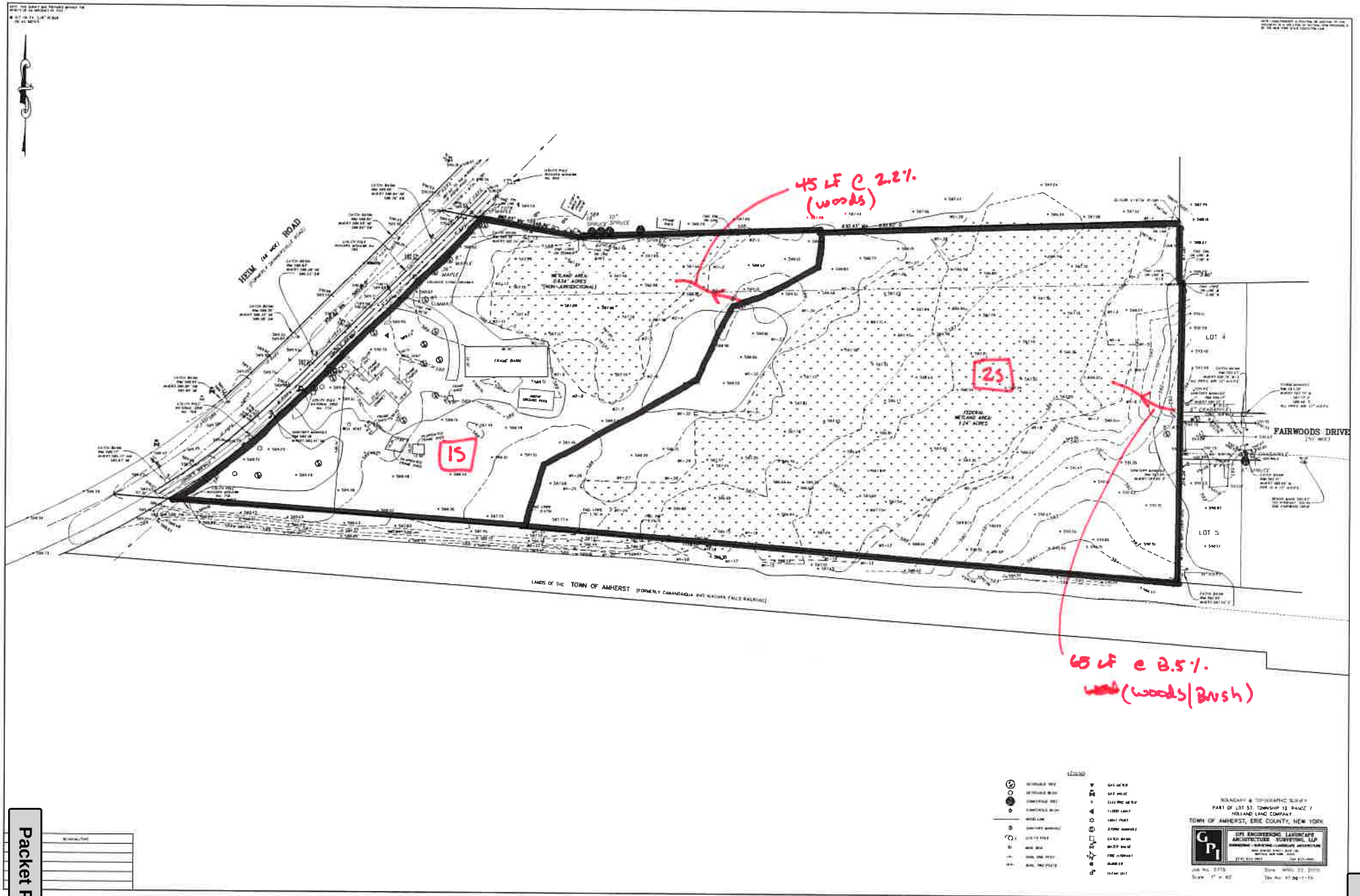
Storm Sewer System Drainage Calculations

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Existing Runoff

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Existing Runoff



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Events for Subcatchment 1S: Wetland/West

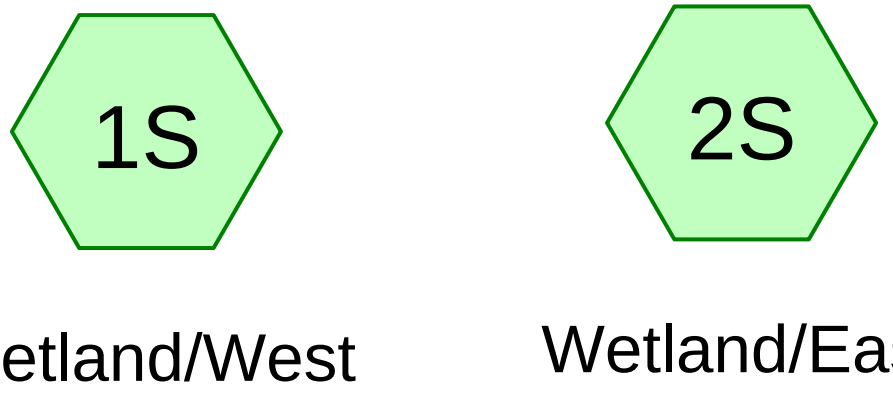
Event	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	1.60	0.102	0.48
2-Year	2.38	0.146	0.69
5-Year	3.65	0.219	1.03
10-Year	4.87	0.290	1.36
25-Year	6.94	0.411	1.93
50-Year	8.88	0.527	2.48
100-Year	**11.19**	**0.667**	**3.14**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Events for Subcatchment 2S: Wetland/East

Event	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.46	0.148	0.41
2-Year	3.81	0.217	0.60
5-Year	6.03	0.333	0.92
10-Year	8.21	0.447	1.24
25-Year	11.92	0.645	1.78
50-Year	15.42	0.835	2.31
100-Year	**19.64**	**1.067**	**2.95**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Subcat Reach Pond Link

Routing Diagram for 19.190 Existing
Prepared by {enter your company name here}, Printed 6/22/2020
HydroCAD® 10.00-18 s/n 05021 © 2016 HydroCAD Software Solutions LLC

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.310	80	>75% Grass cover, Good, HSG D (1S)
1.340	77	Brush, Fair, HSG D (2S)
0.030	96	Gravel surface, HSG D (1S)
0.110	98	Roofs, HSG D (1S)
5.100	79	Woods, Fair, HSG D (1S, 2S)
6.890	**79**	**TOTAL AREA**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
6.890	HSG D	1S, 2S
0.000	Other	
6.890		**TOTAL AREA**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.310	0.000	0.310	>75% Grass cover, Good	1S
0.000	0.000	0.000	1.340	0.000	1.340	Brush, Fair	2S
0.000	0.000	0.000	0.030	0.000	0.030	Gravel surface	1S
0.000	0.000	0.000	0.110	0.000	0.110	Roofs	1S
0.000	0.000	0.000	5.100	0.000	5.100	Woods, Fair	1S, 2S
0.000	**0.000**	**0.000**	**6.890**	**0.000**	**6.890**	**TOTAL AREA**	

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=0.48"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=1.60 cfs 0.102 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=0.41"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=2.46 cfs 0.148 af

Total Runoff Area = 6.890 ac Runoff Volume = 0.249 af Average Runoff Depth = 0.43"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

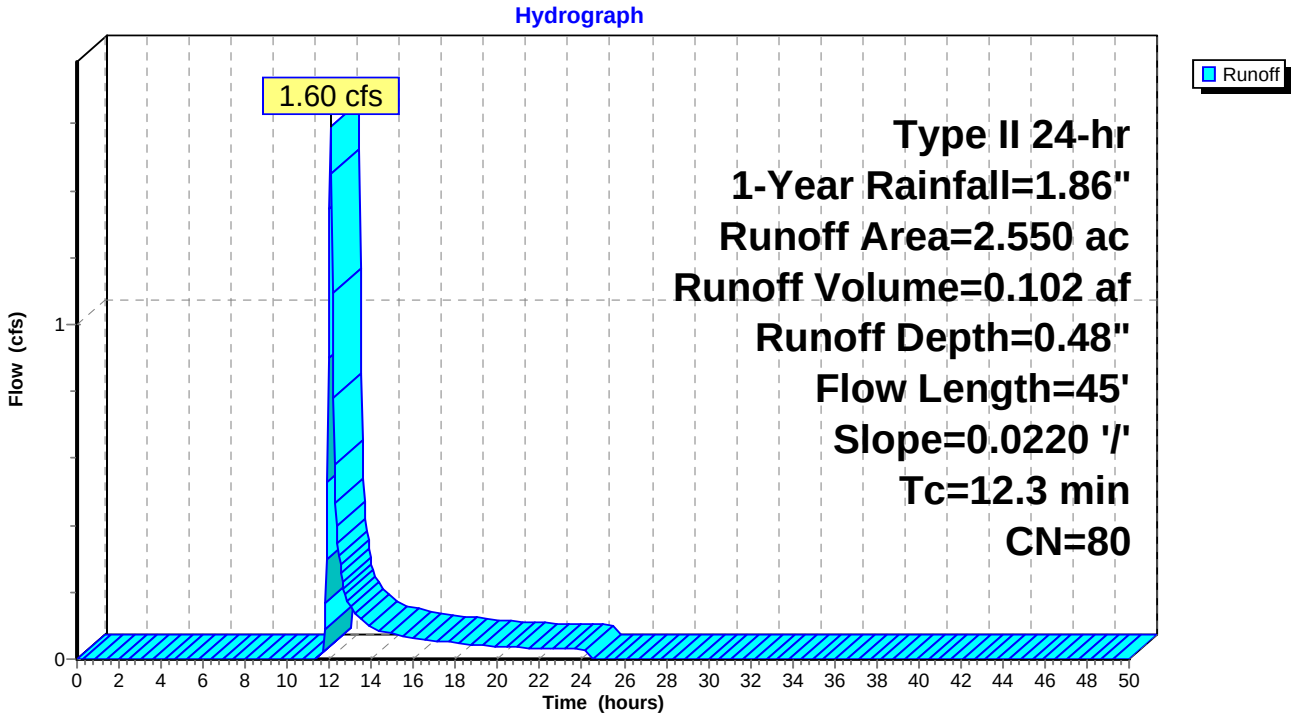
Runoff = 1.60 cfs @ 12.06 hrs, Volume= 0.102 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.86"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

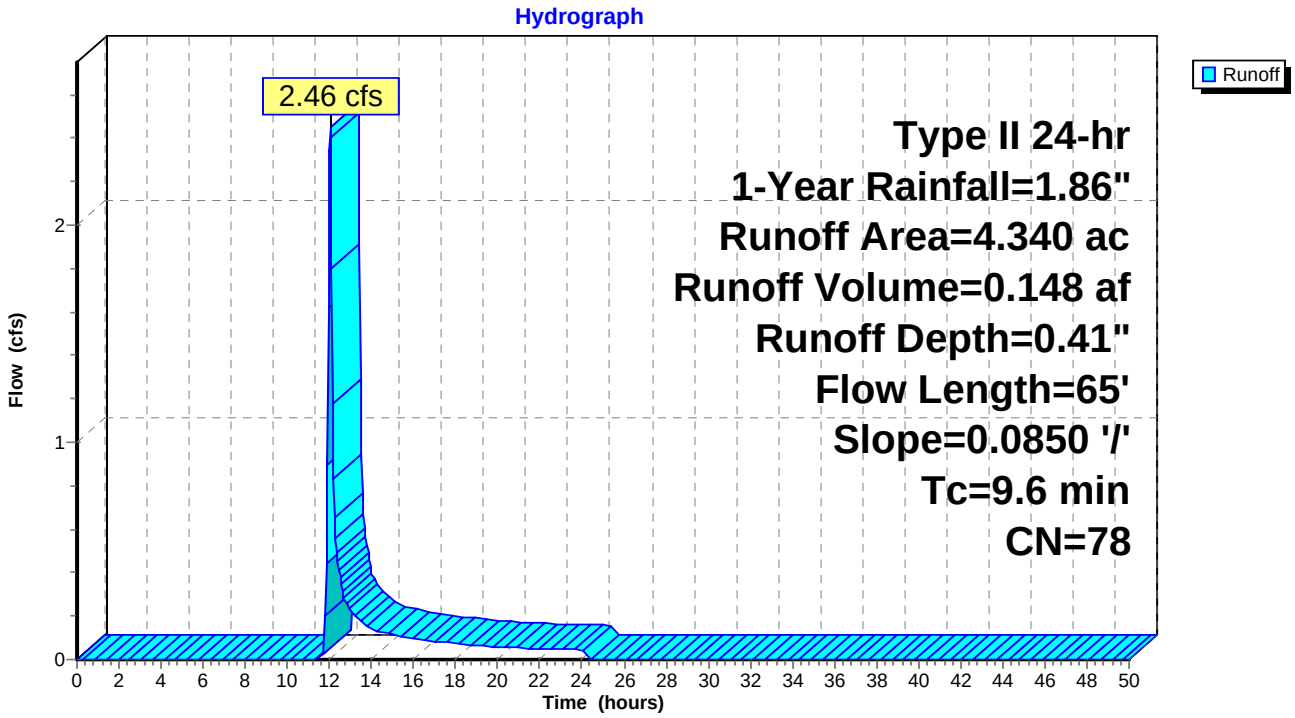
Runoff = 2.46 cfs @ 12.03 hrs, Volume= 0.148 af, Depth= 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.86"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=0.69"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=2.38 cfs 0.146 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=0.60"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=3.81 cfs 0.217 af

Total Runoff Area = 6.890 ac Runoff Volume = 0.363 af Average Runoff Depth = 0.63"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

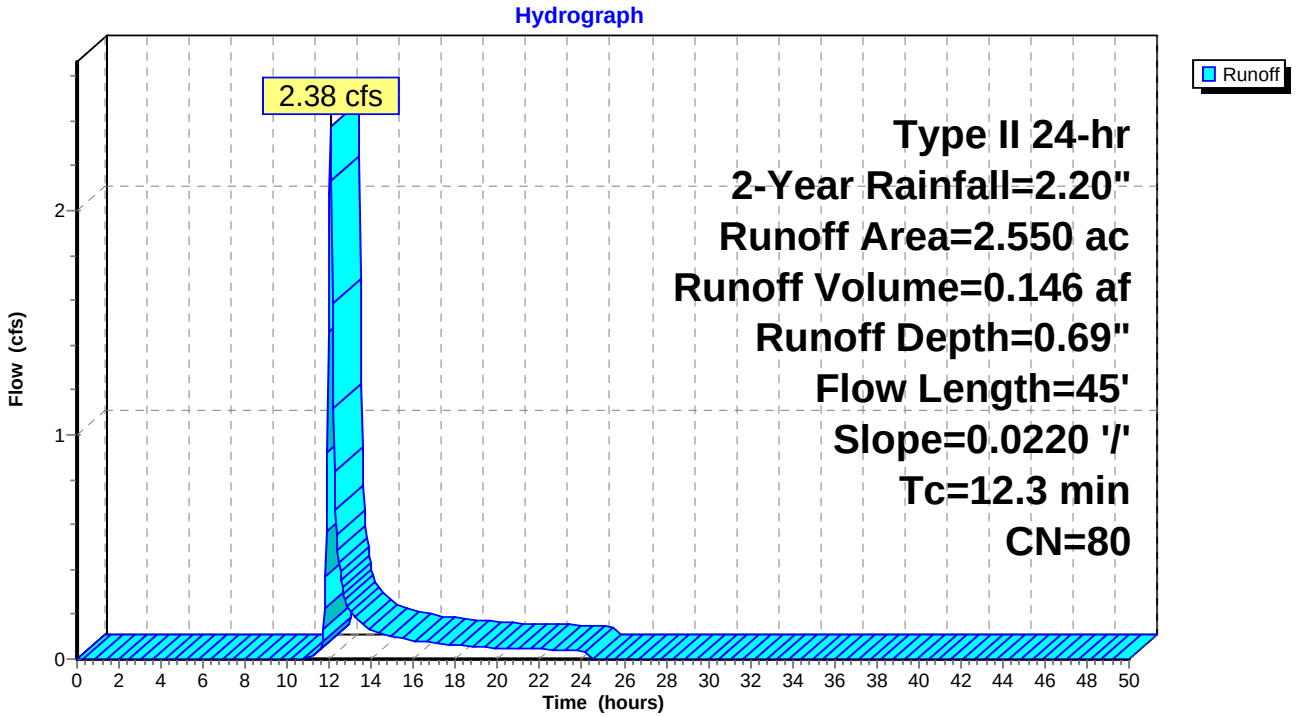
Runoff = 2.38 cfs @ 12.05 hrs, Volume= 0.146 af, Depth= 0.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.20"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

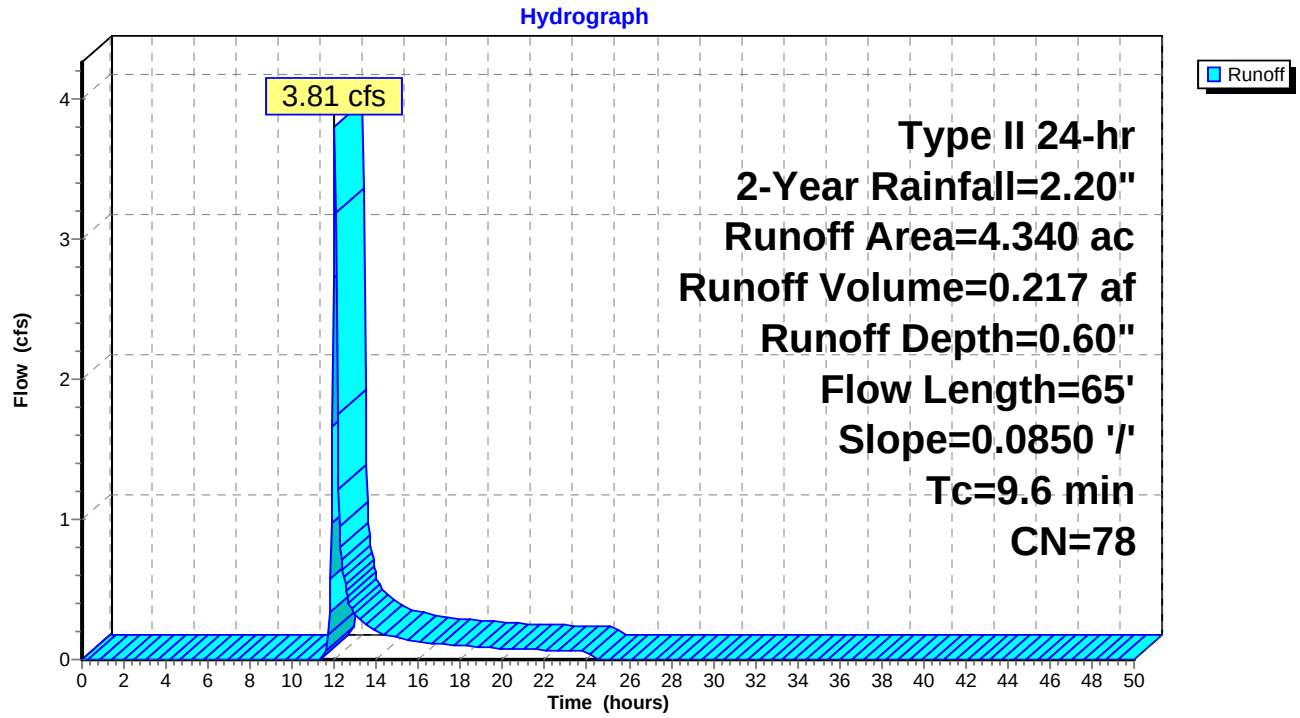
Runoff = 3.81 cfs @ 12.02 hrs, Volume= 0.217 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.20"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=1.03"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=3.65 cfs 0.219 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=0.92"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=6.03 cfs 0.333 af

Total Runoff Area = 6.890 ac Runoff Volume = 0.552 af Average Runoff Depth = 0.96"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

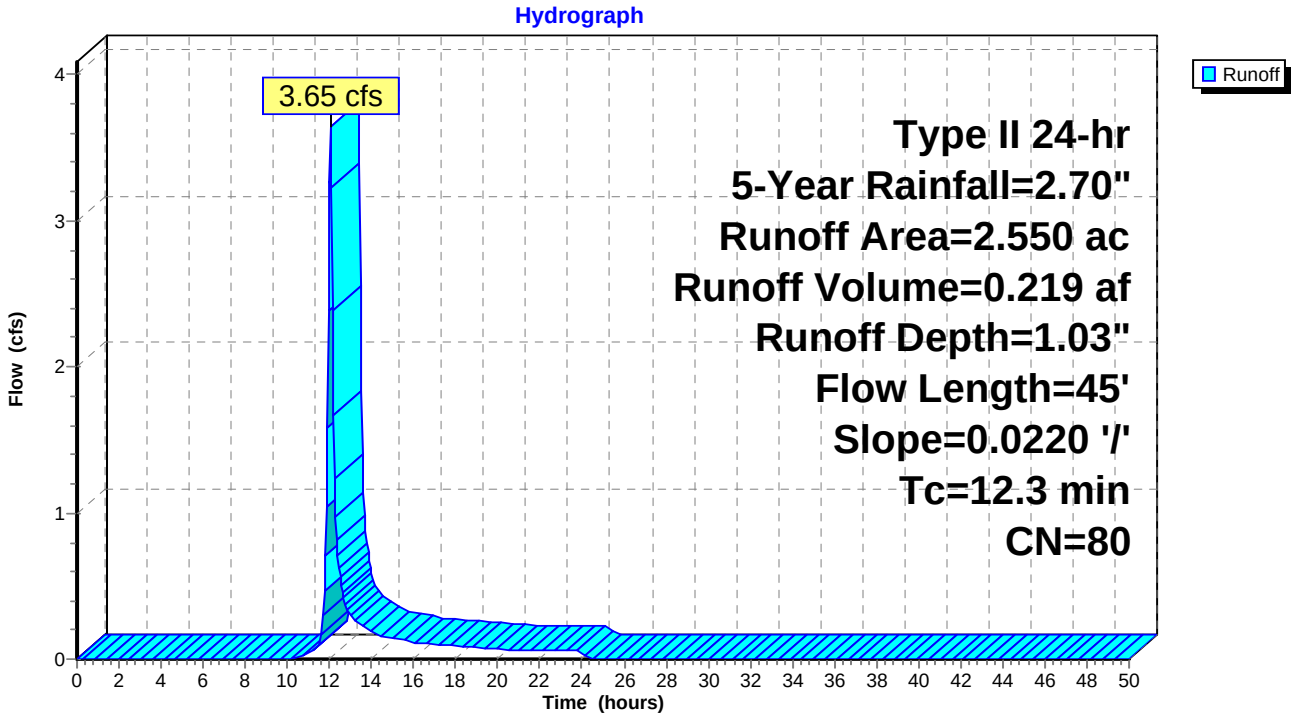
Runoff = 3.65 cfs @ 12.05 hrs, Volume= 0.219 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=2.70"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

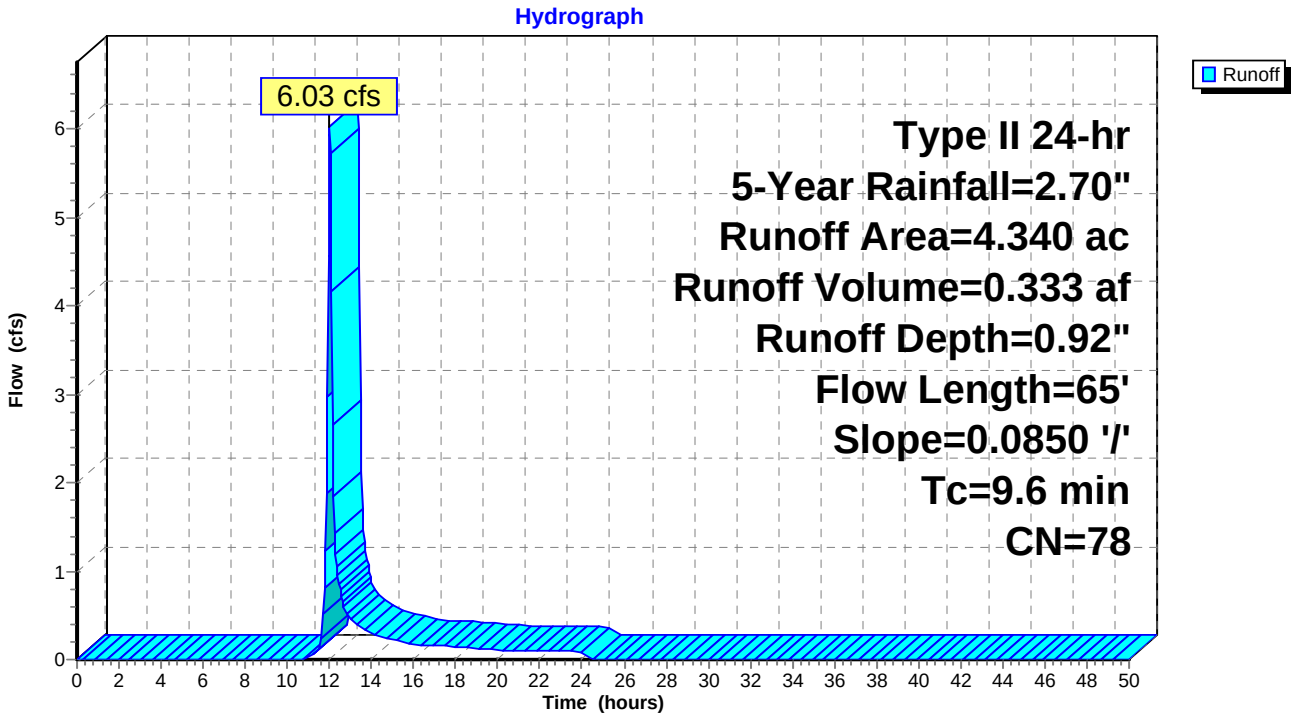
Runoff = 6.03 cfs @ 12.02 hrs, Volume= 0.333 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=2.70"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=1.36"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=4.87 cfs 0.290 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=1.24"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=8.21 cfs 0.447 af

Total Runoff Area = 6.890 ac Runoff Volume = 0.737 af Average Runoff Depth = 1.28"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

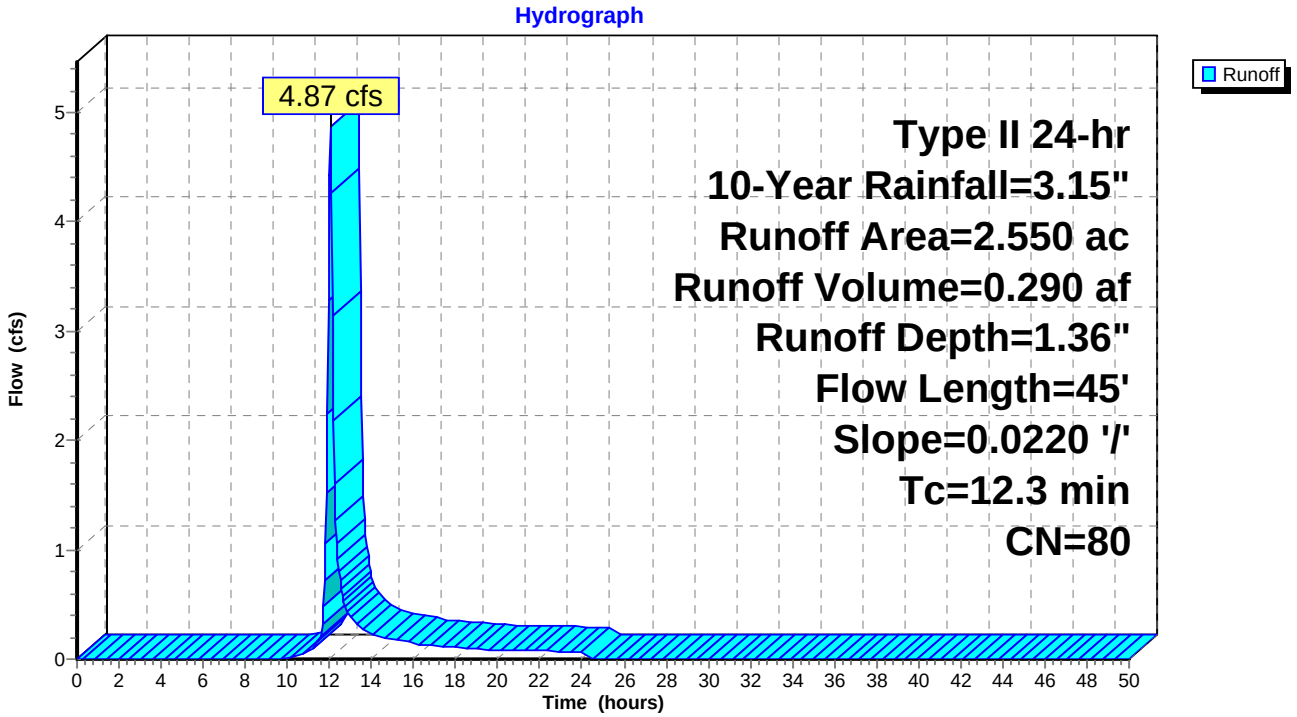
Runoff = 4.87 cfs @ 12.05 hrs, Volume= 0.290 af, Depth= 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.15"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

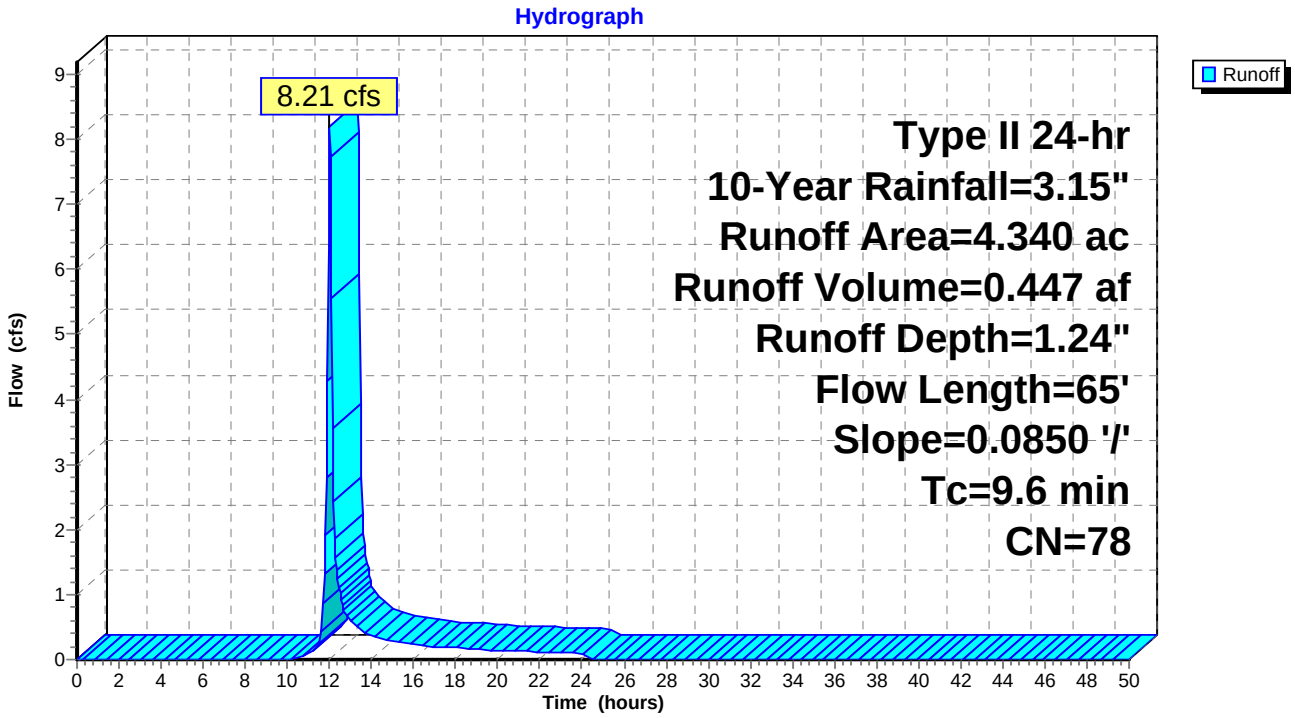
Runoff = 8.21 cfs @ 12.02 hrs, Volume= 0.447 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.15"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=1.93"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=6.94 cfs 0.411 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=1.78"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=11.92 cfs 0.645 af

Total Runoff Area = 6.890 ac Runoff Volume = 1.056 af Average Runoff Depth = 1.84"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

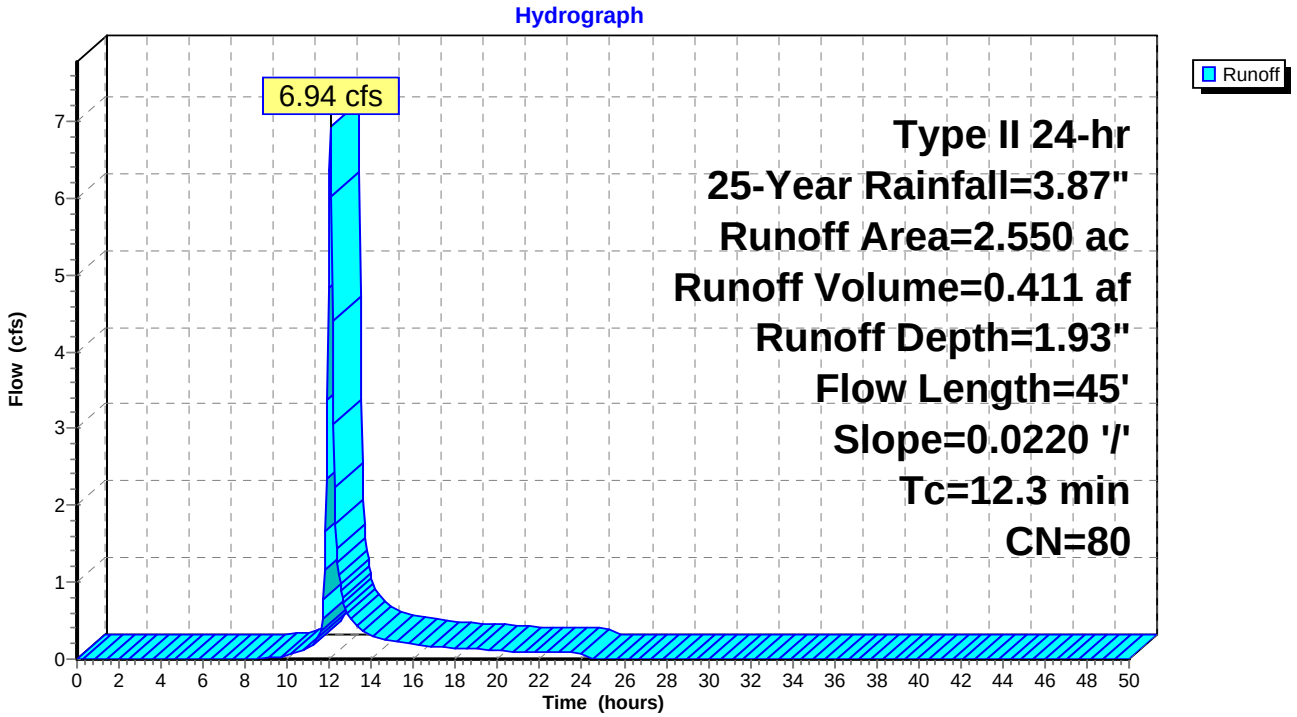
Runoff = 6.94 cfs @ 12.04 hrs, Volume= 0.411 af, Depth= 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.87"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

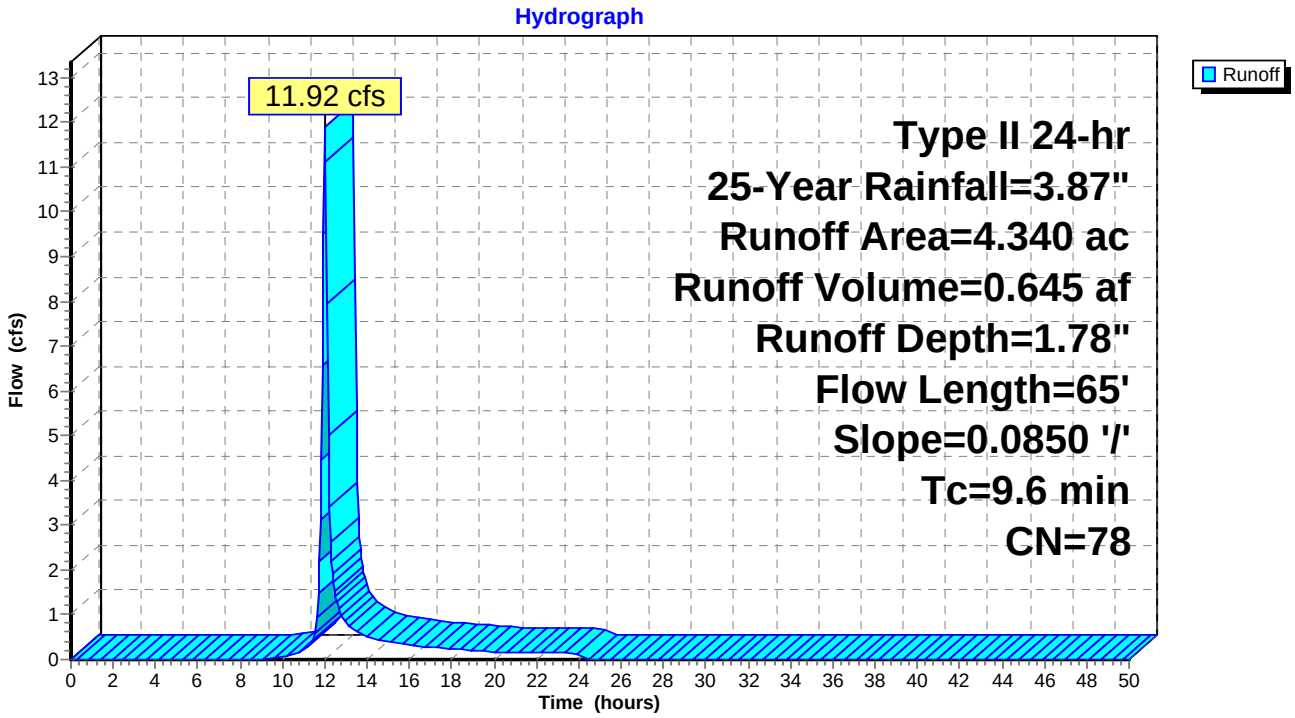
Runoff = 11.92 cfs @ 12.01 hrs, Volume= 0.645 af, Depth= 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=3.87"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=2.48"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=8.88 cfs 0.527 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=2.31"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=15.42 cfs 0.835 af

Total Runoff Area = 6.890 ac Runoff Volume = 1.362 af Average Runoff Depth = 2.37"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

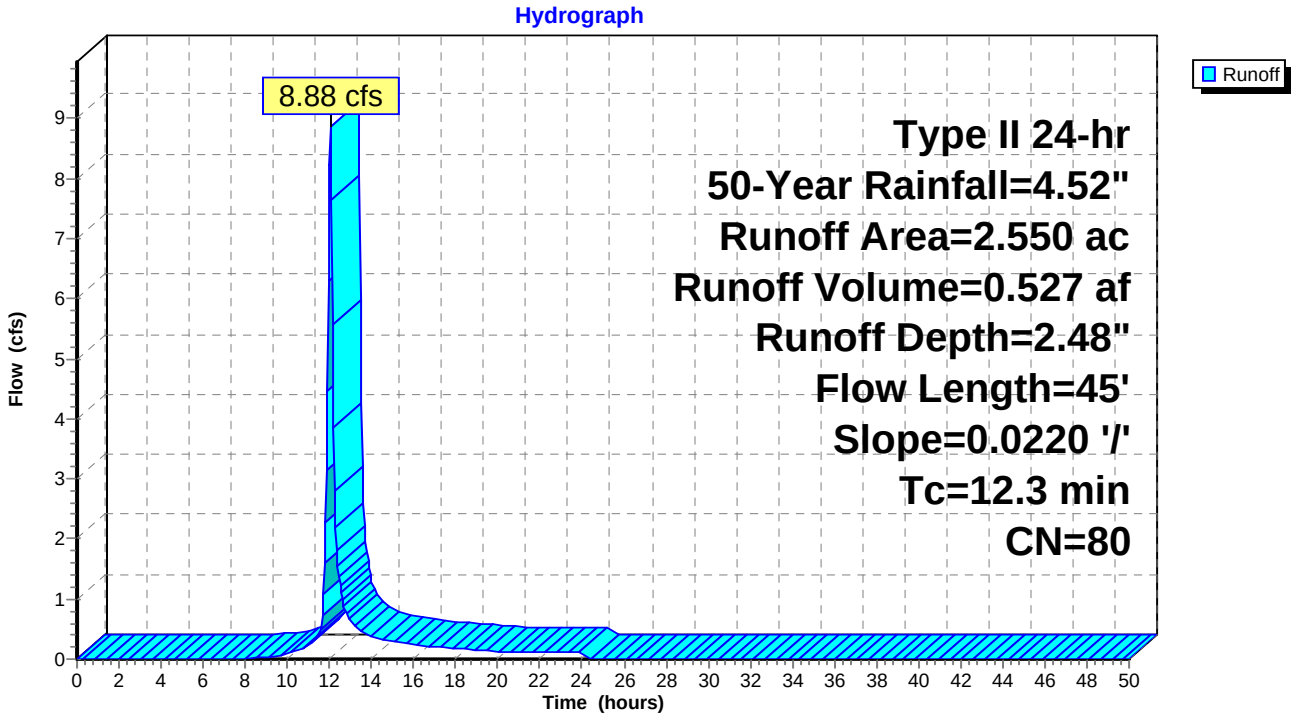
Runoff = 8.88 cfs @ 12.04 hrs, Volume= 0.527 af, Depth= 2.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=4.52"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

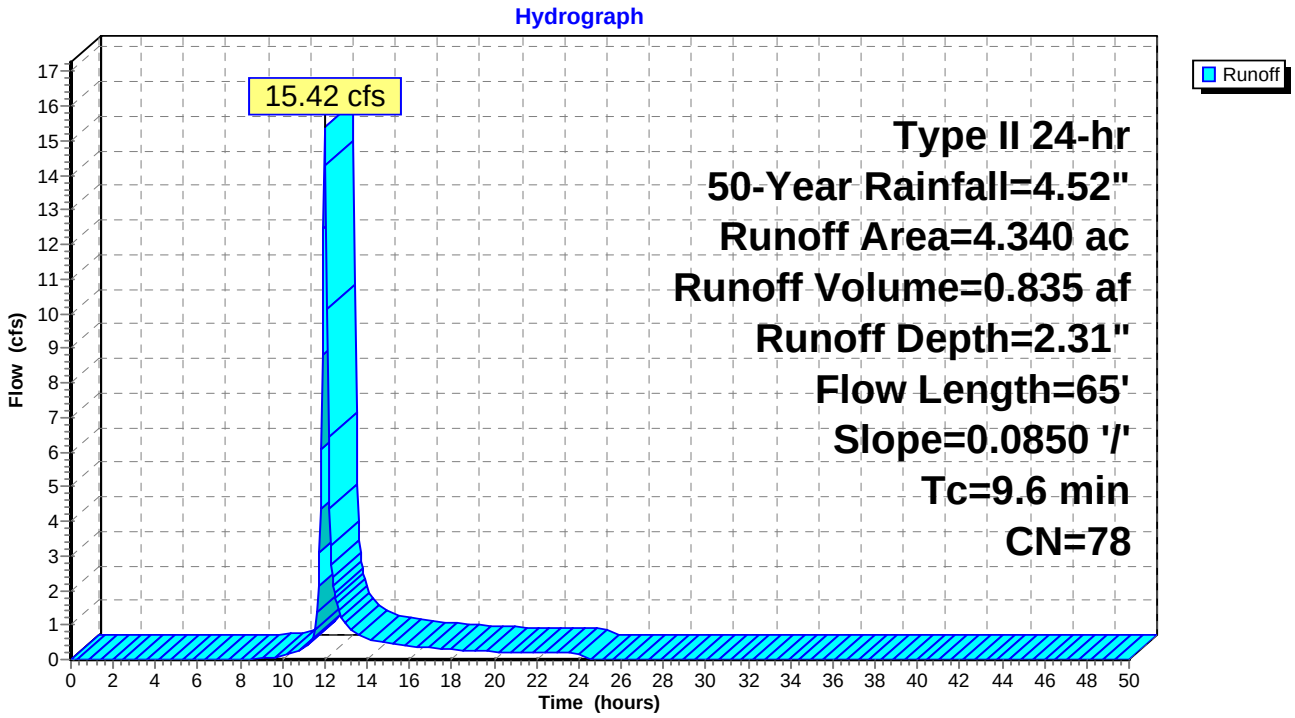
Runoff = 15.42 cfs @ 12.01 hrs, Volume= 0.835 af, Depth= 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=4.52"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Wetland/West Runoff Area=2.550 ac 4.31% Impervious Runoff Depth=3.14"
Flow Length=45' Slope=0.0220 '/' Tc=12.3 min CN=80 Runoff=11.19 cfs 0.667 af

Subcatchment 2S: Wetland/East Runoff Area=4.340 ac 0.00% Impervious Runoff Depth=2.95"
Flow Length=65' Slope=0.0850 '/' Tc=9.6 min CN=78 Runoff=19.64 cfs 1.067 af

Total Runoff Area = 6.890 ac Runoff Volume = 1.734 af Average Runoff Depth = 3.02"
98.40% Pervious = 6.780 ac 1.60% Impervious = 0.110 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Wetland/West

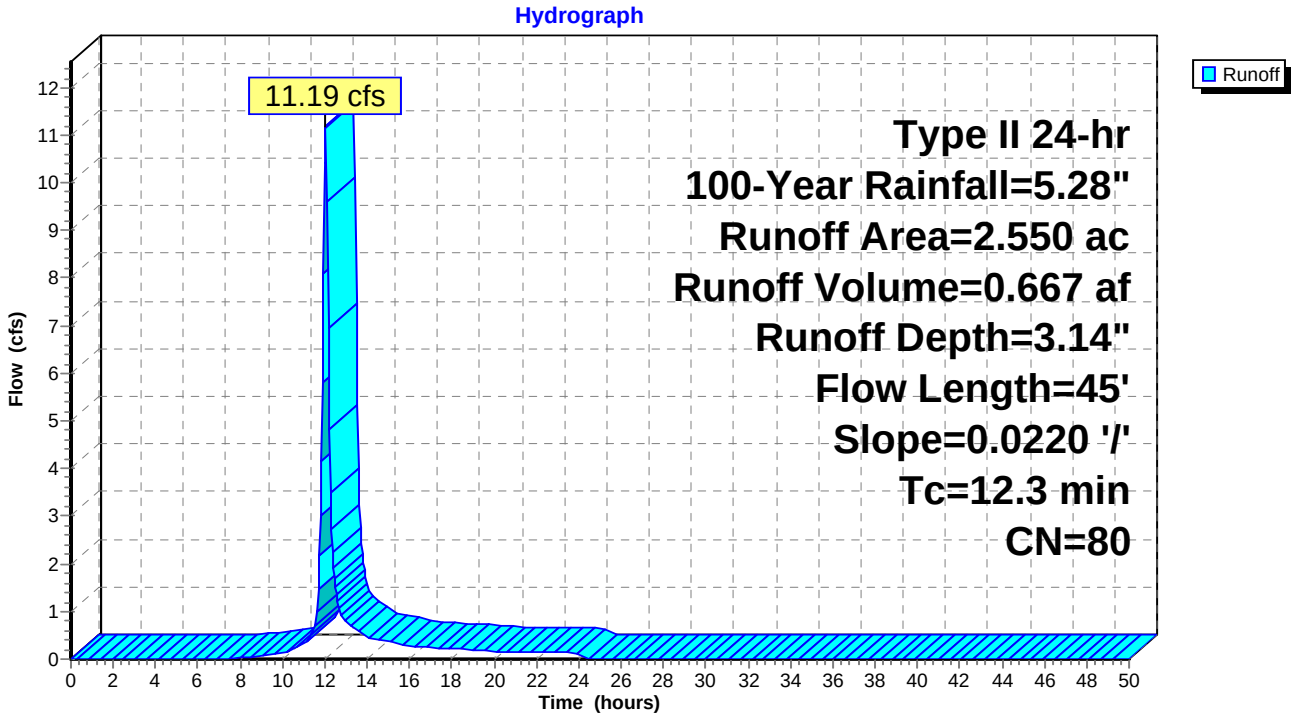
Runoff = 11.19 cfs @ 12.04 hrs, Volume= 0.667 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.28"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG D
0.110	98	Roofs, HSG D
2.100	79	Woods, Fair, HSG D
0.310	80	>75% Grass cover, Good, HSG D
2.550	80	Weighted Average
2.440		95.69% Pervious Area
0.110		4.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	45	0.0220	0.06		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 1S: Wetland/West



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 2S: Wetland/East

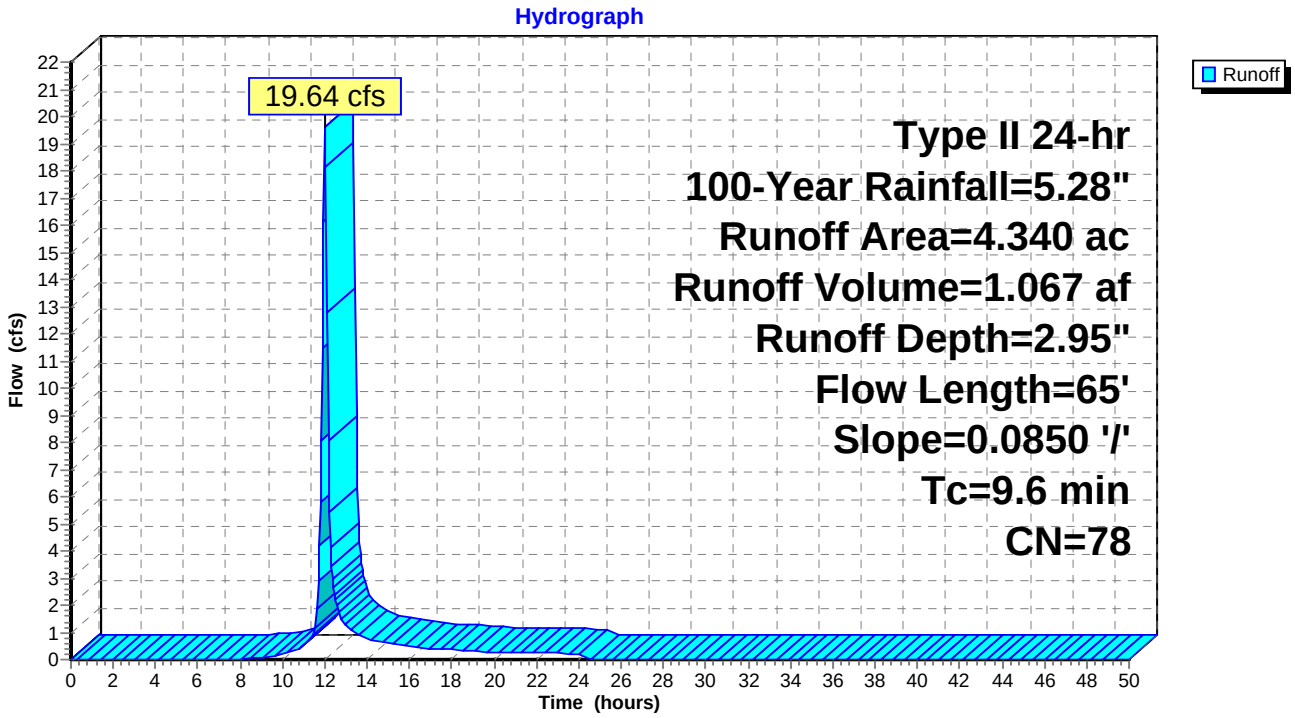
Runoff = 19.64 cfs @ 12.01 hrs, Volume= 1.067 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.28"

Area (ac)	CN	Description
3.000	79	Woods, Fair, HSG D
1.340	77	Brush, Fair, HSG D
4.340	78	Weighted Average
4.340		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	65	0.0850	0.11		**Sheet Flow, woods/brush** Woods: Light underbrush n= 0.400 P2= 2.50"

Subcatchment 2S: Wetland/East



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Proposed Runoff

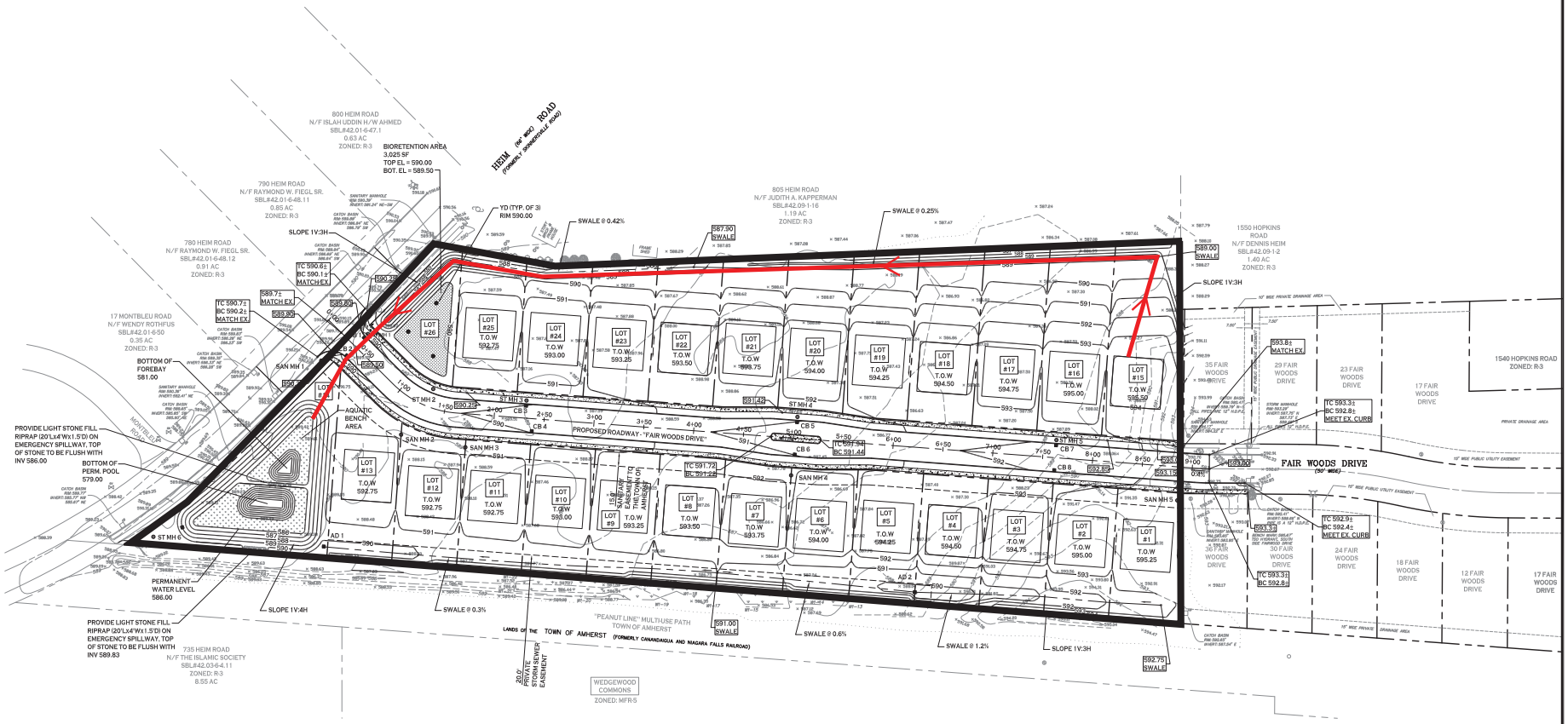
Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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PROPOSED RUNOFF

STRUCTURE TABLE

STRUCTURE	STATION	OFFSET	RIM
AD 1	1+15.41	172.14' RT.	589.75
AD 2	6+32.14	144.50' RT.	589.75
CB 1	0+37.93	13.00' LT.	589.40
CB 2	0+37.93	13.00' RT.	589.40
CB 3	2+31.03	13.00' LT.	589.98
CB 4	3+38.33	13.00' RT.	590.02
CB 5	5+02.52	16.75' LT.	590.98
CB 6	5+02.52	16.75' RT.	590.98
CB 7	7+62.27	13.00' LT.	592.10
CB 8	7+62.27	13.00' RT.	592.10
CB 9	0+41.73	250.04' RT.	589.00
ST MH 1	0+37.93	17.75' LT.	590.00
ST MH 2	1+31.06	18.39' LT.	590.20
ST MH 3	2+31.03	17.75' LT.	590.48
ST MH 4	5+02.52	21.50' LT.	591.48
ST MH 5	7+62.27	17.75' LT.	592.75
ST MH 6	0+28.41	277.39 RT.	589.50
SAN MH 1	0+23.34	34.03' RT.	590.50
SAN MH 2	1+21.77	36.60' RT.	590.80
SAN MH 3	1+73.51	33.50' RT.	590.80
SAN MH 4	5+00.52	37.25' RT.	591.80
SAN MH 5	8+87.52	33.50' RT.	593.50



GRADING PLAN

SCALE: 1"=50'

GRADING NOTES:

1. IN GENERAL, EXTERIOR GRADE AT THE PROPOSED HOUSES SHALL BE 2' ABOVE THE HIGHEST ADJACENT EDGE OF ROAD, CORNER LOTS MAY DIFFER, SEE PLAN FOR SPECIFIC SITUATIONS.
2. IN GENERAL, 1ST FFE FOR THE PROPOSED HOUSES SHALL BE 2.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
3. IN GENERAL, TOP OF WALL ELEVATION SHALL BE 1.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
4. SANITARY SEWER INVERT AT THE PROPOSED HOUSE SHALL BE 1.5' ABOVE THE BASEMENT FLOOR ELEVATION, BASEMENT FLOOR ELEVATION IS 9' BELOW THE 1ST FFE.
5. HOUSE BOXES SHOWN ARE 50'x50' FOR DESIGN PURPOSES.

PROPOSED GRADING LEGEND

- PROPOSED CONTOUR — 101
- PROPOSED SPOT ELEVATION — 100.80
- PROPOSED TOP OF CURB/ BOT. OF CURB ELEVATION — T.C. 100.50 B.C. 100.00
- PROPOSED CATCH BASIN — CB
- PAVEMENT/GROUND SLOPE
- PROPOSED MANHOLE — MH
- PROPOSED YARD DRAIN — YD
- PROPOSED SWALE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 0 50 100Ft.

Carmina Wood Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Grading Plan

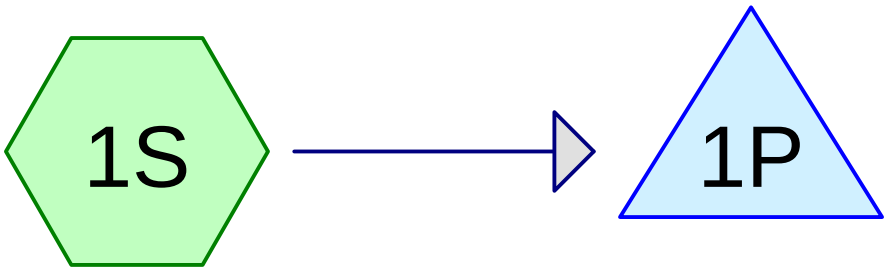
DRAWING NO.
C-200

Project no.: 19.190

Events for Pond 1P: Detention Basin

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-Year	3.28	1.02	1.02	**0.00**	586.91	6,969
2-Year	4.50	1.46	1.46	0.00	587.21	9,540
5-Year	6.39	1.95	1.95	0.00	587.68	13,904
10-Year	8.18	2.25	2.25	0.00	588.13	18,422
25-Year	11.11	2.66	2.66	0.00	588.84	26,316
50-Year	13.80	4.12	4.12	0.00	589.33	32,337
100-Year	**16.96**	**5.95**	**5.95**	0.00	**589.74**	**37,707**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



Fair Woods Drive Detention Basin

Subcat Reach Pond Link

Routing Diagram for 19.190 Proposed
Prepared by {enter your company name here}, Printed 11/10/2020
HydroCAD® 10.00-18 s/n 05021 © 2016 HydroCAD Software Solutions LLC

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.500	80	>75% Grass cover, Good, HSG D (1S)
0.700	98	Paved parking, HSG D (1S)
1.600	98	Roofs, HSG D (1S)
6.800	**86**	**TOTAL AREA**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
6.800	HSG D	1S
0.000	Other	
6.800		**TOTAL AREA**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	4.500	0.000	4.500	>75% Grass cover, Good	1S
0.000	0.000	0.000	0.700	0.000	0.700	Paved parking	1S
0.000	0.000	0.000	1.600	0.000	1.600	Roofs	1S
0.000	**0.000**	**0.000**	**6.800**	**0.000**	**6.800**	**TOTAL AREA**	

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1S	0.00	0.00	125.0	0.0030	0.020	12.0	0.0	0.0
2	1P	585.96	585.67	62.0	0.0047	0.013	12.0	0.0	0.0
3	1P	586.00	585.96	12.0	0.0033	0.013	8.0	0.0	0.0

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=0.74"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=3.28 cfs 0.422 af

Pond 1P: Detention Basin Peak Elev=586.91' Storage=6,969 cf Inflow=3.28 cfs 0.422 af
Primary=1.02 cfs 0.417 af Secondary=0.00 cfs 0.000 af Outflow=1.02 cfs 0.417 af

Total Runoff Area = 6.800 ac Runoff Volume = 0.422 af Average Runoff Depth = 0.74"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 3.28 cfs @ 12.45 hrs, Volume= 0.422 af, Depth= 0.74"

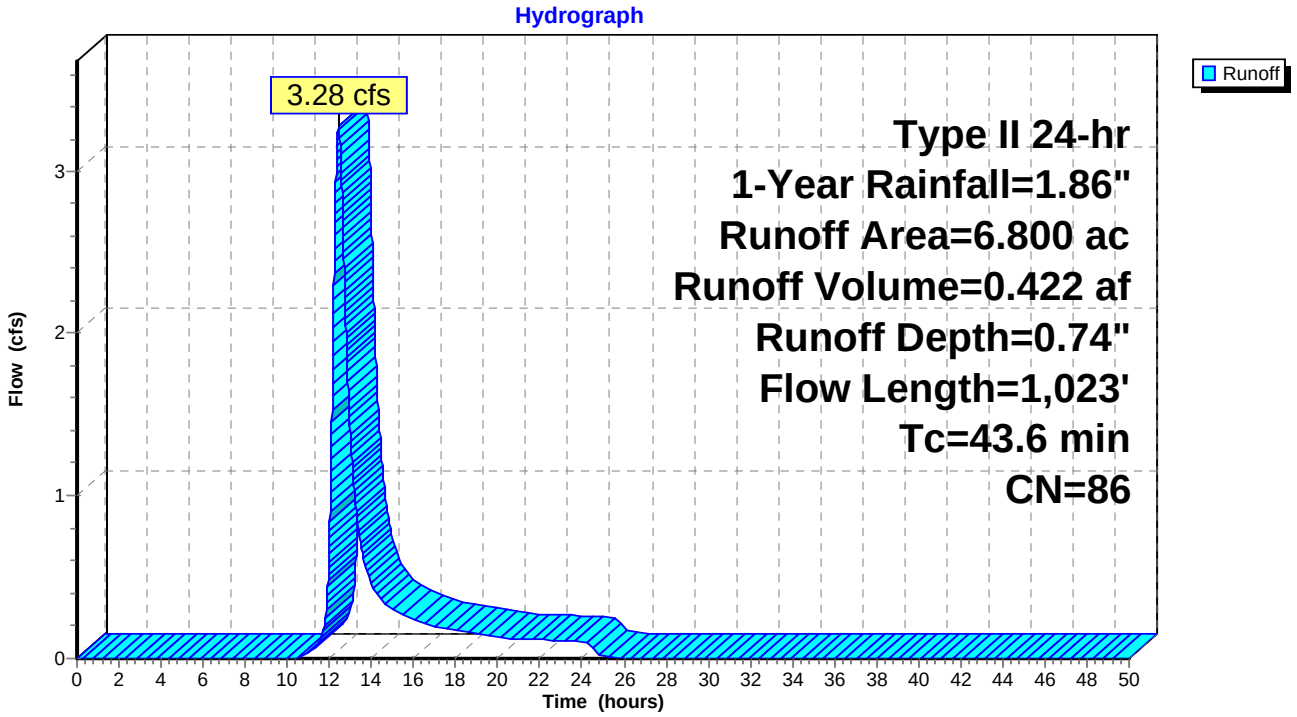
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-Year Rainfall=1.86"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 0.74" for 1-Year event
Inflow = 3.28 cfs @ 12.45 hrs, Volume= 0.422 af
Outflow = 1.02 cfs @ 13.19 hrs, Volume= 0.417 af, Atten= 69%, Lag= 44.6 min
Primary = 1.02 cfs @ 13.19 hrs, Volume= 0.417 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 586.91' @ 13.19 hrs Surf.Area= 8,390 sf Storage= 6,969 cf

Plug-Flow detention time= 157.7 min calculated for 0.417 af (99% of inflow)
Center-of-Mass det. time= 151.0 min (1,031.3 - 880.3)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

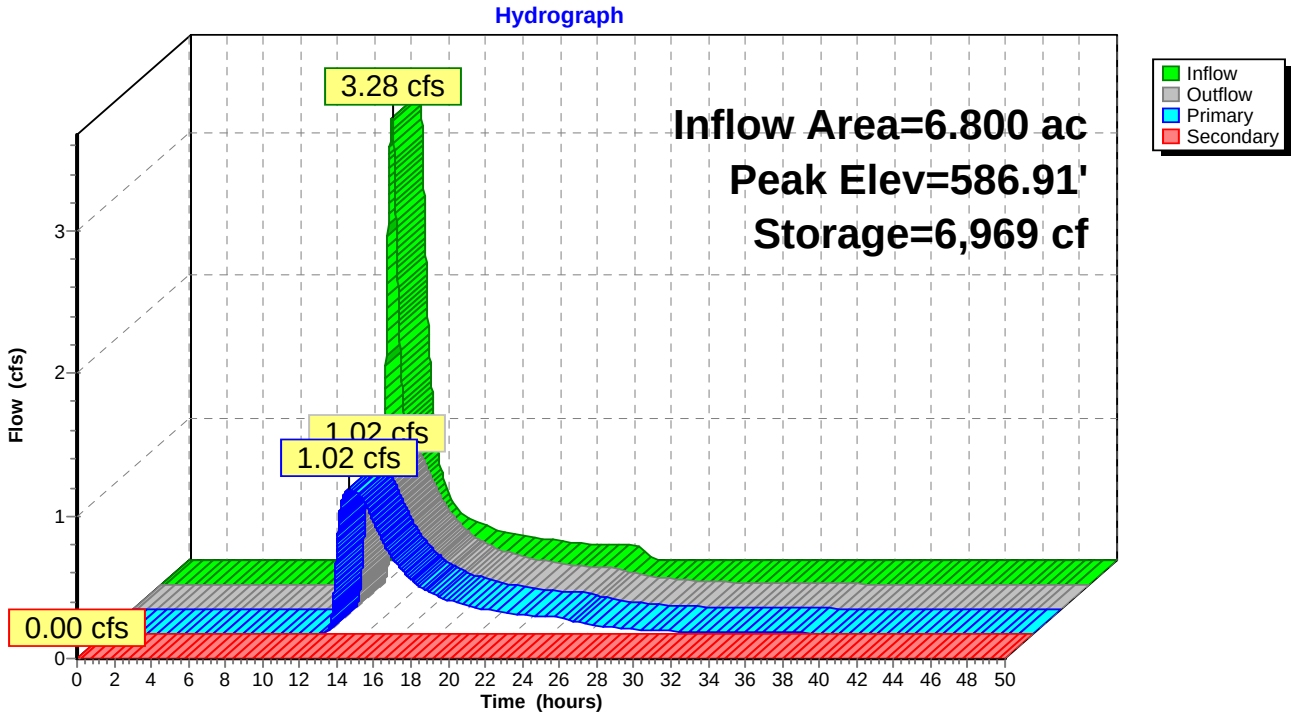
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=1.02 cfs @ 13.19 hrs HW=586.91' (Free Discharge)
└**1=12" outlet pipe** (Passes 1.02 cfs of 2.00 cfs potential flow)
└**2=8" inlet pipe** (Barrel Controls 1.02 cfs @ 2.92 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=1.00"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=4.50 cfs 0.568 af

Pond 1P: Detention Basin Peak Elev=587.21' Storage=9,540 cf Inflow=4.50 cfs 0.568 af
Primary=1.46 cfs 0.563 af Secondary=0.00 cfs 0.000 af Outflow=1.46 cfs 0.563 af

Total Runoff Area = 6.800 ac Runoff Volume = 0.568 af Average Runoff Depth = 1.00"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 4.50 cfs @ 12.44 hrs, Volume= 0.568 af, Depth= 1.00"

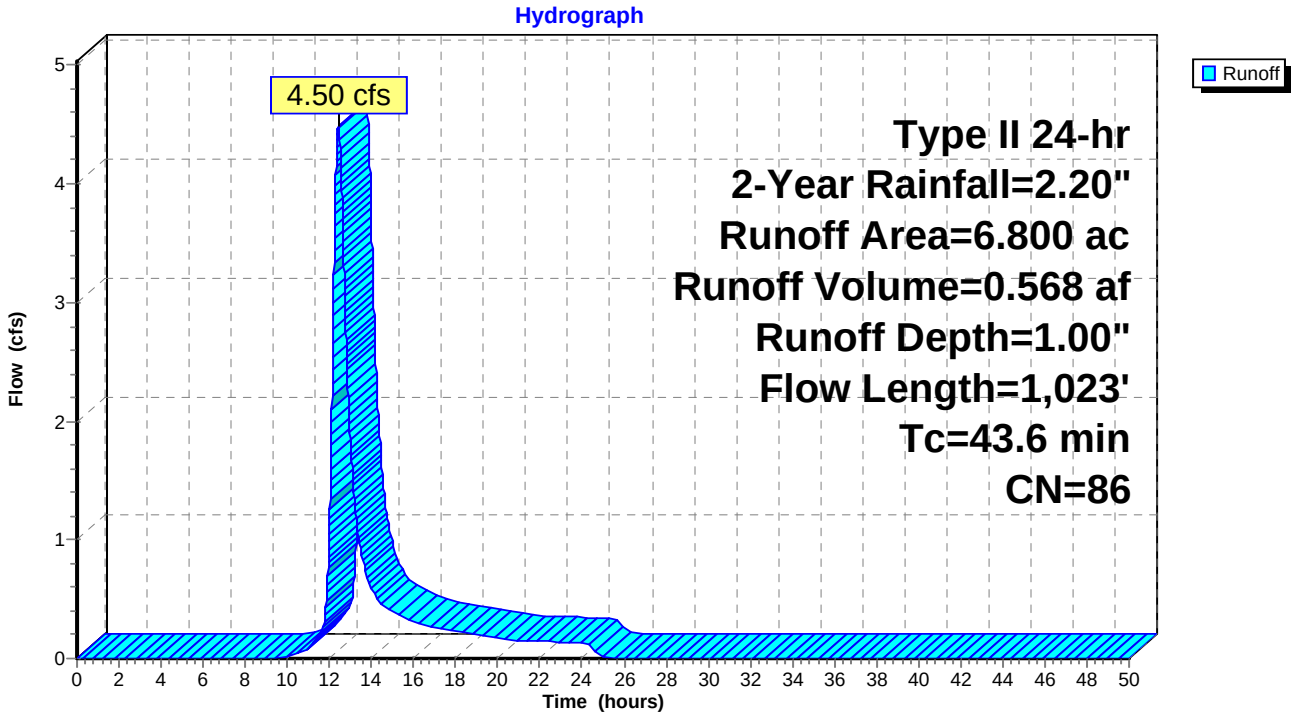
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Year Rainfall=2.20"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 1.00" for 2-Year event
Inflow = 4.50 cfs @ 12.44 hrs, Volume= 0.568 af
Outflow = 1.46 cfs @ 13.14 hrs, Volume= 0.563 af, Atten= 68%, Lag= 41.6 min
Primary = 1.46 cfs @ 13.14 hrs, Volume= 0.563 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 587.21' @ 13.14 hrs Surf.Area= 8,890 sf Storage= 9,540 cf

Plug-Flow detention time= 143.8 min calculated for 0.563 af (99% of inflow)
Center-of-Mass det. time= 138.4 min (1,010.0 - 871.6)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

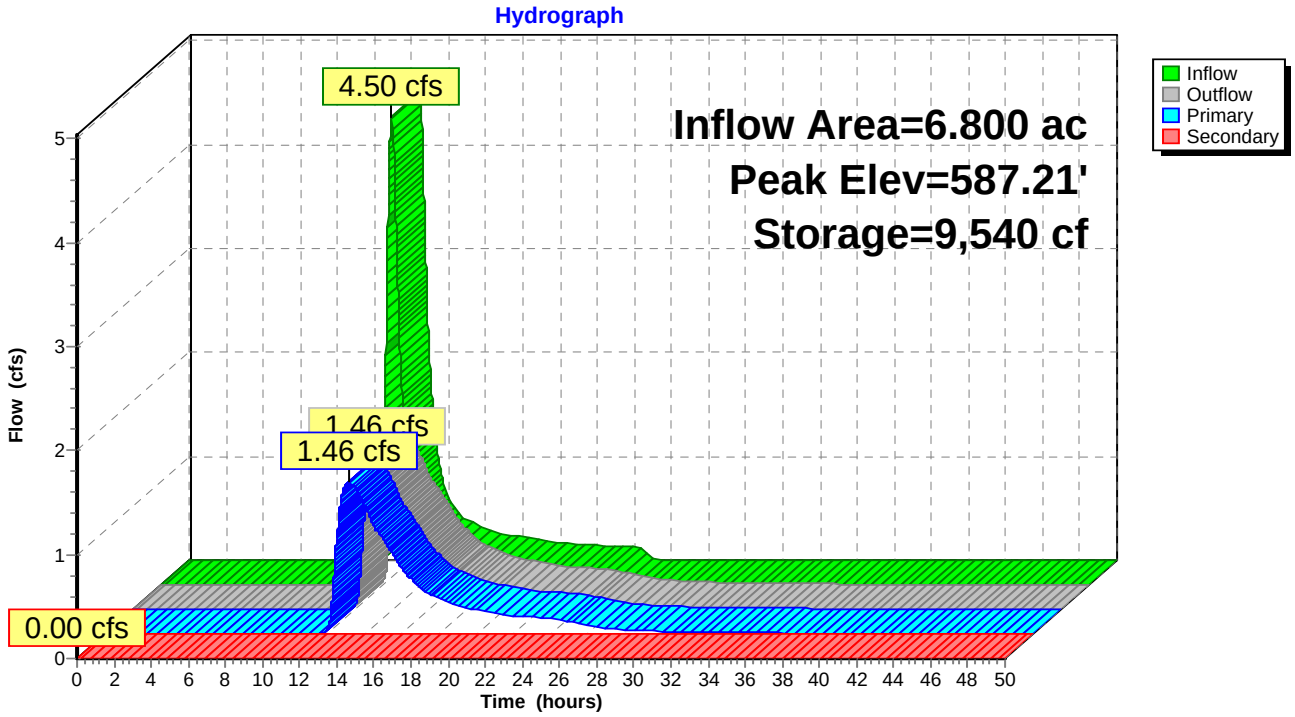
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=1.46 cfs @ 13.14 hrs HW=587.21' (Free Discharge)
└**1=12" outlet pipe** (Passes 1.46 cfs of 2.71 cfs potential flow)
└**2=8" inlet pipe** (Barrel Controls 1.46 cfs @ 4.17 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=1.41"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=6.39 cfs 0.798 af

Pond 1P: Detention Basin Peak Elev=587.68' Storage=13,903 cf Inflow=6.39 cfs 0.798 af
Primary=1.95 cfs 0.793 af Secondary=0.00 cfs 0.000 af Outflow=1.95 cfs 0.793 af

Total Runoff Area = 6.800 ac Runoff Volume = 0.798 af Average Runoff Depth = 1.41"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 6.39 cfs @ 12.41 hrs, Volume= 0.798 af, Depth= 1.41"

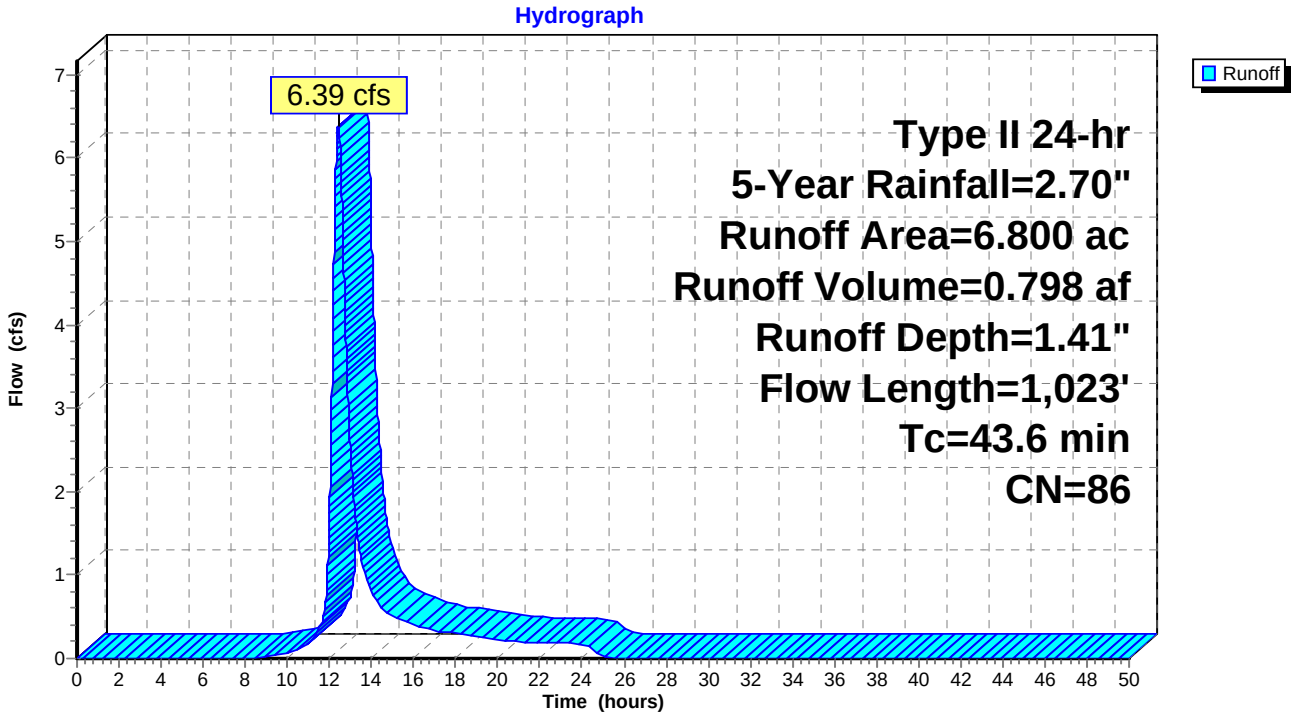
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-Year Rainfall=2.70"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 1.41" for 5-Year event
Inflow = 6.39 cfs @ 12.41 hrs, Volume= 0.798 af
Outflow = 1.95 cfs @ 13.15 hrs, Volume= 0.793 af, Atten= 70%, Lag= 44.4 min
Primary = 1.95 cfs @ 13.15 hrs, Volume= 0.793 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 587.68' @ 13.15 hrs Surf.Area= 9,693 sf Storage= 13,903 cf

Plug-Flow detention time= 135.1 min calculated for 0.793 af (99% of inflow)
Center-of-Mass det. time= 131.1 min (993.0 - 861.9)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

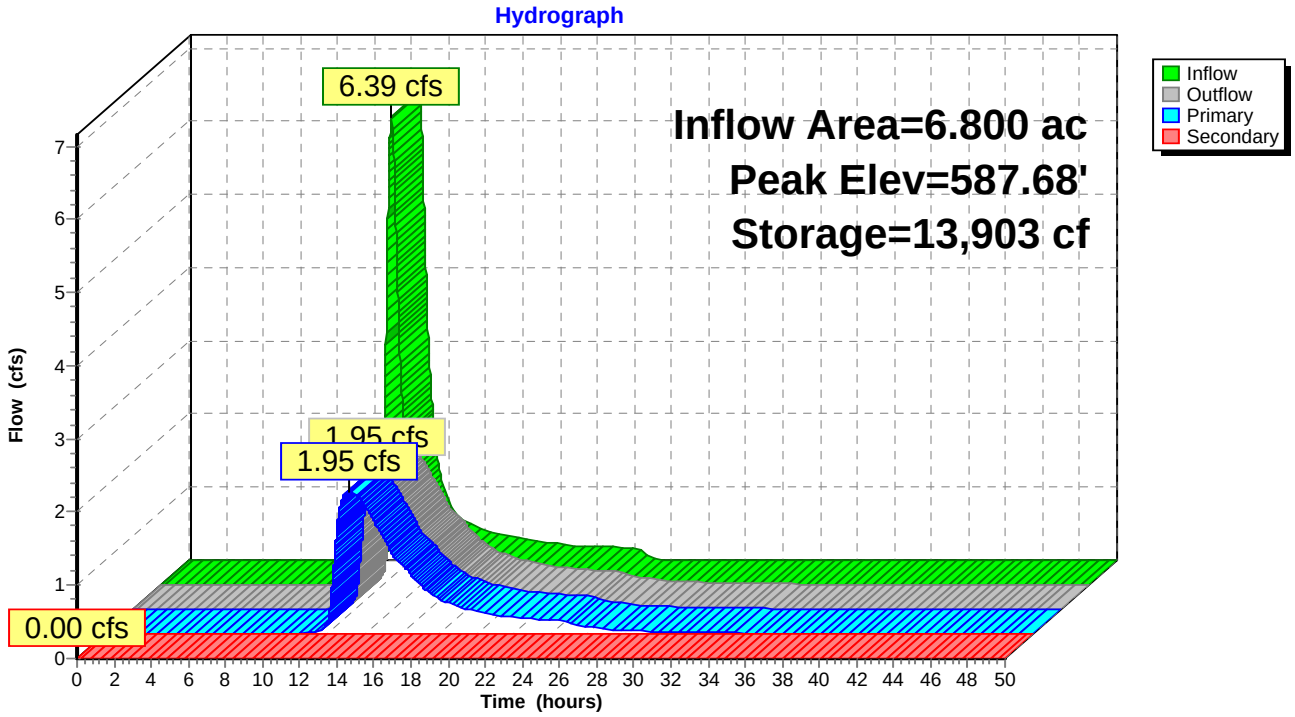
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=1.95 cfs @ 13.15 hrs HW=587.68' (Free Discharge)
└**1=12" outlet pipe** (Passes 1.95 cfs of 3.41 cfs potential flow)
└**2=8" inlet pipe** (Inlet Controls 1.95 cfs @ 5.58 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=1.79"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=8.18 cfs 1.015 af

Pond 1P: Detention Basin Peak Elev=588.13' Storage=18,421 cf Inflow=8.18 cfs 1.015 af
Primary=2.25 cfs 1.010 af Secondary=0.00 cfs 0.000 af Outflow=2.25 cfs 1.010 af

Total Runoff Area = 6.800 ac Runoff Volume = 1.015 af Average Runoff Depth = 1.79"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 8.18 cfs @ 12.41 hrs, Volume= 1.015 af, Depth= 1.79"

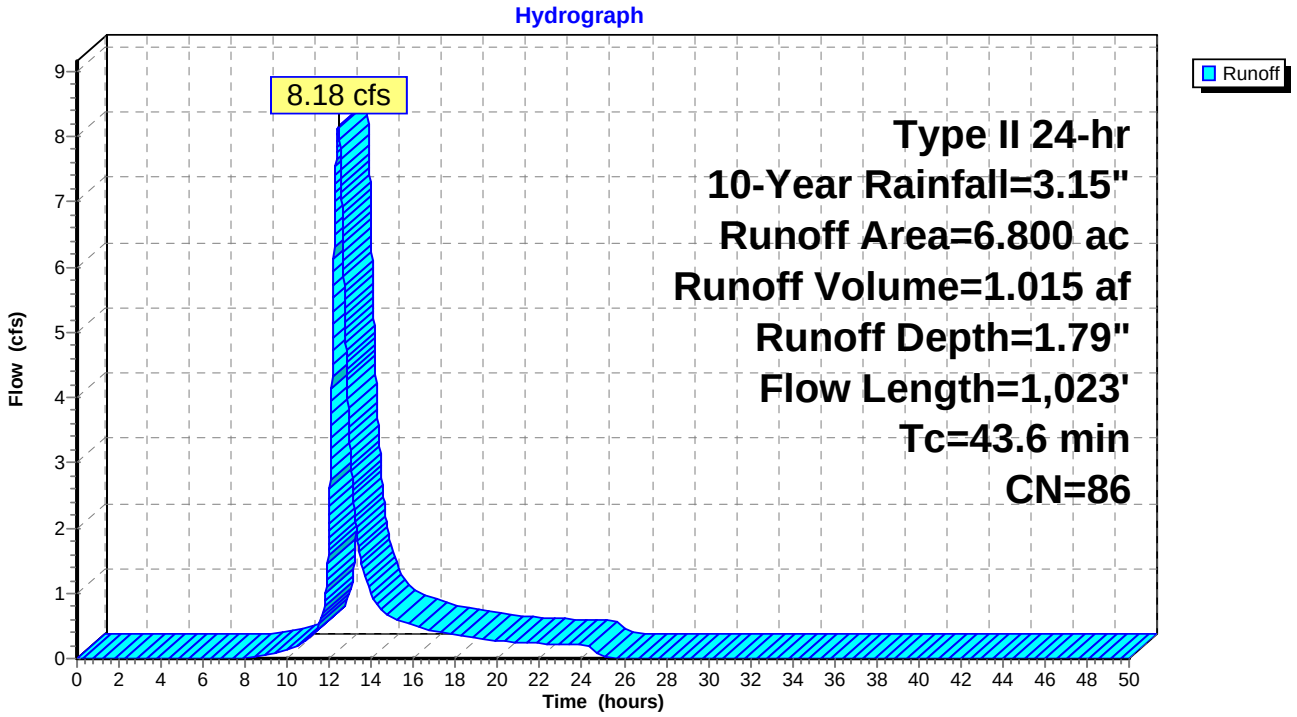
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-Year Rainfall=3.15"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 1.79" for 10-Year event
Inflow = 8.18 cfs @ 12.41 hrs, Volume= 1.015 af
Outflow = 2.25 cfs @ 13.20 hrs, Volume= 1.010 af, Atten= 72%, Lag= 47.7 min
Primary = 2.25 cfs @ 13.20 hrs, Volume= 1.010 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 588.13' @ 13.20 hrs Surf.Area= 10,472 sf Storage= 18,421 cf

Plug-Flow detention time= 135.3 min calculated for 1.010 af (99% of inflow)
Center-of-Mass det. time= 132.1 min (987.1 - 855.0)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

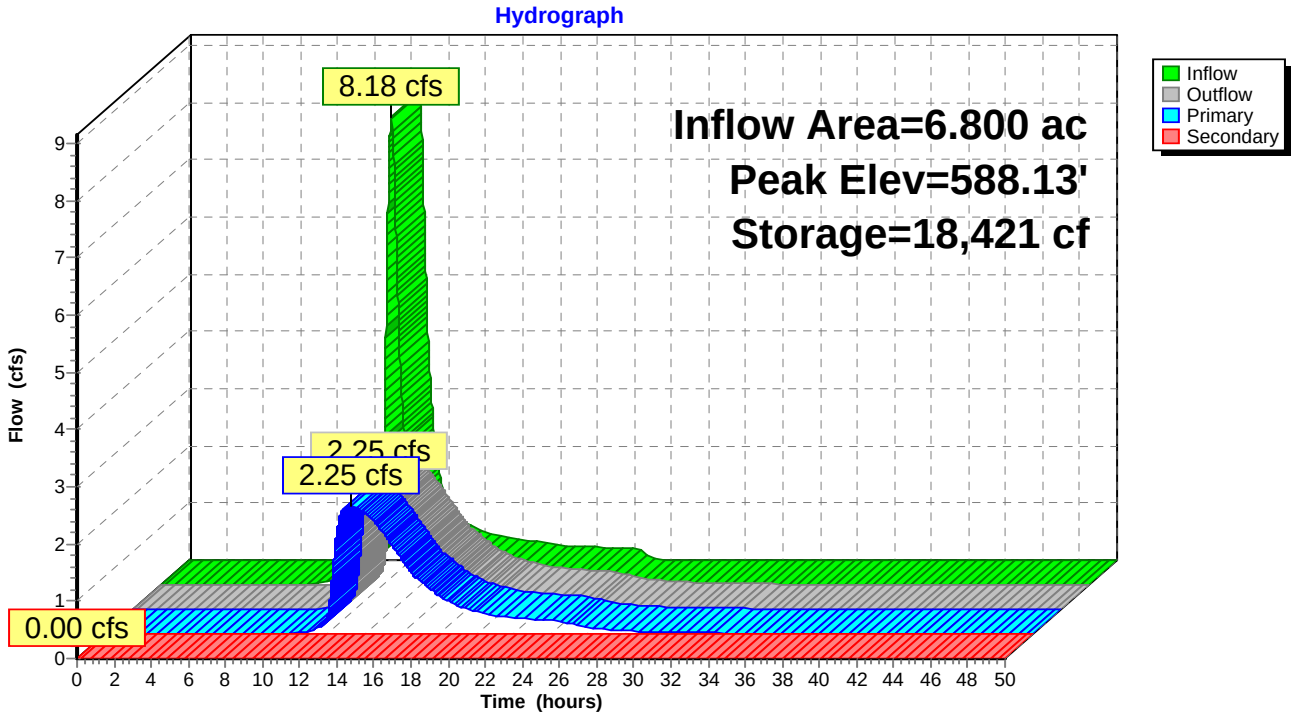
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=2.25 cfs @ 13.20 hrs HW=588.13' (Free Discharge)
└**1=12" outlet pipe** (Passes 2.25 cfs of 4.10 cfs potential flow)
└**2=8" inlet pipe** (Inlet Controls 2.25 cfs @ 6.45 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=2.43"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=11.11 cfs 1.376 af

Pond 1P: Detention Basin Peak Elev=588.84' Storage=26,316 cf Inflow=11.11 cfs 1.376 af
Primary=2.66 cfs 1.371 af Secondary=0.00 cfs 0.000 af Outflow=2.66 cfs 1.371 af

Total Runoff Area = 6.800 ac Runoff Volume = 1.376 af Average Runoff Depth = 2.43"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 11.11 cfs @ 12.40 hrs, Volume= 1.376 af, Depth= 2.43"

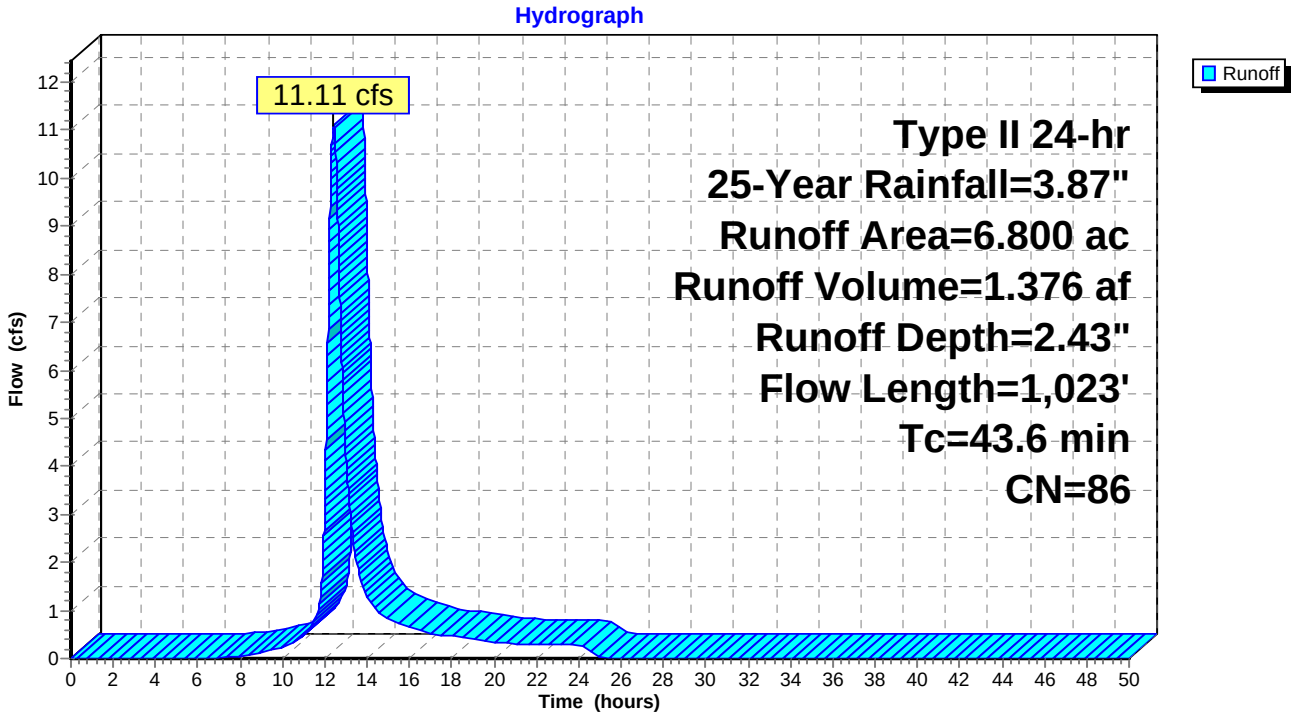
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-Year Rainfall=3.87"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 2.43" for 25-Year event
Inflow = 11.11 cfs @ 12.40 hrs, Volume= 1.376 af
Outflow = 2.66 cfs @ 13.27 hrs, Volume= 1.371 af, Atten= 76%, Lag= 52.2 min
Primary = 2.66 cfs @ 13.27 hrs, Volume= 1.371 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 588.84' @ 13.27 hrs Surf.Area= 11,757 sf Storage= 26,316 cf

Plug-Flow detention time= 142.6 min calculated for 1.371 af (100% of inflow)
Center-of-Mass det. time= 140.2 min (986.5 - 846.3)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

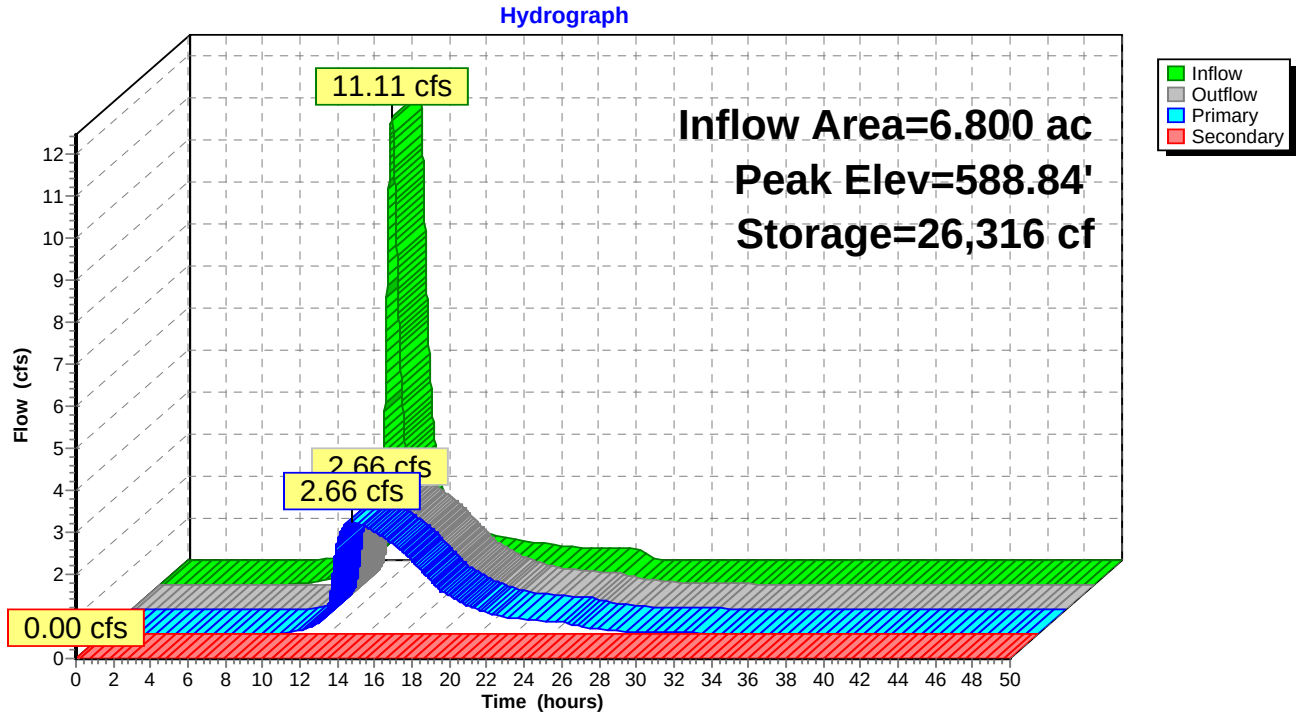
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=2.66 cfs @ 13.27 hrs HW=588.84' (Free Discharge)
└**1=12" outlet pipe** (Passes 2.66 cfs of 5.00 cfs potential flow)
└**2=8" inlet pipe** (Inlet Controls 2.66 cfs @ 7.62 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=3.02"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=13.80 cfs 1.712 af

Pond 1P: Detention Basin Peak Elev=589.33' Storage=32,337 cf Inflow=13.80 cfs 1.712 af
Primary=4.12 cfs 1.707 af Secondary=0.00 cfs 0.000 af Outflow=4.12 cfs 1.707 af

Total Runoff Area = 6.800 ac Runoff Volume = 1.712 af Average Runoff Depth = 3.02"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 13.80 cfs @ 12.40 hrs, Volume= 1.712 af, Depth= 3.02"

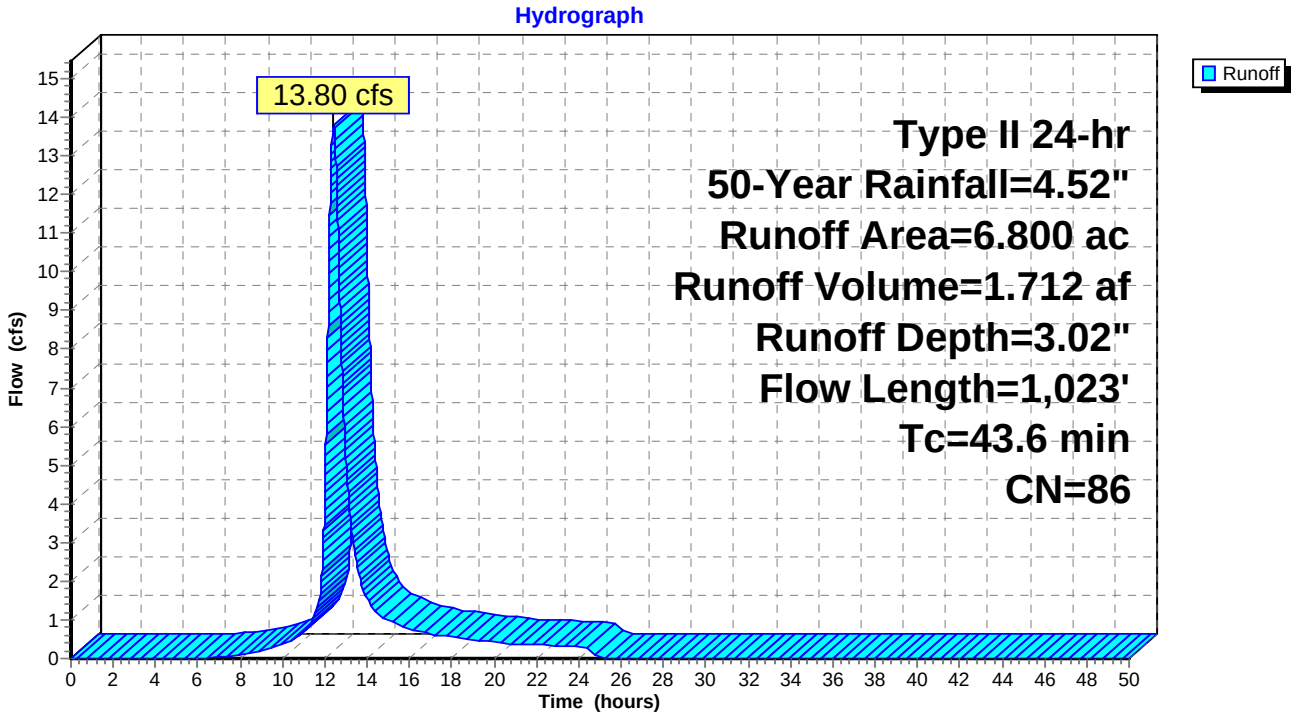
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-Year Rainfall=4.52"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 3.02" for 50-Year event
Inflow = 13.80 cfs @ 12.40 hrs, Volume= 1.712 af
Outflow = 4.12 cfs @ 13.12 hrs, Volume= 1.707 af, Atten= 70%, Lag= 43.2 min
Primary = 4.12 cfs @ 13.12 hrs, Volume= 1.707 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 589.33' @ 13.12 hrs Surf.Area= 12,682 sf Storage= 32,337 cf

Plug-Flow detention time= 142.4 min calculated for 1.707 af (100% of inflow)
Center-of-Mass det. time= 140.3 min (980.4 - 840.1)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

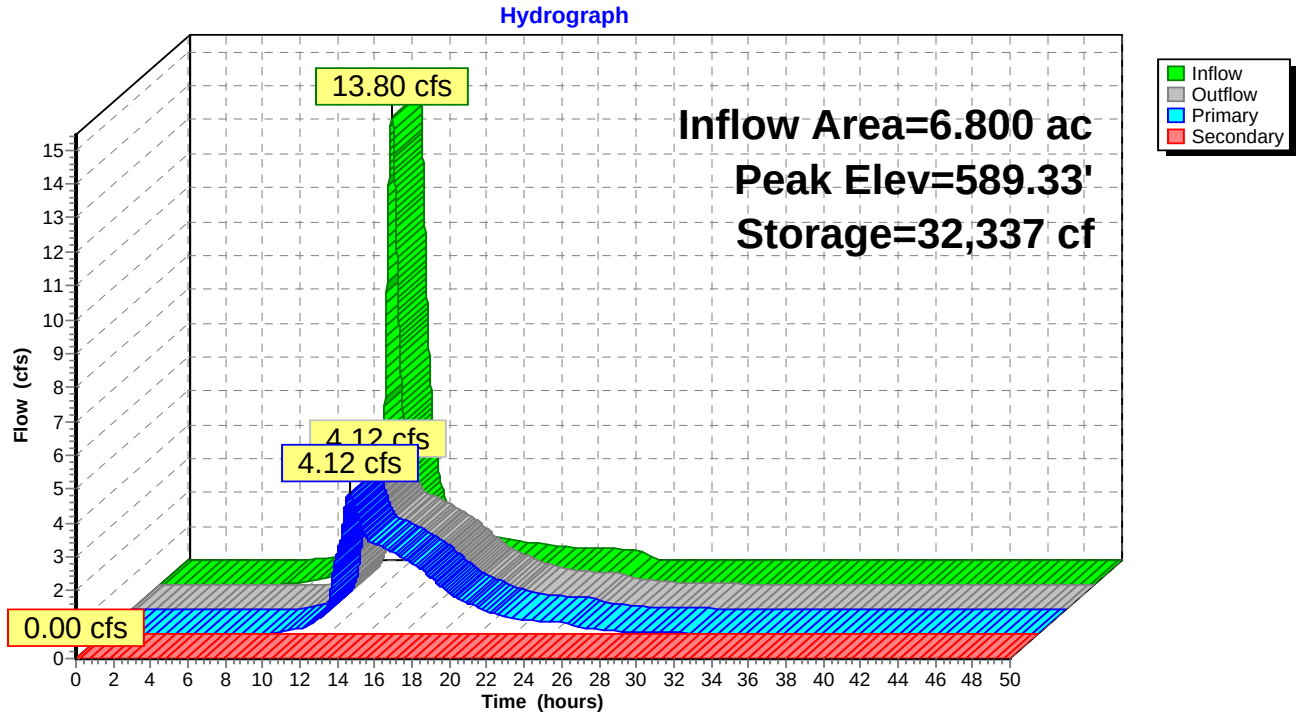
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=4.12 cfs @ 13.12 hrs HW=589.33' (Free Discharge)
└**1=12" outlet pipe** (Passes 4.12 cfs of 5.54 cfs potential flow)
  └**2=8" inlet pipe** (Inlet Controls 2.91 cfs @ 8.33 fps)
  └**3=Orifice/Grate** (Orifice Controls 1.21 cfs @ 1.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Fair Woods Drive Runoff Area=6.800 ac 33.82% Impervious Runoff Depth=3.73"
Flow Length=1,023' Tc=43.6 min CN=86 Runoff=16.96 cfs 2.113 af

Pond 1P: Detention Basin Peak Elev=589.74' Storage=37,706 cf Inflow=16.96 cfs 2.113 af
Primary=5.95 cfs 2.108 af Secondary=0.00 cfs 0.000 af Outflow=5.95 cfs 2.108 af

Total Runoff Area = 6.800 ac Runoff Volume = 2.113 af Average Runoff Depth = 3.73"
66.18% Pervious = 4.500 ac 33.82% Impervious = 2.300 ac

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Subcatchment 1S: Fair Woods Drive

Runoff = 16.96 cfs @ 12.40 hrs, Volume= 2.113 af, Depth= 3.73"

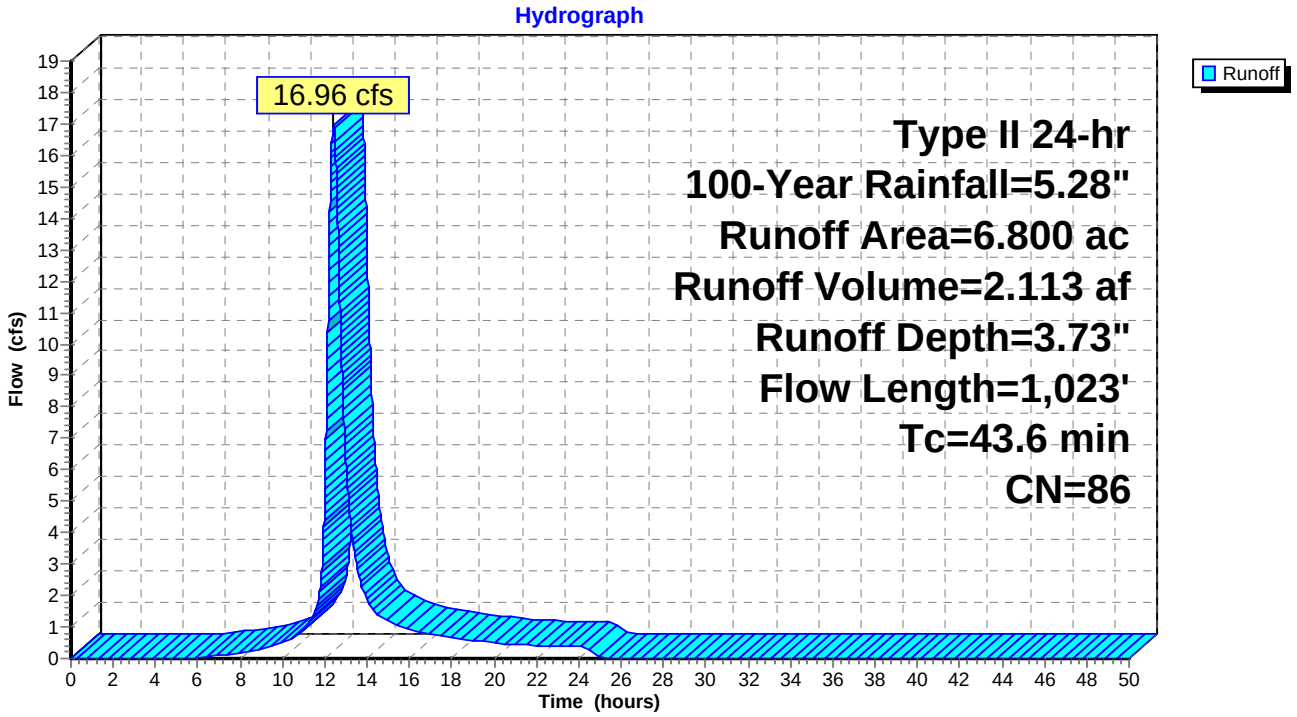
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-Year Rainfall=5.28"

Area (ac)	CN	Description
0.700	98	Paved parking, HSG D
1.600	98	Roofs, HSG D
4.500	80	>75% Grass cover, Good, HSG D
6.800	86	Weighted Average
4.500		66.18% Pervious Area
2.300		33.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0450	0.21		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.50"
22.1	465	0.0025	0.35		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
12.2	333	0.0042	0.45		**Shallow Concentrated Flow, swale** Short Grass Pasture Kv= 7.0 fps
1.3	125	0.0030	1.62	1.27	**Pipe Channel, 12" pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.020 Corrugated PE, corrugated interior
43.6	1,023	Total			

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Subcatchment 1S: Fair Woods Drive



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 1P: Detention Basin

Inflow Area = 6.800 ac, 33.82% Impervious, Inflow Depth = 3.73" for 100-Year event
Inflow = 16.96 cfs @ 12.40 hrs, Volume= 2.113 af
Outflow = 5.95 cfs @ 13.02 hrs, Volume= 2.108 af, Atten= 65%, Lag= 37.4 min
Primary = 5.95 cfs @ 13.02 hrs, Volume= 2.108 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 589.74' @ 13.02 hrs Surf.Area= 13,467 sf Storage= 37,706 cf

Plug-Flow detention time= 132.5 min calculated for 2.107 af (100% of inflow)
Center-of-Mass det. time= 131.0 min (965.2 - 834.1)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	41,280 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	6,927	0	0
587.00	8,535	7,731	7,731
588.00	10,245	9,390	17,121
589.00	12,054	11,150	28,271
590.00	13,965	13,010	41,280

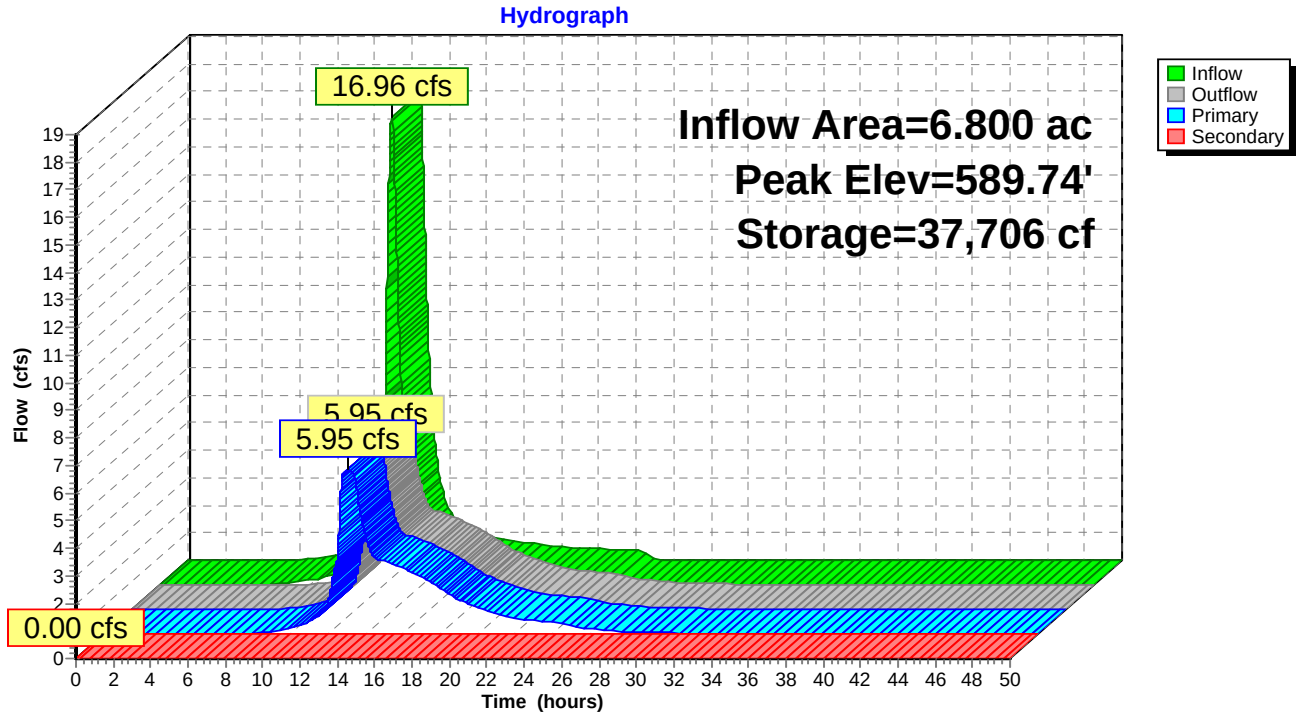
Device	Routing	Invert	Outlet Devices
#1	Primary	585.96'	**12.0" Round 12" outlet pipe** L= 62.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 585.96' / 585.67' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	586.00'	**8.0" Round 8" inlet pipe** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 586.00' / 585.96' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#3	Device 1	589.00'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600
#4	Secondary	589.80'	**20.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=5.95 cfs @ 13.02 hrs HW=589.74' (Free Discharge)
└**1=12" outlet pipe** (Barrel Controls 5.95 cfs @ 7.57 fps)
└**2=8" inlet pipe** (Passes < 3.10 cfs potential flow)
└**3=Orifice/Grate** (Passes < 4.08 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=586.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Detention Basin



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Green Infrastructure & Water Quality Calculations

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Version 1.7
Last Updated: 10/02/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	

Design Point:	1	
P=	1.00	*inch*

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	6.90	2.30	33%	0.35	8,766	
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	6.90	2.30	33%	0.35	**8,766**	**Subtotal 1**
Total	6.90	2.30	33%	0.35	**8,766**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	6.90	2.30	33%	0.35	8,766
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**6.90**	**2.30**	33%	0.35	8,766
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	6.90	2.30	33%	0.35	**8,766**
WQv reduced by Area Reduction techniques					0

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Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C		30%
D	**6.90**	20%
Total Area	6.9	
Calculate the Minimum RRv		
S =	**0.20**	
Impervious =	2.30	*acre*
Precipitation	1	*in*
Rv	0.95	
Minimum RRv	**1,586**	***ft3***
	0.04	af

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Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	1

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	6.90	2.30	0.33	0.35	8766.45	1.00	
Enter Impervious Area Reduced by Disconnection of Rooftops			33%	0.35	8,766	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						*ft^3*	

Soil Information			
Soil Group	D		
Soil Infiltration Rate	0.00	*in/hour*	*Okay*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area				
		Value	Units	Notes
WQv		8,766	*ft^3*	
Enter Depth of Soil Media	*df*	1.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**6575**	***ft^2***	

Determine Actual Bio-Retention Area			
Filter Width	55	*ft*	
Filter Length	55	*ft*	
Filter Area	3025	*ft^2*	
Actual Volume Provided	4033	*ft^3*	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?			Select Practice	
RRv	1,613			
RRv applied	**1,613**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	7,153	*ft^3*	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	0	*ft^3*	This volume is directed another practice	
Sizing √	Error		*Check to be sure Area provided ≥ Af*	

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Summary for Pond 3P: FOREBAY Water Quality in Detention Basin

[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description
#1	581.00'	3,194 cf	**Detention Pond (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
581.00	127	0	0
582.00	242	185	185
583.00	382	312	497
584.00	548	465	962
585.00	738	643	1,605
586.00	2,440	1,589	3,194

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Summary for Pond 4P: PERMANENT POOL Water Quality in Detention Basin

[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description
#1	579.00'	8,007 cf	**Detention Pond (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
579.00	234	0	0
580.00	400	317	317
581.00	590	495	812
582.00	806	698	1,510
583.00	1,047	927	2,437
584.00	1,314	1,181	3,617
585.00	1,605	1,460	5,077
586.00	4,256	2,931	8,007

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix E

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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.**

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

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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

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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

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

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

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

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

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

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

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

(i) Wastewater from washout of concrete;

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

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(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.

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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

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

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

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

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

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

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

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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

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

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

D. Maintaining Water Quality

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

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

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

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

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

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

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E. Eligibility Under This General Permit

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

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

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

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

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

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

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

2. *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*

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

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

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

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

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

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

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

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

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

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

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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:

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

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

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

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

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

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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

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

c. the final SWPPP has been prepared, and

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

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

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

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

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

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

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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*

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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

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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*

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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;

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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

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

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

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

B. Required SWPPP Contents

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

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

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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

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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;

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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.

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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

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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

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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.

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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:

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(Part IV.C.4.a)

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

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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;

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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,

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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

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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.

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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:

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(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,

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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

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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

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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.

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R. Other Permits

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

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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

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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

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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.

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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.

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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 .

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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

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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.

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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

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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.

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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

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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

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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

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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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

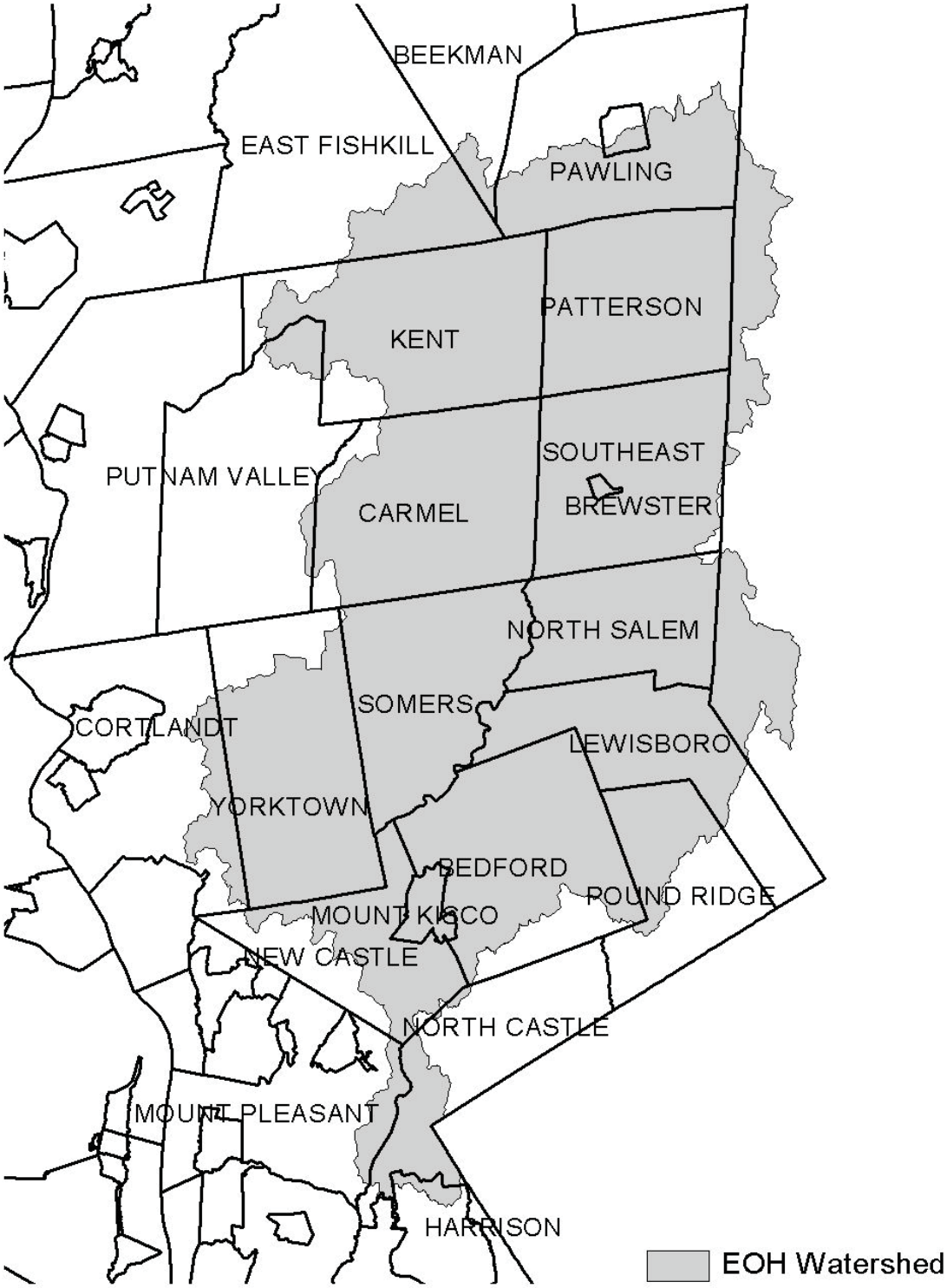
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

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

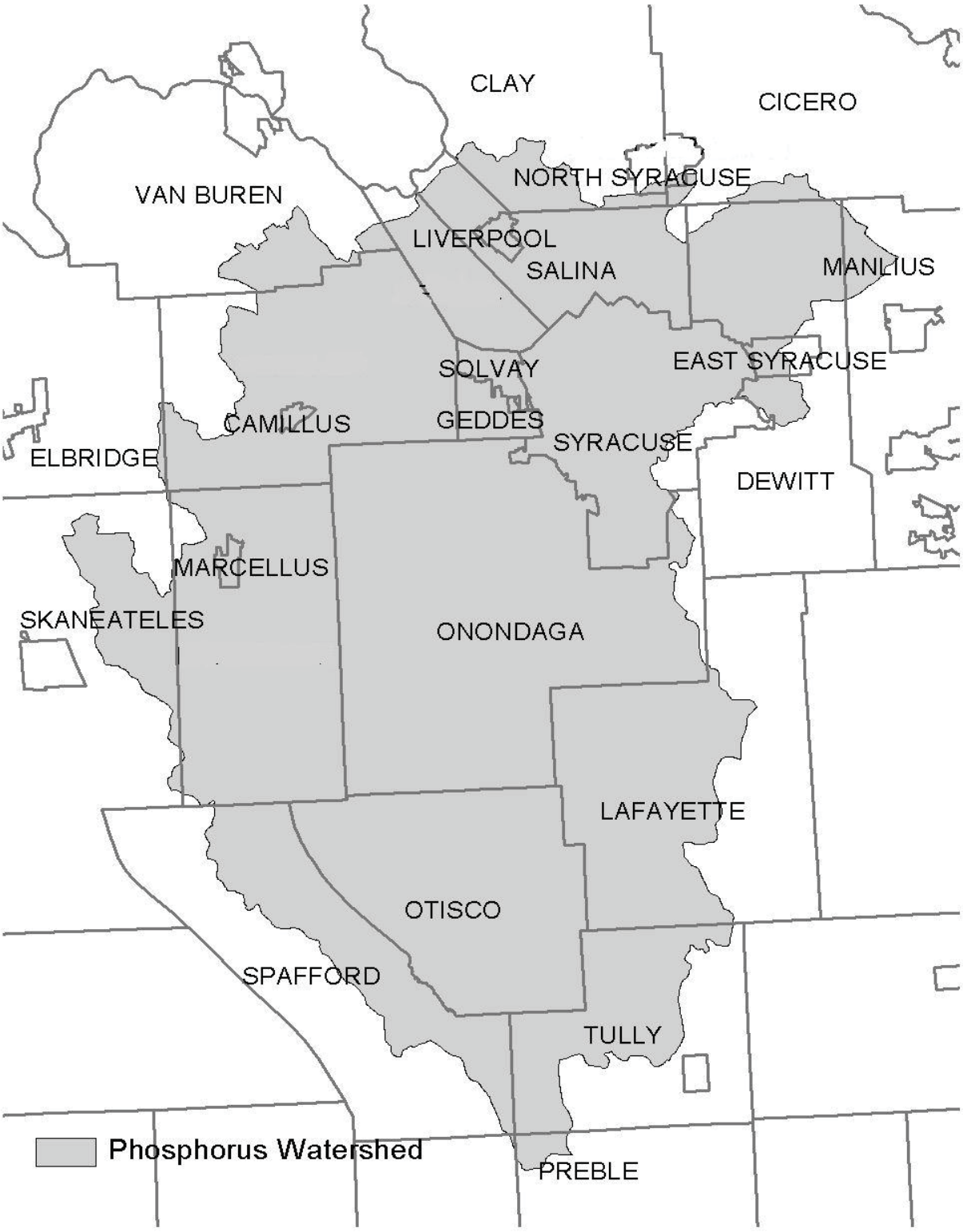
Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Figure 1 - New York City Watershed East of the Hudson



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Figure 2 - Onondaga Lake Watershed



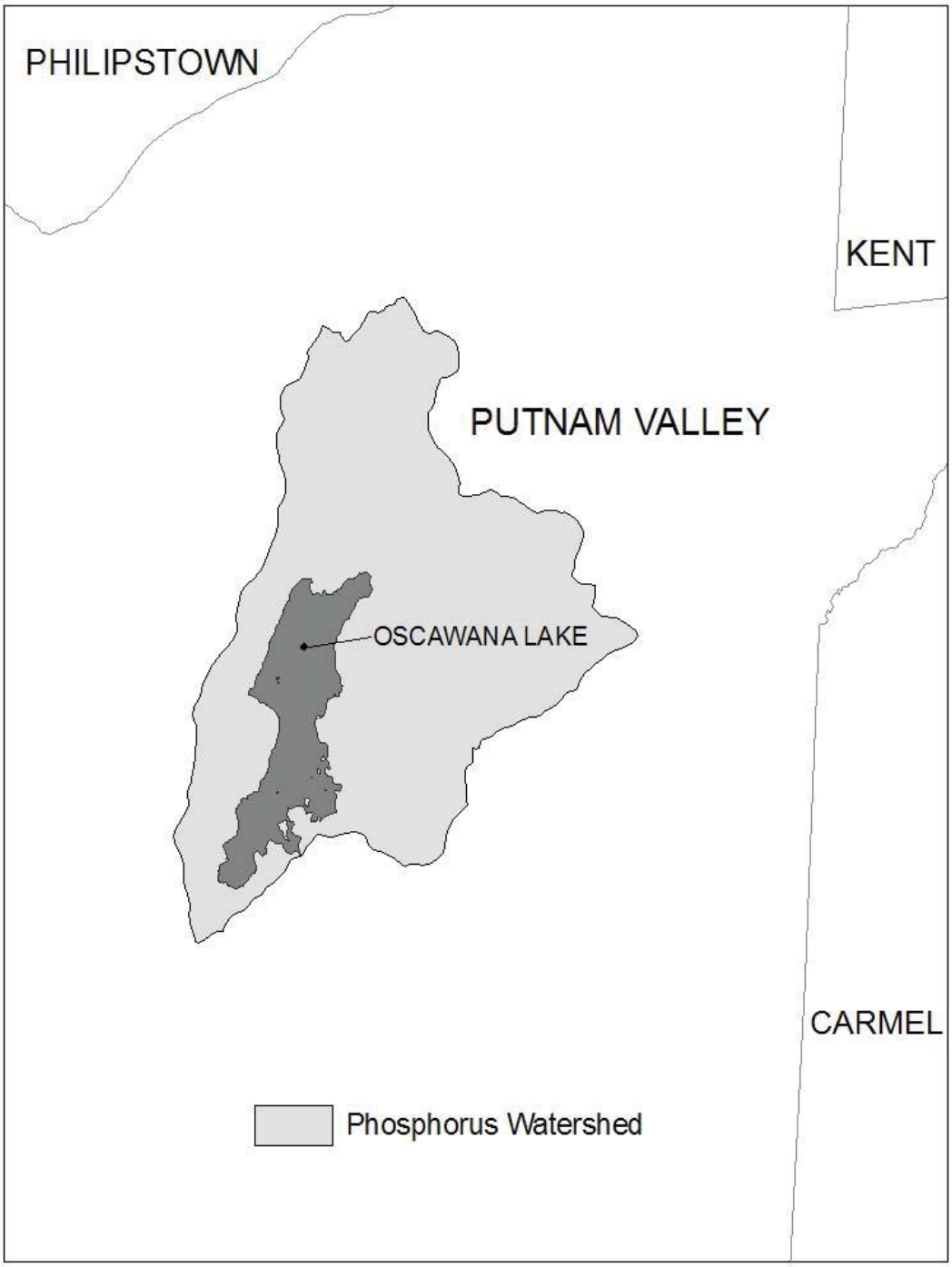
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Figure 3 - Greenwood Lake Watershed



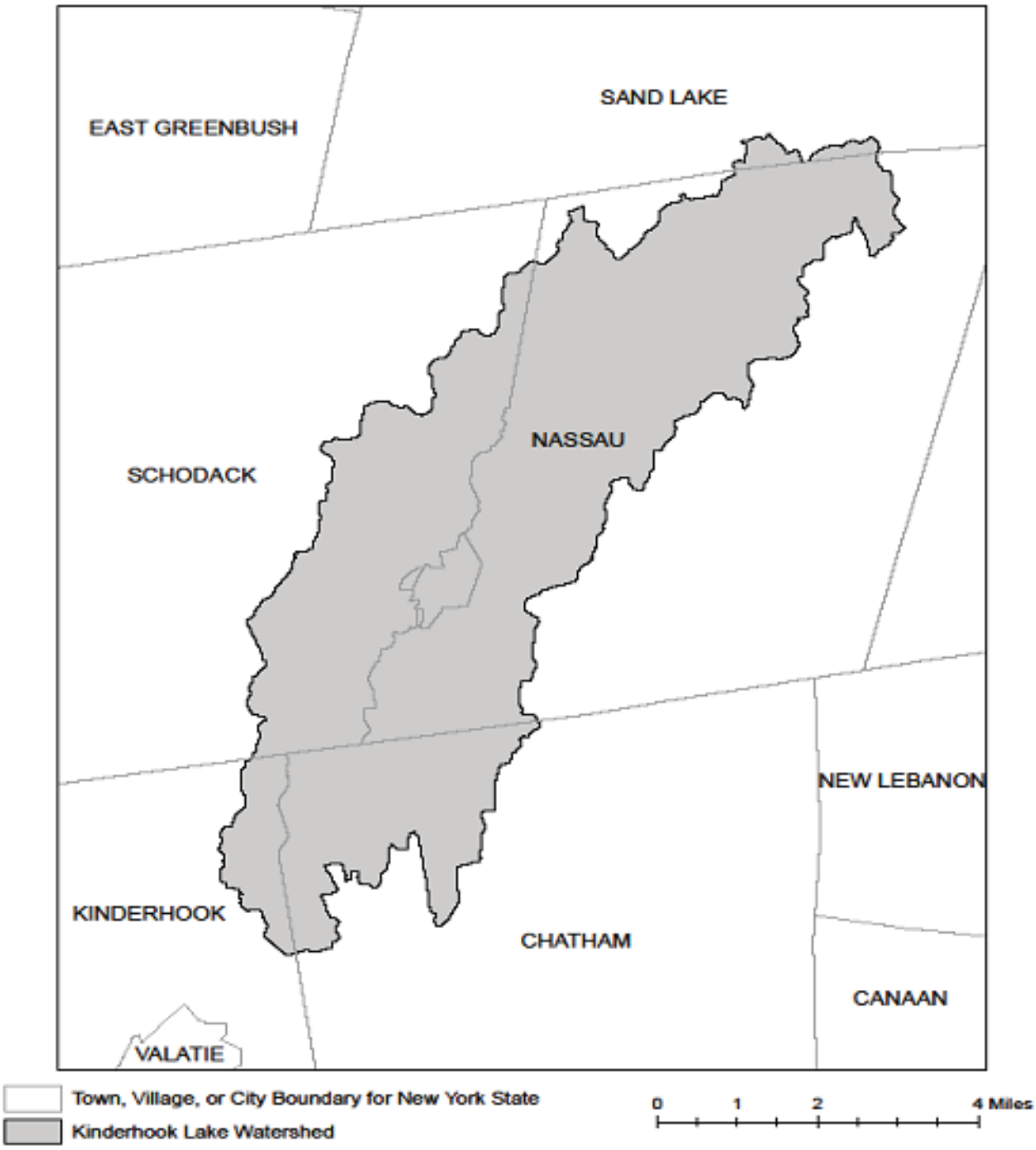
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Figure 4 - Oscawana Lake Watershed



Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Figure 5 - Kinderhook Lake Watershed



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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

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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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

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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

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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

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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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix F

Forms

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR'S CERTIFICATION STATEMENT

Fair Woods Estates Subdivision

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 Amherst.

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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: Fair Woods Estates Subdivision

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.

Owner/Operator First Name	M.I.	Last Name
Robert		Savarino



Signature

6/22/20

Date

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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

Fair Woods Estates Subdivision

Owner/Operator Information

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

Essex Homes of WNY

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.

Patrick		Sheedy Jr
First name	MI	Last Name



Signature

6/22/20

Date

Revised: January 2020

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix G

NYSDEC Notice of Termination (NOT)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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)?

_____

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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)

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix H

Construction Documents

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York
SITE DEVELOPMENT DRAWINGS

AGENCIES

ENGINEERING DEPARTMENT
NAME/TITLE: JEFFERY BURROUGHS, P.E. – TOWN ENGINEER
COMPANY/DEPT: TOWN OF AMHERST ENGINEERING DEPARTMENT
ADDRESS: 1100 NORTH FOREST ROAD
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–631–7154

PLANNING & ZONING DEPARTMENT
NAME/TITLE: DANIEL HOWARD – PLANNING DIRECTOR
COMPANY/DEPT: TOWN OF AMHERST PLANNING DEPARTMENT
ADDRESS: 5583 MAIN STREET
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–631–7051

LAND SURVEYOR
NAME/TITLE: GPI ENGINEERING, LANDSCAPE ARCHITECTURE SURVEYING, LLP
COMPANY/DEPT: 4950 GENESEE STREET, SUITE 100
ADDRESS: BUFFALO, NEW YORK 14225
TELEPHONE 716–633–4844

UTILITIES

NATURAL GAS
COMPANY/DEPT:. NATIONAL FUEL GAS CORP.
ADDRESS: 6363 MAIN STREET
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–857–7000

TELEPHONE COMPANY
COMPANY/DEPT: VERIZON
ADDRESS: 65 FRANKLIN STREET
BUFFALO, NEW YORK 14203
TELEPHONE 716–840–8748

CABLE COMPANY
COMPANY/DEPT: TIME WARNER
ADDRESS: 789 CHURCH ROAD
WEST SENECA, NEW YORK
TELEPHONE 716–558–8615

ELECTRIC COMPANY
COMPANY/DEPT: NATIONAL GRID
ADDRESS: 144 KENSINGTON AVENUE
BUFFALO, NEW YORK 14214
TELEPHONE 716–236–2738

WATER
COMPANY/DEPT:. ERIE COUNTY WATER AUTHORITY
ADDRESS: 3030 UNION ROAD
CHEEKTOWAGA, NEW YORK 14227
TELEPHONE 716–684–1510

DIG SAFELY NEW YORK
TELEPHONE 1–800–962–7962

OWNER/DEVELOPER

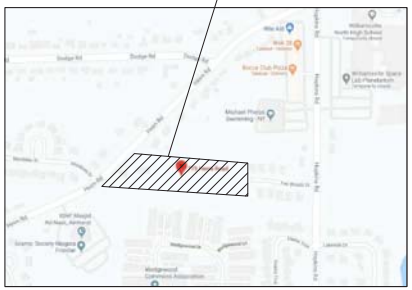
NAME: Essex Homes of WNY, Inc.
ADDRESS 8940 Main Street
Clarence, NY 14031
CONTACT: Robert Savarino
TELEPHONE 716-635-0550

ENGINEER

Carmina • Wood • Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

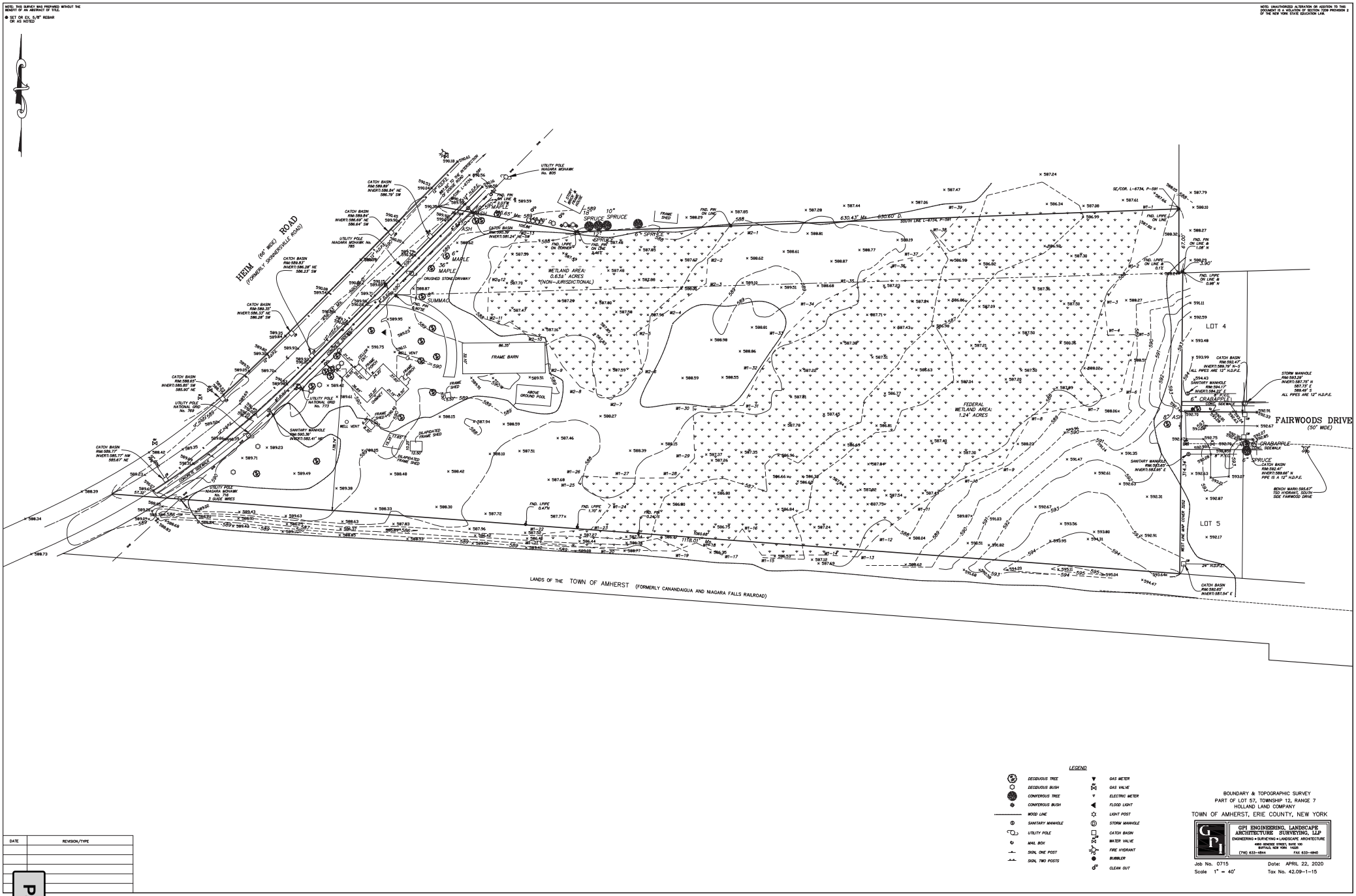
NOVEMBER 2020

PROJECT AREA



LOCATION MAP

DWG NO.	DRAWING TITLE
–	COVER SHEET
–	SURVEY & TOPOGRAPHIC MAP
C–001	DEMOLITION & EROSION CONTROL PLAN
C–002	TYPICAL LOT DEMOLITION & EROSION CONTROL PLAN
C–003	DEMOLITION & EROSION CONTROL DETAILS
C–100	PRELIMINARY PLAT
C–101	SITE DETAILS
C–200	GRADING PLAN
C–201	CENTERLINE ROAD PROFILE
C–300	STORM DRAINAGE PLAN
C–301	STORM DRAINAGE PROFILE
C–302	STORM DRAINAGE DETAILS
C–400	UTILITY PLAN
C–401	SANITARY SEWER & WATERLINE PROFILE & DETAILS
C–402	SANITARY SEWER DETAILS
C–403	SANITARY SEWER DETAILS
C–404	SANITARY SEWER GENERAL NOTES
C–405	SANITARY SEWER TESTING NOTES
C–406	WATER DETAILS
C–407	WATER DETAILS
C–408	WATER DETAILS & NOTES


NOTE: THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE.
● SET OR EX. 5/8" REBAR OR AS NOTED
NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.
HEIM ROAD (66' WIDE) (FORMERLY SOMMERSVILLE ROAD)
FAIRWOODS DRIVE (50' WIDE)
LANDS OF THE TOWN OF AMHERST (FORMERLY CANANDAIGUA AND NIAGARA FALLS RAILROAD)
WETLAND AREA: 0.63± ACRES *(NON-JURISDICTIONAL)
FEDERAL WETLAND AREA: 1.24± ACRES
FRAME BARN
LOT 4
LOT 5
SOUTH LINE L-6734, P-591
WEST LINE MAP COVER 3302
LEGEND
DECIDUOUS TREE
DECIDUOUS BUSH
CONIFEROUS TREE
CONIFEROUS BUSH
WOOD LINE
SANITARY MANHOLE
UTILITY POLE
MAIL BOX
SIGN, ONE POST
SIGN, TWO POSTS
GAS METER
GAS VALVE
ELECTRIC METER
FLOOD LIGHT
LIGHT POST
STORM MANHOLE
CATCH BASIN
WATER VALVE
FIRE HYDRANT
BUMBLER
CLEAN OUT
BOUNDARY & TOPOGRAPHIC SURVEY
PART OF LOT 57, TOWNSHIP 12, RANGE 7
HOLLAND LAND COMPANY
TOWN OF AMHERST, ERIE COUNTY, NEW YORK
GPI ENGINEERING, LANDSCAPE ARCHITECTURE SURVEYING, LLP
ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE
4965 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225
(716) 633-4844 FAX 633-4940
Job No. 0715 Date: APRIL 22, 2020
Scale 1" = 40' Tax No. 42.09-1-15
DATE
REVISION/TYPE

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CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CONSTRUCT TEMPORARY CONSTRUCTION EXIT, INSTALL PERIMETER SILT FENCE/SILT SOCK AND DRAINAGE INLET PROTECTION.
2. CLEAR AND GRUB SITE.
3. INSTALL DETENTION BASIN.
4. COMMENCE SITE GRADING.
5. INSTALL PROPOSED UTILITIES.
6. PREPARE PAVEMENT SUBGRADE.
7. INSTALL CURB, STORM PIPING AND STRUCTURES.
8. INSTALL PAVEMENT.
9. CARRY OUT FINAL GRADING AND INSTALL LANDSCAPING PLANTINGS.
10. CLEAN STORM SYSTEM AND DETENTION BASIN.
11. REMOVE SILT FENCE/SILT SOCK AND CONSTRUCTION ENTRANCES.
12. CLEAN SITE.

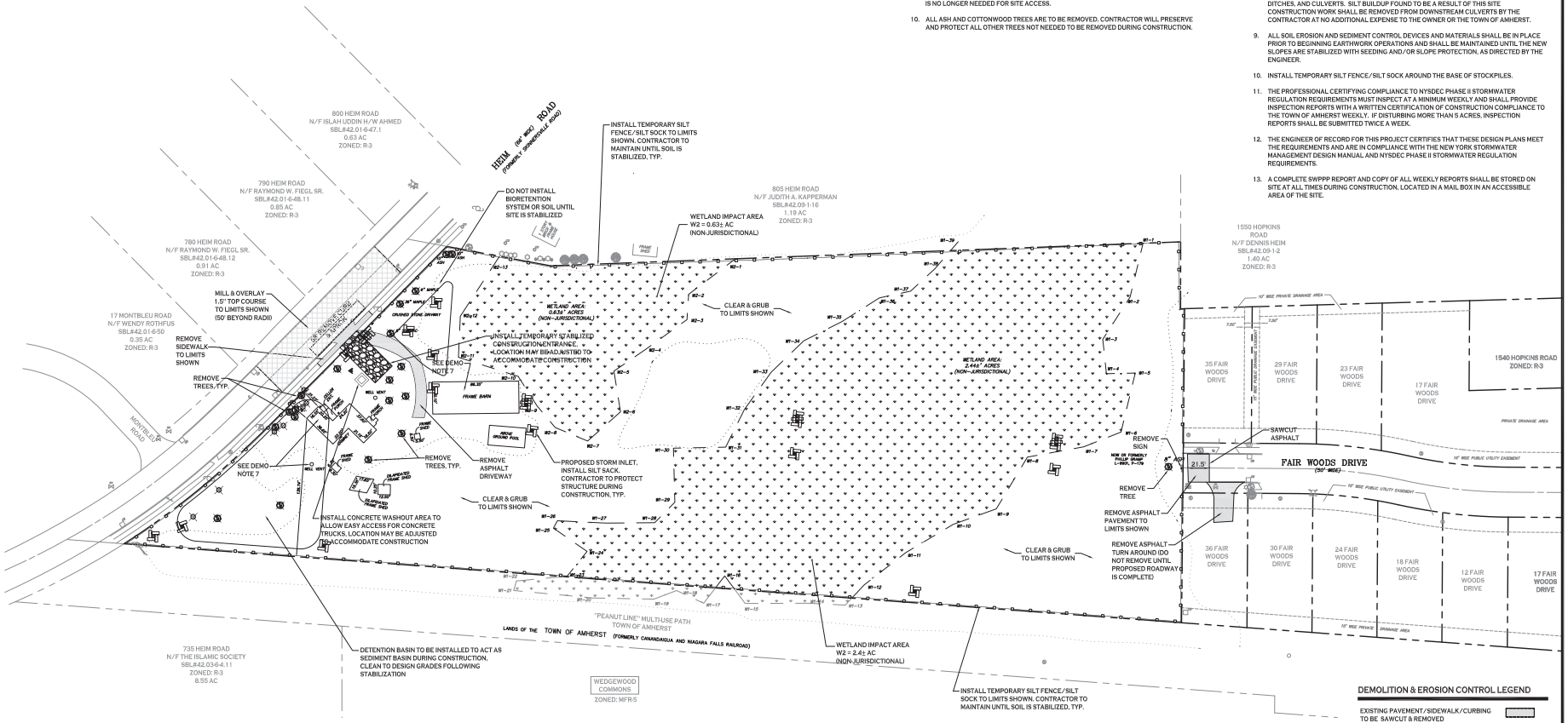
DEMOLITION NOTES:

1. 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/SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
3. CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES WHERE ACCESSING THE SITE FROM PAVED ROADWAYS. STORM DRAINAGE INLETS THAT INTERFERE WITH CONSTRUCTION ENTRANCE TO BE PROTECTED WITH SILT SACK AND OTHER PROPER TEMPORARY INLET PROTECTION MEASURES.
4. IF NECESSARY, CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH NYS M.U.T.C.D. STANDARDS PRIOR TO STARTING WORK.
5. IF NECESSARY, CONTRACTOR TO USE COVERED DUMPSTERS AS REQUIRED FOR CONSTRUCTION WASTE.
6. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. STUMPS AND BRUSH SHALL NOT BE BURIED WITHIN THE TOWN.
7. REMOVE EXISTING HOUSE TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.
8. EXISTING CURB AT DRIVEWAY ENTRANCE TO BE REMOVED SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED.
9. CURB CUT NOT TO BE REMOVED UNTIL TEMPORARY STABILIZED CONSTRUCTION ENTRANCE IS NO LONGER NEEDED FOR SITE ACCESS.
10. ALL ASH AND COTTONWOOD TREES ARE TO BE REMOVED. CONTRACTOR WILL PRESERVE AND PROTECT ALL OTHER TREES NOT NEEDED TO BE REMOVED DURING CONSTRUCTION.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT FENCE/SILT SOCK BARRIERS AS DIRECTED BY THE ENGINEER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE/SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE 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/SILT SOCK BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE ENGINEER 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 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. 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 TOWN OF AMHERST.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK 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/SILT SOCK AROUND THE BASE OF STOCKPILES.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY AND SHALL PROVIDE INSPECTION REPORTS WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF AMHERST WEEKLY. IF DISTURBING MORE THAN 5 ACRES, INSPECTION REPORTS SHALL BE SUBMITTED TWICE A WEEK.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.
13. A COMPLETE SWPPP REPORT AND COPY OF ALL WEEKLY REPORTS SHALL BE STORED ON SITE AT ALL TIMES DURING CONSTRUCTION, LOCATED IN A MAIL BOX IN AN ACCESSIBLE AREA OF THE SITE.



DEMOLITION & EROSION CONTROL PLAN

SCALE: 1"=50'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT/SIDEWALK/CURBING TO BE SAWCUT & REMOVED
- PROPOSED SILT FENCE
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

Carmina Wood Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

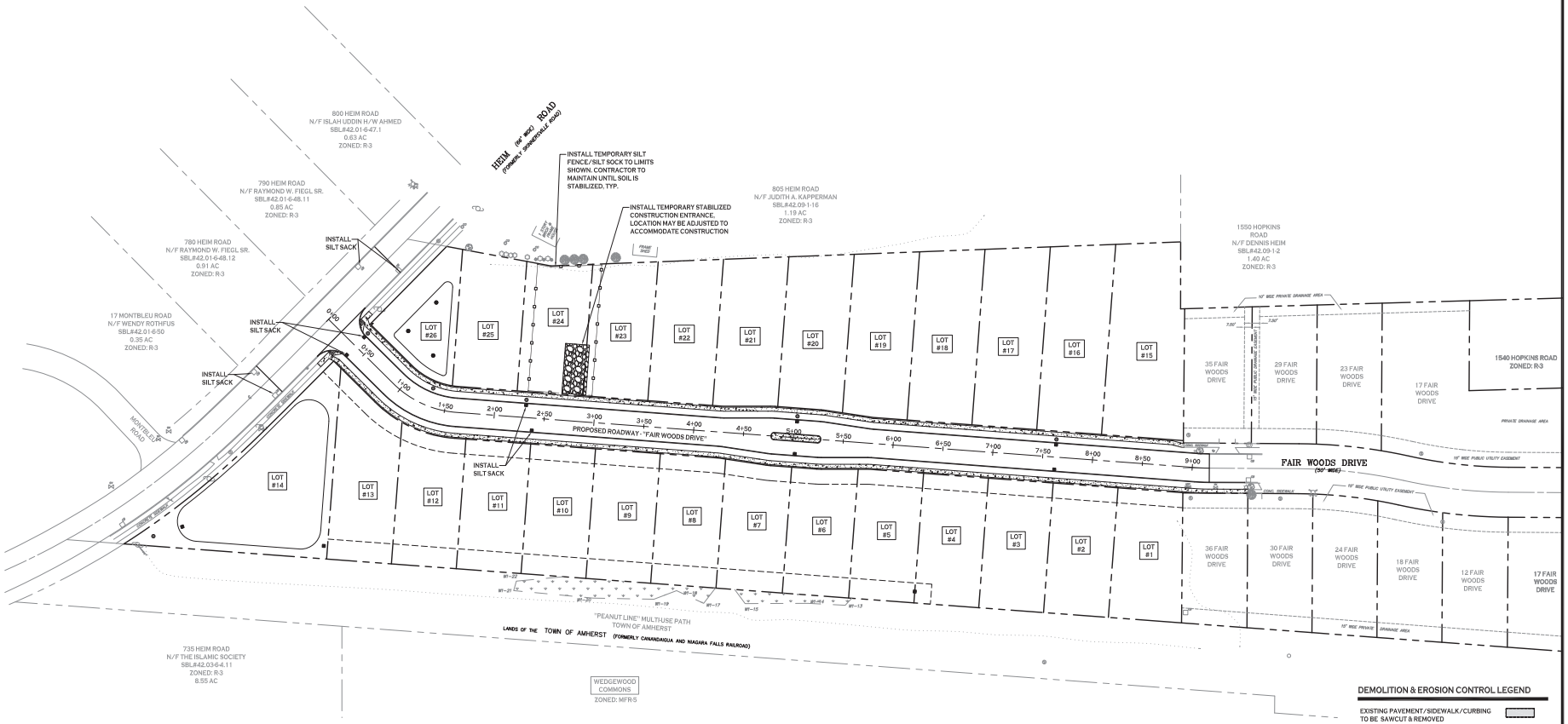
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Demolition & Erosion Control Plan

DRAWING NO.
C-001

Project no.: 19.190

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DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT/SIDEWALK/CURBING TO BE SAWCUT & REMOVED
- PROPOSED SILT FENCE
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

REFER TO C-001 FOR NOTES

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487 Main Street Suite 500
Buffalo, New York 14203
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F 716.842.0263

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

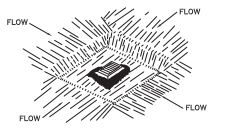
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Drawn by: P. Sheedy
Scale: As Noted

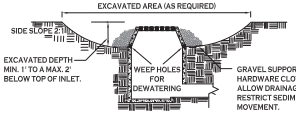
DRAWING NAME:
Typical Lot Demo & Erosion Control Plan

DRAWING NO.
C-002

Project no.: 19.190

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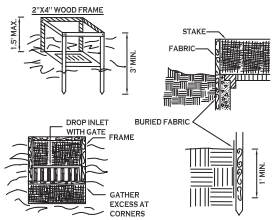


CONSTRUCTION SPECIFICATIONS

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

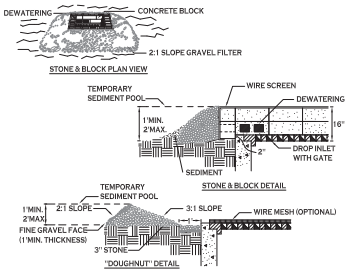


CONSTRUCTION SPECIFICATIONS

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

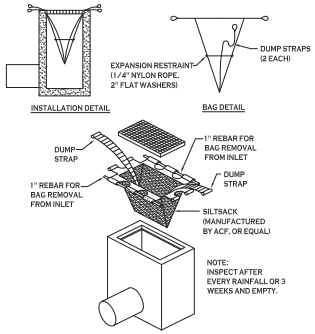


CONSTRUCTION SPECIFICATIONS

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.

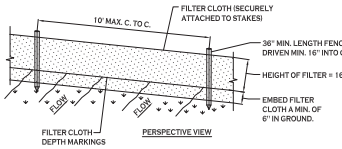
MAXIMUM DRAINAGE AREA 1 ACRE

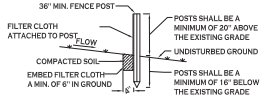
INLET PROTECTION DETAIL 3
NOT TO SCALE



SILT SACK DETAIL
NOT TO SCALE

NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION

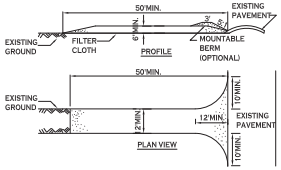




CONSTRUCTION SPECIFICATIONS

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.

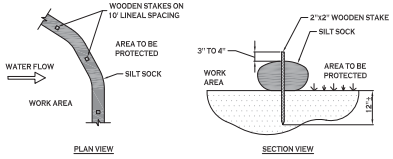
SILT FENCE DETAIL
NOT TO SCALE



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

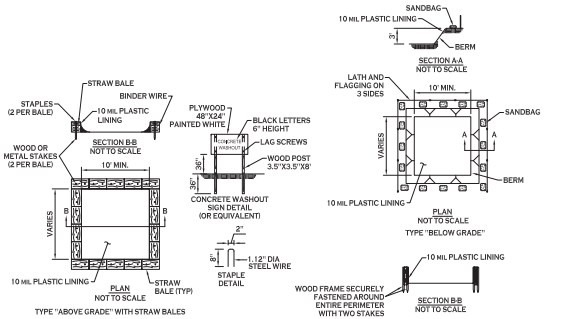


NOTES:

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 ½ 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



NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT DETAIL
NOT TO SCALE

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Demolition & Erosion Control Details

DRAWING NO.
C-003

Project no.: 19.190

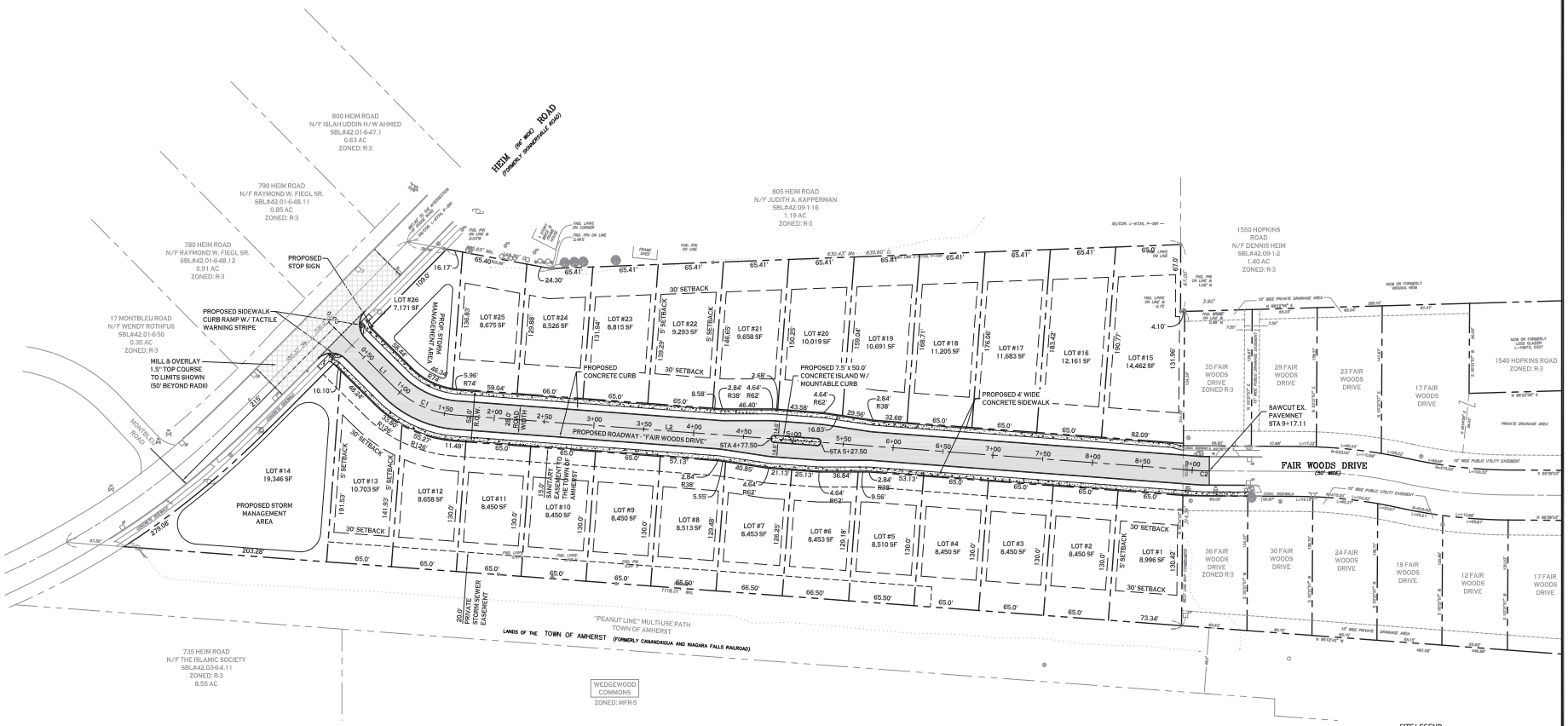
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SITE NOTES:

1. ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
2. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
3. ALL HANDICAP RAMPS AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPES WHERE ENTERING PARKING AREAS/DRIVEWAYS/ROADWAYS.
4. CONCRETE SIDEWALK FRONTING LOTS 14, 16 AND 22 SHALL BE INSTALLED WITH THE ROADWAY AND UTILITY WORK INCLUSIVE OF THE PIP.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AT PROPOSED DRIVEWAY ENTRANCE AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. EXISTING PAVEMENT SHALL NOT BE DISTURBED.



PRELIMINARY PLAT

SCALE: 1"=50'

SITE DATA (R-3 ZONING)

MIN. LOT WIDTH = 65 FT INTERIOR LOTS
MIN. LOT WIDTH = 75 FT CORNER LOTS

MIN. LOT AREA = 8,450 SF INTERIOR LOTS
MIN. LOT AREA = 9,750 SF CORNER LOTS

FRONT SETBACK = 30 FT
SIDE SETBACK = 5 FT
REAR SETBACK = 30 FT

MAXIMUM LOT COVERAGE = 35%
MAXIMUM BUILDING HEIGHT = 35 FT

MINIMUM FLOOR AREA = 1,000 SF (1 STORY)
MINIMUM FLOOR AREA = 1,200 SF (2 STORIES)

CURVE TABLE

CURVE	LENGTH (FT)	RADIUS (FT)	DELTA ANGLE
C1	70.69	100	40° 30' 16"
C2	13.63	200	3° 54' 21"

LINE TABLE

LINE	LENGTH (FT)	BEARING
L1	91.34	S 45° 14' 26" E
L2	741.44	S 85° 44' 42" E

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50 0 50 100Ft.

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

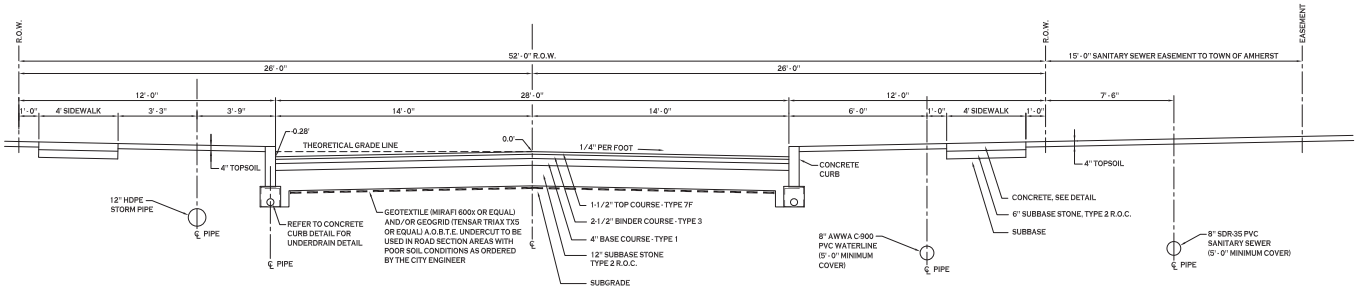
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Preliminary Plat

DRAWING NO.
C-100

Project no.: 19.190

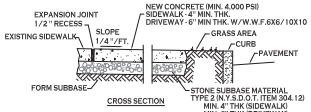
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TYPICAL PAVEMENT SECTION (T.O.A. LOCAL STREET)

NOT TO SCALE

NOTE:
LIMITS AND DEGREE OF DEPTH OF ROAD SECTION UNDERCUT AREA WILL BE DETERMINED BY THE TOWN/CITY ENGINEER OR HIS/HER REPRESENTATIVE. MAXIMUM DEGREE OF DEPTH OF UNDERCUTTING SHALL BE 3'-6". ALL UNDERCUT AREAS SHALL BE GRADED/CROWNED TO DRAIN PROPERLY.

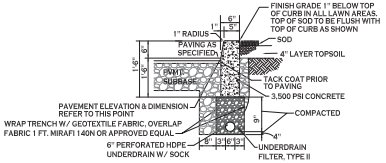


CROSS SECTION

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, CONCRETE TO BE CLASS D AND SEALED AFTER CURING.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS 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" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

CONCRETE SIDEWALK

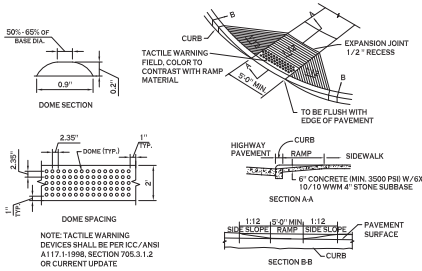
NOT TO SCALE



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 (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.
3. TIE UNDERDRAINS INTO CLOSEST DRAINAGE SYSTEM OR OUTLET TO DAYLIGHT UNLESS OTHERWISE INDICATED. SLOPE OF UNDERDRAIN TO FOLLOW BOTTOM OF CURB SLOPE.

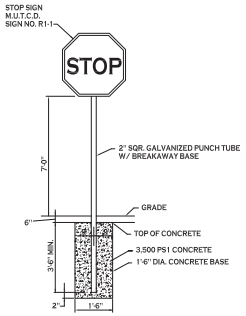
TYPE "A" CONCRETE CURB

NOT TO SCALE



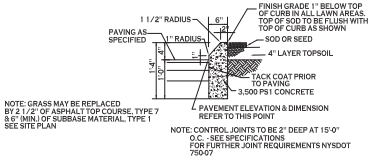
SIDEWALK CURB RAMP

NOT TO SCALE



STOP SIGN

NOT TO SCALE



MOUNTABLE CURB

NOT TO SCALE

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

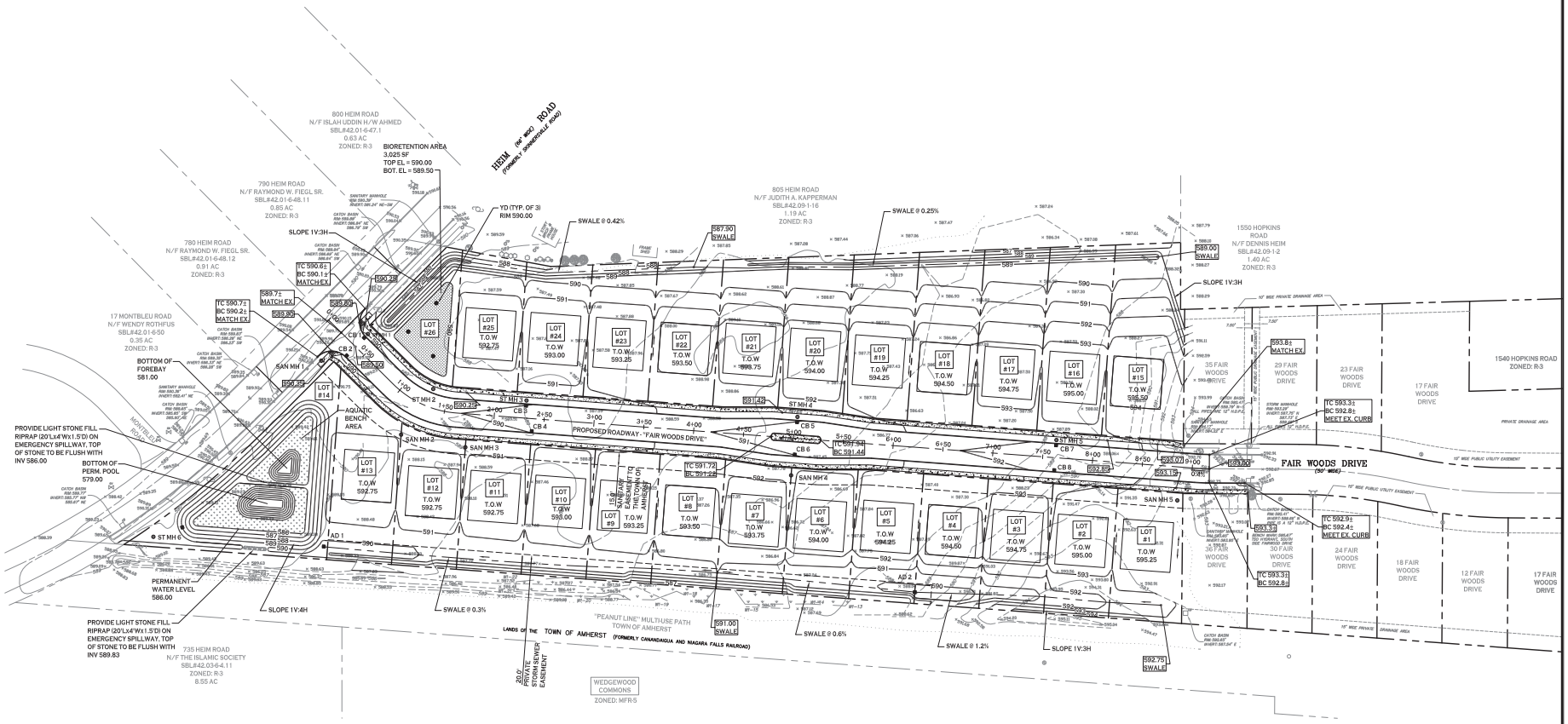
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Site Details

DRAWING NO.
C-101
Project no.: 19.190

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GRADING PLAN

SCALE: 1"=50'

STRUCTURE TABLE

STRUCTURE	STATION	OFFSET	RIM
AD 1	1+15.41	172.14' RT.	589.75
AD 2	6+32.14	144.50' RT.	589.75
CB 1	0+37.93	13.00' LT.	589.40
CB 2	0+37.93	13.00' RT.	589.40
CB 3	2+31.03	13.00' LT.	589.98
CB 4	3+38.33	13.00' RT.	590.02
CB 5	5+02.52	16.75' LT.	590.98
CB 6	5+02.52	16.75' RT.	590.98
CB 7	7+62.27	13.00' LT.	592.10
CB 8	7+62.27	13.00' RT.	592.10
CB 9	0+41.73	250.04' RT.	589.00
ST MH 1	0+37.93	17.75' LT.	590.00
ST MH 2	1+31.06	18.39' LT.	590.20
ST MH 3	2+31.03	17.75' LT.	590.48
ST MH 4	5+02.52	21.50' LT.	591.48
ST MH 5	7+62.27	17.75' LT.	592.75
ST MH 6	0+28.41	277.39 RT.	589.50
SAN MH 1	0+23.34	34.03' RT.	590.50
SAN MH 2	1+21.77	36.60' RT.	590.80
SAN MH 3	1+73.51	33.50' RT.	590.80
SAN MH 4	5+00.52	37.25' RT.	591.80
SAN MH 5	8+87.52	33.50' RT.	593.50

GRADING NOTES:

1. IN GENERAL, EXTERIOR GRADE AT THE PROPOSED HOUSES SHALL BE 2' ABOVE THE HIGHEST ADJACENT EDGE OF ROAD, CORNER LOTS MAY DIFFER, SEE PLAN FOR SPECIFIC SITUATIONS.
2. IN GENERAL, 1ST FFE FOR THE PROPOSED HOUSES SHALL BE 2.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
3. IN GENERAL, TOP OF WALL ELEVATION SHALL BE 1.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
4. SANITARY SEWER INVERT AT THE PROPOSED HOUSE SHALL BE 1.5' ABOVE THE BASEMENT FLOOR ELEVATION, BASEMENT FLOOR ELEVATION IS 9' BELOW THE 1ST FFE.
5. HOUSE BOXES SHOWN ARE 50'x50' FOR DESIGN PURPOSES.

PROPOSED GRADING LEGEND

- PROPOSED CONTOUR — 101
- PROPOSED SPOT ELEVATION — 100.80
- PROPOSED TOP OF CURB/ BOT. OF CURB ELEVATION — T.C. 100.50 B.C. 100.00
- PROPOSED CATCH BASIN — CB
- PAVEMENT/GROUND SLOPE
- PROPOSED MANHOLE — MH
- PROPOSED YARD DRAIN — YD
- PROPOSED SWALE

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50' 0 50 100Ft.

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REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

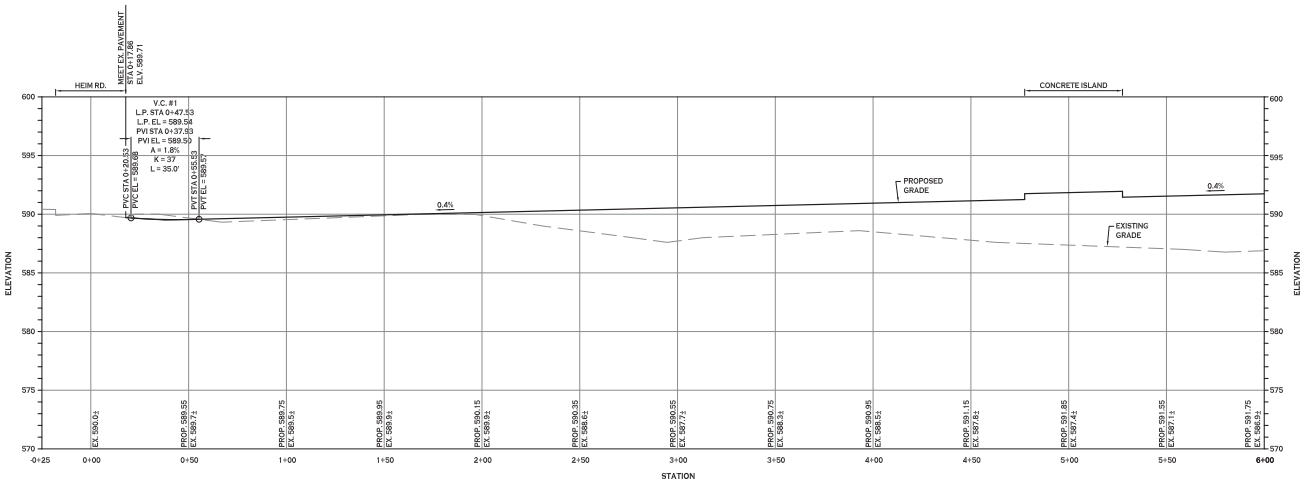
Grading Plan

DRAWING NO.

C-200

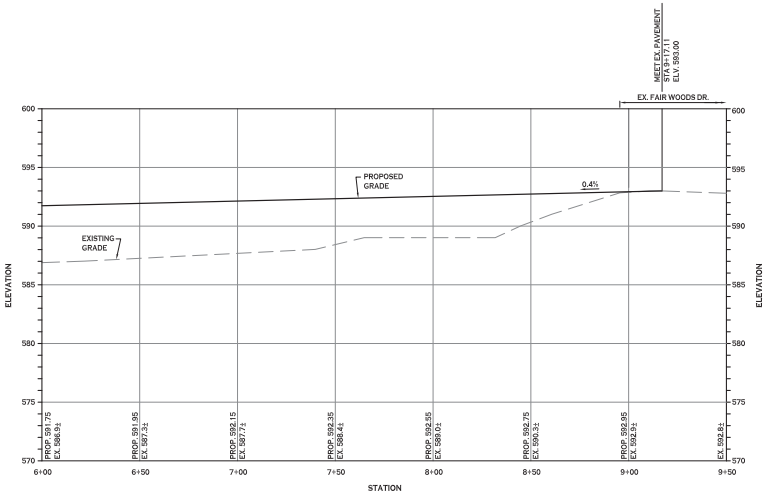
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CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Centerline
Road Profile

DRAWING NO.
C-201

Project no.: 19.190

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PRE DEVELOPMENT STORMWATER EVENT SUMMARY

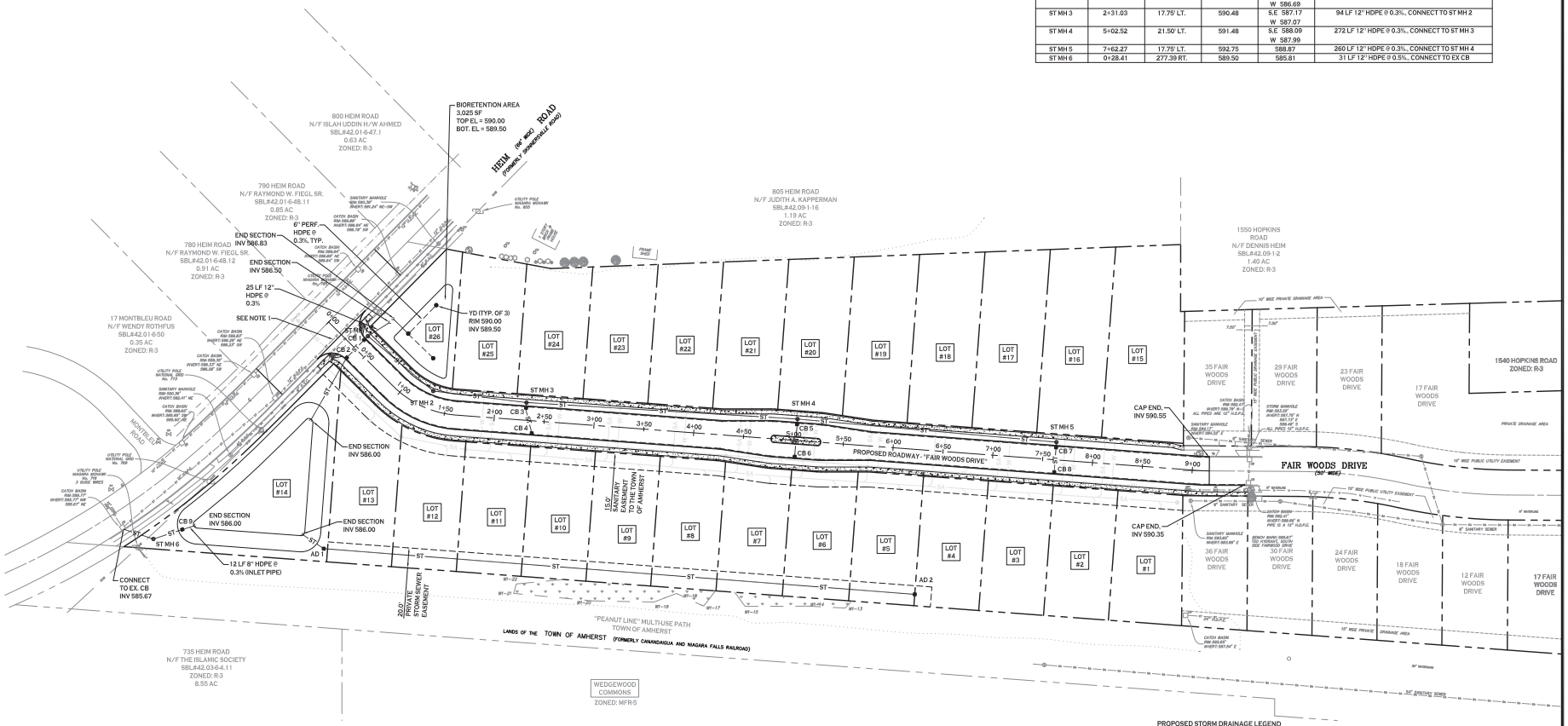
EVENT	RUNOFF (CFS)	VOLUME (AC-FT)	DEPTH (INCHES)
1-YEAR	4.06	0.250	0.89
2-YEAR	6.19	0.363	1.29
5-YEAR	9.68	0.552	1.95
10-YEAR	13.08	0.737	2.60
25-YEAR	18.86	1.056	3.71
50-YEAR	24.30	1.362	4.79
100-YEAR	30.83	1.734	6.09

POST DEVELOPMENT STORMWATER EVENT SUMMARY
DETENTION BASIN

EVENT	INFLOW (CFS)	OUTFLOW (CFS)	ELEVATION (FEET)	STORAGE (CUBIC-FEET)
1-YEAR	3.28	1.02	586.91	6,969
2-YEAR	4.50	1.46	587.21	9,540
5-YEAR	6.39	1.95	587.68	13,904
10-YEAR	8.18	2.25	588.13	18,422
25-YEAR	11.11	2.66	588.84	26,316
50-YEAR	13.80	4.12	589.33	32,337
100-YEAR	16.96	5.95	589.74	37,707

STRUCTURE TABLE

STRUCTURE	STATION	OFFSET	RIM	INV	DESCRIPTION
AD 1	1+15.41	172.14' RT.	589.75	586.07	24 LF 12" HDPE @ 0.3%, OUTLET TO DETENTION BASIN
AD 2	6+32.14	144.50' RT.	589.75	587.85	593 LF 12" HDPE @ 0.3%, CONNECT TO AD 1
CB 1	0+37.93	13.00' LT.	589.40	SE 587.15 NE,SW 586.30	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 2
CB 2	0+37.93	13.00' RT.	589.40	SE 587.15 NE,SW 586.22	71 LF 12" HDPE @ 0.3%, OUTLET TO DETENTION POND
CB 3	2+31.03	13.00' LT.	589.98	E,W 587.73 SE 587.20	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 3 183 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 1
CB 4	3+38.33	13.00' RT.	590.02	E,W 587.77 NW 587.29	28 LF 12" HDPE @ 0.3%, CONNECT TO CB 3 214 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 2
CB 5	5+02.52	16.75' LT.	590.98	E,W 588.73 N 588.11	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 4 272 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 3
CB 6	5+02.52	16.75' RT.	590.98	E,W 588.73 N 588.19	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 5 260 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 4
CB 7	7+62.27	13.00' LT.	592.10	E,W 589.85 N 588.90	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 5 260 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 5
CB 8	7+62.27	13.00' RT.	592.10	E,W 589.85 N 588.96	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 7 260 LF 6" PERF, HDPE @ STD. DEPTH, CONNECT TO CB 6
CB 9	0+41.73	250.04' RT.	589.00	585.96	31 LF 12" HDPE @ 0.5%,, CONNECT TO ST MH 6
ST MH 1	0+37.93	17.75' LT.	590.00	SE 586.43 NE,SW 586.33	5 LF 12" HDPE @ 0.6%,, CONNECT TO CB 1
ST MH 2	1+31.06	18.39' LT.	590.20	E 586.79 W 586.69	85 LF 12" HDPE @ 0.3%, CONNECT TO ST MH 1
ST MH 3	2+31.03	17.75' LT.	590.48	S,E 587.17 W 587.07	94 LF 12" HDPE @ 0.3%,, CONNECT TO ST MH 2
ST MH 4	5+02.52	21.50' LT.	591.48	S,E 588.09 W 587.99	272 LF 12" HDPE @ 0.3%,, CONNECT TO ST MH 3
ST MH 5	7+62.27	17.75' LT.	592.75	588.87	260 LF 12" HDPE @ 0.3%,, CONNECT TO ST MH 4
ST MH 6	0+28.41	277.39 RT.	589.50	585.81	31 LF 12" HDPE @ 0.5%,, CONNECT TO EX CB



N

STORM DRAINAGE PLAN

SCALE: 1"=50'

PROPOSED STORM DRAINAGE LEGEND

- PROPOSED STORM PIPE — ST —
- PROPOSED PERFORATED STORM PIPE - - - -
- PROPOSED CATCH BASIN ■
- PROPOSED YARD DRAIN ⊕
- PROPOSED CLEANOUT ○

CB: CATCH BASIN
C.O.: CLEAN OUT
YD: YARD DRAIN

STORM DRAINAGE NOTES

1. STORM PIPE ALONG HEIM ROAD THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND PER ERIE COUNTY DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

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Buffalo, New York 14203
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F 716.842.0263

REVISIONS:
No. Description Date

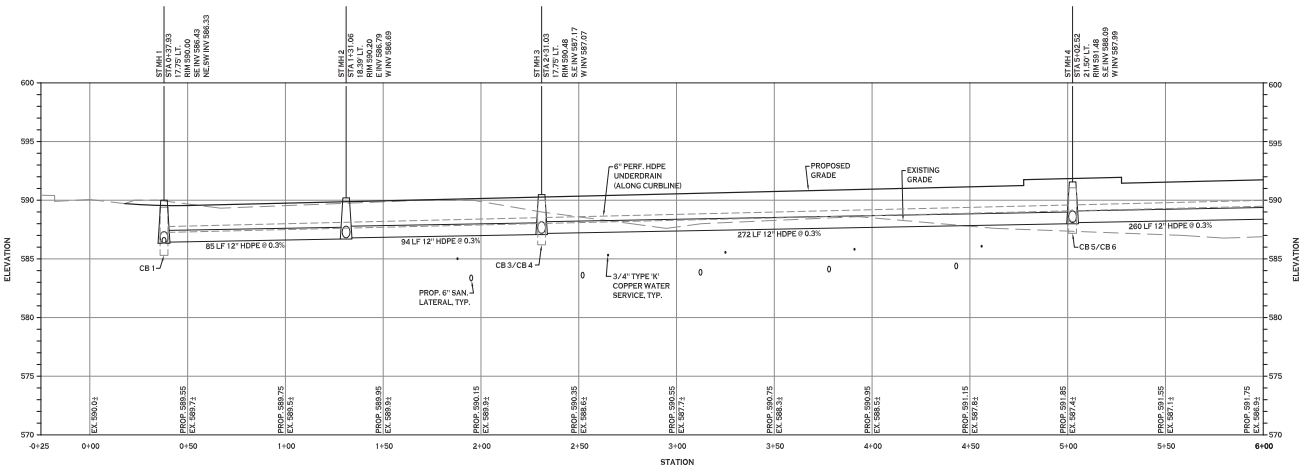
PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Storm Drainage Plan

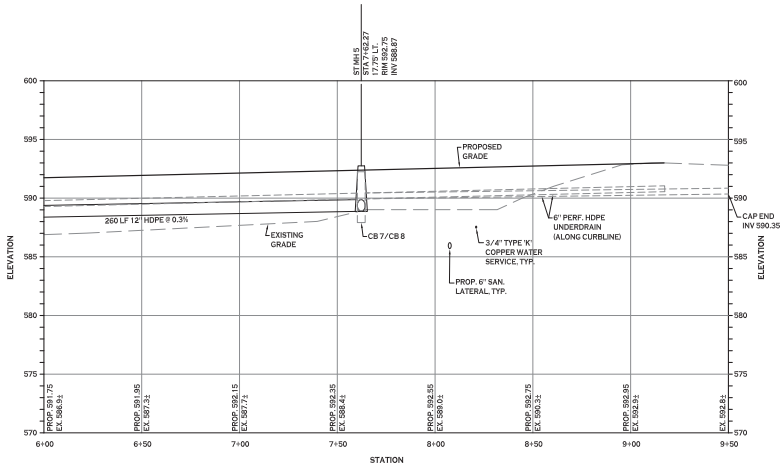
DRAWING NO.
C-300

Project no.: 19.190



CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'

NOTES:

1. SELECT FILL TO BE INSTALLED FOR STORM SEWERS UNDER PAVEMENT & CONCRETE SURFACES EXTEND 5' BEYOND PAVEMENT LIMITS, TYP.
2. PROFILES SHOWN IN RELATION TO THE CENTERLINE OF THE ROADWAY. GRADING/DEPTH AND ALIGNMENT MAY VARY IN RELATION TO THE CENTERLINE. REFER TO DRAWING C-300 FOR REFERENCE.

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

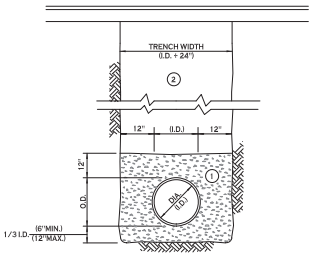
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Storm Drainage Profile

DRAWING NO.
C-301

Project no.: 19.190

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

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

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

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH 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.

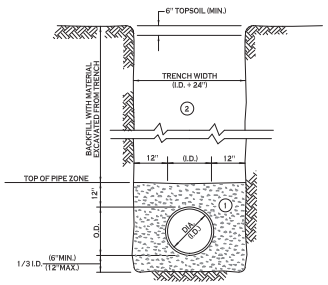
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES 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.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

STORM SEWER TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

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

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

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

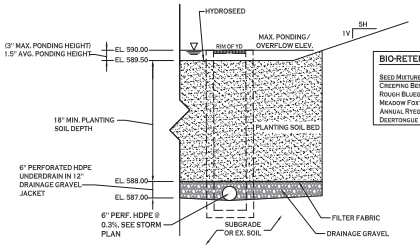
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH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

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

STORM SEWER TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE



BIO-RETENTION AREA SEEDING SPEC (NORTHEAST WETLAND GRASS SEED MIX):

SEED MIXTURE	VARIETY	PERCENT BY NO. OF SEEDS
CREEPING BENTGRASS	AGROSTIS STOLONIFERA	63.0
ROUGH BLUEGRASS	POA TRIVIALIS	17.0
MEADOW FOXTAIL	ALOPECURUS ARUNDINACEUS	11.0
ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	4.5
DEERTONGUE	PANICUM CLANDESTINUM	4.5

NOTES:

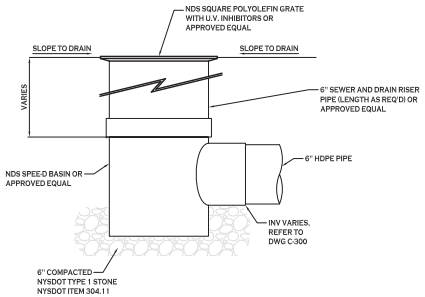
1. FILTER FABRIC TO BE NON-WOVEN CLASS 'C', MIRAFI 180N OR APPROVED EQUIVALENT
2. MULCH TO BE SHREDDED HARDWOOD, AGED 12 MONTHS MIN.
3. DRAINAGE GRAVEL TO MEET AASHTO M-43. NO.67. SIZE 0.25" TO 0.75"
4. CONTRACTOR TO PROVIDE PLANTING SOIL SUBMITTAL SPECIFICATION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

NOTE: PLANTING SOIL SHALL BE LOAM/SAND MIX CONTAINING A MINIMUM OF 35 TO 60% SAND BY VOLUME AND LESS THAN 25% CLAY. SOIL SHOULD FALL WITHIN USCS TYPES SM OR ML WITH PERMEABILITY OF AT LEAST 0.5 FEET PER DAY. SOIL SHOULD BE FREE FROM STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED.

CHARACTERISTICS SHALL BE:
PH RANGE: 5.2- 7.00
ORGANIC MATTER: 1.5 - 4.0%
MAGNESIUM: 35 LBS PER ACRE MIN.
PHOSPHORUS: 75 LBS PER ACRE MIN.
POTASSIUM: 85 LBS PER ACRE MIN.
SOLUBLE SALTS: 500 PPM
CLAY: 10 TO 25%
SILT: 30 TO 55%
SAND: 35 TO 60%

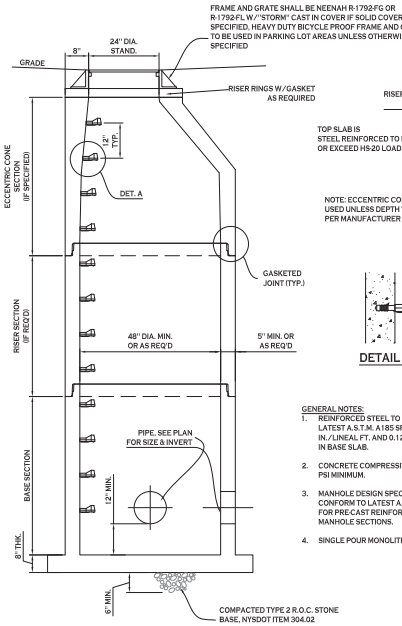
BIORETENTION AREA - TYPICAL SECTION

NOT TO SCALE



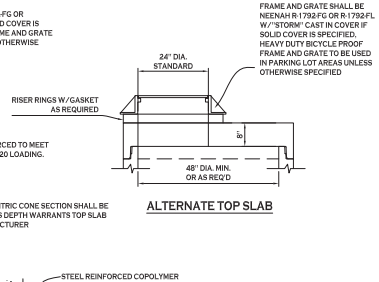
TYPICAL AREA DRAIN DETAIL

NOT TO SCALE



TYPICAL STORM MANHOLE DETAIL

NOT TO SCALE



NOTE: ECCENTRIC CONE SECTION SHALL BE USED UNLESS DEPTH WARRANTS TOP SLAB PER MANUFACTURER

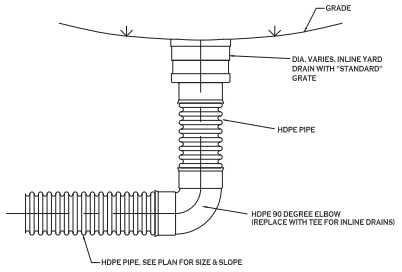
ALTERNATE TOP SLAB



DETAIL A

GENERAL NOTES:

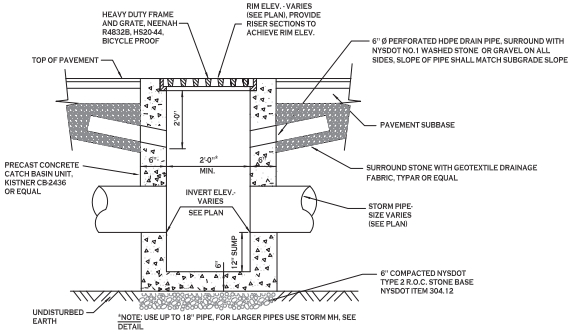
1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN BASE SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.



NOTE:
SEE TYPICAL TRENCH SECTION FOR BEDDING REQUIREMENTS

TYPICAL YARD DRAIN DETAIL

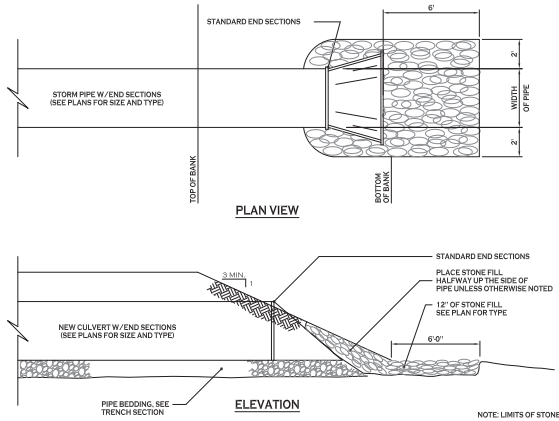
NOT TO SCALE



*NOTE: USE UP TO 18" PIPE, FOR LARGER PIPES USE STORM MH, SEE DETAIL

TYPICAL PRECAST CATCH BASIN

NOT TO SCALE



PLAN VIEW

ELEVATION

NOTE: LIMITS OF STONE SHOWN ARE MINIMUMS. PLAN MAY INDICATE GREATER LIMITS

TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP

NOT TO SCALE

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REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Storm Drainage Details

DRAWING NO.
C-302

Project no.: 19.190

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STRUCTURE TABLE

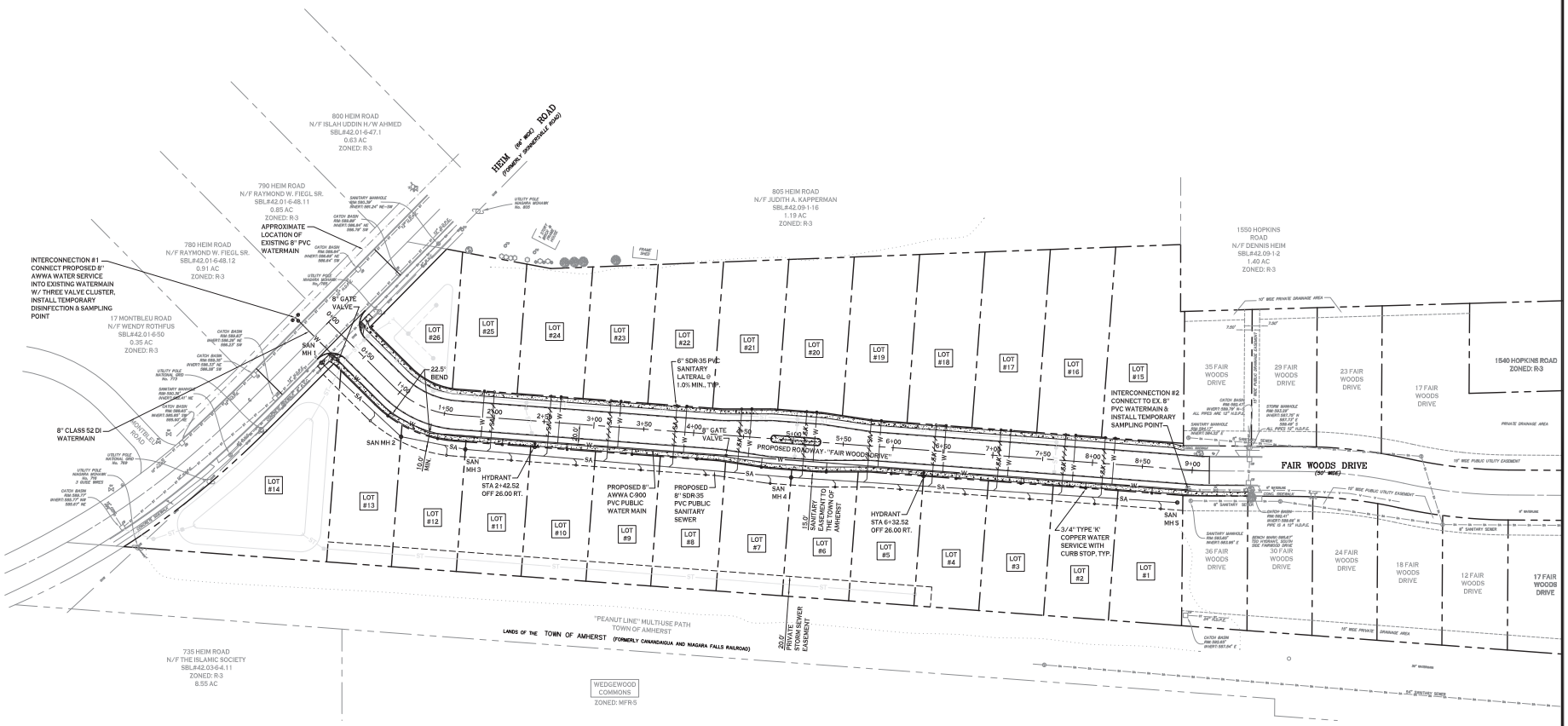
STRUCTURE	STATION	OFFSET	RIM	INV	DESCRIPTION
SAN MH 1	0+23.34	34.03' RT.	590.50	SE 582.00 EX. 581.9±	CONNECT TO EX. 8" PVC SANITARY SEWER
SAN MH 2	1+21.77	36.60' RT.	590.80	E 582.55 NW 582.45	109 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 1
SAN MH 3	1+73.51	33.50' RT.	590.80	E 582.91 W 582.81	65 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 2
SAN MH 4	5+00.52	37.25' RT.	591.80	E 584.32 W 584.22	327 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 3
SAN MH 5	8+87.52	33.50' RT.	593.50	585.87	387 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 4

*ALL OTHER MANHOLES TO BE 4'Ø

NOTE: ALL SANITARY SEWER MANHOLES AND PIPE ARE PUBLIC.

UTILITY NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING STORM AND SANITARY LOCATIONS/INVERTS PRIOR TO CONSTRUCTION. EXISTING WATER, GAS, ELECTRIC AND SANITARY LINES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION/SIZE/CONDITION BEFORE CONSTRUCTION.
2. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH PAVEMENT AREAS.
3. PROVIDE FITTINGS AND BLOCKING AS NECESSARY AT ALL BENDS IN WATER LINES.
4. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
5. THE ERIE COUNTY WATER AUTHORITY (ECWA) IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION FOR THE NEW WATER SERVICE.
6. ALL SANITARY SEWER CONSTRUCTION SHALL ADHERE TO ERIE COUNTY DIVISION OF SEWERAGE MANAGEMENT SPECIFICATIONS AND DETAILS, AND ERIE COUNTY DEPARTMENT OF HEALTH RULES AND REGULATIONS.
7. ALL OTHER REQUIRED PERMITS BY THE STATE OF NEW YORK, ERIE COUNTY, OR TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL FOLLOW AWWA C605 OR M23 FOR FLUSHING AND PRESSURE AND LEAKAGE TESTING; AND AWWA C651 EXCEPT THE TABLE METHOD WHEN DISINFECTING THE WATERLINE.
9. INSTALL 6" SDR-35 PVC SANITARY LATERAL @ 1.0% MIN. SLOPE FOR EACH BUILDING LOT, WYE CONNECT TO PROPOSED PUBLIC 8" SDR-35 PVC SANITARY SEWER.
10. INSTALL 3/4" TYPE 'K' COPPER WATER SERVICE WITH CURB STOP FOR EACH BUILDING LOT, TAP PROPOSED PUBLIC 8" C-900 PVC WATERMAIN.



N

UTILITY PLAN

SCALE: 1"=50'

PROPOSED UTILITY LEGEND

- PROPOSED WATER LINE — W
- PROPOSED SANITARY SEWER — SA
- PROPOSED SANITARY MANHOLE
- PROPOSED WATER VALVE
- PROPOSED CLEANOUT
- INSTALL SELECT FILL

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

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No.	Description	Date

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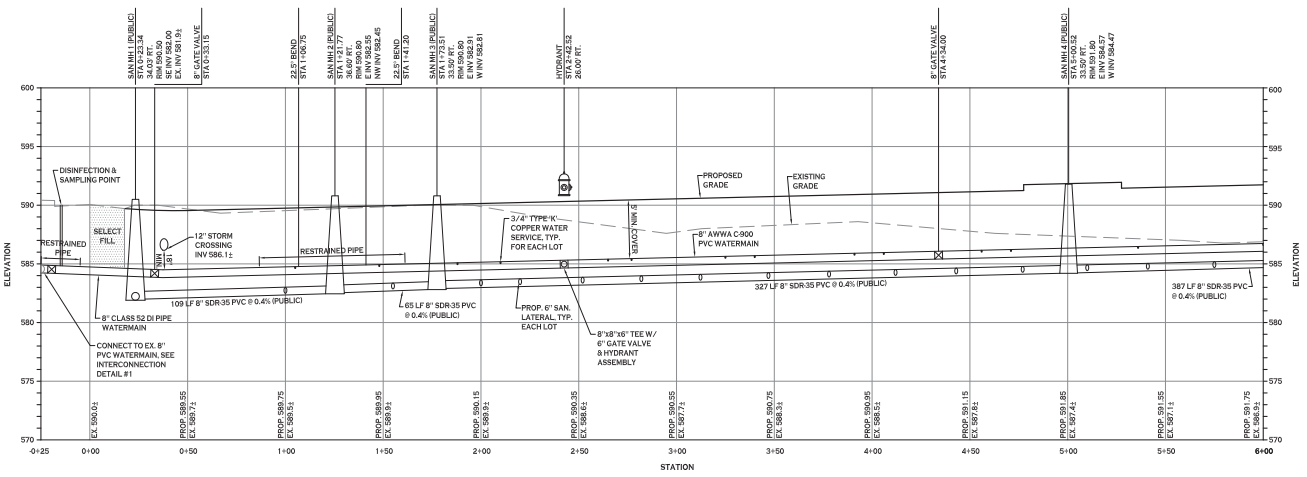
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Utility Plan

DRAWING NO.
C-400

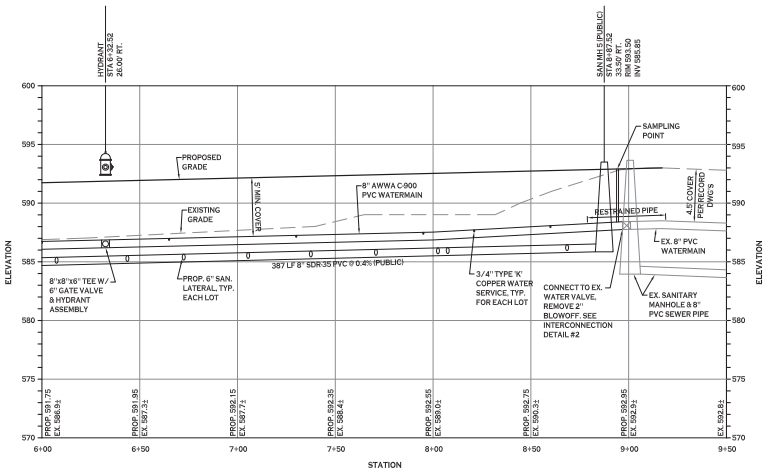
Project no.: 19.190

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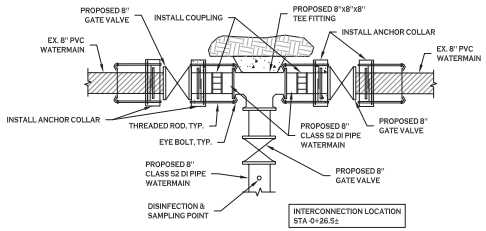
CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



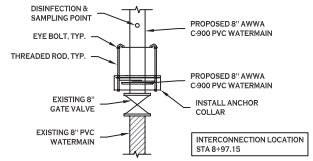
CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



INTERCONNECTION #1 DETAIL

NOT TO SCALE



INTERCONNECTION #2 DETAIL

NOT TO SCALE

NOTES:

1. SELECT FILL TO BE INSTALLED FOR UTILITY PIPES UNDER PAVEMENT & CONCRETE SURFACES EXTEND 5' BEYOND PAVEMENT LIMITS, TYP.
2. PROFILES SHOWN IN RELATION TO THE CENTERLINE OF THE ROADWAY. GRADING/DEPTH AND ALIGNMENT MAY VARY IN RELATION TO THE CENTERLINE. REFER TO DRAWING C-400 FOR REFERENCE.
3. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.

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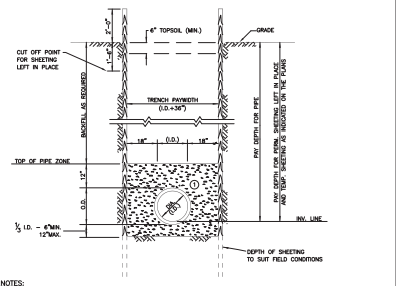
DRAWING NAME:
Sanitary Sewer & Waterline Profile & Details

DRAWING NO.
C-401

Project no.: 19.190

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SHEETED TRENCH
(JANUARY 2012)



NOTES:
1. MAINTAIN 18" BETWEEN PIPE AND INSIDE FACE OF TEMPORARY SHEETING. IF SHEETING EXTENDS BELOW PIPE INVERT AS SHOWN, WHEN PVC PIPE MATERIAL IS USED, COMPACT MATERIAL ① BEFORE PULLING THE SHEETING.
2. SHEETED TRENCH OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING EQUIPMENT.
3. SHEETING DRIVEN BELOW THE INVERT OF THE PIPE FOR BEDDING MATERIAL AND TOE SUPPORT WILL NOT BE CONSIDERED IN THE FORMULA FOR PAYMENT BUT SHOULD BE FIGURED BY THE CONTRACTOR IN DETERMINING HIS UNIT BID PRICE PER SQUARE FOOT OF SHEETING.
4. WHERE INDICATED ON THE PLANS OR AS ORDERED BY THE ENGINEER, TEMPORARY SHEETING WILL BE PAID FOR UNDER THE APPLICABLE BID ITEM. OTHER AREAS WHERE THE CONTRACTOR ELECTS TO USE TEMPORARY SHEETING NOT PREVIOUSLY AUTHORIZED BY THE ENGINEER SHALL BE AT HIS OPTION AND EXPENSE.

MATERIALS

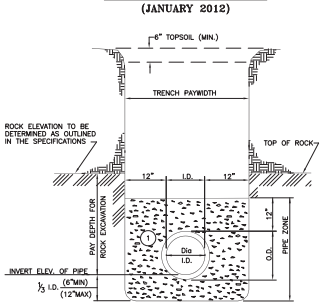
PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

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.

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ①

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 2/7/94 REVISED TOPSOIL DIMENSION Rev. 2 5/5/08 UPDATED MATERIALS TO NYSDOT LATEST EDITION File: d-02 Date: 3/1/91	STD.DETAIL 2

ROCK TRENCH DETAIL
(JANUARY 2012)



NOTE:
A. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
B. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

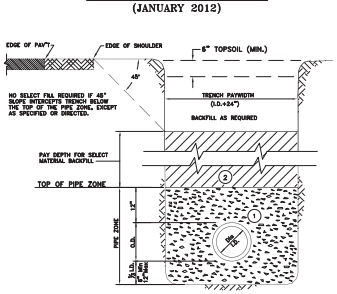
PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

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 6" 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	Rev. 1 1/8/94 ADDED 6" TOPSOIL (MIN.) Rev. 2 2/7/94 ADDED NOTES A & B File: d-03 Date: 3/1/91	STD.DETAIL 3

SELECT BACKFILL FOR TRENCH PARALLEL TO ROADWAYS
(JANUARY 2012)



NOTE:
A. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
B. AN OSHA APPROVED MOVABLE 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 ONE INCH 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.

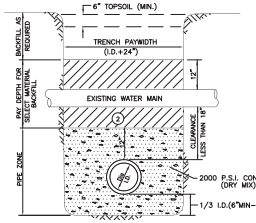
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

② 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)

NO SLAG SHALL BE ALLOWED FOR MATERIALS ① & ②

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 2 12/28/00 UPDATED MATERIALS TO NYSDOT LATEST EDITION Rev. 3 12/01 Updated NYS DOT Editions File: d-04 Date: 3/1/91	STD.DETAIL 4

WATERMAIN CROSSING DETAIL TYPICAL FOR ENCASEMENT
(JANUARY 2012)



NOTES:
A. IN ALL CASES WHERE THERE IS LESS THAN 18" CLEARANCE BETWEEN EXISTING WATER MAIN AND PROPOSED SEWER (INCLUDING HOUSE LATERALS) THE NEW WORK SHALL BE ENCASED IN CONCRETE AS SHOWN. WHERE A CASING PIPE IS SPECIFIED, NO CONCRETE ENCASEMENT IS REQUIRED.
B. THE CONCRETE ENCASEMENT SHALL EXTEND 3'–0" EACH SIDE OF THE WATER MAIN.
C. SEWERS SHALL BE LAID AT LEAST 10' (3.0 m) HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10' SEPARATION, THE APPROPRIATE REVIEWING AGENCY MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THE WATERMAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND THE ELEVATION OF THE BOTTOM OF THE WATERMAIN IS AT LEAST 18" (46 cm) ABOVE THE TOP OF SEWER.
D. SEWERS CROSSING WATERMAINS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF 18" (46 CM) BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHEN THE WATERMAIN IS ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THE JOINTS OF THE SEWER PIPE WILL BE EQUIDISTANT FROM AND AS FAR AWAY FROM THE WATERMAIN JOINTS AS POSSIBLE. WHERE THE WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATERMAIN.
E. WHEN IT IS IMPOSSIBLE TO OBTAIN THE PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER SHALL BE EITHER ENCASED IN CONCRETE OR CONSTRUCTED OF PIPE MATERIAL EQUAL TO THE WATERMAIN AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS.
F. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIALS PLACEMENT AND MAXIMUM PAY LIMITS.
G. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

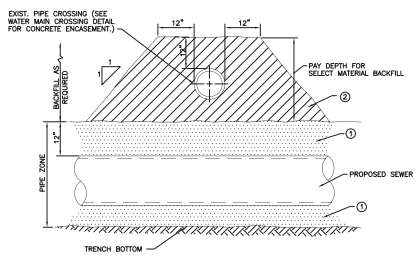
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

② 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 8"LIFTS TO 90% DENSITY)

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ②

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Revisions 2/7/94 ADDED 6" TOPSOIL(MIN.) & NOTE F&G 01/08/08 REVISED NOTE A 12/01 Revised Note "A" File: d-05 Date: 3/1/91	STD.DETAIL 5

PIPE CROSSING SUPPORT DETAIL
(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 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

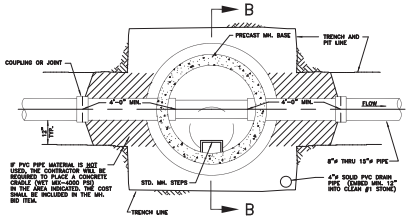
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

② 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 ②

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 12/01 UPDATED MATERIALS TO NYSDOT LATEST EDITION Rev. 2 File: d-09 Date: 3/1/91	STD.DETAIL 9

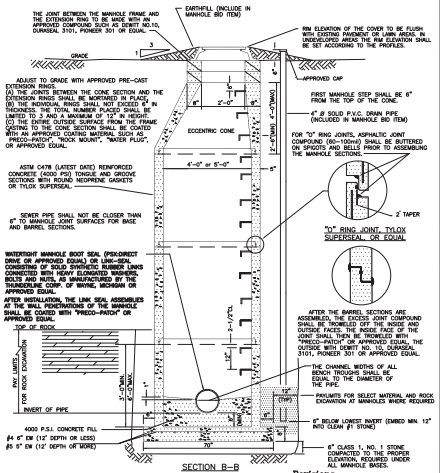
MONOLITHIC PRECAST BASE MANHOLES 4'–5' DIA. BASE FOR 15"ø SEWERS OR LESS
(JANUARY 2012)



PLAN

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 12/01 REVISED 4" PVC TO SOLID PIPE IN #1 STONE BED Rev. 2 File: d-10 Date: 3/1/91	STD.DETAIL 10

MONOLITHIC PRECAST BASE MANHOLES 4'–5' DIA. BASE FOR 15"ø SEWERS OR LESS (SECTION B–B)
(JANUARY 2012)

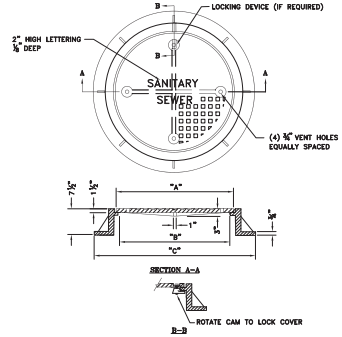


SECTION B–B

Revisions	
07/15/96	ADD ROCK EXCAVATION PAYJOINTS
11/23/98	ADD 4"ø P.V.C. MARKER AND NOTES
12/01	REVISED 4" P.V.C. TO SOLID PIPE
03/04/05	ADDED WATER TIGHT BOOT SEAL NOTE
06/22/06	ADDED "ROCK MOUNT" AS AN APPROVED EQUAL FOR ITEM (A)
02/27/07	CHANGED THE NUMBER OF EXTENSION RINGS FROM 2 TO 3

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	File: d-11 Date: 3/1/91	STD.DETAIL 11

STANDARD FRAME AND COVER (PRIVATE SEWER)
(JANUARY 2012)



LOCKING DEVICE

TABLE				
PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	35"(MAX.)	150 LBS. ± 5%
OVER 18"	32"	30"	46"(MAX.)	200 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 210 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	Rev. 1 Rev. 2 Rev. 3 Rev. 4 File: d-13P Date: 2/05	STD.DETAIL 13P

Carmina Wood Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

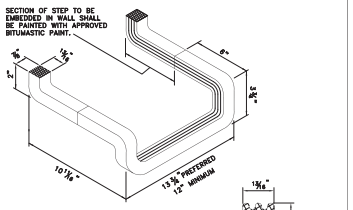
DRAWING NAME:
Sanitary Sewer Details

DRAWING NO.
C-402

Project no.: 19.190

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STANDARD MANHOLE STEP
(JANUARY 2012)

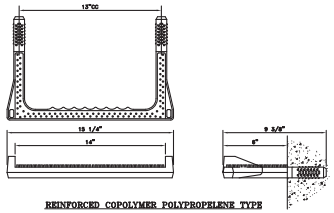


(DROP FRONT TYPE)



TYPICAL SECTION

NOTES:
1. MANHOLE STEPS SHALL BE OF FORGED ALUMINUM ALLOY.
2. AN ACCEPTABLE ALTERNATE IS THE STEEL REINFORCED COPOLYMER POLYPROPYLENE MANHOLE STEP.
3. THE STEPS SHALL BE EMBEDDED IN THE WALLS OF THE CONCRETE MANHOLE BARREL WHILE THE MANHOLE IS BEING CAST OR SECURELY GROUTED IN PLACE AFTER CASTING.



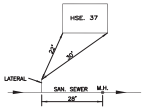
REINFORCED COPOLYMER POLYPROPYLENE TYPE

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 10/8/96	ADDED REINFORCED COPOLYMER TYPE STEP	STD.DETAIL 17
	Rev. 2		
	File: d-17	Date: 3/1/91	

CONSTRUCTION SPECIFICATIONS FOR HOUSE LATERALS
(JANUARY 2012)

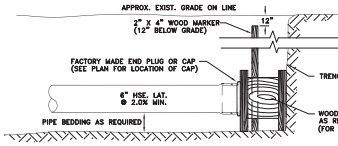
1. MATERIAL
   a. THICK WALL PVC – D – 3034, SDR–35
   b. EXTRA HEAVY CAST IRON
   c. DUCTILE IRON
2. FAR SIDE CROSSING
   a. LATERALS INSTALLED ACROSS TOWN ROADS MAY BE BY THE OPEN CUT METHOD WHERE ALLOWED BY THE HIGHWAY PERMIT.
   b. LATERALS INSTALLED ACROSS STATE OR COUNTY ROADS SHALL BE BY THE BORING AND JACKING METHOD (UNLESS OTHERWISE NOTED ON THE PLANS) USING A STEEL CASING PIPE. THE CARRIER PIPE SHALL CONFORM WITH THE MATERIAL SPECIFIED OR APPROVED BY THE ENGINEER.
   c. ALL PAVEMENT CROSSINGS (OPEN CUT METHOD) WITH LESS THAN 4'–0" COVER SHALL BE ENCASED WITH 2000 PSI CONCRETE.
   d. ALL FAR SIDE CROSSINGS SHALL BE INSTALLED UP TO ONE (1) FOOT OF THE R.O.W. LINE.
   e. THE CONTRACTOR SHALL SUPPLY A 2" X 4" WOOD MARKER EXTENDING FROM THE END OF THE CROSSING TO ONE (1) FOOT BELOW GRADE. ALL LATERALS SHALL BE KEPT AS TO THE DEPTH OF THE HOUSE SERVICE AND A MINIMUM OF 5'–0" BELOW GRADE SHALL BE ESTABLISHED AT THE LOCATION OF THE SERVICE.
   f. LATERALS SHALL BE LAID AT A 2.0% MINIMUM GRADE. IN CASES OF A SHALLOW SEWER, A 1.0% SLOPE MAY BE APPROVED BY THE ENGINEER.
3. NEAR SIDE SERVICES
   a. THE CONTRACTOR SHALL SUPPLY WYE BRANCHES OF THE SAME MATERIAL AND CLASS AS THE SEWER MAIN.
   b. THE LOCATION OF THE WYE BRANCHES WILL BE DETERMINED BY THE CONTRACTOR AND ENGINEER IN THE FIELD AFTER CONFERRING WITH THE HOMEOWNER.
   c. THE LOCATION OF THE BRANCHES SHALL BE MEASURED FROM THE LAST DOWNSTREAM MANHOLE AND AT LEAST THREE (3) TIES FROM AN EXISTING STRUCTURE, NORMALLY THE HOME IT IS TO SERVICE.
   d. NEAR SIDE SERVICES SHALL BE INSTALLED UP TO ONE (1) FOOT OF THE R.O.W. LINE.
   e. THE CONTRACTOR SHALL PROVIDE A 2" X 4" WOOD MARKER EXTENDED FROM THE WYE BRANCH TO ONE (1) FOOT BELOW GRADE.
   f. ON ALL SERVICES WHERE THE MAIN IS GREATER THAN 8' IN DEPTH, THE CONTRACTOR SHALL PROVIDE A RISER PIPE TO AN ELEVATION 8' BELOW EXISTING GRADE.

NOTES:
1. RECORDS OF THE DEPTH OF COVER SHALL BE KEPT FOR ALL HOUSE LATERALS BUILT ACROSS PAVEMENTS. SUCH RECORDS SHALL IDENTIFY THE LATERALS BY THE USE OF HOUSE NUMBERS AND SHALL SHOW LOCATION OF THE END OF THE HOUSE LATERAL WITH A MINIMUM OF THREE(3) TIES AS SHOWN IN EXAMPLE BELOW.
2. THE CONTRACTOR SHALL OBTAIN ALL HIGHWAY/R.O.W. PERMITS PRIOR TO START OF WORK.
3. VENTS AND CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS, PREFERABLY BETWEEN THE CURB OR EDGE OF PAVEMENT AND THE SIDEWALK.

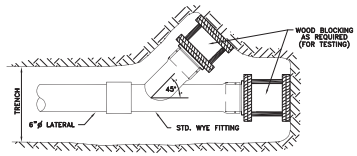


ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 5/17/95	NOTE 3a: DEPTH 4'–0"	STD.DETAIL 23
	Rev. 2 12/6/96	CHANGED NOTE 1 TO THREE(3) TIES	
	Rev. 3 7/15/97	ADDED TITLE	
	Rev. 4 12/1	ADDED NOTE 2 REGARDING LOCATION OF VENTS AND CLEAN OUTS	
	File: d-23	Date: 3/1/91	

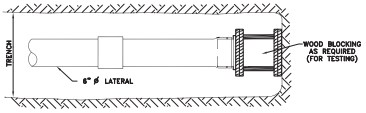
CAP & BLOCKING METHODS FOR AIR TESTING
(JANUARY 2012)



TYPICAL SECTION



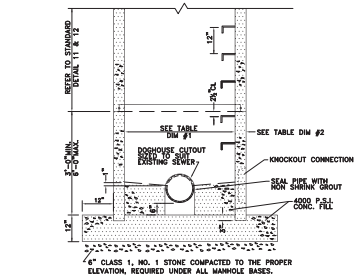
TYPE "2" SERVICE LATERAL FITTING



TYPE "1" SERVICE LATERAL FITTING

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1		STD.DETAIL 26
	Rev. 2		
	File: d-26	Date: 3/1/91	

PRECAST DOGHOUSE BASE MANHOLE
(JANUARY 2012)



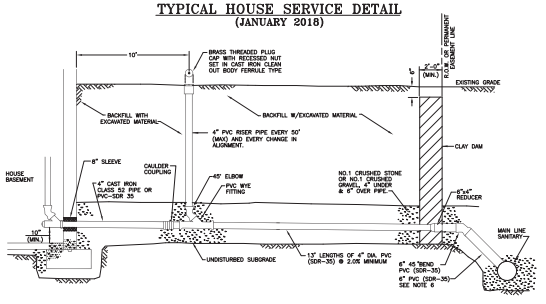
PIPE SIZE	DIMENSION #1	DIMENSION #2
8"–18"	4'–0"*	5"
18"	5'–0"	6"
21"–27"	5'–0"	6"
30"–36"	5'–0"	7"

* FOR DROP CONNECTIONS INSIDE DIAMETER SHALL BE 5'–0"

NOTE:
AREA AROUND DOGHOUSE CUTOUT & PIPE TO BE MADE WATERTIGHT UTILIZING A HYDRAULIC CEMENT MIXTURE (WATERPLUG,PRECO–PATCH, OR APPROVED EQUAL).

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 11/06/91	ADDED PIPE SIZE CHART & NOTE	STD.DETAIL 35
	Rev. 2 5/7/94	REVISED STONE UNDER MANHOLE BASE TO CLASS 1, NO. 1	
	File: d-35	Date:10/16/91	

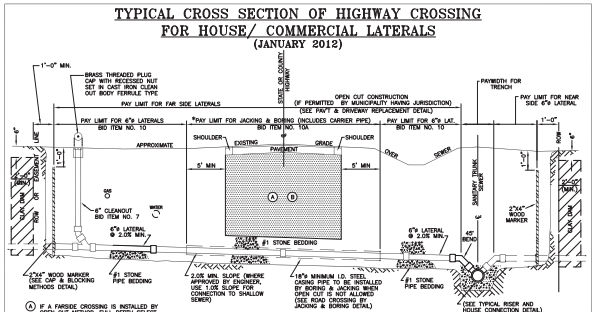
TYPICAL HOUSE SERVICE DETAIL
(JANUARY 2018)



NOTES:
1. NO INSPECTION WILL BE PROVIDED WITHOUT A PERMIT. INSPECTIONS REQUIRED INCLUDE, ADVANCE NOTICE TO BE GIVEN.
2. ALL BEDDING MUST BE INSPECTED BY A COUNTY INSPECTOR.
3. ALL PIPE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST NEW YORK STATE STANDARD SPECIFICATIONS FOR PIPE MATERIAL SHALL BE FURNISHED AND INSTALLED TO MEET THE REQUIREMENTS OF ASTM–412.
4. A MINIMUM VALVE SHALL BE IN-STALLED ON SEWERAGE LAUNDRY DRAIN LINE.
5. ALL CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS, PREFERABLY BETWEEN THE CURB OR EDGE OF PAVEMENT AND THE SIDEWALK.
6. SELECT BACKFILL REQUIRED UNDER PAVED AREAS.
7. CONCRETE ENCASEMENT of STUB SEWER IS USED WHEN 4'–0" UNDER PAVED AREAS
8. FOR NEW CONSTRUCTION 20 MIL. THICK PVC PIPE SHALL BE USED IN LIEU OF SDR–35 PIPE.
9. 4'x4' CLEAN OUT IS REQUIRED at R.O.W. BRANCH OF MAIN SEWER WHEN 4'–0" OR MORE DEPTH OF COVER IS FOR SUBDIVISIONS.
10. ANY EXCAVATION TO BE LEFT OPEN OVERNIGHT SHALL BE COMPLETELY ENCLOSED IN FENCING, OR WHERE APPROPRIATE, COVERED WITH STEEL PLATES.
11. DOWN SPOUTS, SUMP PUMPS, AND FOOTING DRAINS SHALL NOT BE PERMITTED TO BE CONNECTED TO THE HOUSE LATERAL.
12. FOR NEW STRUCTURES, NO CONNECTION SHALL BE MADE UNTIL PLUMB BOWL IS DRILLED AND BASE/FLOOR IS POURED.

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 6/05	ADDED NOTE 20 & CLASS 52 TYPE CI PIPE	STD. DETAIL 21
	Rev. 1/07	REMOVED OLD NOTES 1,3,8,10,12,13 AND 20 REVISED TO 6"PVC–DR18, 48 HR ADV NOTICE	
	Rev. 11/08	ADDED PVC TRAP AND SLEEVE	
	Rev. 01/12	REVISED 4" CAST IRON TRAP	
	Rev. 01/16	REMOVED TRAP AND RISER VENT	
	File: d–21	Date: 3/1/91	

TYPICAL CROSS SECTION OF HIGHWAY CROSSING FOR HOUSE/ COMMERCIAL LATERALS
(JANUARY 2012)



Ⓐ IF A FARSIDE CROSSING IS INSTALLED BY OPEN CUT METHOD, FULL DEPTH SELECT FILL MATERIAL SHALL BE REQUIRED UNDER PAVEMENT & SHOULDER AREA AS DESCRIBED IN SECTION 01020—ITEM15 DESCRIPTION OF BID ITEMS–ECDEP SPECIFICATIONS.

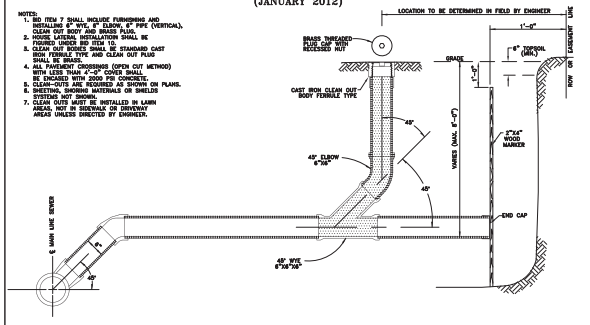
Ⓑ NO. 2 RUN OF CRUSHED STONE WITH A GRADATION CONFORMING TO THE NYSDOT STANDARD SECTION 304 (LATEST EDITION) WITHOUT SCREENINGS, COMPACTED IN 6" LIFTS TO WORK DENSITY.

NOTE:
SHEETING, SHORING MATERIALS OR SHIELD SYSTEM NOT SHOWN.
* LENGTH OF PAY LIMIT FOR JACKING AND BORING VARIES IN ACCORDANCE WITH DIMENSIONS SHOWN ON THE PLAN SHEETS.
* CONCRETE ENCASEMENT IF COVER DEPTH IS LESS THAN 4'–0" UNDER PAVED AREAS (SEE TYP. CONCRETE ENCASEMENT DETAIL)
* CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS UNLESS DIRECTED BY ENGINEER

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	REVISIONS		STD. DETAIL 24
	6/9/92	ADDED CLAY DAM	
	3/19/93	OPEN CUT CLARIFICATION	
	2/7/94	CHANGED NOTES 2 & 3.D A & B	
	7/15/96	18" STEEL FILL OVER PIPE	
	12/01	ADDED NOTE ON LOCATION OF VENTS & C.O.	
	File: d–24	Date: 3/1/91	

CLEAN–OUT DETAIL FOR SERVICE CONNECTION
(JANUARY 2012)

NOTES:
1. BID ITEM 7 SHALL INCLUDE FURNISHING AND INSTALLING 6" WYE, 6" ELBOW, 6" PIPE (VERTICAL), CLEAN OUT BODY AND GRADE PLUG.
2. ALL PAVEMENT CROSSINGS SHALL BE INCLUDED UNDER BID ITEM 10A.
3. CLEAN OUT BOXES SHALL BE STANDARD CAST IRON FERRULE TYPE AND CLEAN OUT PLUG SHALL BE BRASS.
4. ALL PAVEMENT CROSSINGS (OPEN CUT METHOD) WITH LESS THAN 4'–0" COVER SHALL BE ENCASED WITH 2000 PSI CONCRETE.
5. CLEAN–OUTS ARE REQUIRED AS SHOWN ON PLANS.
6. SHEETING, SHORING MATERIALS OR SHIELDS SYSTEMS NOT SHOWN.
7. CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS UNLESS DIRECTED BY ENGINEER.



ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 3/3/93A	4'–0" COVER, C.I. CAP "RECESSED NUT"	STD. DETAIL 28
	Rev. 8/7/94	CHANGED DIM LOC FOR MAX. DEPTH	
	Rev. 9/5/95	ADDED NOTE 7	
	Rev. 4/97	CHANGED C.I. CAP TO BRASS	
	Rev. 8/98	11' MIN. FROM EDGE OF WALK NOTE	
	Rev. 01/16	CHANGED C.I. TO BRASS NOTES 1 & 5	
	File: d–28	Date: 3/1/91	

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer Details

DRAWING NO.
C-403

Project no.: 19.190

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GENERAL NOTES FOR
SANITARY SEWER CONSTRUCTION
WITHIN ERIE COUNTY SEWER DISTRICTS

1. The Erie County Division of Sewerage Management (DSM), who operates and maintains the existing sewer lines and appurtenances within Erie County Sewer Districts (ECSD), is to be notified at least 48 hours in advance of the start of construction.
2. Construction shall be in accordance with the Rules and Regulations for Erie County Sewer Districts.
3. All permits required by the Federal, State, County, City and/or Town governments to perform work must be obtained prior to the start of work, and paid for by the Contractor.
4. If easement and/or Out of District Agreements are required, they must be complete and ready to be filed before the project will be approved for construction.
5. The contractor shall comply in all respects to the Industrial Code Part (Rule No.) 53 relating to construction, excavation, and demolition operations at or near underground facilities, as issued by the State of New York Department of Labor, Board of Standard and Appeals.
6. The construction of the sanitary sewer facilities shall be under the supervision of a person or firm qualified to practice professional engineering in New York State under the Education Law of the State, whenever engineering services are required by such law for such purposes.
7. Where such sanitary sewer facilities are under the supervision of a professional engineer, he/she shall certify to the DSM and to the applicant that the constructed facilities have been under his/her supervision and that the work has been fully completed in accordance with the approved engineering reports, plans, specifications, and approvals.
8. The Contractor is solely responsible for all site safety. The Contractor's equipment and methods of operation shall be in full compliance with OSHA Standards and satisfy all Federal, State and Local Health and Safety Regulations.
9. The Contractor is advised a trench shield and/or shoring designed in accordance with OSHA Standards shall be used in all open trench excavations.
10. Any contractor and/or plumber performing work in a confined space (i.e. manholes, wetwells, and chambers) owned by an Erie County Sewer District, must certify to the County that they have their own Confined Space Entry Program that meets or exceeds OSHA's regulations. Certification must be notarized by a notary public.

11. The contractor shall expose existing utilities ahead of the pipe laying operation, so if minor adjustments must be made in the pipe elevation and/or alignment due to interference from these utilities, said changes can be made in advance of the work.
12. The contractor shall retain the services of a qualified tree expert to remove, where necessary, branches which interfere with the construction operation, or to repair trees having suffered damage by construction activities. The cost involved is to be included in the various items of the contract.
13. The proposed 8 through 12 inch diameter sanitary sewer pipe shall be polyvinyl chloride (PVC) sewer pipe conforming to the latest revisions of American Society for Testing and Materials (ASTM) designation D-3034, SDR-35, installed in accordance with the ASTM designation D-2321-83a or the latest revision thereof, or approved equal. Larger diameter pipes will be reviewed on a case by case basis.
14. Sewers shall be laid with straight alignment between manholes and shall be checked by using a laser beam or lamping.
15. Should a fluid condition be encountered at the trench bottom, the contractor is to undercut the trench and provide suitable fill material (stone & fabric) to stabilize the trench bottom.
16. Sanitary sewer bedding material shall be No. 1 crushed stone with a gradation conforming to the *DSM Specifications for Subdivisions and Sanitary Sewer Extensions.*
17. Backfill shall be of a suitable material removed from the excavation except where other material is specified. Debris, frozen material, large clods or stones, organic matter, or other unstable materials shall not be used for backfill within two (2') feet of the top of the pipe.
18. All pipes crossing under paved areas are to be backfilled to sub-grade with compacted select material (No. 2 crushed stone) to five (5') feet outside the pavement edges or as required by the highway permit. If any proposed sewer runs under paved areas and has less than four (4) feet of cover, then concrete encasement is required as shown on the DSM Typical Concrete Encasement Detail.
19. Sewers parallel to watermains - *Ten State Standards, Latest Edition, Chapter 30, Section 38.31, and Page 30-11:* Sewers shall be laid at least ten (10') feet (three (3) meters) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten (10') foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the sewer and at an elevation so the bottom of the water main is at least 18-inches (460 mm) above the top of the sewer.

If it is impossible to obtain proper horizontal and vertical separation as described above, both the water main and sewer must be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the regulatory agency and be pressure tested to 150 pounds per square inch (psi) (1034 kPa) to assure water tightness prior to backfilling.

20. Sewers crossing watermains - *Ten State Standards, Latest Edition, Chapter 30, Section 38.32, Page 30-11 to 30-12:* Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18-inches (460 mm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the watermain joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade.
21. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, one of the following methods must be specified:
    a. The sewer shall be designed and constructed equal to water pipe, and shall be pressure tested at 150 psi (1034 kPa) to assure water tightness prior to backfilling.
    b. Either the water main or the sewer line may be encased in a watertight carrier pipe which extends ten (10') feet (three (3) meters) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the regulatory agency for use in water main construction.
    c. The sewer shall be encased in concrete per the DSM Watermain Crossing Detail Typical For Encasement
22. The manhole covers are to bear the inscription "ECSD SANITARY" and comply with the DSM Standard Frame and Cover detail. For private projects the covers shall bear the inscription "SANITARY SEWER" and comply with the DSM Standard Frame and Cover (Private Sewer) detail.
23. Building sanitary sewer vents must be installed six (6) inches above finished grade in a grassy area with a mushroom cap. If the vent is in a sidewalk or paved area, then protect with 6" diameter bollards (2 minimum).
24. Cleanouts (c.o.) are required on 4" and 6" building sewers every fifty feet and one hundred feet respectively, and at every change of alignment.
25. Abandoned building sewer connections from the site, if any, require proof of a District Permit for Disconnection prior to the new connection being made.
26. The following pertains only for direct replacement of in service sanitary sewers:
    a. Each new pipe joint shall be ultrasonic tested after it is laid, but before the next pipe is laid. All tests shall be in accordance with the testing equipment manufacture recommendations.
    b. The ultrasonic test shall be performed in lieu of the hydrostatic and air tests.
    c. A video inspection of the entire sewer shall be performed. Forward the video inspection tape and related paperwork to DSM for review and approval.
    d. A deflection test is required in all cases.
27. For all sanitary sewer installations, a written certificate of construction completeness and compliance, including the results of the hydrostatic leakage test, lamp test, deflection test, air test, etc. shall be submitted to the Erie County Health Department and DSM within thirty (30) days after completion of construction.
28. For all public and private 8" diameter pipe or larger sanitary sewer installations, the developer/contractor must provide one (1) set of record drawings on "D" size paper (24" x 36") and in an electronic file format (CD or flash drive) compatible with the latest AutoCAD release.
29. All public sewer extension projects that consist of more than 750 LF of 8" diameter pipe or larger, shall furnish a 2 year maintenance bond to the DSM.
30. Final Certification will be issued upon the full completeness and compliance of the project including any requirement(s) of I&I remedial work.

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer General Notes

DRAWING NO.
C-404

Project no.: 19.190

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RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2014 EDITION

38.3 Relation to Water Mains

38.31 Horizontal and Vertical Separation

Sewers shall be laid at least 10 feet (3 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. For gravity sewers where it is not practical to maintain a 10 foot (3 m) separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the gravity sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the gravity sewer and at an elevation so the bottom of the water main is at least 18 inches (460 mm) above the top of the sewer.
If it is impossible to obtain proper horizontal and vertical separation as described above for gravity sewers, both the water main and gravity sewer shall be constructed of slip-on or mechanical joint pipe complying with Section 8.1 and Section 8.7 of the 'Recommended Standards for Water Works - 2012 Edition' and shall be pressure rated to at least 150 psi (1034 kPa) and pressure tested to ensure watertightness.

38.32 Crossings

Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (460 mm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade.
When it is impossible to obtain proper horizontal and vertical separation as stipulated above, one of the following methods shall be specified:
30-11
a. The sewer shall be designed and constructed equal to water pipe, as described in Paragraph 38.31.
b. Either the water main or the sewer line may be encased in a watertight carrier pipe that extends 10 feet (3 m) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be made of materials approved by the regulatory agency for use in water main construction.

A. Requirements

1. After backfilling and prior to the final acceptance of the project, the Contractor will be required to perform the following three tests on all sewers built under this project:

a) Air Tests
b) Infiltration or Exfiltration
c) Deflection Test (15" dia. and smaller).

2. No more than 1,000 linear feet of installed sewer shall be allowed to remain untested.

3. In view of the fact that house laterals and riser pipes often contribute considerable infiltration, such laterals and risers are to be installed and capped, tied and blocked as the work progresses, prior to the air testing of the lines.

4. The Contractor's testing procedures shall be completed in accordance with OSHA Standards for confined space entry. The Contractor will be required to provide and operate all equipment necessary for full compliance for his operation. Equipment such as gas detectors, safety harnesses, ventilating blowers, respirators etc. shall be provided by the Contractor.

B. Air Tests (Required for All Diameters up to and including 36") 10 State Standards Section, 33.54

1) This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2) The procedure for air testing shall be as specified herein. The minimum allowable time for the test pressure to decrease from 3.5 psi to 2.0 psi shall be not less than as called for in the following table:

Minimum Acceptance Times* For Length Shown (min:sec)

Pipe Diameter	Up to 100'	100 - 200'	200 - 300'	300 - 400'
6"	2:50	2:50	2:50	2:51
8"	3:47	3:47	3:48	5:04
12"	5:40	5:42	8:33	11:24
15"	7:05	8:54	13:21	17:48
18"	8:30	12:49	19:14	25:38
21"	9:55	17:27	26:11	34:54
24"	11:24	22:48	34:11	45:35
27"	14:25	28:51	43:16	57:42
30"	17:48	35:37	53:25	71:13
33"	21:33	43:56	64:38	86:10
36"	25:39	51:17	76:55	102:34

* Erie County Sewer District Inspector will extend time to the next full minute during the test.

3. Pipe lines in sizes up to 36 inches in diameter can be air tested from manhole to manhole for distances not to exceed 400 feet.

4. In wet trenches where pumping to lower the water table is impractical, approved 4" diameter, solid PVC drain pipe (with approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Embed the pipe a minimum of 12" into clean #1 stone. Ground water elevations will be measured at each manhole in order to calculate the groundwater pressure acting on the pipe exterior. The initial air test pressure shall be increased as necessary to overcome the calculated groundwater pressure.

5. The testing procedures outlined shall be strictly adhered to.

6. All testing equipment shall be supplied by the Contractor and be in good working condition. Some of the major equipment required for air tests is:

a) Stop watch graduated in tenths of a second,
b) Compressor of 50 to 100 psi capacity.
c) Bulkheads for pipe.
d) Approximately 100 feet of 3/8" diameter air hose.
e) Pressure gauge - 0 to 5 psi graduated in 1/16th of a pound increments.
f) Three 3/8 inch diameter check valves.

C. Infiltration Tests (Applicable Only if Ground Water is Two Feet Above the Top of the Pipe)

1. This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2. Infiltration tests for all sewers constructed under this project shall not exceed 100 gallons per inch diameter per mile of sewer, per 24 hours. Each individual run of sewer (from one manhole to the next manhole if greater than 100 feet) shall comply with the allowable rate of infiltration. All equipment for the tests shall be furnished by the Contractor and be in good working condition.

3. The allowable rate of infiltration given in gallons per mile is not to be construed as a commitment on the part of the District to accept an entire line, where overall infiltration is less than the allowable, while one or more runs contribute excessive infiltration.

4. The infiltration test is intended to measure the water tightness of a sewer as related to the infiltration of ground water and is only applicable if the water table level is 2 feet or higher above the top of the pipe for the entire length of the test section.

a) Approved 4" diameter solid PVC drain pipe (with an approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Embed the pipe a minimum of 12" into clean #1 stone. Ground water elevations will be measured at each manhole so that the ground water level can be correlated with the infiltration measurements.

b) Before conducting the tests, the water table should be allowed to stabilize at its normal level and verified that it is 2 feet above the top of the pipe during the test period. The test is usually conducted between adjacent manholes with the upstream end of the sewer bulkheaded in a suitable manner to isolate the test section. All service laterals, stubs and fittings should be properly plugged or capped at the connections to the test pipe section to prevent the entrance of ground water at these locations.

c) A V-notch weir or other suitable measuring device should be installed in the inlet pipe of the downstream manhole. Infiltrating water is then allowed to build up and level off behind the weir until a steady, uniform flow occurs over the weir. Leakage is determined by direct reading from graduations on the weir consecutively for five (5) days and converting the flow quantity to gallons per unit length of pipe per unit of time.

d) An important factor in applying the test criteria is to properly correlate the variable water head over the length of the sewer being tested to the high ground water level. A minimum of 2 feet of water over the pipe is required at the upper manhole before the infiltration test will be allowed.

5. When a sewer run between two consecutive manholes or chambers is found to contribute infiltration at a rate above the allowable, inspection by television or other cameras may be made by the Contractor so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole if greater than 100 feet) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

D. Exfiltration Tests

1. This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2. The exfiltration test for all diameter sewers shall be as described below. Although actual infiltration will normally be less than that indicated by the water exfiltration test, the test does provide a positive means of subjecting the completed sewer system to an actual pressure test. Since sanitary sewers are not designed or expected to operate as a pressure system, care must be exercised in conducting the test and correlating the results with the allowable exfiltration limits.

a) The test is usually conducted between adjacent manholes. Prior to the test, all service laterals, stubs and fittings within the test section should be plugged or capped and adequately braced or blocked to withstand the water pressure resulting from the test.

b) If manholes are to be included in the test, the inlet pipe to each manhole should be bulkheaded and the test section filled with water through the upstream manhole. To allow air to escape from the sewer, the flow should be at a steady rate until the water level in the upstream manhole provides an average pressure of 5 psi (11.6' head) at the center point of the test section or the upstream manhole is filled. If necessary, provisions should be made to bleed off entrapped air during the filling of the test section.

c) Once the test section is filled, the water should be allowed to stand for an adequate period of time (one day minimum) to allow for water absorption by the pipe and manhole. After water absorption has stabilized, the water level in the upstream manhole is brought up to the proper test level and this level established by measuring down from the manhole rim or other convenient datum point. After 24 hours, the water elevation should be measured from the same reference point and the loss of water during the test period calculated, or the water can be restored to the level existing at the beginning of the test, and the amount added used to determine the leakage.

d) To exclude both manholes from the test, it is necessary to bulkhead the outlet pipe of the upstream manhole. Provision must be made in the bulkhead for filling the pipe and expelling trapped air.

e) The water level at the upstream manhole shall be computed and varies above the top of the pipe. Since the sewer is installed on a grade, the test section downstream will most likely be subjected to a greater pressure. Therefore, the test pressure head at the upstream manhole should be adjusted such that the maximum pressure on the pipe being tested is no greater than 10 psi, (23 feet of head).

3. When a sewer run between two consecutive manholes or chambers is found to exfiltrate at a rate above the allowable, inspection by television or other cameras may be made by the Contractor during wet weather, so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

E. Deflection Test

1. This test shall be performed no earlier than 30 calendar days after the trenches are backfilled.

2. All flexible (PVC) sewers 8" diameter or larger constructed under this project shall be internally checked with a five percent (5%) deflection "go-no-go pig" or Mandrel to determine if the pipes are deflecting excessively. Any section of pipe unable to pass the deflection test "pig test" shall be removed and replaced at the Contractor's expense.

3. Deflection testing mandrels or pig shall be pulled thru the pipe by hand or hand operated winch. Power winches or drives are not permitted.

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REVISIONS:
No. Description Date

PROJECT NAME:
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Fair Woods Estates Subdivision
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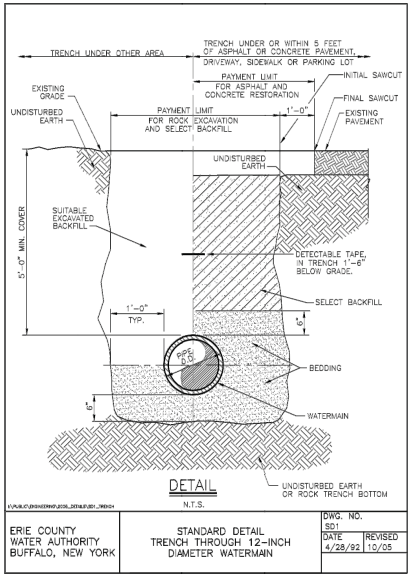
DRAWING NAME:
Sanitary Sewer Testing Notes

DRAWING NO.
C-405

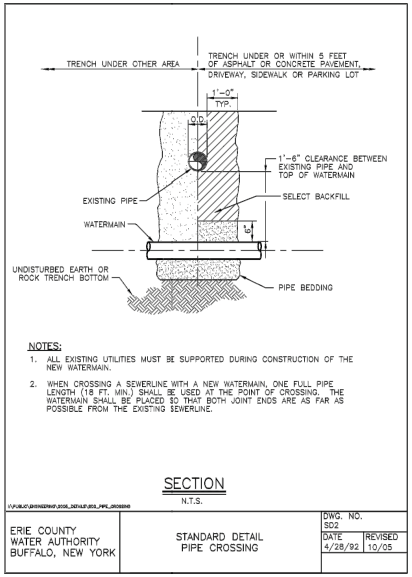
Project no.: 19.190

Packet Pg. 3

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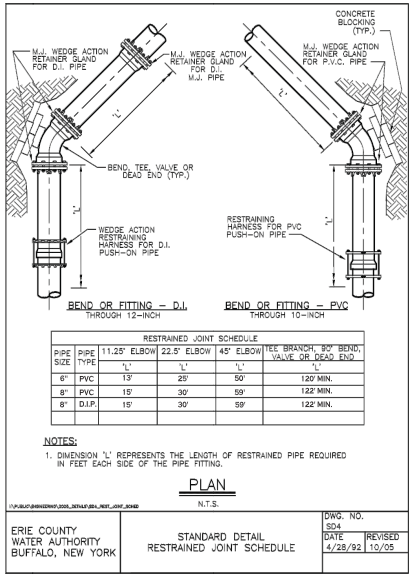


ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TRENCH THROUGH 12–INCH DIAMETER WATERMAIN	DWG. NO. SD1
		DATE 4/28/92 · REVISED 10/05



NOTES:
1. ALL EXISTING UTILITIES MUST BE SUPPORTED DURING CONSTRUCTION OF THE NEW WATERMAIN.
2. WHEN CROSSING A SEWERLINE WITH A NEW WATERMAIN, ONE FULL PIPE LENGTH (18 FT. MIN.) SHALL BE USED AT THE POINT OF CROSSING. THE WATERMAIN SHALL BE PLACED SO THAT BOTH JOINT ENDS ARE AS FAR AS POSSIBLE FROM THE EXISTING SEWERLINE.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL PIPE CROSSING	DWG. NO. SD2
		DATE 4/28/92 · REVISED 10/05

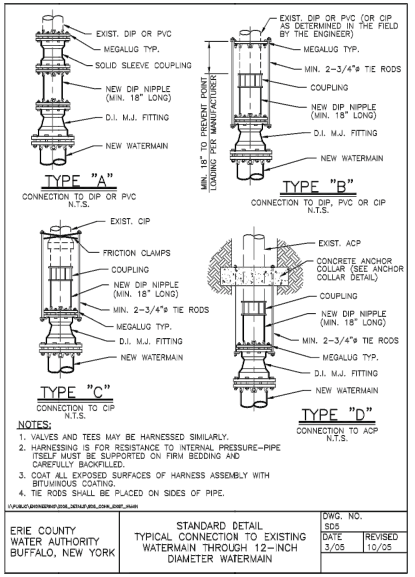


RESTRAINED JOINT SCHEDULE

PIPE SIZE	PIPE TYPE	11.25° ELBOW 'L'	22.5° ELBOW 'L'	45° ELBOW 'L'	TEE BRANCH, 90° BEND, VALVE OR DEAD END 'L'
6"	PVC	13'	25'	50'	120' MIN.
8"	PVC	15'	30'	59'	122' MIN.
8"	D.I.P.	15'	30'	59'	122' MIN.

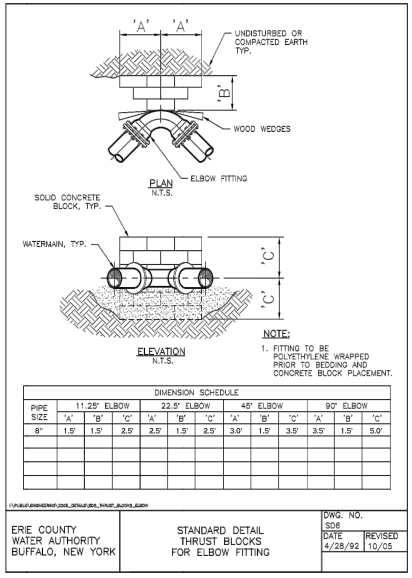
NOTES:
1. DIMENSION 'L' REPRESENTS THE LENGTH OF RESTRAINED PIPE REQUIRED IN FEET EACH SIDE OF THE PIPE FITTING.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL RESTRAINED JOINT SCHEDULE	DWG. NO. SD4
		DATE 4/28/92 · REVISED 10/05



NOTES:
1. VALVES AND TEES MAY BE HARNESSED SIMILARLY.
2. HARNESSING IS FOR RESISTANCE TO INTERNAL PRESSURE–PIPE ITSELF MUST BE SUPPORTED ON FIRM BEDDING AND CAREFULLY BACKFILLED.
3. COAT ALL EXPOSED SURFACES OF HARNESS ASSEMBLY WITH BITUMINOUS COATING.
4. TIE RODS SHALL BE PLACED ON SIDES OF PIPE.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TYPICAL CONNECTION TO EXISTING WATERMAIN THROUGH 12–INCH DIAMETER WATERMAIN	DWG. NO. SD5
		DATE 3/05 · REVISED 10/05

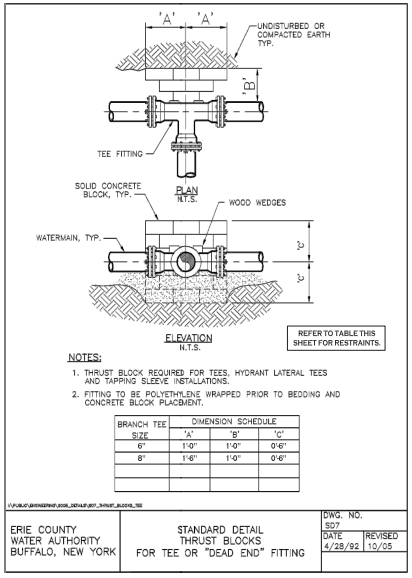


NOTE:
1. FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.

DIMENSION SCHEDULE

PIPE SIZE	11.25° ELBOW 'A'	'B'	'C'	22.5° ELBOW 'A'	'B'	'C'	45° ELBOW 'A'	'B'	'C'	90° ELBOW 'A'	'B'	'C'
8"	1.5'	1.5'	2.5'	2.5'	1.5'	2.5'	3.0'	1.5'	3.5'	3.5'	1.5'	5.0'

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR ELBOW FITTING	DWG. NO. SD6
		DATE 4/28/92 · REVISED 10/05

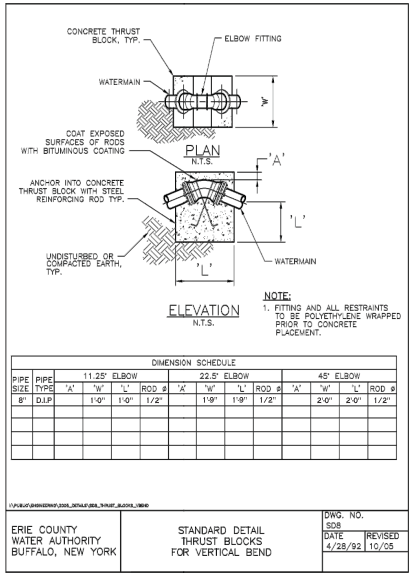


REFER TO TABLE THIS SHEET FOR RESTRAINTS.

NOTES:
1. THRUST BLOCK REQUIRED FOR TEES, HYDRANT LATERAL TEES AND TAPPING SLEEVE INSTALLATIONS.
2. FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.

BRANCH TEE SIZE	DIMENSION SCHEDULE 'A'	'B'	'C'
6"	1'-0"	1'-0"	0'-6"
8"	1'-6"	1'-0"	0'-6"

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR TEE OR "DEAD END" FITTING	DWG. NO. SD7
		DATE 4/28/92 · REVISED 10/05

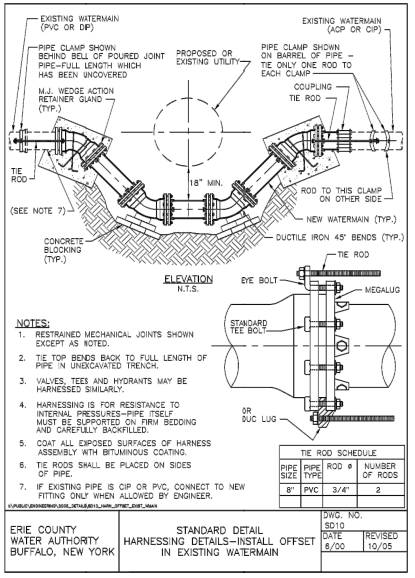


NOTE:
1. FITTING AND ALL RESTRAINTS TO BE POLYETHYLENE WRAPPED PRIOR TO CONCRETE PLACEMENT.

DIMENSION SCHEDULE

PIPE SIZE	PIPE TYPE	11.25° ELBOW 'A'	'W'	'L'	ROD ø	22.5° ELBOW 'A'	'W'	'L'	ROD ø	45° ELBOW 'A'	'W'	'L'	ROD ø
8"	D.I.P.		1'-0"	1'-0"	1/2"		1'-9"	1'-9"	1/2"		2'-0"	2'-0"	1/2"

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR VERTICAL BEND	DWG. NO. SD8
		DATE 4/28/92 · REVISED 10/05



NOTES:
1. RESTRAINED MECHANICAL JOINTS SHOWN EXCEPT AS NOTED.
2. TIE TOP BENDS BACK TO FULL LENGTH OF PIPE IN UNEXCAVATED TRENCH.
3. VALVES, TEES AND HYDRANTS MAY BE HARNESSED SIMILARLY.
4. HARNESSING IS FOR RESISTANCE TO INTERNAL PRESSURES–PIPE ITSELF MUST BE SUPPORTED ON FIRM BEDDING AND CAREFULLY BACKFILLED.
5. COAT ALL EXPOSED SURFACES OF HARNESS ASSEMBLY WITH BITUMINOUS COATING.
6. TIE RODS SHALL BE PLACED ON SIDES OF PIPE.
7. IF EXISTING PIPE IS CIP OR PVC, CONNECT TO NEW FITTING ONLY WHEN ALLOWED BY ENGINEER.

TIE ROD SCHEDULE

PIPE SIZE	PIPE TYPE	ROD ø	NUMBER OF RODS
8"	PVC	3/4"	2

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL HARNESSING DETAILS–INSTALL OFFSET IN EXISTING WATERMAIN	DWG. NO. SD10
		DATE 6/00 · REVISED 10/05

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

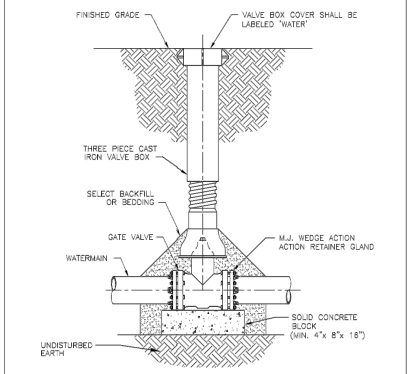
Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Water Details

DRAWING NO.
C-406

Project no.: 19.190

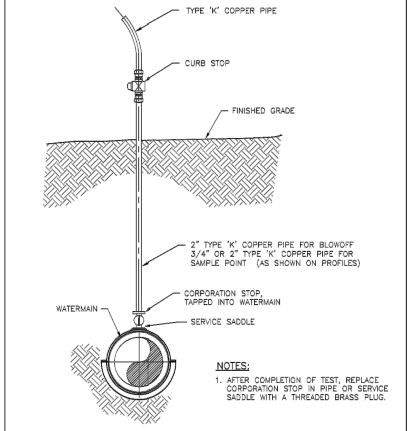
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NOTES:
1. VALVE SHALL NOT SUPPORT VALVE BOX.
2. GATE VALVE SHALL BE INSTALLED LEVEL.
3. VALVE BOX SHALL BE PLUMB TO GRADE, WITH OPERATING NUT CENTERED IN BOX.

SECTION
N.T.S.

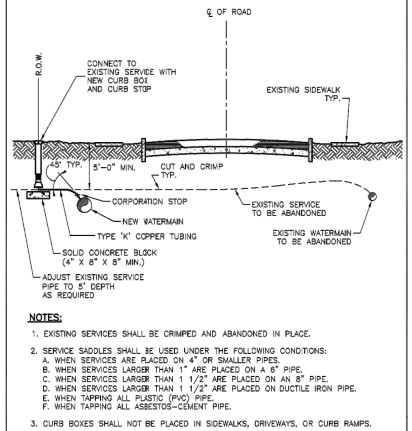
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GATE VALVE SETTING	DWG. NO. SD11
		DATE 4/28/92 — REVISED 02/17



NOTES:
1. AFTER COMPLETION OF TEST, REPLACE CORPORATION STOP IN PIPE OR SERVICE SADDLE WITH A THREADED BRASS PLUG.

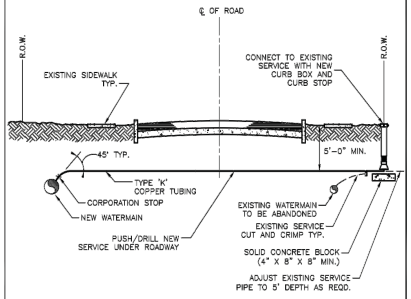
ELEVATION
N.T.S.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TEMPORARY BLOW-OFF/SAMPLING POINT	DWG. NO. SD17
		DATE 4/28/92 — REVISED 10/05



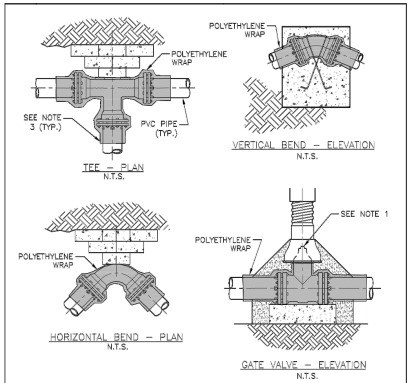
NOTES:
1. EXISTING SERVICES SHALL BE CRIMPED AND ABANDONED IN PLACE.
2. SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
   A. WHEN SERVICES ARE PLACED ON 4" OR SMALLER PIPES.
   B. WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
   C. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
   D. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
   E. WHEN TAPPING ALL PLASTIC (PVC) PIPE.
   F. WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
3. CURB BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR CURB RAMPS.
4. UNIONS ON COPPER TUBING ARE NOT ALLOWED UNLESS APPROVED BY ECWA PRIOR TO INSTALLATION.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL NEAR SIDE SERVICE REPLACEMENT/INSTALLATION	DWG. NO. SD15
		DATE 4/92 — REVISED 09/16



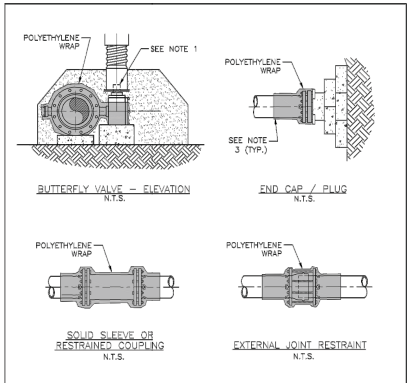
NOTES:
1. EXISTING SERVICES SHALL BE CRIMPED AND ABANDONED IN PLACE.
2. SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
   A. WHEN SERVICES AND PLACED ON 4" OR SMALLER PIPES.
   B. WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
   C. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
   D. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
   E. WHEN TAPPING ALL PLASTIC (PVC) PIPE.
   F. WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
3. CURB BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR CURB RAMPS.
4. USE POLYETHYLENE FOR 3/4" AND 1" SERVICES GREATER THAN 100 FEET IN LENGTH, AND FOR 1-1/2" AND 2" SERVICES GREATER THAN 60 FEET IN LENGTH. ALL POLYETHYLENE SERVICES SHALL INCLUDE A TRACER WIRE FOR DETECTION BY ECWA FORCES.
5. UNIONS ON COPPER TUBING ARE NOT ALLOWED UNLESS APPROVED BY ECWA PRIOR TO INSTALLATION.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL FAR SIDE SERVICE REPLACEMENT/INSTALLATION	DWG. NO. SD16
		DATE 4/92 — REVISED 09/16



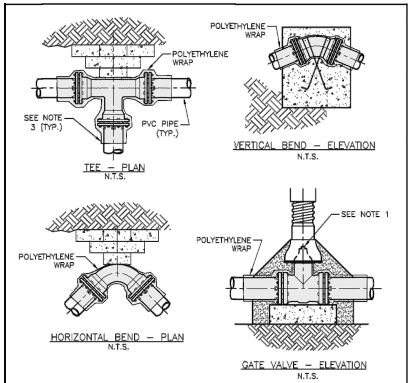
NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP IS NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PIPE (OR POLYWRAP IF DIP) WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING CAST/DUCTILE IRON FITTINGS	DWG. NO. SD39A
		DATE 3/18 — REVISED 12/18



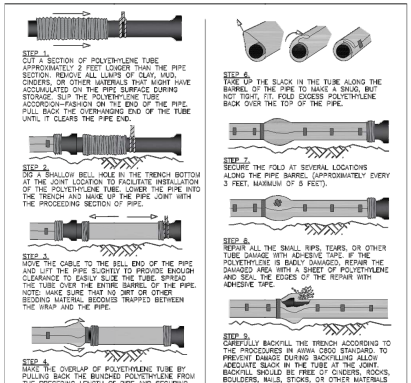
NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP IS NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PIPE (OR POLYWRAP IF DIP) WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING CAST/DUCTILE IRON FITTINGS	DWG. NO. SD39B
		DATE 12/18 — REVISED



NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON GATE VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PVC PIPE WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING DUCTILE IRON FITTINGS ON PVC PIPE	DWG. NO. SD39
		DATE 3/18 — REVISED



ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYETHYLENE ENCASEMENT OF DUCTILE IRON PIPE	DWG. NO. SD32
		DATE 06/18 — REVISED 02/19

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No. Description Date

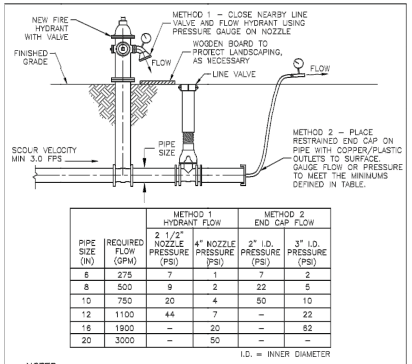
PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Water Details

DRAWING NO.
C-407
Project no.: 19.190

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PIPE SIZE (IN)	REQUIRED FLOW (GPM)	METHOD 1 HYDRANT FLOW		METHOD 2 END CAP FLOW	
		2 1/2" NOZZLE PRESSURE (PSI)	4" NOZZLE PRESSURE (PSI)	2" I.D. PRESSURE (PSI)	3" I.D. PRESSURE (PSI)
6	275	7	1	7	2
8	500	9	2	22	5
10	750	20	4	50	10
12	1100	44	7	–	22
16	1900	–	20	–	82
20	3000	–	50	–	–

I.D. = INNER DIAMETER

NOTES:

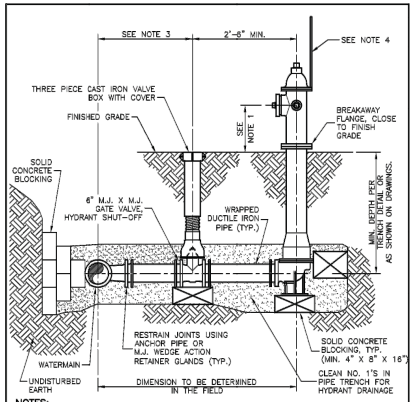
1. TO OBTAIN SCOUR VELOCITY (3.0 FPS) IN THE WATERLINE, CONTRACTOR SHALL ACHIEVE FLOWRATE AT NOZZLE DEFINED IN TABLE. PRESSURE GAUGE USED SHALL SHOW A HIGHER PRESSURE THAN THE MINIMUMS DEFINED IN THE TABLE.
2. OUTLET PRESSURE MEASURED BY PITOT GAUGE.
3. ENGINEER SHALL PROVIDE CALCULATIONS IF CONNECTIONS ARE OTHER THAN THOSE SHOWN. IF MULTIPLE CONNECTIONS ARE USED, OR AS REQUESTED BY ECWA.
4. TO FLUSH THREE PIPE VOLUMES, MINIMUM FLUSHING TIME (IN SECONDS) EQUALS THE LENGTH OF PIPE BEING FLUSHED, IN FEET.

SECTION

N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD36_WATERLINE_FLUSHING

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL WATERLINE FLUSHING	DWG. NO. SD36	
		DATE 6/16	REVISED 3/18



NOTES:

1. CENTERLINE OF THE LOWEST NOZZLE TO FINISHED GRADE SHALL BE A MIN. OF 15" & MAX. OF 18".
2. HYDRANT RISER SHALL BE INSTALLED PLUMB.
3. VALVE BOX SHALL NOT BE PLACED IN PAVEMENT.
4. RELOCATE HYDRANT MARKER (IF PRESENT), FOR WATERLINE REPLACEMENT PROJECTS ONLY.
5. HYDRANT FACE TO BE A MINIMUM OF 3' FROM THE BACK FACE OF ALL CURBS OR A MINIMUM OF 5' FROM ALL EDGES OF PAVEMENT (IF NO CURB).

SECTION

N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD13_HYD_INST

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL FIRE HYDRANT INSTALLATION	DWG. NO. SD13	
		DATE 6/00	REVISED 11/16

NOTES

1. All elevations refer to USGS NAVD83 datum.
2. The CONTRACTOR shall obtain necessary permits and furnish copies to the ENGINEER prior to commencing work.
3. The CONTRACTOR'S work area shall be confined to the limits of the right-of-ways and easements. The CONTRACTOR shall obtain any additional easements or work releases should the CONTRACTOR require additional area to accommodate his operations.
4. The CONTRACTOR shall provide maintenance and protection of traffic in accordance with the Erie County Highway Department standards and the NYSDOT Manual of Uniform Traffic Control Devices.
5. The locations and depths of existing underground utilities as shown on the plans and profiles are approximate. Other underground utilities not shown may be encountered. The CONTRACTOR shall perform test pits to verify the location and elevation of utilities at interconnections and crossings as shown, directed, or required. The CONTRACTOR shall excavate in advance of the pipe laying operation and expose all existing underground utilities to prevent damage during construction and to determine required changes in grade necessary to install the watermain to avoid conflicts.
6. The CONTRACTOR shall install those measures required to limit erosion of areas disturbed by the work. Clearing shall be performed on an as-needed basis, phased to reduce erosion and visual impact.
7. Blasting will not be permitted.
8. No more than one connection may be made to any existing watermain prior to testing, disinfection, and approval of the Waterline Installation Completed Works Approval Report(s) by the Erie County Water Authority and the Erie County Health Department.
9. The Erie County Water Authority shall only operate existing valves and fire hydrants, including newly installed valves and fire hydrants that have been placed into service. The CONTRACTOR is advised that watertight conditions may not exist when existing valves are closed.
10. The CONTRACTOR shall have all equipment, manpower, and materials required on site and ready for use prior to commencing any shut-down or removing any existing facilities from service. The CONTRACTOR shall notify all affected customers in writing of any shut-down at least 48 hours in advance. The CONTRACTOR shall notify the appropriate fire stations 48 hours in advance prior to taking any fire hydrants out of service. Any fire hydrants not in service shall be bagged in burlap or plastic. Any shut-downs shall be limited to 4 consecutive hours. It may be necessary to schedule shut-downs at night, weekends, or other off hours so as to not affect schools, businesses or other customers, as determined by the ENGINEER. Shut-down requests shall be submitted to the Erie County Water Authority a minimum of 5 business days in advance of the requested shut-down date.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD29_GENERAL_NOTES

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GENERAL NOTES	DWG. NO. SD29	
		DATE 3/05	REVISED 7/17

11. All watermain piping shall be installed with a minimum of 5'-0" of cover.
12. All watermain piping shall be installed with a minimum of 1'-6" of vertical clearance and 10'-0" of horizontal clearance from sanitary and storm piping, measured from the outside of the pipes at the point of crossing.
13. If the material at the design grade is unsuitable as determined by the ENGINEER, the CONTRACTOR, when ordered in writing, shall excavate additional material to the depth necessary and shall backfill to the proposed grade with the select granular material.
14. The installation of 90 degree bends in the watermain is not allowed, unless approved by the Erie County Water Authority.
15. Thrust restraint for watermain piping through 12-inch diameter shall consist of thrust blocks and pipe joint restraint.
16. The CONTRACTOR shall notify the owner of any utility pole in advance of any excavation work that will take place within 5'-0" of the utility pole. The CONTRACTOR shall include the cost of temporary pole support in the appropriate bid item.Where utility poles are required to be supported during construction, the CONTRACTOR shall make all necessary arrangements with the utility company.
17. If materials are encountered during the construction that are suspected of being contaminated, the CONTRACTOR shall immediately notify the NYSDEC for direction regarding testing, separation, containment, and disposal procedures.
18. Existing fire hydrants removed during construction and not reinstalled as part of the work shall be scheduled and returned to the Erie County Water Authority Service Center, 3030 Union Road, Cheektowaga, New York 14227.
19. The CONTRACTOR shall cold patch all trench excavations in traveled areas including roads, driveways, sidewalks, and parking areas.
20. The CONTRACTOR shall not restrict access for school buses or any emergency vehicles.
21. The use of existing fire hydrants for any reason is prohibited without prior approval of the Erie County Water Authority. This includes newly installed fire hydrants that have been placed into service.
22. The CONTRACTOR shall submit procedures for testing and disinfection of the watermain to the ENGINEER for review prior to the start of testing.
23. The CONTRACTOR shall be present and assist in the Final Walk inspection. The CONTRACTOR shall provide sufficient personnel and equipment to demonstrate to the ENGINEER that all valves, fire hydrants, and curb stops operate as required.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD30_GENERAL_NOTES

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GENERAL NOTES	DWG. NO. SD30	
		DATE 3/05	REVISED 7/17

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REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Water Details & Notes

DRAWING NO.
C-408

Project no.: 19.190

Appendix I

Soils Information

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Soil Map—Erie County, New York



Map Scale: 1:1,880 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Erie County, New York
Survey Area Data: Version 19, Sep 16, 2019

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

Date(s) aerial images were photographed: Jul 26, 2019—Oct 10, 2019

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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ch	Cheektowaga fine sandy loam	0.0	0.4%
Cv	Cosad loamy fine sand	6.1	92.8%
ElB	Elnora loamy fine sand, 3 to 8 percent slopes	0.5	6.8%
Totals for Area of Interest		**6.6**	**100.0%**

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Erie County, New York

Ch—Cheektowaga fine sandy loam

Map Unit Setting

National map unit symbol: 9rkn
Elevation: 200 to 800 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Cheektowaga and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cheektowaga

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy deltaic deposits over clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 22 inches: loamy fine sand
H3 - 22 to 26 inches: loamy fine sand
H4 - 26 to 60 inches: stratified silty clay to silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Minor Components

Cosad
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Canandaigua
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lamson
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Claverack
Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Erie County, New York
Survey Area Data: Version 19, Sep 16, 2019

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Erie County, New York

Cv—Cosad loamy fine sand

Map Unit Setting

National map unit symbol: 9rl8
Elevation: 200 to 800 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Cosad and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cosad

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy glaciofluvial or deltaic deposits over clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 21 inches: loamy fine sand
H3 - 21 to 24 inches: fine sandy loam
H4 - 24 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Minor Components

Claverack
Percent of map unit: 5 percent
Hydric soil rating: No

Lamson
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Odessa
Percent of map unit: 5 percent
Hydric soil rating: No

Cheektowaga
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Minoa
Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Erie County, New York
Survey Area Data: Version 19, Sep 16, 2019

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Erie County, New York

ElB—Elnora loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9rlq
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elnora and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elnora

Setting

Landform: Deltas, beach ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Sandy glaciofluvial, eolian, or deltaic deposits

Typical profile

H1 - 0 to 4 inches: loamy fine sand
H2 - 4 to 24 inches: loamy fine sand
H3 - 24 to 60 inches: fine sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Galen

Percent of map unit: 5 percent

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Hydric soil rating: No

Minoa

Percent of map unit: 5 percent
Hydric soil rating: No

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Colonie

Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Erie County, New York
Survey Area Data: Version 19, Sep 16, 2019

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Appendix J

USACOE Wetland Jurisdictional Determination

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BUFFALO DISTRICT
1776 NIAGARA STREET

August 17, 2020

Regulatory Branch

SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

Rob Savarino
Essex Homes of WNY
8940 Main Street
Clarence, New York 14031

Dear Mr. Savarino:

This pertains to the wetland delineation submitted on behalf of Essex Homes of WNY by Earth Dimensions, Inc for a jurisdictional determination for a 6.92 acre parcel located at 775 Heim Road, Town of Amherst, Erie County, New York.

Section 404 of the Clean Water Act 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 boundary as shown on the attached wetland delineation map dated January 16, 2020. This verification was confirmed on August 17, 2020 and 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 and additional impacts are proposed for waters of the United States. Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act 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.

I have determined that there is no clear surface water connection or ecological continuum between Wetlands W1 and W2 on the parcel and a surface tributary system to a navigable water of the United States. Therefore, these waters are considered isolated, non-navigable, intrastate waters and not regulated under Section 404 of the Clean Water Act. Accordingly, you do not need Department of the Army authorization to commence work in these areas.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Regulatory Branch
SUBJECT: Jurisdictional Determination, Department of Army Application No. LRB-2020-00174

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 jurisdictional determination for the subject parcel. If you object to this determination, 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 determination, 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:

Jacob Siegrist
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: 513-684-2699 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 October 12, 2020.

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:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Essex Homes of WNY	File Number: LRB-2020-00174	Date: August 17, 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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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	Jacob Siegrist 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: 513-684-2699 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.		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 8/17/2020
ORM Number: 2020-00174 Essex Homes (Heim Road)
Associated JDs: N/A
Review Area Location[1]: State/Territory: New York City: Amherst County/Parish/Borough: Erie (775 Heim Road)
Center Coordinates of Review Area: Latitude 43.0216 Longitude -78.7429

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A	N/A	N/A.	N/A.	N/A

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	N/A

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A.	N/A.	See above.
N/A	N/A	N/A.	N/A.	See above.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
W1 (PFO)	2.44	acre(s)	(b)(1) Non-adjacent wetland.	W1 is a PFO wetland that is 2.44 acres in size and starts on the North property line and extends to the South, offsite and directly abuts the abandoned/removed "Peanut" railroad line. During the July 14, 2020 site visit, it was observed W1 abuts a swale that drains to the West through a 18 inch C.M.P. culvert. The water heads North in a closed, piped stormwater system before it outlets into Ditch 25, 2-4 miles away along Millersport Highway ((Email from Mr. Jeffrey Szatkowski of the Town of Amherst (July 29, 2020)). On the North side of the property,W1 ends at the adjacent property line because the area is maintained lawn. The swale is not a waters because it lacks an OHW and bed/banks. No other drainageways or streams were observed in the vicinity of W1 during the site visit. To the South of the "peanut" line are residential apartments. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. No wetlands exist on the other side of the peanut line All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.
W2 PFO	0.63	acre(s)	(b)(1) Non-adjacent wetland.	W2 is a PFO wetland that is 0.63 acres in size and located in the Northwest corner of the property. During the July 14, 2020 site visit, the boundary was walked and no drainageways or streams were located within the vicinity of the wetland. On the North side of the property,W2 ends at the adjacent

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
				property because the area is maintained lawn. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separated from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Wetland delineation conducted by Earth Dimensions, Inc, was submitted on January 28, 2020 with accurate, completed data sheets, photographs, NWI map, web soil survey with hydric soil ratings and other supporting information

This information is sufficient for purposes of this AJD.
Rationale: NA

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
☒ Photographs: Aerial and Other: Global Earth, ESRI, Google Earth aerial review*
☒ Corps site visit(s) conducted on: July 14, 2020
☐ Previous Jurisdictional Determinations (AJDs or PJDs): None
☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
☒ USDA NRCS Soil Survey: Web Soil Survey*
☒ USFWS NWI maps: Reviewed
☒ USGS topographic maps: Clarence Center, New York Quad*

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	ORM maps
State/Local/Tribal Sources	N/A.
Other Sources	NYSDEC Freshwater Wetland Maps – no State regulated wetlands are within the vicinity of the delineated parcel

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: Evaluation of the on-site conditions as presented in the submittal and substantiated by the photographs and data summary sheets appear to be clear and straight-forward.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

The review area is relatively small (6.92 acres) and does not present complicated details. The delineated parcel is surrounded by commercial and residential development on all sides. A review of in-house resources, USDWS NWI Maps, USGS Quad Map, NRCS Web Soil Survey and NYSDEC Environmental Resource Mapper indicated no mapped wetlands or streams are located within the vicinity of the delineated parcel. During the field visit, it was determined the swale located off site along the abandoned "Peanut" rail-line is not an A(1)-A(3) waters as no bed/banks or OHW were found. All resources reviewed support the determination that W1 and W2 don't directly abut an A(1)-A(3) waters, are not separted from an A(1)-A(3) waters by a natural or man-made feature and are not adjacent to an A(1)-A(3) waters. Therefore, W1 and W2 are not jurisdictional waters of the United States.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Essex Homes-Heim Rd
DA#2020-00174
Erie County
W11K19b Quad:Clarence Center 775 Heim Road
Sheet 1 of 5

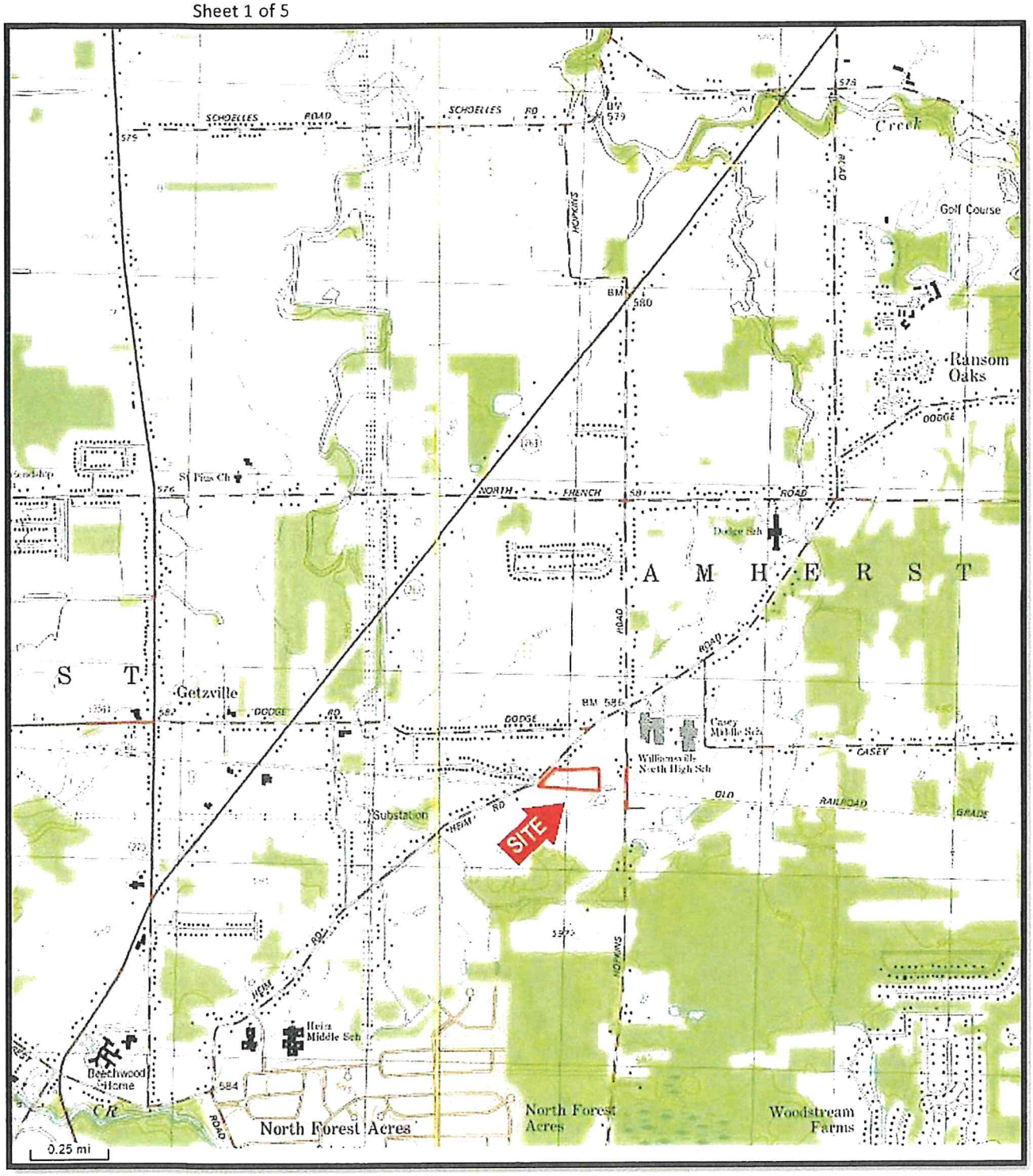


FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHICAL MAP

Clarence Center Quadrangle / 2002 DeLorme

775 Heim Road

Town of Amherst, Erie County, New York

EARTH DIMENSIONS, INC.

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



FIGURE 2: NATIONAL WETLANDS INVENTORY MAP

http://www.fws.gov/wetlands/data/mapper.HTML (Visited 01/16/2020)

775 Heim Road

Town of Amherst, Erie County, New York

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

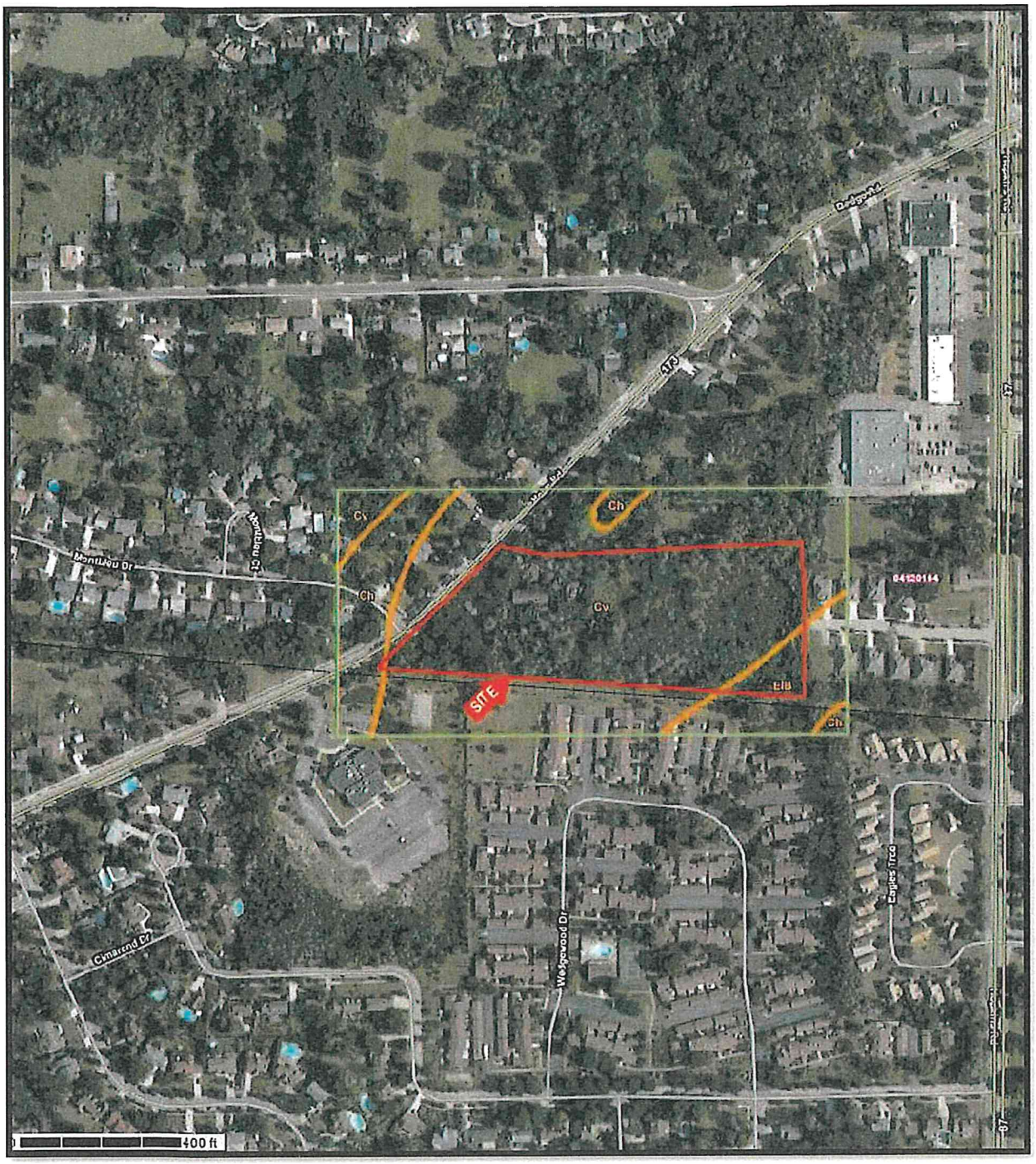


FIGURE 3: NRCS ERIE COUNTY SOIL SURVEY MAP

http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Visited 01/16/2020)

775 Heim Road

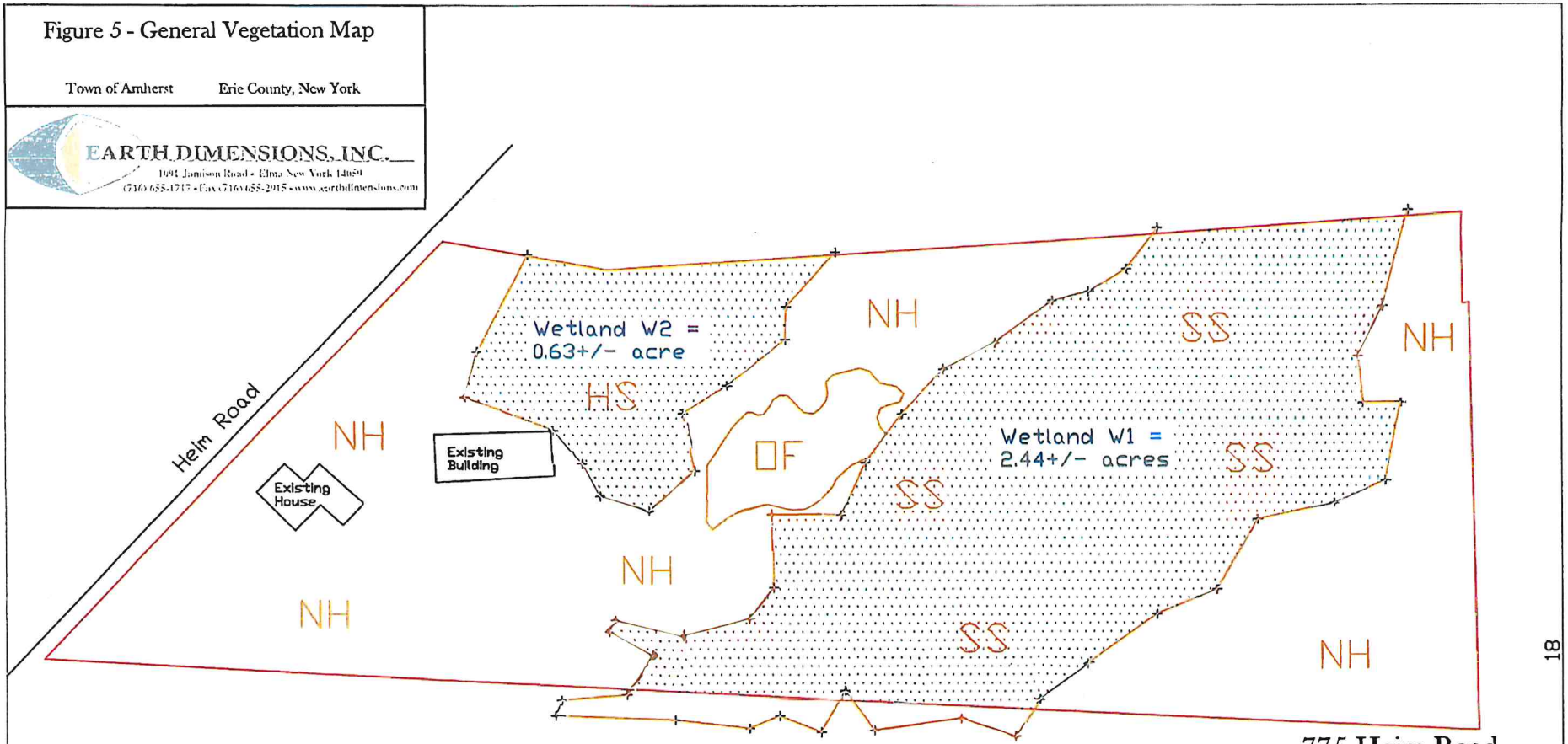
Town of Amherst, Erie County, New York

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Figure 5 - General Vegetation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1991 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2915 • www.earthdimensions.com



775 Heim Road

LEGEND

- Limits of Investigation
- Community Boundary
- W1-1 Wetland Boundary Flag
- Wetland Area
- OF Successional Old Field
- NH Northern Hardwood
- SS Scrub-shrub
- HS Hardwood Swamp

Scale: 0 50' 100'
Map Date: January 16, 2020/ TJS for EDI Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation map.dwg
EDI Project Code: W11K19b

Essex Homes-Heim Rd
DA#2020-00174
Erie County
Quad:Clarence Center
Sheet 4 of 5

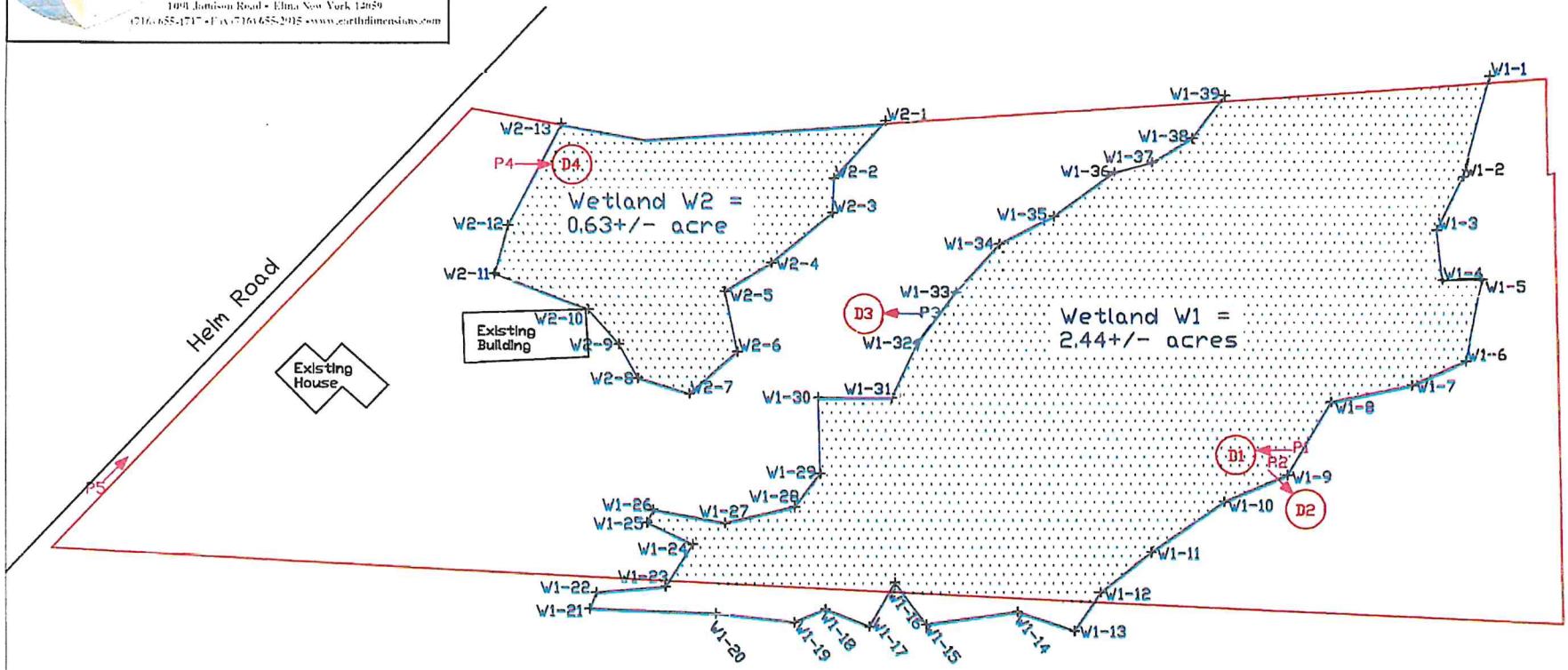


Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Figure 6 - Wetland Delineation Map

Town of Amherst Erie County, New York

EARTH DIMENSIONS, INC.
1091 Jamison Road • Elma New York 14059
(716) 655-1717 • Fax (716) 655-2015 • www.earthdimensions.com



775 Heim Road

LEGEND

- Limits of Investigation
- Drainages
- W1-1 Wetland Boundary Flag
- Wetland Area
- P1 Photo Location
- D1 Data Point Location

Scale: 0 30' 100'
Map Date: January 16, 2020/ TJS for EDI Revised:
Base Map Provided By: Trimble Geo 7X
File Name: Delineation map.dwg
EDI Project Code: W11K19b

Essex Homes-Heim Rd
DA#2020-00174
Erie County
Quad:Clarence Center
Sheet 1 of 5

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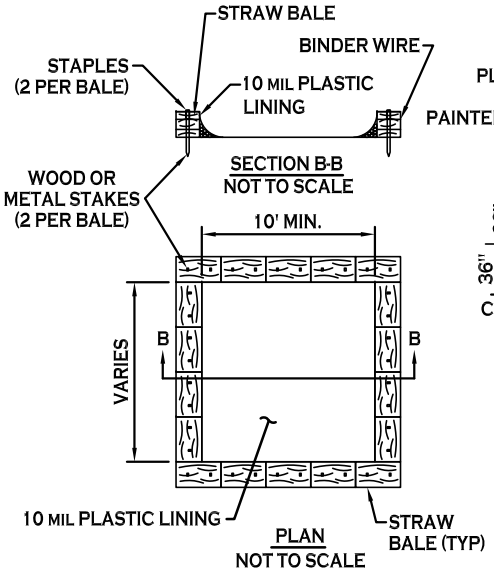
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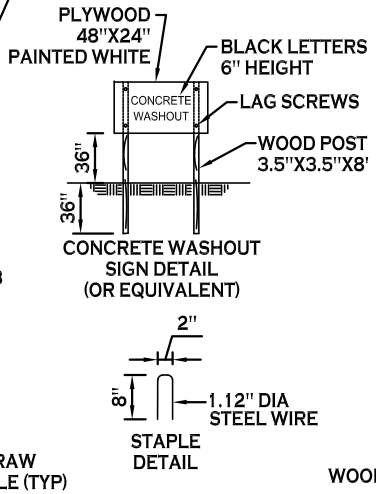
Appendix K

Standard Erosion Control Details

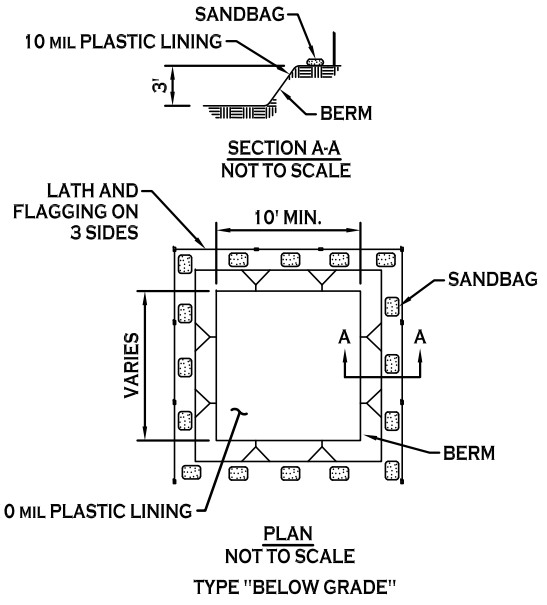
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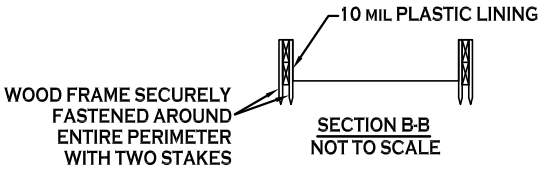




TYPE "ABOVE GRADE" WITH STRAW BALES

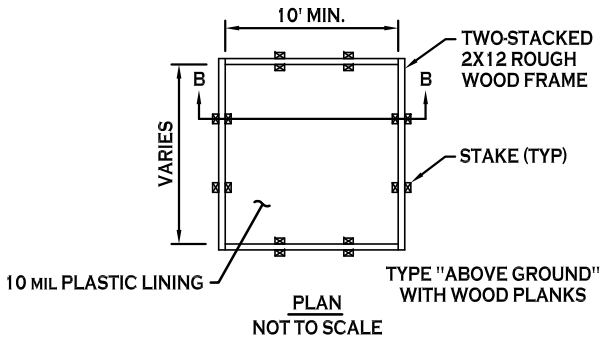


TYPE "BELOW GRADE"



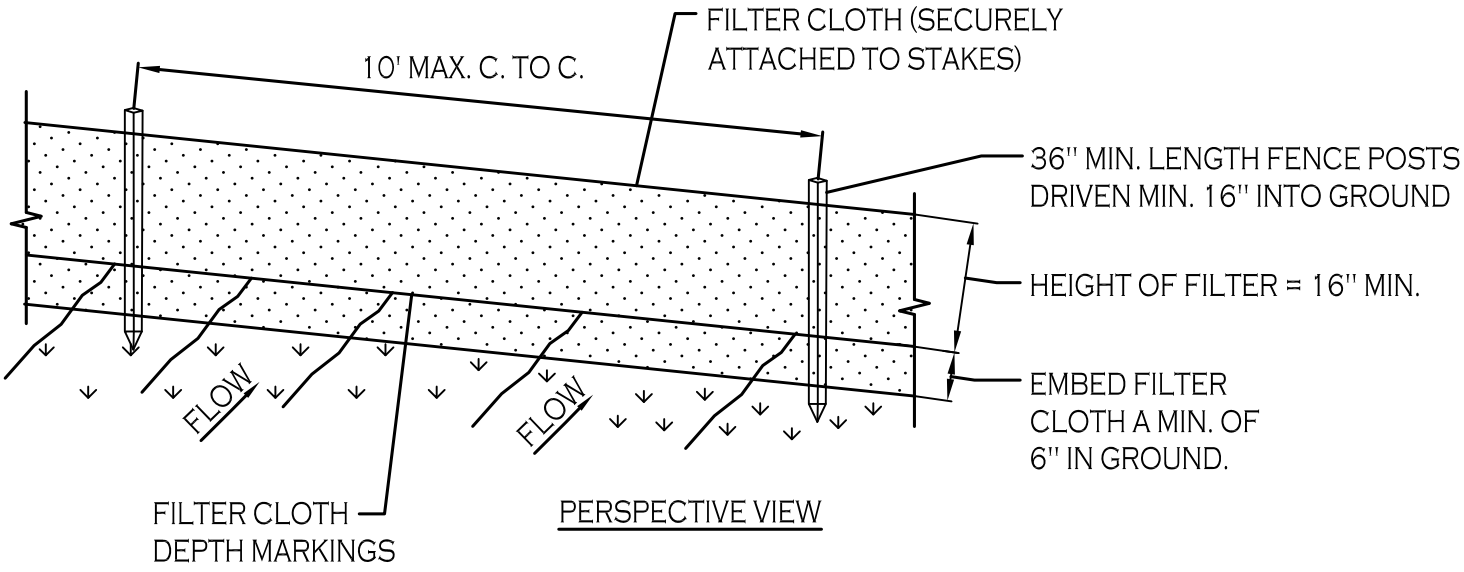
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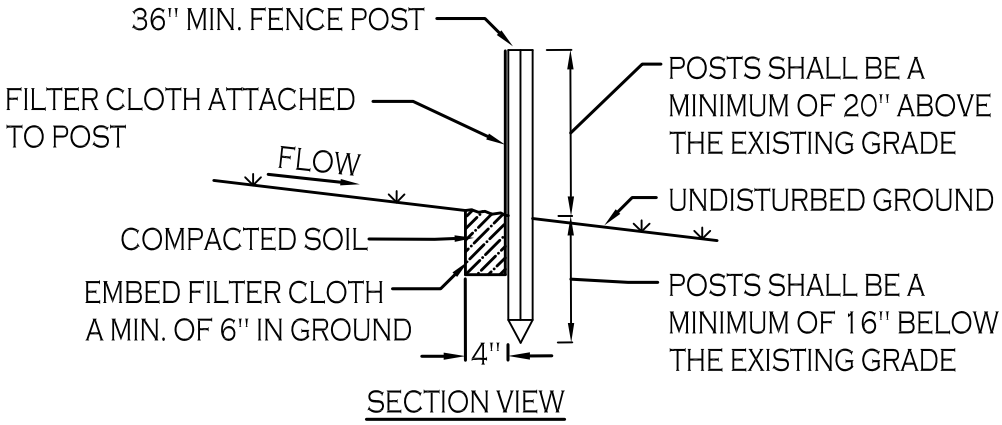
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.



CONCRETE WASHOUT 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.

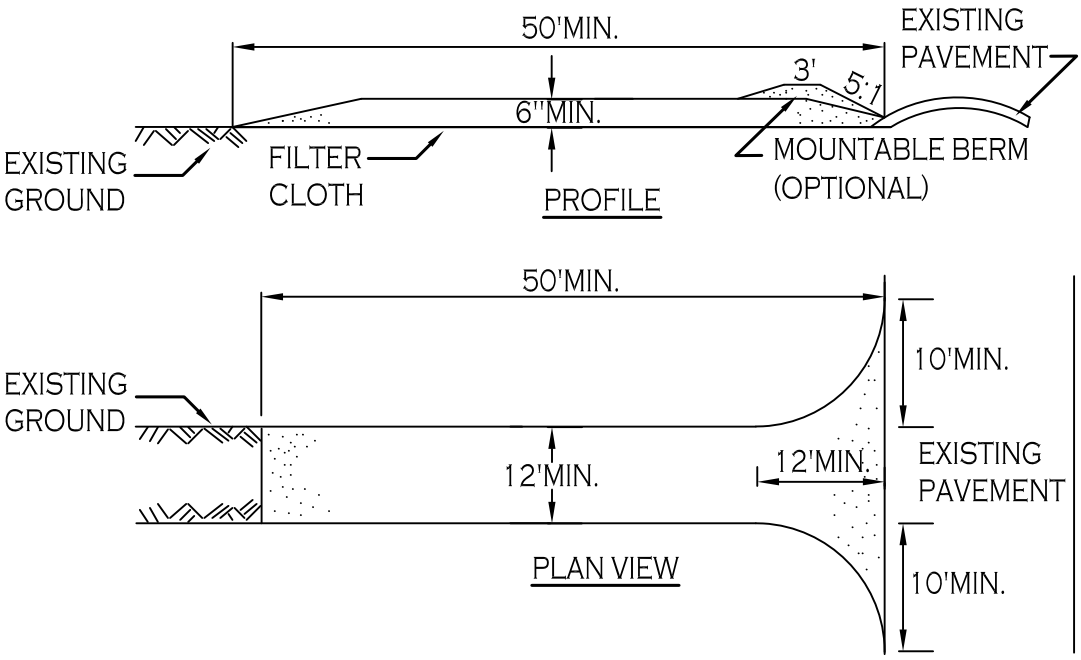
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.

3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE

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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.

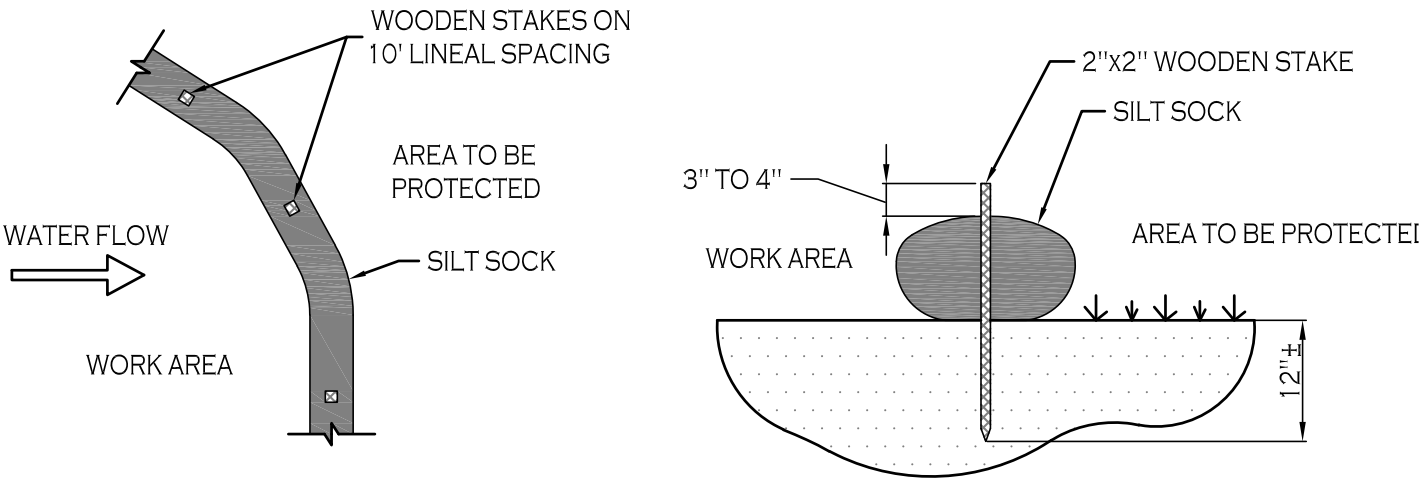
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

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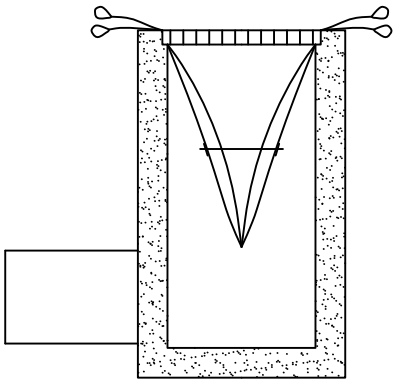
CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

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.

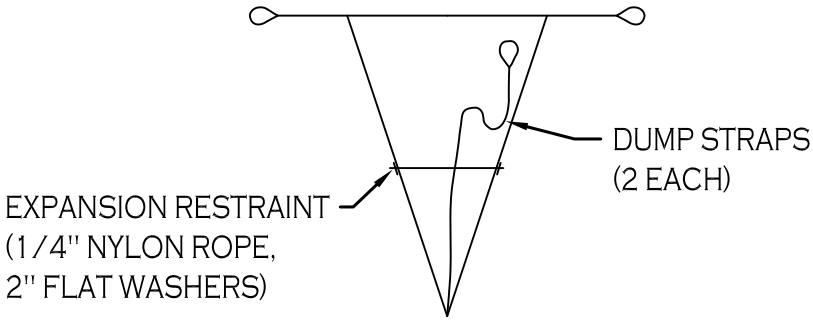
SILT SOCK DETAIL

NOT TO SCALE

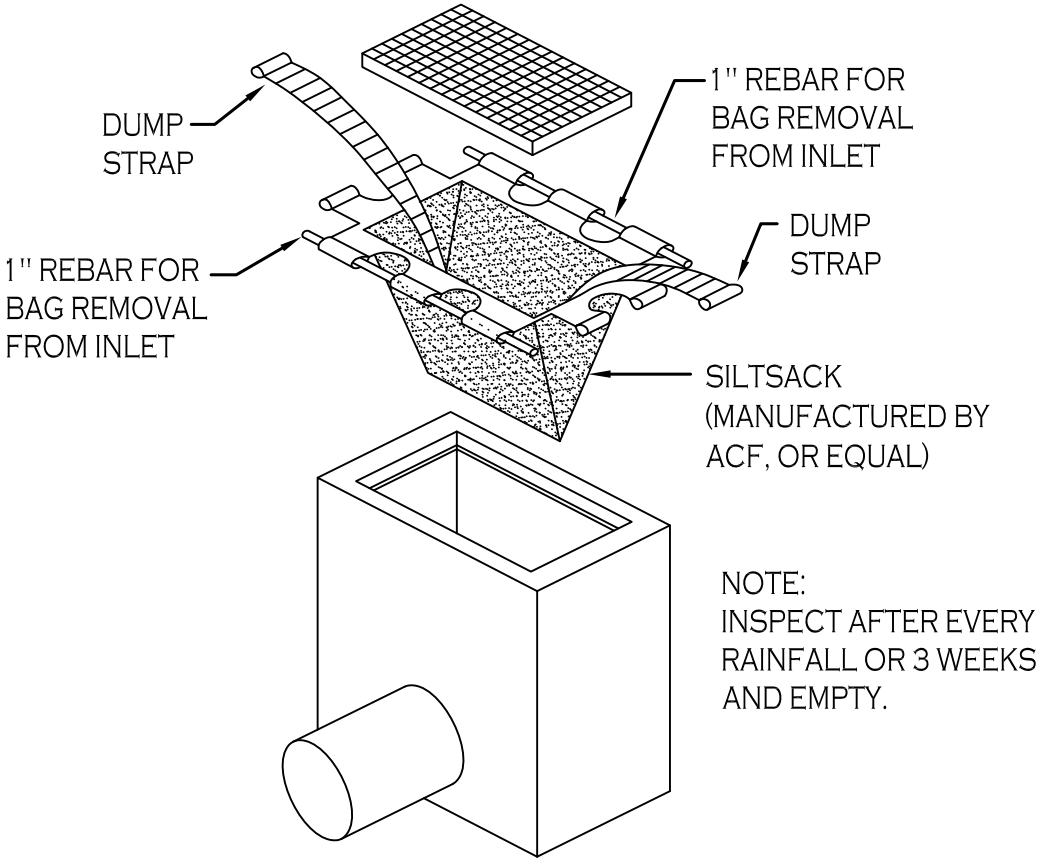
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INSTALLATION DETAIL



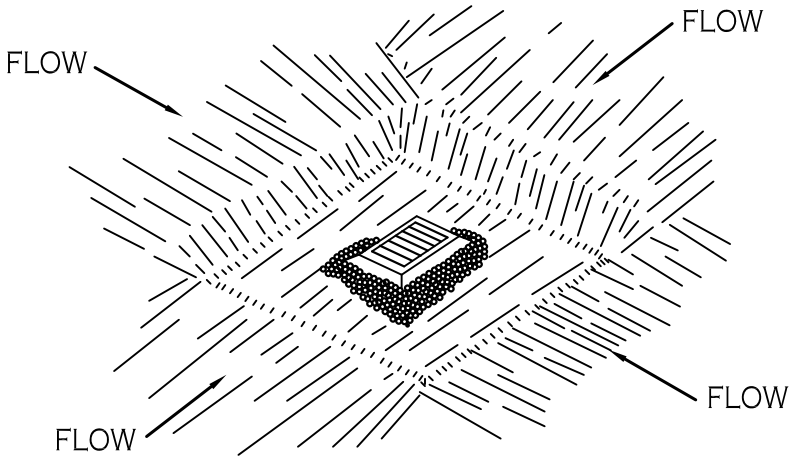
BAG DETAIL

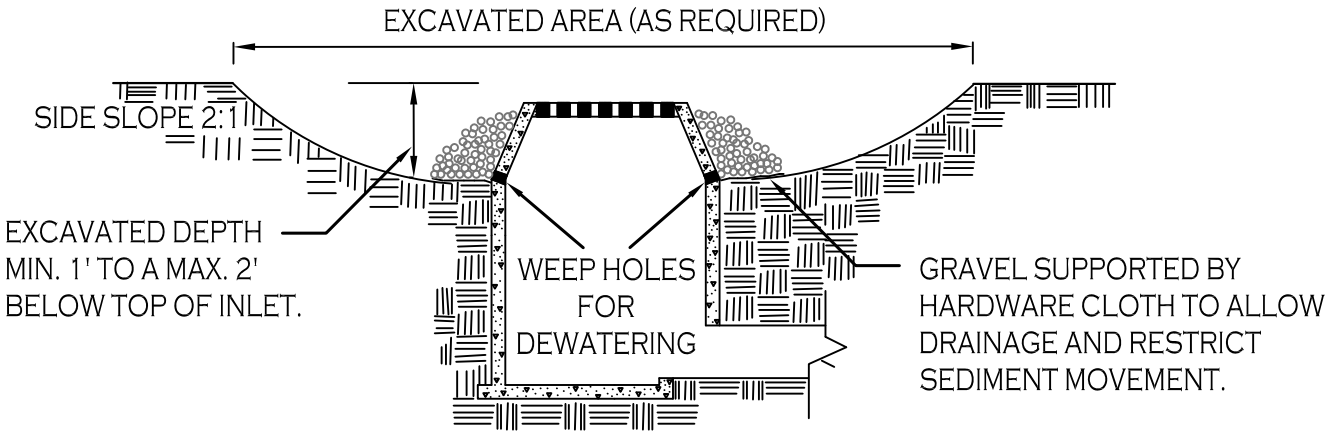


SILT SACK DETAIL

NOT TO SCALE

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CONSTRUCTION SPECIFICATIONS

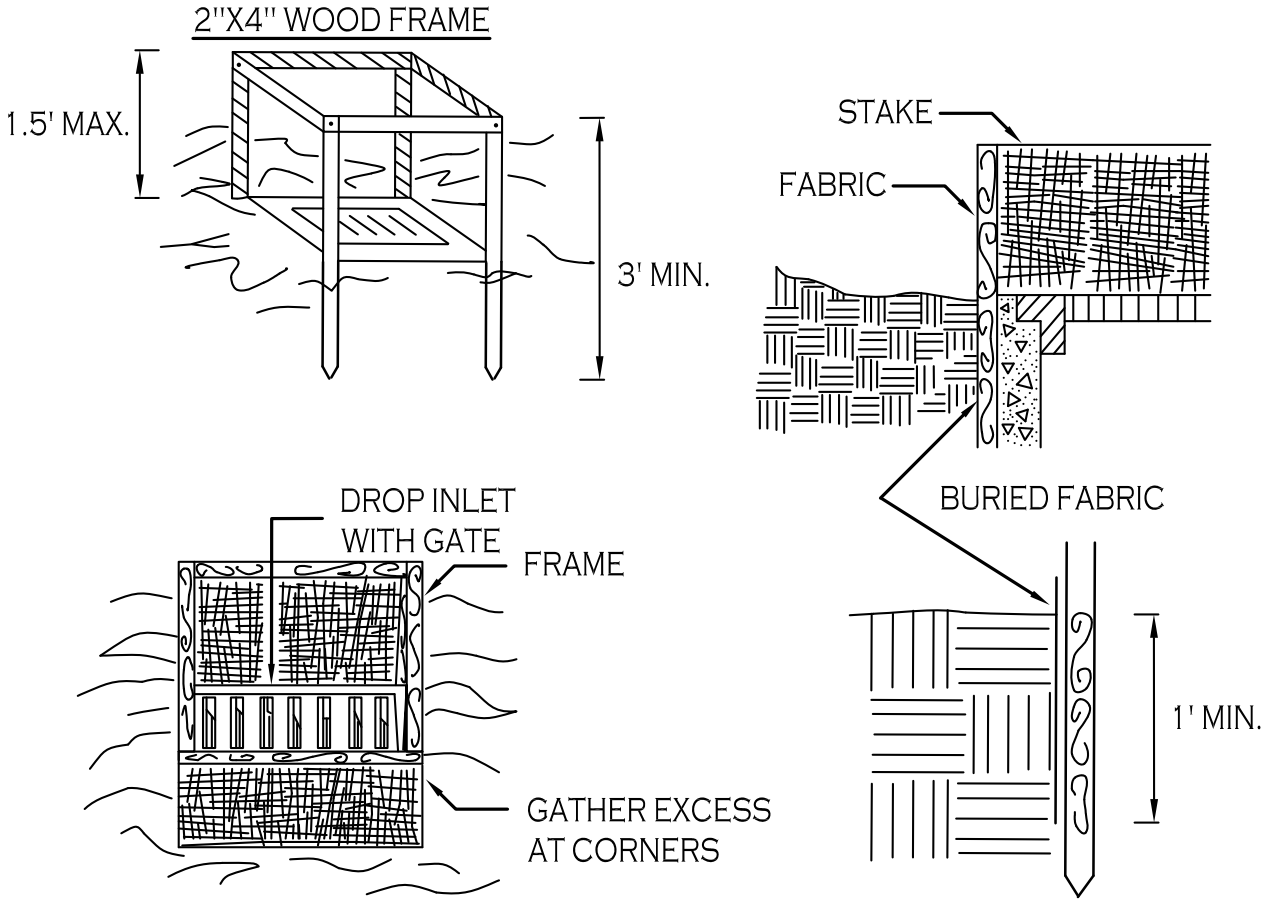
1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND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

MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 1

NOT TO SCALE

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



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.

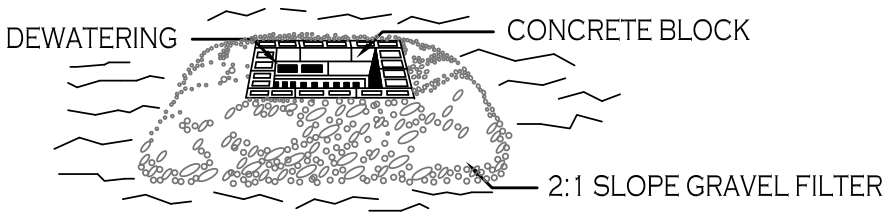
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

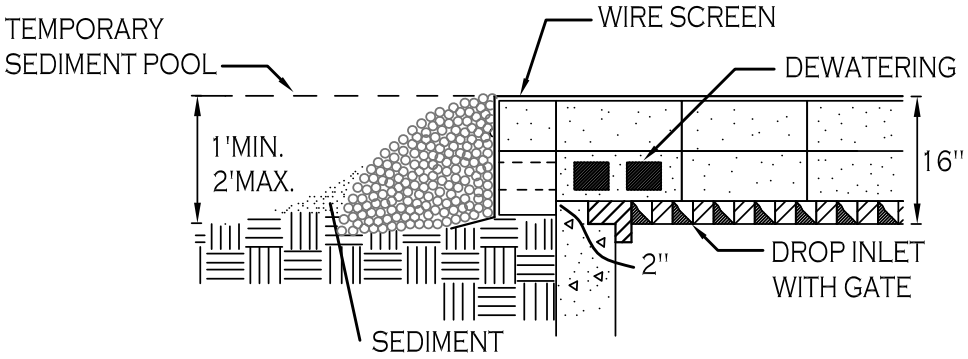
INLET PROTECTION DETAIL 2

NOT TO SCALE

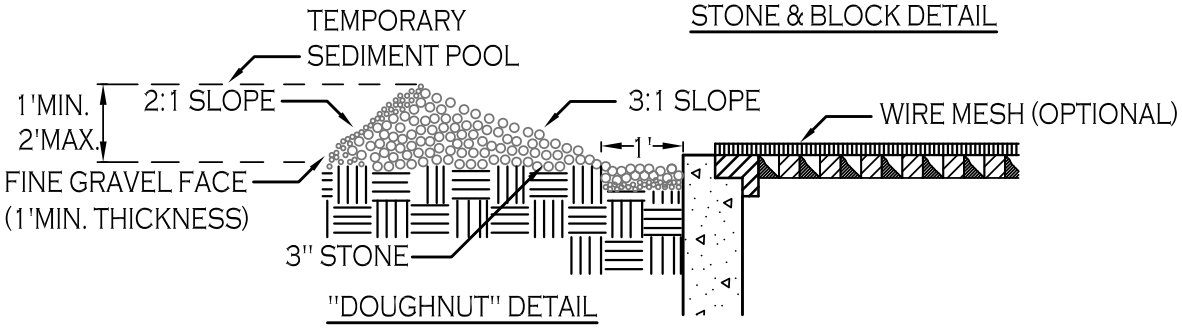
Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)



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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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.

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Appendix L

NYSDEC Stormwater Management Inspection Lists

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Stormwater Ponds



Description: Constructed stormwater retention basin that has a permanent pool (or micropool). Runoff from each rain event is detained and treated in the pool through settling and biological uptake mechanisms.

Design Options: Micropool Extended Detention (P-1), Wet Pond (P-2), Wet Extended Detention (P-3), Multiple Pond (P-4), Pocket Pond (P-5)

KEY CONSIDERATIONS

FEASIBILITY

- Contributing drainage area greater than 10 acres for P-1, 25 acres for P-2 to P-4.
- Follow DEC Guidelines for Design of Dams.
- Provide a minimum 2' separation from the groundwater in sole source aquifers.
- Do not locate ponds in jurisdictional wetlands.
- Avoid directing hotspot runoff to design P-5.

CONVEYANCE

- Forebay at each inlet, unless the inlet contributes less than 10% of the total inflow, 4' to 6' deep.
- Stabilize the channel below the pond to prevent erosion.
- Stilling basin at the outlet to reduce velocities.

PREATREATMENT

- Forebay volume at least 10% of the WQ_v
- Forebay shall be designed with non-erosive outlet conditions.
- Provide direct access to the forebay for maintenance equipment
- In sole source aquifers, provide 100% pretreatment for hotspot runoff.

TREATMENT

- Provide the water quality volume in a combination of permanent pool and extended detention (Table 6.1 in manual provides limitations on storage breakdown)
- Minimum length to width ratio of 1.5:1
- Minimum surface area to drainage area ratio of 1:100

LANDSCAPING

STORMWATER MANAGEMENT SUITABILITY

X	Water Quality
X	Channel Protection
X	Overbank Flood Protection
X	Extreme Flood Protection

Accepts Hotspot Runoff: *Yes*

(2 feet minimum separation distance required to water table)

FEASIBILITY CONSIDERATIONS

L	Cost
L	Maintenance Burden

Key: L=Low **M**=Moderate **H**=High

Residential Subdivision Use: Yes

High Density/Ultra-Urban: *No*

Soils: *Hydrologic group 'A' soils may require pond liner*

Hydrologic group 'D' soils may have compaction constraints

Other Considerations:

- *Thermal effects*

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

- Provide a minimum 10’ and preferably 15’ safety bench extending from the high water mark, with a maximum slope of 6%.
- Provide an aquatic bench extending 15 feet outward from the shoreline, and a maximum depth of 18" below normal water elevation.
- Develop a landscaping plan.
- Provide a 25’pond buffer.
- No woody vegetation within 15 feet of the toe of the embankment, or 25 feet from the principal spillway.

MAINTENANCE REQUIREMENTS

- Legally binding maintenance agreement
- Sediment removal from forebay every five to six years or when 50% full.
- Provide a maintenance easement and right-of-way.
- Removable trash rack on the principal spillway.
- Non-clogging low flow orifice
- Riser in the embankment.
- Pond drain required, capable of drawing down the pond in 24 hours.
- Notification required for pond drainage.
- Provide an adjustable gate valve on both the WQ_v-ED pipe, and the pond drain.
- Side Slopes less than 3:1, and terminate at a safety bench.
- Principal spillway shall not permit access by small children, and endwalls above pipes greater than 48” in diameter shall be fenced.

- *Outlet clogging*
- *Safety bench*

POLLUTANT REMOVAL

G	Phosphorus
G	Nitrogen
G	Metals - Cadmium, Copper,Lead, and Zinc removal
G	Pathogens Coliform, E.Coli, Streptococci removal

Key: G=Good **F**=Fair **P**=Poor

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

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CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

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CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Actions to be Taken:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Actions to be Taken:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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*

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

	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

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Comments:

Actions to be Taken:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

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		

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Comments:

Actions to be Taken:

Attachment: SUB-2020-03PP_application reports_012121 (22546 : Sub-2020-03Pp)

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York
SITE DEVELOPMENT DRAWINGS

AGENCIES

ENGINEERING DEPARTMENT
NAME/TITLE: JEFFERY BURROUGHS, P.E. – TOWN ENGINEER
COMPANY/DEPT: TOWN OF AMHERST ENGINEERING DEPARTMENT
ADDRESS: 1100 NORTH FOREST ROAD
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–631–7154

PLANNING & ZONING DEPARTMENT
NAME/TITLE: DANIEL HOWARD – PLANNING DIRECTOR
COMPANY/DEPT: TOWN OF AMHERST PLANNING DEPARTMENT
ADDRESS: 5583 MAIN STREET
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–631–7051

LAND SURVEYOR
NAME/TITLE: GPI ENGINEERING, LANDSCAPE ARCHITECTURE SURVEYING, LLP
COMPANY/DEPT: 4950 GENESEE STREET, SUITE 100
ADDRESS: BUFFALO, NEW YORK 14225
TELEPHONE 716–633–4844

UTILITIES

NATURAL GAS
COMPANY/DEPT:. NATIONAL FUEL GAS CORP.
ADDRESS: 6363 MAIN STREET
WILLIAMSVILLE, NEW YORK 14221
TELEPHONE 716–857–7000

TELEPHONE COMPANY
COMPANY/DEPT: VERIZON
ADDRESS: 65 FRANKLIN STREET
BUFFALO, NEW YORK 14203
TELEPHONE 716–840–8748

CABLE COMPANY
COMPANY/DEPT: TIME WARNER
ADDRESS: 789 CHURCH ROAD
WEST SENECA, NEW YORK
TELEPHONE 716–558–8615

ELECTRIC COMPANY
COMPANY/DEPT: NATIONAL GRID
ADDRESS: 144 KENSINGTON AVENUE
BUFFALO, NEW YORK 14214
TELEPHONE 716–236–2738

WATER
COMPANY/DEPT:. ERIE COUNTY WATER AUTHORITY
ADDRESS: 3030 UNION ROAD
CHEEKTOWAGA, NEW YORK 14227
TELEPHONE 716–684–1510

DIG SAFELY NEW YORK
TELEPHONE 1–800–962–7962

OWNER/DEVELOPER

NAME: Essex Homes of WNY, Inc.
ADDRESS 8940 Main Street
Clarence, NY 14031
CONTACT: Robert Savarino
TELEPHONE 716-635-0550

ENGINEER

Carmina • Wood • Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

NOVEMBER 2020

PROJECT AREA



LOCATION MAP

DWG NO.	DRAWING TITLE
–	COVER SHEET
–	SURVEY & TOPOGRAPHIC MAP
C–001	DEMOLITION & EROSION CONTROL PLAN
C–002	TYPICAL LOT DEMOLITION & EROSION CONTROL PLAN
C–003	DEMOLITION & EROSION CONTROL DETAILS
C–100	PRELIMINARY PLAT
C–101	SITE DETAILS
C–200	GRADING PLAN
C–201	CENTERLINE ROAD PROFILE
C–300	STORM DRAINAGE PLAN
C–301	STORM DRAINAGE PROFILE
C–302	STORM DRAINAGE DETAILS
C–400	UTILITY PLAN
C–401	SANITARY SEWER & WATERLINE PROFILE & DETAILS
C–402	SANITARY SEWER DETAILS
C–403	SANITARY SEWER DETAILS
C–404	SANITARY SEWER GENERAL NOTES
C–405	SANITARY SEWER TESTING NOTES
C–406	WATER DETAILS
C–407	WATER DETAILS
C–408	WATER DETAILS & NOTES

Attachment: SUB-2020-03PP drawings 012121 (22546 : Sub-2020-03Pp)

NOTE: THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE.

● SET OR EX. 5/8" REBAR OR AS NOTED

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HEIM ROAD (66' WIDE) (FORMERLY SKINNERSVILLE ROAD)

FAIRWOODS DRIVE (50' WIDE)

WETLAND AREA: 0.63± ACRES (NON-JURISDICTIONAL)

FEDERAL WETLAND AREA: 1.24 ACRES

LOT 4

LOT 5

LANDS OF THE TOWN OF AMHERST (FORMERLY CANANDAIGUA AND NIAGARA FALLS RAILROAD)

LEGEND

DECIDUOUS TREE	GAS METER
DECIDUOUS BUSH	GAS VALVE
CONIFEROUS TREE	ELECTRIC METER
CONIFEROUS BUSH	FLOOD LIGHT
WOOD LINE	LIGHT POST
SANITARY MANHOLE	STORM MANHOLE
UTILITY POLE	CATCH BASIN
MAIL BOX	WATER VALVE
SIGN, ONE POST	FIRE HYDRANT
SIGN, TWO POSTS	BUBBLER
	CLEAN OUT

DATE	REVISION/TYPE

BOUNDARY & TOPOGRAPHIC SURVEY
PART OF LOT 57, TOWNSHIP 12, RANGE 7
HOLLAND LAND COMPANY
TOWN OF AMHERST, ERIE COUNTY, NEW YORK

GPI ENGINEERING, LANDSCAPE ARCHITECTURE SURVEYING, LLP
ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225
(716) 633-4944 FAX 633-4940

Job No. 0715 Date: APRIL 22, 2020
Scale 1" = 40' Tax No. 42.09-1-15

Attachment: SUB-2020-03PP drawings 012121 (22546 : Sub-2020-03Pp)

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CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CONSTRUCT TEMPORARY CONSTRUCTION EXIT, INSTALL PERIMETER SILT FENCE/SILT SOCK AND DRAINAGE INLET PROTECTION.
2. CLEAR AND GRUB SITE.
3. INSTALL DETENTION BASIN.
4. COMMENCE SITE GRADING.
5. INSTALL PROPOSED UTILITIES.
6. PREPARE PAVEMENT SUBGRADE.
7. INSTALL CURB, STORM PIPING AND STRUCTURES.
8. INSTALL PAVEMENT.
9. CARRY OUT FINAL GRADING AND INSTALL LANDSCAPING PLANTINGS.
10. CLEAN STORM SYSTEM AND DETENTION BASIN.
11. REMOVE SILT FENCE/SILT SOCK AND CONSTRUCTION ENTRANCES.
12. CLEAN SITE.

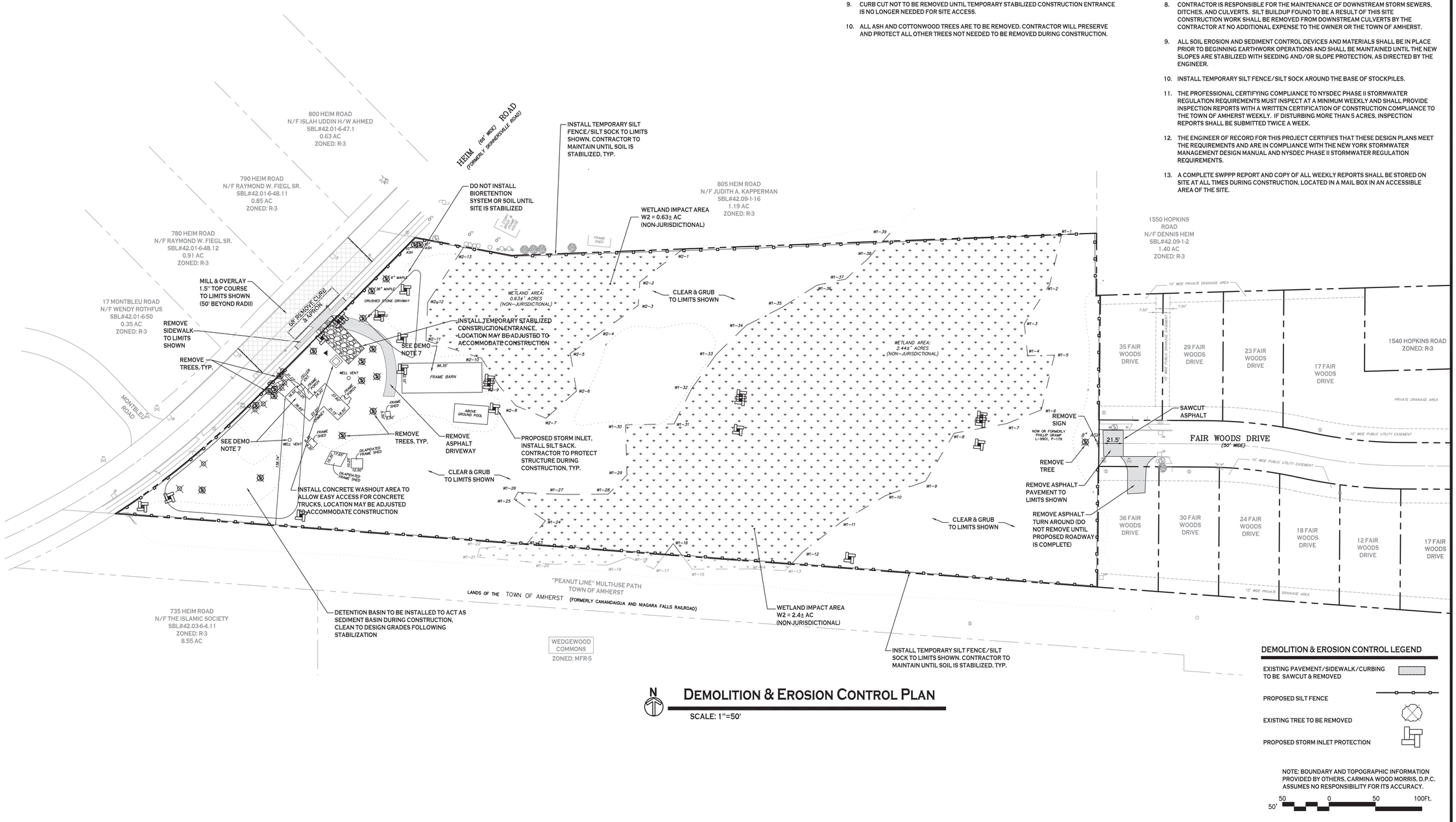
DEMOLITION NOTES:

1. 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/SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
3. CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES WHERE ACCESSING THE SITE FROM PAVED ROADWAYS. STORM DRAINAGE INLETS THAT INTERFERE WITH CONSTRUCTION ENTRANCE TO BE PROTECTED WITH SILT SACK AND OTHER PROPER TEMPORARY INLET PROTECTION MEASURES.
4. IF NECESSARY, CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH NYS M.U.T.C.D. STANDARDS PRIOR TO STARTING WORK.
5. IF NECESSARY, CONTRACTOR TO USE COVERED DUMPSTERS AS REQUIRED FOR CONSTRUCTION WASTE.
6. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. STUMPS AND BRUSH SHALL NOT BE BURIED WITHIN THE TOWN.
7. REMOVE EXISTING HOUSE TO INCLUDE ALL FOUNDATIONS, PORCHES, STEPS, ETC. ALL UTILITY CONNECTIONS TO BE ABANDONED AND/OR REMOVED PER COUNTY, TOWN, AND UTILITY COMPANY REQUIREMENTS.
8. EXISTING CURB AT DRIVEWAY ENTRANCE TO BE REMOVED SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED.
9. CURB CUT NOT TO BE REMOVED UNTIL TEMPORARY STABILIZED CONSTRUCTION ENTRANCE IS NO LONGER NEEDED FOR SITE ACCESS.
10. ALL ASH AND COTTONWOOD TREES ARE TO BE REMOVED. CONTRACTOR WILL PRESERVE AND PROTECT ALL OTHER TREES NOT NEEDED TO BE REMOVED DURING CONSTRUCTION.

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT FENCE/SILT SOCK BARRIERS AS DIRECTED BY THE ENGINEER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE/SILT SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE 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/SILT SOCK BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE ENGINEER 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 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. 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 TOWN OF AMHERST.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK 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/SILT SOCK AROUND THE BASE OF STOCKPILES.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY AND SHALL PROVIDE INSPECTION REPORTS WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF AMHERST WEEKLY. IF DISTURBING MORE THAN 5 ACRES, INSPECTION REPORTS SHALL BE SUBMITTED TWICE A WEEK.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.
13. A COMPLETE SWPPP REPORT AND COPY OF ALL WEEKLY REPORTS SHALL BE STORED ON SITE AT ALL TIMES DURING CONSTRUCTION, LOCATED IN A MAIL BOX IN AN ACCESSIBLE AREA OF THE SITE.



DEMOLITION & EROSION CONTROL PLAN

SCALE: 1"=50'

DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT/SIDEWALK/CURBING TO BE SAWCUT & REMOVED
- PROPOSED SILT FENCE
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50 0 50 100Ft.
50'

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STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Demolition & Erosion Control Plan

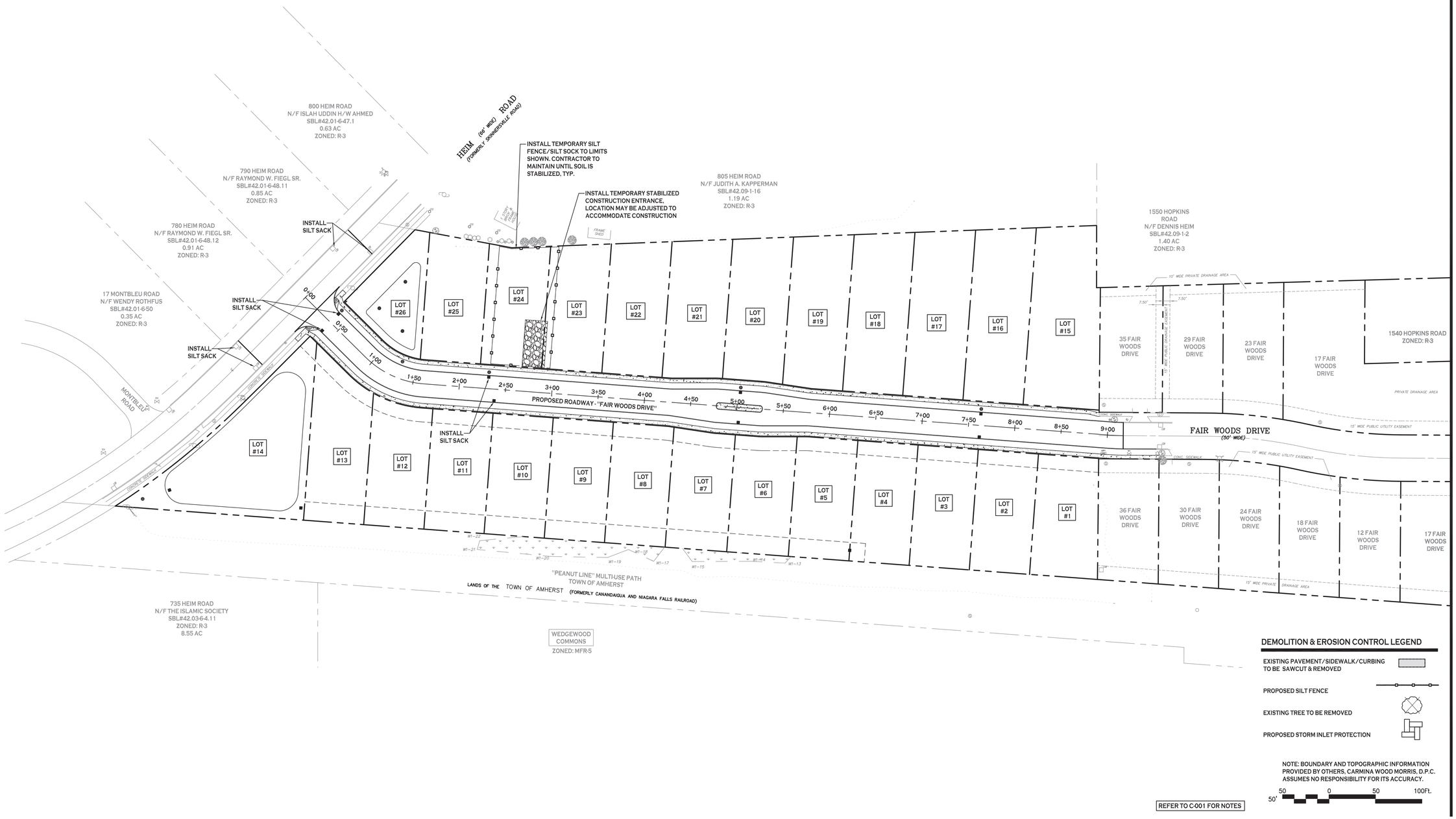
DRAWING NO.

C-001

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03PP)

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DEMOLITION & EROSION CONTROL LEGEND

- EXISTING PAVEMENT/SIDEWALK/CURBING TO BE SAWCUT & REMOVED
- PROPOSED SILT FENCE
- EXISTING TREE TO BE REMOVED
- PROPOSED STORM INLET PROTECTION

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50 0 50 100Ft.
50'

REFER TO C-001 FOR NOTES

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STATE OF NEW YORK
CHRISTOPHER WOOD
117364
LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

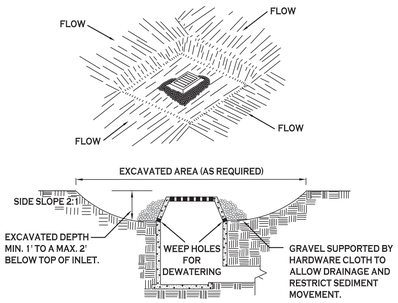
DRAWING NAME:
Typical Lot Demo & Erosion Control Plan

DRAWING NO.
C-002

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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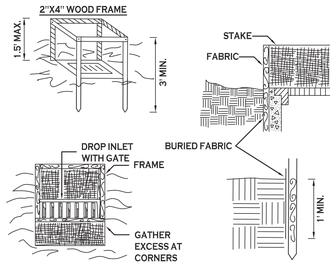


CONSTRUCTION SPECIFICATIONS

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

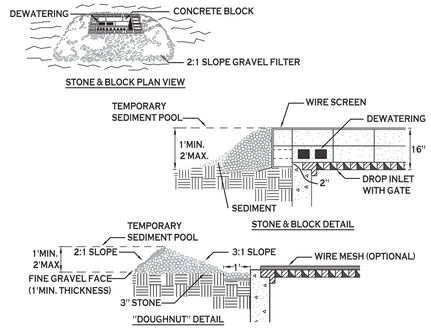


CONSTRUCTION SPECIFICATIONS

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

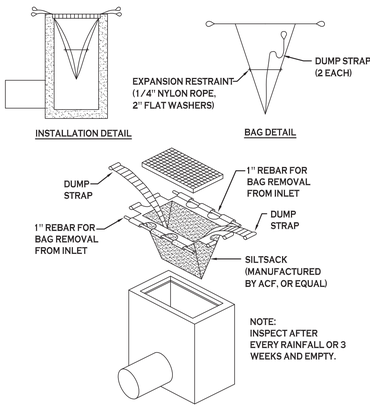


CONSTRUCTION SPECIFICATIONS

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.

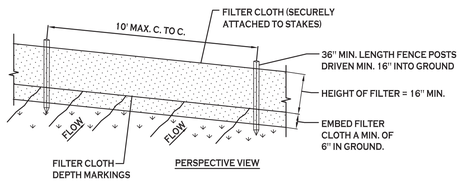
MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3
NOT TO SCALE



SILT SACK DETAIL
NOT TO SCALE

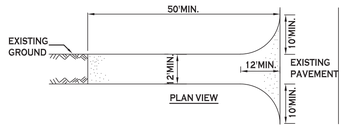
NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION



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.

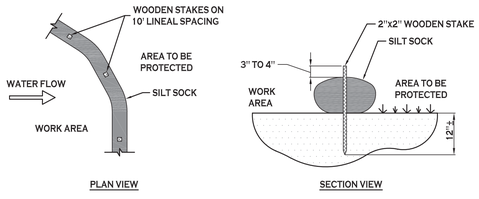
SILT FENCE DETAIL
NOT TO SCALE



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

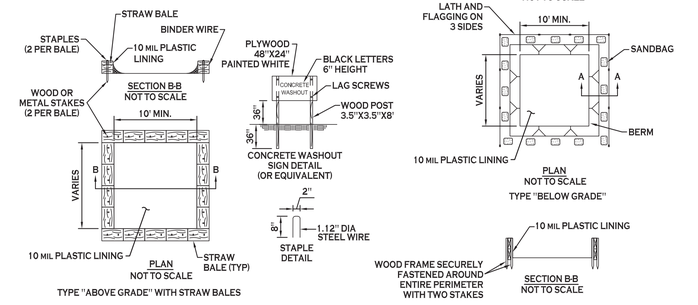


NOTES:

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 ½ 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



NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT DETAIL
NOT TO SCALE

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STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Demolition & Erosion Control Details

DRAWING NO.
C-003

Project no.: 19-100

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

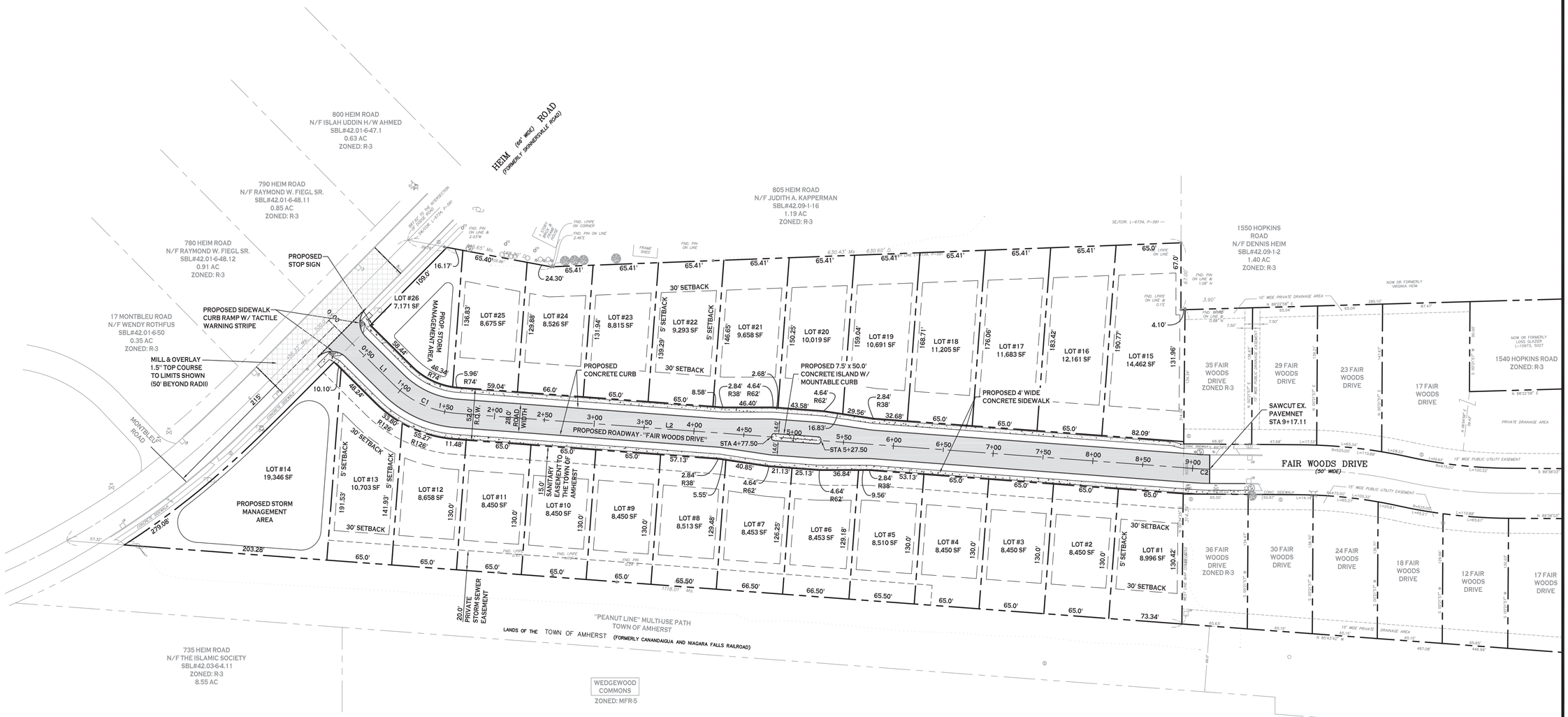
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SITE NOTES:

1. ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
2. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
3. ALL HANDICAP RAMPS AND/OR SIDEWALKS FLUSH TO PAVEMENT SHALL HAVE ADA COMPLIANT TACTILE WARNING STRIPES WHERE ENTERING PARKING AREAS/DRIVEWAYS/ROADWAYS.
4. CONCRETE SIDEWALK FRONTING LOTS 14, 16 AND 22 SHALL BE INSTALLED WITH THE ROADWAY AND UTILITY WORK INCLUSIVE OF THE PIP.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.
9. EXISTING CURB AT PROPOSED DRIVEWAY ENTRANCE AND REMOVAL OF EXISTING ENTRANCE SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE, EXISTING PAVEMENT SHALL NOT BE DISTURBED.



PRELIMINARY PLAT

SCALE: 1"=50'

SITE DATA (R-3 ZONING)
MIN. LOT WIDTH = 65 FT INTERIOR LOTS
MIN. LOT WIDTH = 75 FT CORNER LOTS
MIN. LOT AREA = 8,450 SF INTERIOR LOTS
MIN. LOT AREA = 9,750 SF CORNER LOTS
FRONT SETBACK = 30 FT
SIDE SETBACK = 5 FT
REAR SETBACK = 30 FT
MAXIMUM LOT COVERAGE = 35%
MAXIMUM BUILDING HEIGHT = 35 FT
MINIMUM FLOOR AREA = 1,000 SF (1 STORY)
MINIMUM FLOOR AREA = 1,200 SF (2 STORIES)

CURVE TABLE

CURVE	LENGTH (FT)	RADIUS (FT)	DELTA ANGLE
C1	70.69	100	40° 30' 16"
C2	13.63	200	3° 54' 21"

LINE TABLE

LINE	LENGTH (FT)	BEARING
L1	91.34	S 45° 14' 26" E
L2	741.44	S 85° 44' 42" E

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 0 50 100Ft.

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STATE OF NEW YORK · CHRISTOPHER WOOD · 076394 · LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Preliminary Plat

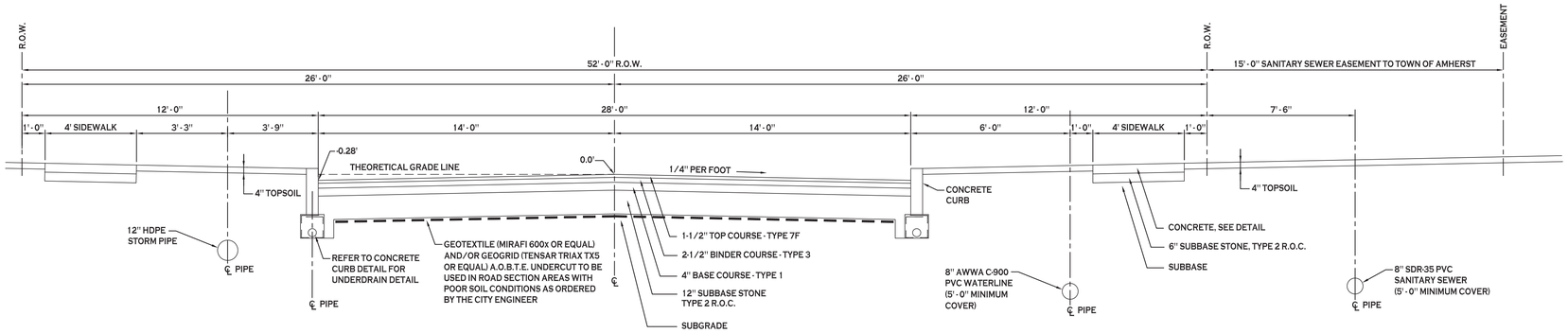
DRAWING NO.

C-100

Project no.: 19-190

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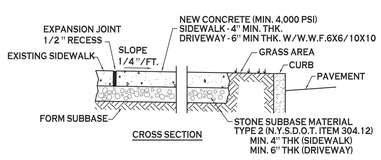
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TYPICAL PAVEMENT SECTION (T.O.A. LOCAL STREET)

NOT TO SCALE

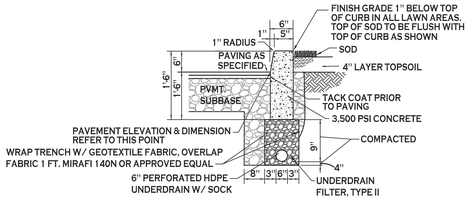
NOTE:
LIMITS AND DEGREE OF DEPTH OF ROAD SECTION UNDERCUT AREA WILL BE DETERMINED BY THE TOWN/CITY ENGINEER OR HIS/HER REPRESENTATIVE. MAXIMUM DEGREE OF DEPTH OF UNDERCUTTING SHALL BE 3'-6". ALL UNDERCUT AREAS SHALL BE GRADED/CROWNED TO DRAIN PROPERLY.



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, CONCRETE TO BE CLASS D AND SEALED AFTER CURING.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS 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" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

CONCRETE SIDEWALK

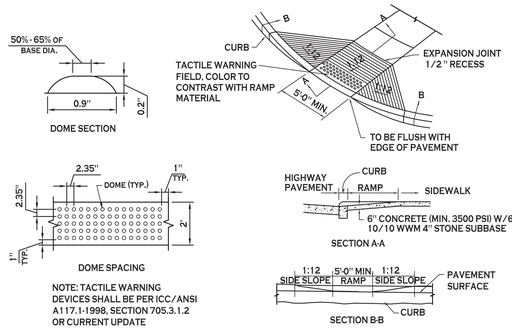
NOT TO SCALE



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 (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.
3. TIE UNDERDRAINS INTO CLOSEST DRAINAGE SYSTEM OR OUTLET TO DAYLIGHT UNLESS OTHERWISE INDICATED, SLOPE OF UNDERDRAIN TO FOLLOW BOTTOM OF CURB SLOPE.

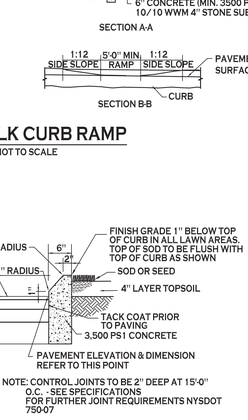
TYPE "A" CONCRETE CURB

NOT TO SCALE



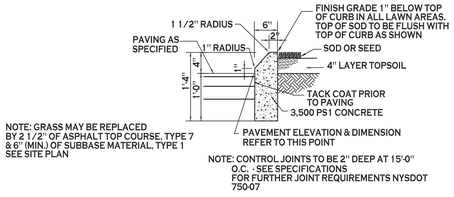
SIDEWALK CURB RAMP

NOT TO SCALE



STOP SIGN

NOT TO SCALE



MOUNTABLE CURB

NOT TO SCALE

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STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Site Details

DRAWING NO.
C-101

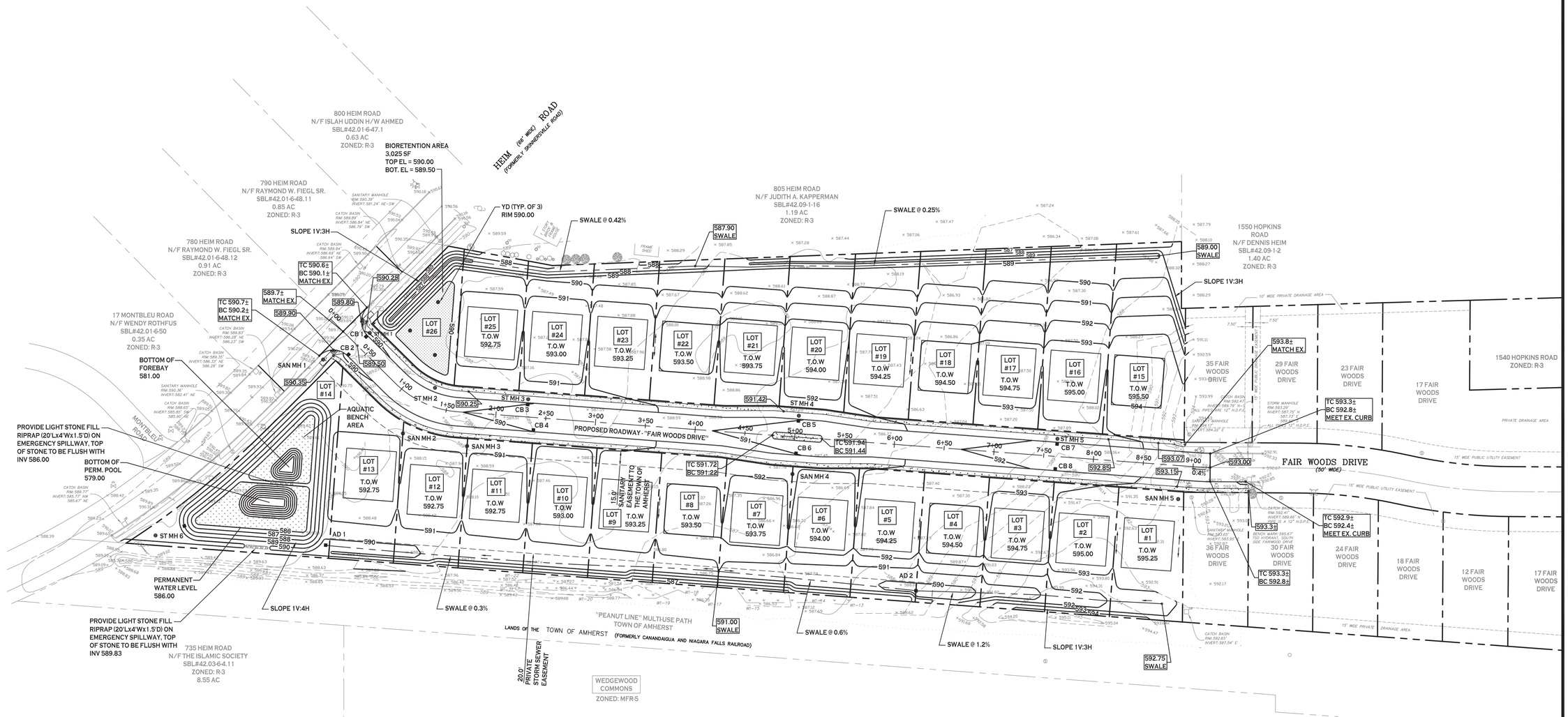
Project no.: 19-190

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STRUCTURE TABLE

STRUCTURE	STATION	OFFSET	RIM
AD 1	1+15.41	172.14' RT.	589.75
AD 2	6+32.14	144.50' RT.	589.75
CB 1	0+37.93	13.00' LT.	589.40
CB 2	0+37.93	13.00' RT.	589.40
CB 3	2+31.03	13.00' LT.	589.98
CB 4	3+38.33	13.00' RT.	590.02
CB 5	5+02.52	16.75' LT.	590.98
CB 6	5+02.52	16.75' RT.	590.98
CB 7	7+62.27	13.00' LT.	592.10
CB 8	7+62.27	13.00' RT.	592.10
CB 9	0+41.73	250.04' RT.	589.00
ST MH 1	0+37.93	17.75' LT.	590.00
ST MH 2	1+31.06	18.39' LT.	590.20
ST MH 3	2+31.03	17.75' LT.	590.48
ST MH 4	5+02.52	21.50' LT.	591.48
ST MH 5	7+62.27	17.75' LT.	592.75
ST MH 6	0+28.41	277.39 RT.	589.50
SAN MH 1	0+23.34	34.03' RT.	590.50
SAN MH 2	1+21.77	36.60' RT.	590.80
SAN MH 3	1+73.51	33.50' RT.	590.80
SAN MH 4	5+00.52	37.25' RT.	591.80
SAN MH 5	8+87.52	33.50' RT.	593.50



GRADING PLAN

SCALE: 1"=50'

GRADING NOTES:

1. IN GENERAL, EXTERIOR GRADE AT THE PROPOSED HOUSES SHALL BE 2' ABOVE THE HIGHEST ADJACENT EDGE OF ROAD, CORNER LOTS MAY DIFFER, SEE PLAN FOR SPECIFIC SITUATIONS.
2. IN GENERAL, 1ST FFE FOR THE PROPOSED HOUSES SHALL BE 2.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
3. IN GENERAL, TOP OF WALL ELEVATION SHALL BE 1.5' ABOVE HIGHEST EXTERIOR GRADE ELEVATION.
4. SANITARY SEWER INVERT AT THE PROPOSED HOUSE SHALL BE 1.5' ABOVE THE BASEMENT FLOOR ELEVATION, BASEMENT FLOOR ELEVATION IS 9' BELOW THE 1ST FFE.
5. HOUSE BOXES SHOWN ARE 50'x50' FOR DESIGN PURPOSES.

PROPOSED GRADING LEGEND

- PROPOSED CONTOUR — 101
- PROPOSED SPOT ELEVATION — 100.80
- PROPOSED TOP OF CURB/ BOT. OF CURB ELEVATION — T.C. 100.50 B.C. 100.00
- PROPOSED CATCH BASIN — CB
- PAVEMENT/GROUND SLOPE
- PROPOSED MANHOLE — MH
- PROPOSED YARD DRAIN — YD
- PROPOSED SWALE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 0 50 100Ft.

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STATE OF NEW YORK CHRISTOPHER WOOD 075394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Grading Plan

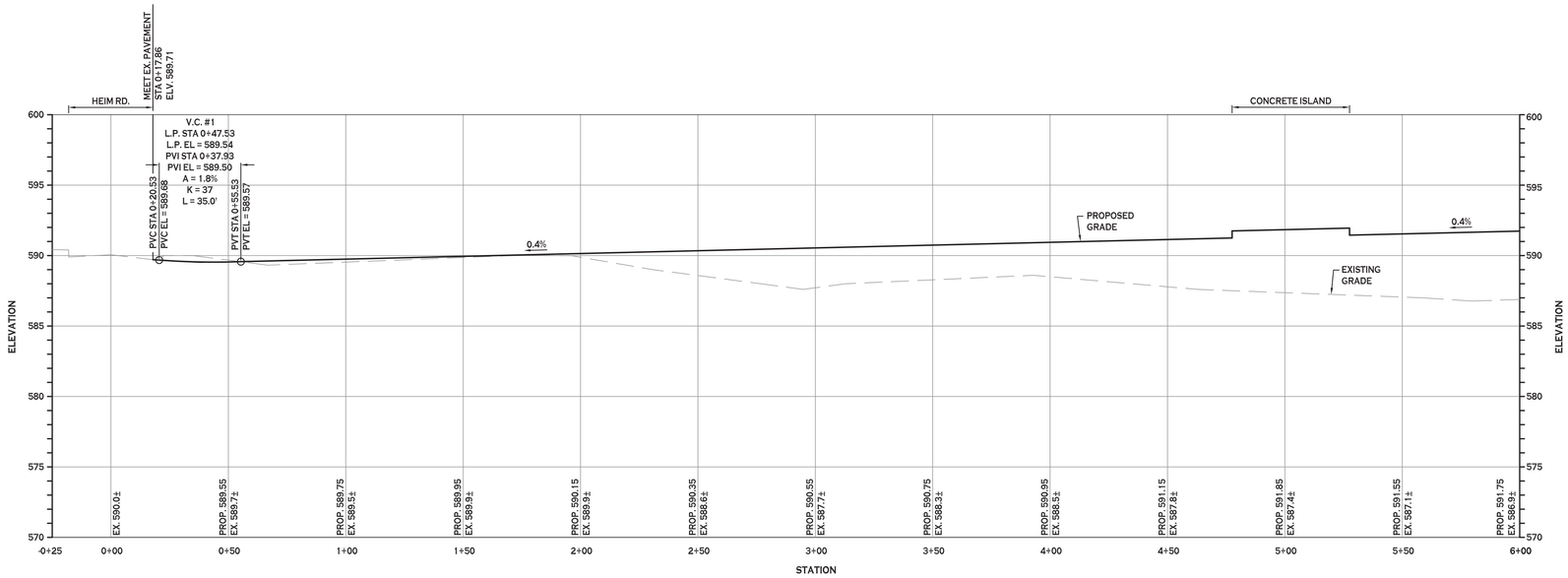
DRAWING NO.

C-200

Project no.: 19-190

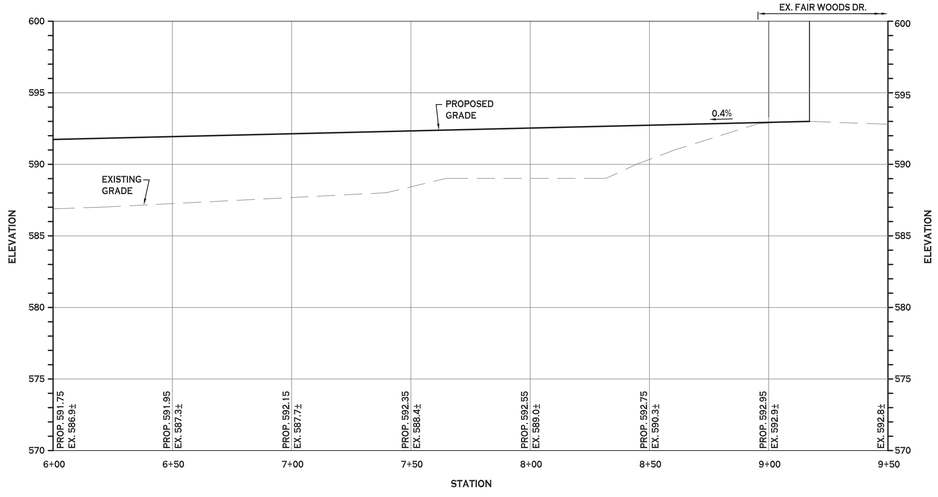
Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03PP)

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CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'

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STATE OF NEW YORK
CHRISTOPHER WOJ
076394
LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Centerline
Road Profile

DRAWING NO.
C-201

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03PP)

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PRE DEVELOPMENT STORMWATER EVENT SUMMARY

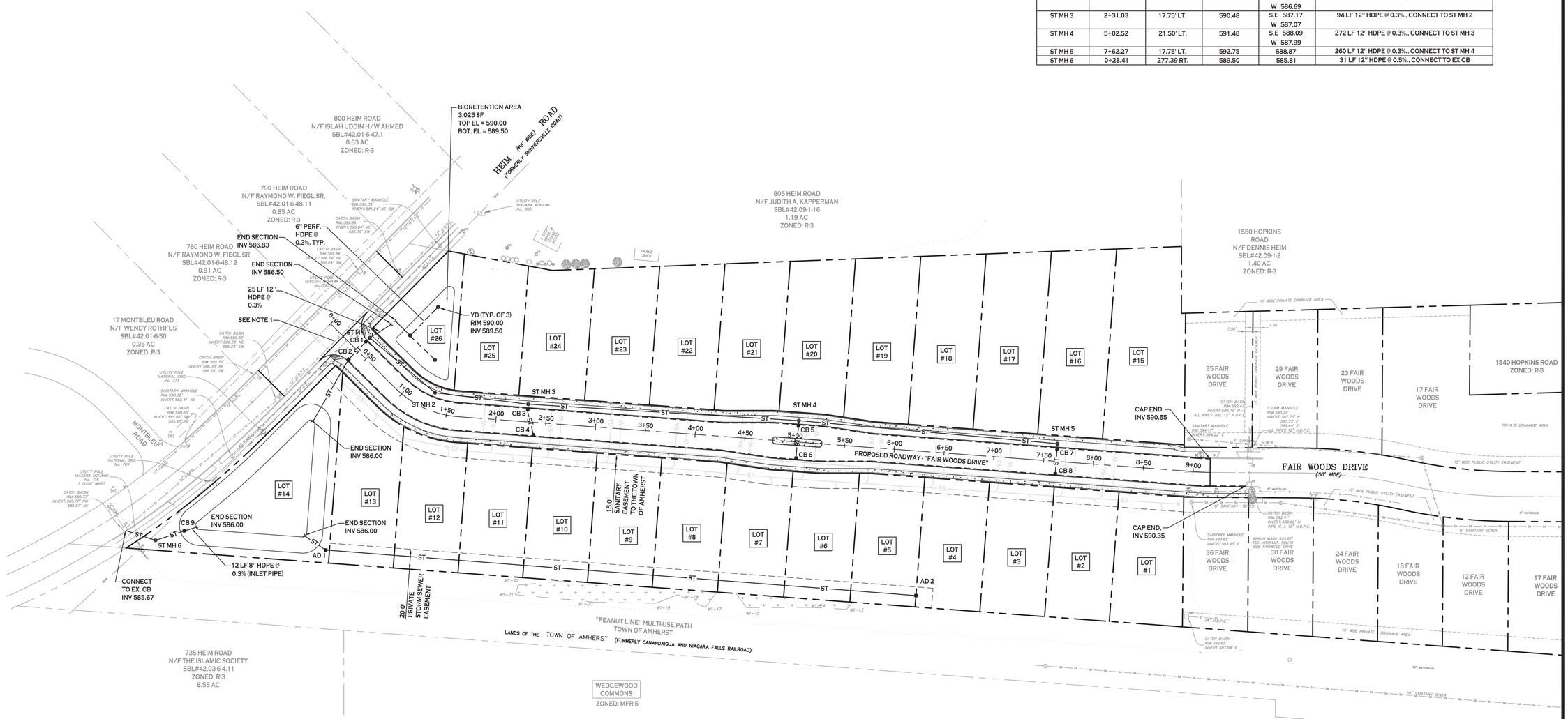
Event	Runoff (cfs)	Volume (ac-ft)	Depth (inches)
1-Year	4.06	0.250	0.89
2-Year	6.19	0.363	1.29
5-Year	9.68	0.552	1.95
10-Year	13.08	0.737	2.60
25-Year	18.86	1.056	3.71
50-Year	24.30	1.362	4.79
100-Year	30.83	1.734	6.09

POST DEVELOPMENT STORMWATER EVENT SUMMARY
DETENTION BASIN

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-Year	3.28	1.02	586.91	6,969
2-Year	4.50	1.46	587.21	9,540
5-Year	6.39	1.95	587.68	13,904
10-Year	8.18	2.25	588.13	18,422
25-Year	11.11	2.66	588.84	26,316
50-Year	13.80	4.12	589.33	32,337
100-Year	16.96	5.95	589.74	37,707

STRUCTURE TABLE

Structure	Station	Offset	Rim	Inv	Description
AD 1	1+15.41	172.14' RT.	589.75	586.07	24 LF 12" HDPE @ 0.3%, OUTLET TO DETENTION BASIN
AD 2	6+32.14	144.50' RT.	589.75	587.85	593 LF 12" HDPE @ 0.3%, CONNECT TO AD 1
CB 1	0+37.93	13.00' LT.	589.40	SE 587.15 NE,SW 586.30	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 2
CB 2	0+37.93	13.00' RT.	589.40	SE 587.15 NE,SW 586.22	71 LF 12" HDPE @ 0.3%, OUTLET TO DETENTION POND
CB 3	2+31.03	13.00' LT.	589.98	E,W 587.73 SE 587.20	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 3 183 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 1
CB 4	3+38.33	13.00' RT.	590.02	E,W 587.77 NW 587.29	28 LF 12" HDPE @ 0.3%, CONNECT TO CB 3 214 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 2
CB 5	5+02.52	16.75' LT.	590.98	E,W 588.73 N 588.11	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 4 272 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 3
CB 6	5+02.52	16.75' RT.	590.98	E,W 588.73 N 588.19	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 5 260 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 4
CB 7	7+62.27	13.00' LT.	592.10	E,W 589.85 N 588.90	5 LF 12" HDPE @ 0.6%, CONNECT TO ST MH 5 260 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 5
CB 8	7+62.27	13.00' RT.	592.10	E,W 589.85 N 588.98	25 LF 12" HDPE @ 0.3%, CONNECT TO CB 7 260 LF 6" PERF. HDPE @ STD. DEPTH, CONNECT TO CB 6
CB 9	0+41.73	250.04' RT.	589.00	585.96	31 LF 12" HDPE @ 0.5%, CONNECT TO ST MH 6
ST MH 1	0+37.93	17.75' LT.	590.00	SE 586.43 NE,SW 586.33	5 LF 12" HDPE @ 0.6%, CONNECT TO CB 1
ST MH 2	1+31.06	18.39' LT.	590.20	E 586.79 W 586.69	85 LF 12" HDPE @ 0.3%, CONNECT TO ST MH 1
ST MH 3	2+31.03	17.75' LT.	590.48	S,E 587.17 W 587.07	94 LF 12" HDPE @ 0.3%, CONNECT TO ST MH 2
ST MH 4	5+02.52	21.50' LT.	591.48	S,E 588.09 W 587.99	272 LF 12" HDPE @ 0.3%, CONNECT TO ST MH 3
ST MH 5	7+62.27	17.75' LT.	592.75	588.87	260 LF 12" HDPE @ 0.3%, CONNECT TO ST MH 4
ST MH 6	0+28.41	277.39 RT.	589.50	585.81	31 LF 12" HDPE @ 0.5%, CONNECT TO EX CB



STORM DRAINAGE PLAN

SCALE: 1"=50'

PROPOSED STORM DRAINAGE LEGEND

- PROPOSED STORM PIPE — ST —
- PROPOSED PERFORATED STORM PIPE - - - - -
- PROPOSED CATCH BASIN ■
- PROPOSED YARD DRAIN ◍
- PROPOSED CLEANOUT ○

CB: CATCH BASIN
C.O.: CLEAN OUT
YD: YARD DRAIN

STORM DRAINAGE NOTES

1. STORM PIPE ALONG HEIM ROAD THAT IS DAMAGED DURING CONSTRUCTION STALL BE REPLACED IN KIND PER ERIE COUNTY DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

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STATE OF NEW YORK CHRISTOPHER WOJ 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

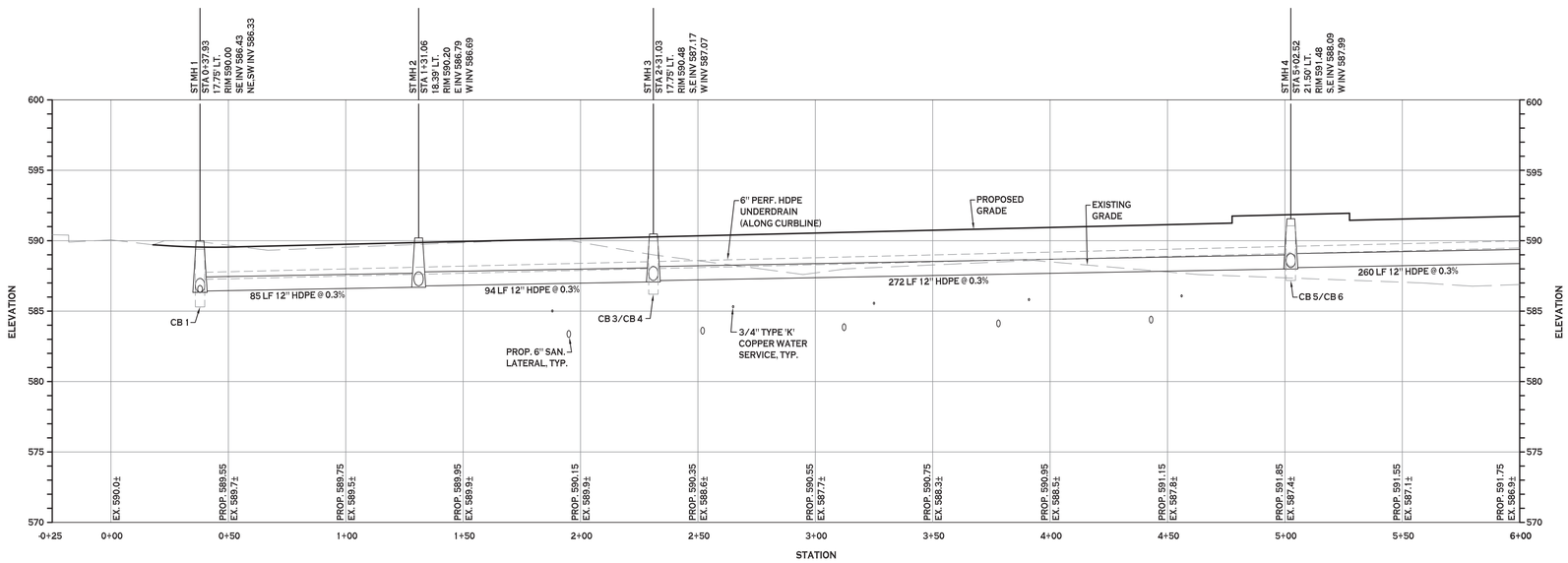
DRAWING NAME:
Storm Drainage Plan

DRAWING NO.
C-300

Project no.: 19-190

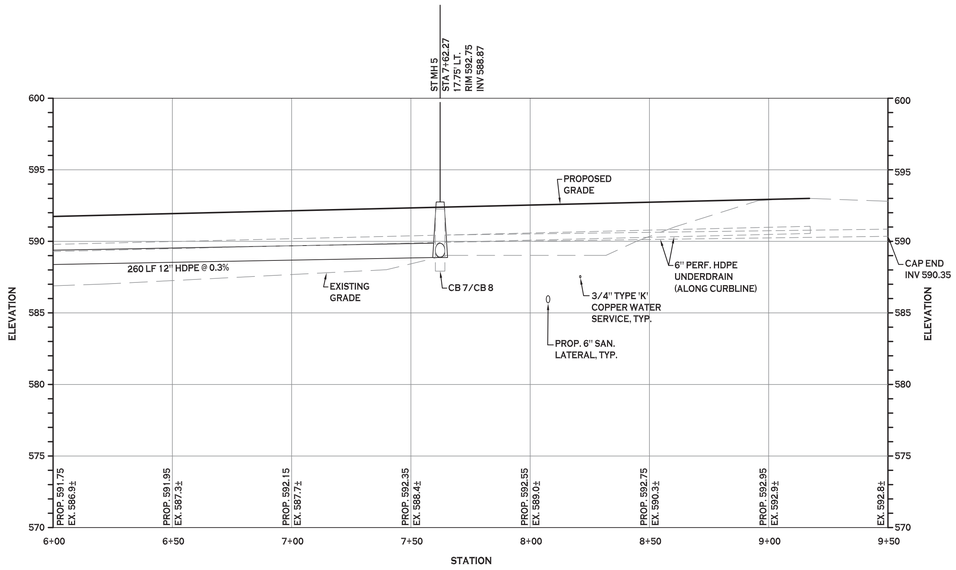
Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'

NOTES:

1. SELECT FILL TO BE INSTALLED FOR STORM SEWERS UNDER PAVEMENT & CONCRETE SURFACES EXTEND 5' BEYOND PAVEMENT LIMITS, TYP.
2. PROFILES SHOWN IN RELATION TO THE CENTERLINE OF THE ROADWAY. GRADING/DEPTH AND ALIGNMENT MAY VARY IN RELATION TO THE CENTERLINE. REFER TO DRAWING C-300 FOR REFERENCE.

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STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Storm Drainage Profile

DRAWING NO.

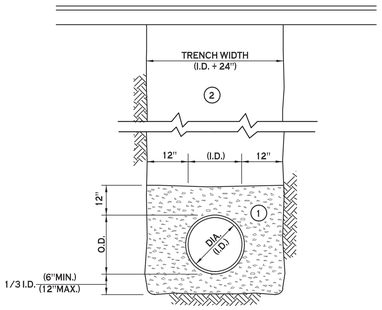
C-301

Project no.: 19-190

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NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

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

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

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH 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.

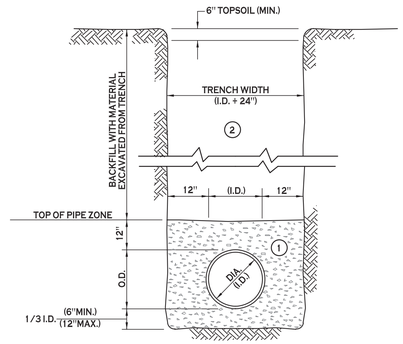
NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES 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.

NO SLAG SHALL BE ALLOWED FOR MATERIAL (2)

STORM SEWER TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

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

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

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

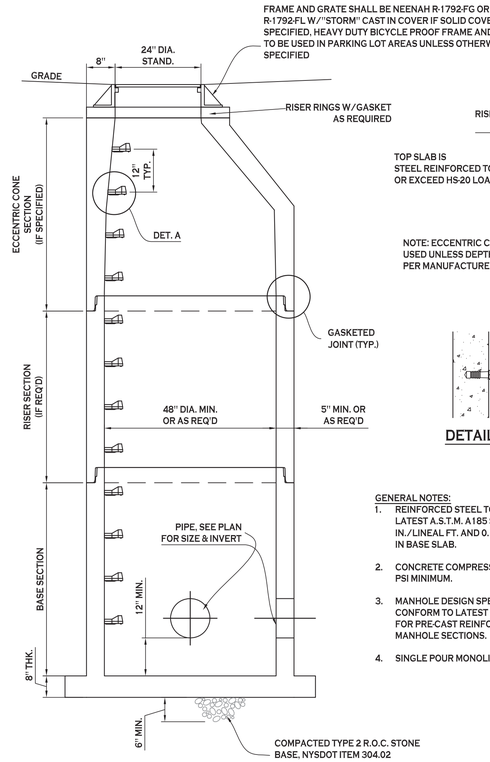
(1) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH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

NO SLAG SHALL BE ALLOWED FOR MATERIAL (1)

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

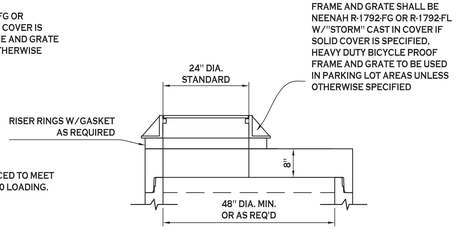
STORM SEWER TRENCH SECTION IN UNPAVED AREAS

NOT TO SCALE



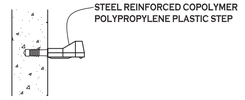
TYPICAL STORM MANHOLE DETAIL

NOT TO SCALE



NOTE: ECCENTRIC CONE SECTION SHALL BE USED UNLESS DEPTH WARRANTS TOP SLAB PER MANUFACTURER

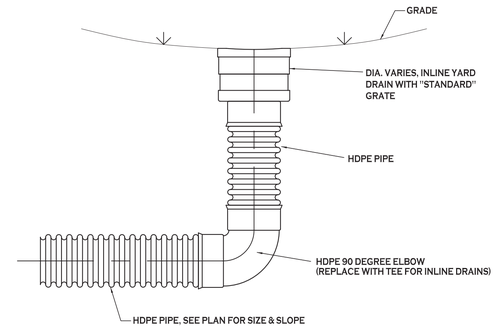
ALTERNATE TOP SLAB



DETAIL A

GENERAL NOTES:

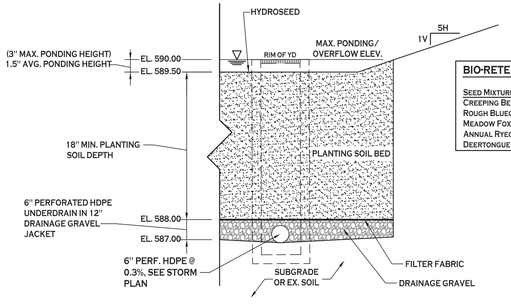
1. REINFORCED STEEL TO CONFORM TO LATEST A.S.T.M. A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) IN BASE SLAB.
2. CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS TO CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRE-CAST REINFORCED CON-CRETE MANHOLE SECTIONS.
4. SINGLE POUR MONOLITHIC BASE SECTION.



NOTE:
SEE TYPICAL TRENCH SECTION FOR BEDDING REQUIREMENTS

TYPICAL YARD DRAIN DETAIL

NOT TO SCALE



BIO-RETENTION AREA SEEDING SPEC (NORTHEAST WETLAND GRASS SEED MIX):

SEED MIXTURE	VARIETY	PERCENT BY NO. OF SEEDS
CREEPING BENTGRASS	AGROSTIS STOLONIFERA	63.0
ROUGH BLUEGRASS	POA TRIVIALIS	17.0
MEADOW FOXTAIL	ALOPECURUS ARUNDINACEUS	11.0
ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	4.5
DEERTONGUE	PANICUM CLANDESTINUM	4.5

NOTES:

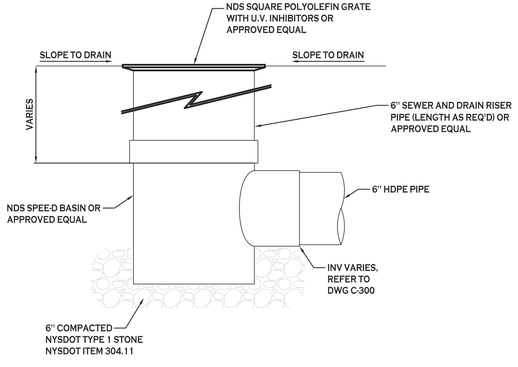
1. FILTER FABRIC TO BE NON-WOVEN CLASS 'C', MIRAFI 180-N OR APPROVED EQUIVALENT
2. MULCH TO BE SHREDDED HARDWOOD, AGED 12 MONTHS MIN.
3. DRAINAGE GRAVEL TO MEET AASHTO M-43. NO.67, SIZE 0.25" TO 0.75"
4. CONTRACTOR TO PROVIDE PLANTING SOIL. SUBMITTAL SPECIFICATION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

NOTE: PLANTING SOIL SHALL BE LOAM/SAND MIX CONTAINING A MINIMUM OF 35 TO 60% SAND BY VOLUME AND LESS THAN 25% CLAY. SOIL SHOULD FALL WITHIN USCS TYPES SM OR ML WITH PERMEABILITY OF AT LEAST 0.5 FEET PER DAY. SOIL SHOULD BE FREE FROM STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED.

CHARACTERISTICS SHALL BE:
PH RANGE: 5.2 - 7.00
ORGANIC MATTER: 1.5 - 4.0%
MAGNESIUM: 35 LBS PER ACRE MIN.
PHOSPHORUS: 75 LBS PER ACRE MIN.
POTASSIUM: 85 LBS PER ACRE MIN.
SOLUBLE SALTS: 500 PPM
CLAY: 10 TO 25%
SILT: 30 TO 55%
SAND: 35 TO 60%

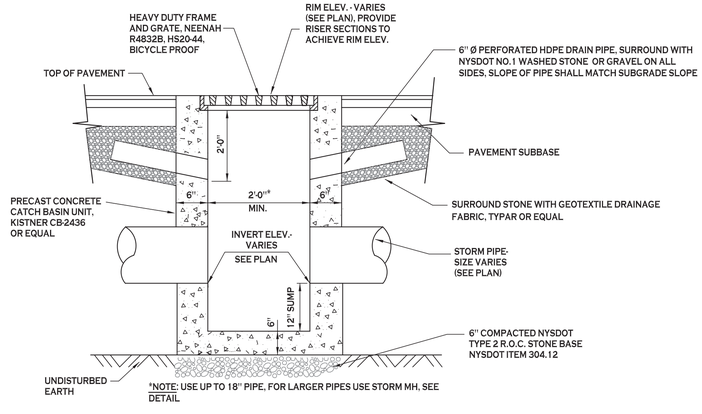
BIORETENTION AREA - TYPICAL SECTION

NOT TO SCALE



TYPICAL AREA DRAIN DETAIL

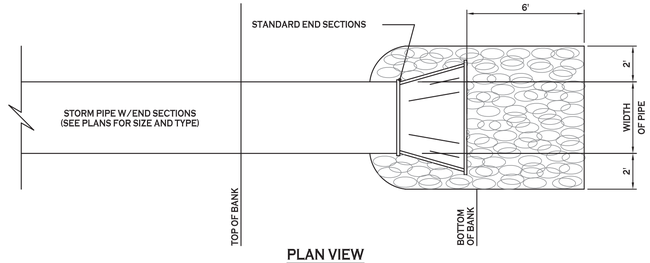
NOT TO SCALE



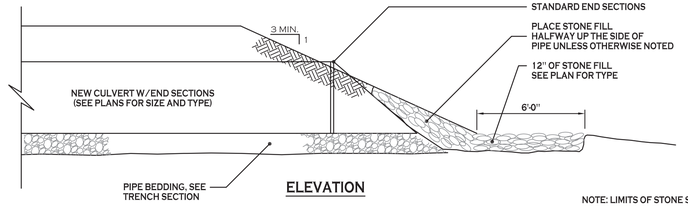
*NOTE: USE UP TO 18" PIPE, FOR LARGER PIPES USE STORM MH, SEE DETAIL

TYPICAL PRECAST CATCH BASIN

NOT TO SCALE



PLAN VIEW



ELEVATION

NOTE: LIMITS OF STONE SHOWN ARE MINIMUMS, PLAN MAY INDICATE GREATER LIMITS

TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP

NOT TO SCALE

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STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Storm Drainage Details

DRAWING NO.

C-302

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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STRUCTURE TABLE

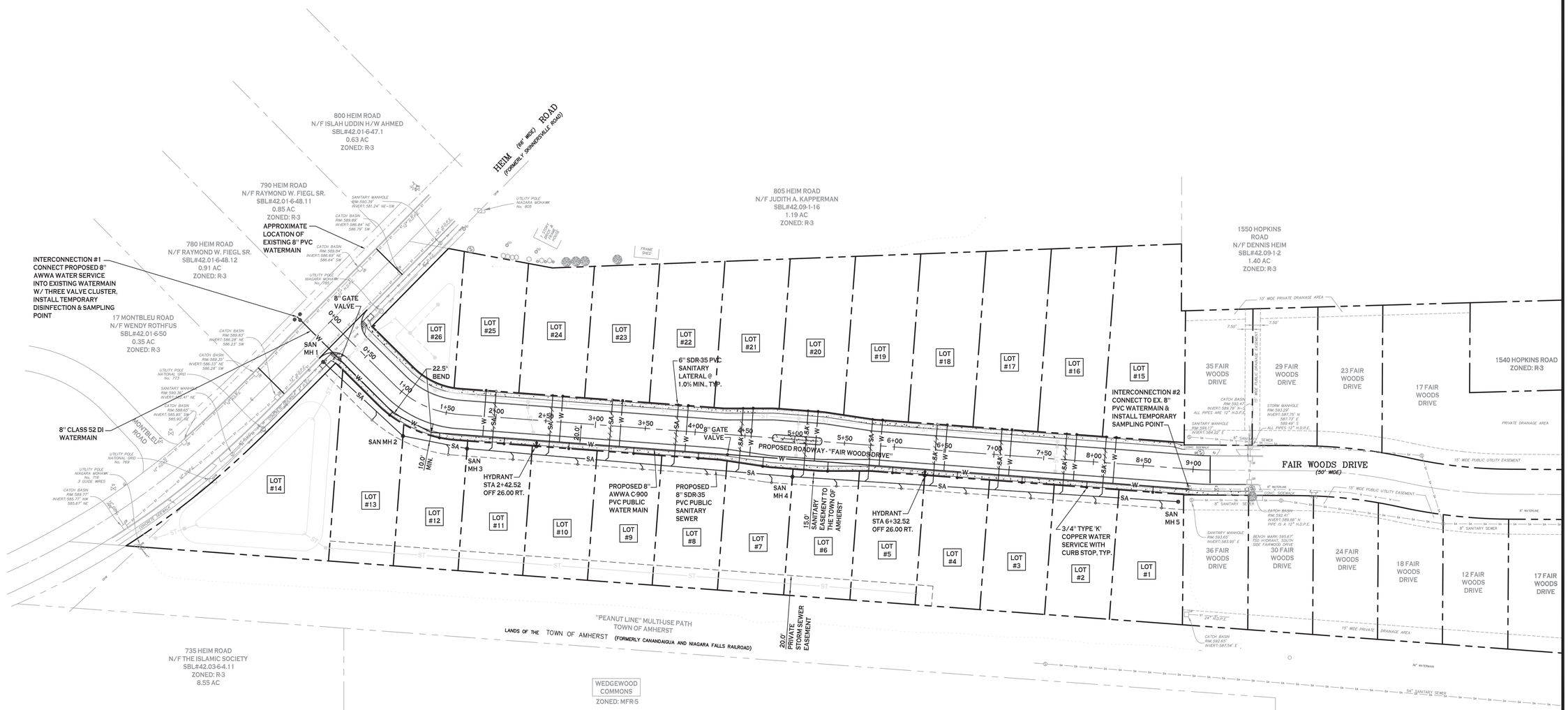
STRUCTURE	STATION	OFFSET	RIM	INV	DESCRIPTION
SAN MH 1	0+23.34	34.03' RT.	590.50	SE 582.00 EX. 581.9±	CONNECT TO EX. 8" PVC SANITARY SEWER
SAN MH 2	1+21.77	36.60' RT.	590.80	E 582.55 NW 582.45	109 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 1
SAN MH 3	1+73.51	33.50' RT.	590.80	E 582.91 W 582.81	65 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 2
SAN MH 4	5+00.52	37.25' RT.	591.80	E 584.32 W 584.22	327 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 3
SAN MH 5	8+87.52	33.50' RT.	593.50	585.87	387 LF 8" SDR-35 PVC @ 0.4%, CONNECT TO SAN MH 4

*ALL OTHER MANHOLES TO BE 4'Ø

NOTE: ALL SANITARY SEWER MANHOLES AND PIPE ARE PUBLIC.

UTILITY NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING STORM AND SANITARY LOCATIONS/INVERTS PRIOR TO CONSTRUCTION. EXISTING WATER, GAS, ELECTRIC AND SANITARY LINES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION/SIZE/CONDITION BEFORE CONSTRUCTION.
2. SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH PAVEMENT AREAS.
3. PROVIDE FITTINGS AND BLOCKING AS NECESSARY AT ALL BENDS IN WATER LINES.
4. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
5. THE ERIE COUNTY WATER AUTHORITY (ECWA) IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION FOR THE NEW WATER SERVICE.
6. ALL SANITARY SEWER CONSTRUCTION SHALL ADHERE TO ERIE COUNTY DIVISION OF SEWERAGE MANAGEMENT SPECIFICATIONS AND DETAILS, AND ERIE COUNTY DEPARTMENT OF HEALTH RULES AND REGULATIONS.
7. ALL OTHER REQUIRED PERMITS BY THE STATE OF NEW YORK, ERIE COUNTY, OR TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL FOLLOW AWWA C605 OR M23 FOR FLUSHING AND PRESSURE AND LEAKAGE TESTING; AND AWWA C651 EXCEPT THE TABLE METHOD WHEN DISINFECTING THE WATERLINE.
9. INSTALL 6" SDR-35 PVC SANITARY LATERAL @ 1.0% MIN. SLOPE FOR EACH BUILDING LOT, WYE CONNECT TO PROPOSED PUBLIC 8" SDR-35 PVC SANITARY SEWER.
10. INSTALL 3/4" TYPE 'K' COPPER WATER SERVICE WITH CURB STOP FOR EACH BUILDING LOT, TAP PROPOSED PUBLIC 8" C-900 PVC WATERMAIN.



N

UTILITY PLAN

SCALE: 1"=50'

PROPOSED UTILITY LEGEND

- PROPOSED WATER LINE — W
- PROPOSED SANITARY SEWER — SA
- PROPOSED SANITARY MANHOLE
- PROPOSED WATER VALVE
- PROPOSED CLEANOUT
- INSTALL SELECT FILL

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

50' 50 0 50 100Ft.

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STATE OF NEW YORK · CHRISTOPHER M. WOOD · 076394 · LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Utility Plan

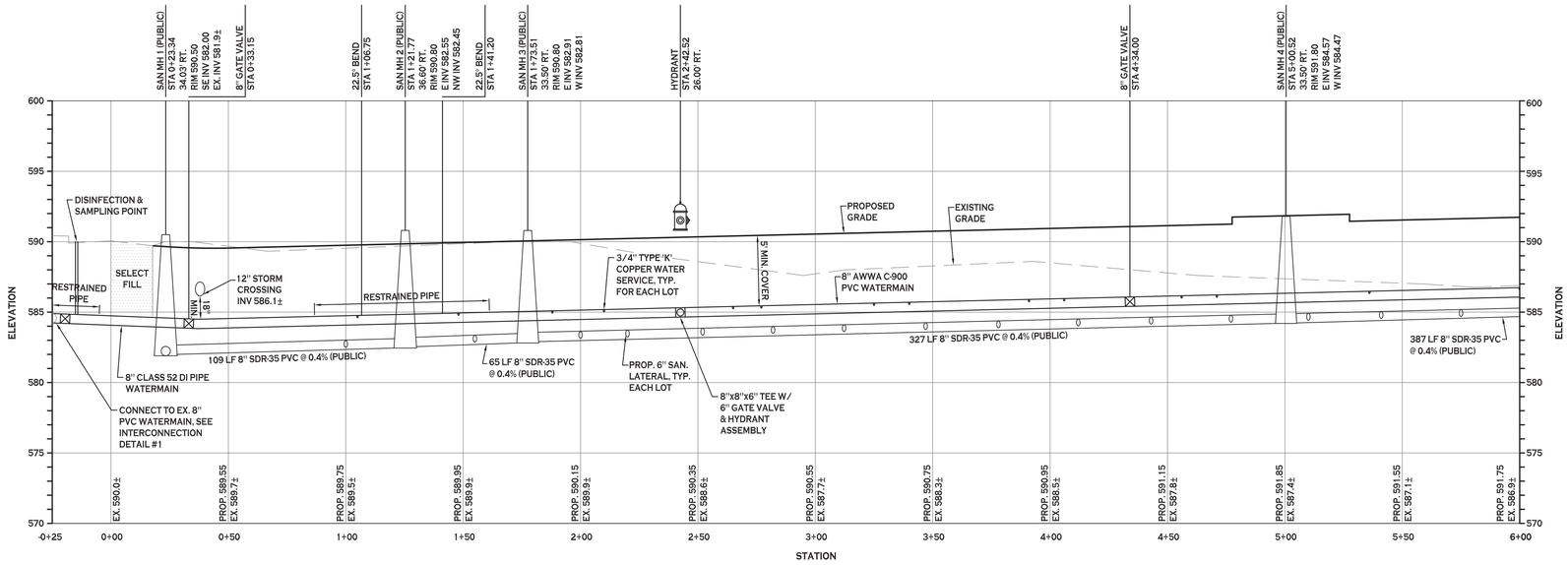
DRAWING NO.

C-400

Project no.: 19-100

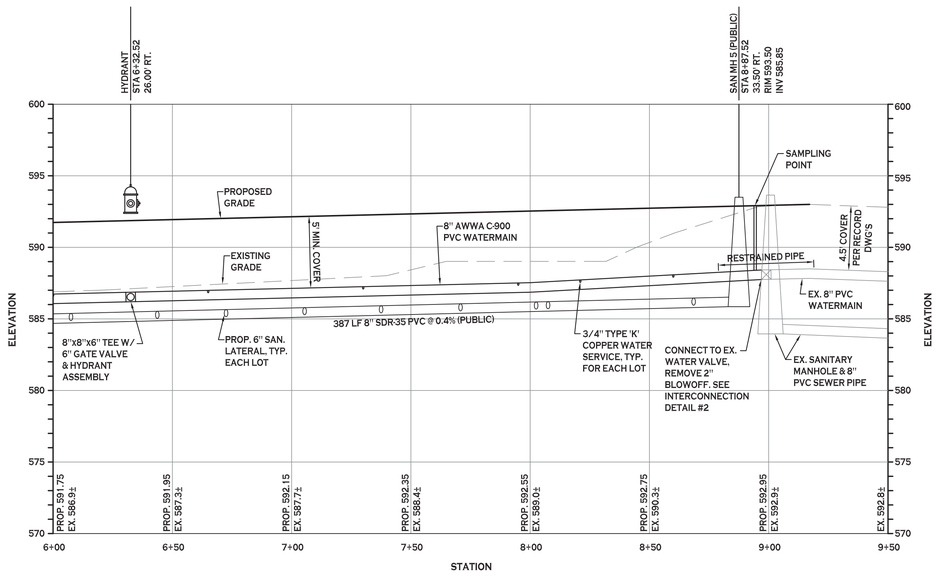
Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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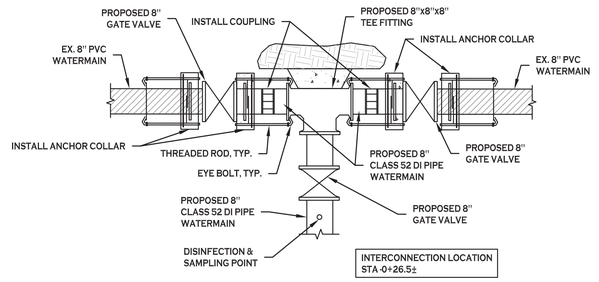
CENTERLINE ROAD PROFILE STA -0+25 TO 6+00

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



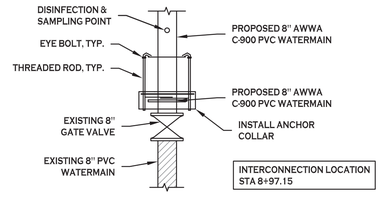
CENTERLINE ROAD PROFILE STA 6+00 TO 9+50

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=5'



INTERCONNECTION #1 DETAIL

NOT TO SCALE



INTERCONNECTION #2 DETAIL

NOT TO SCALE

NOTES:

1. SELECT FILL TO BE INSTALLED FOR UTILITY PIPES UNDER PAVEMENT & CONCRETE SURFACES EXTEND 5' BEYOND PAVEMENT LIMITS, TYP.
2. PROFILES SHOWN IN RELATION TO THE CENTERLINE OF THE ROADWAY. GRADING/DEPTH AND ALIGNMENT MAY VARY IN RELATION TO THE CENTERLINE. REFER TO DRAWING C-400 FOR REFERENCE.
3. A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.

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STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer & Waterline Profile & Details

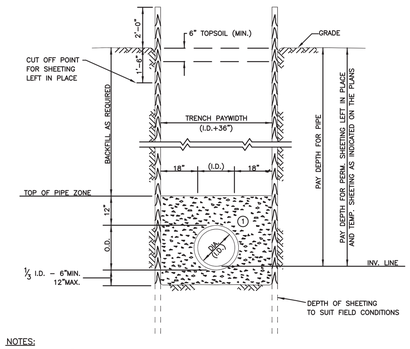
DRAWING NO.
C-401

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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SHEETED TRENCH
(JANUARY 2012)



NOTES:

1. MAINTAIN 18" BETWEEN PIPE AND INSIDE FACE OF TEMPORARY SHEETING. IF SHEETING EXTENDS BELOW PIPE INVERT AS SHOWN, WHEN PVC PIPE MATERIAL IS USED, COMPACT MATERIAL (3) BEFORE PULLING THE SHEETING.
2. SHEETED TRENCH OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING EQUIPMENT.
3. SHEETING DRIVEN BELOW THE INVERT OF THE PIPE FOR BEDDING MATERIAL AND TOE SUPPORT WILL NOT BE CONSIDERED IN THE FORMULA FOR PAYMENT BUT SHOULD BE FIGURED BY THE CONTRACTOR IN DETERMINING HIS UNIT BID PRICE PER SQUARE FOOT OF SHEETING.
4. WHERE INDICATED ON THE PLANS OR AS ORDERED BY THE ENGINEER, TEMPORARY SHEETING WILL BE PAID FOR UNDER THE APPLICABLE BID ITEM. OTHER AREAS WHERE THE CONTRACTOR ELECTS TO USE TEMPORARY SHEETING NOT PREVIOUSLY AUTHORIZED BY THE ENGINEER SHALL BE AT HIS OPTION AND EXPENSE.

MATERIALS

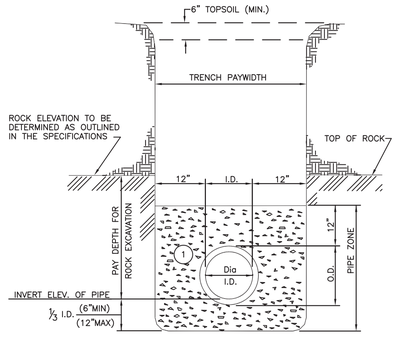
PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

(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.

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS (1)

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1	2/7/94	REVISED TOPSOIL DIMENSION	STD.DETAIL
	Rev. 2	6/5/06	UPDATED MATERIALS TO NYSDOT LATEST EDITION	2
	File: d-02		Date: 3/1/91	

ROCK TRENCH DETAIL
(JANUARY 2012)



NOTE:

A. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

B. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

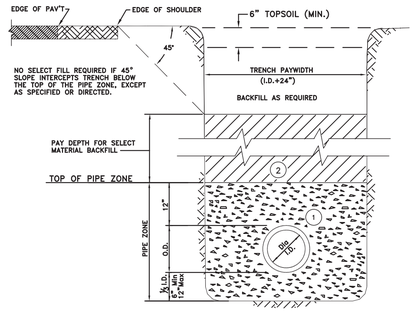
PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

(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 6" 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	Rev. 1	1/6/94	ADDED 6" TOPSOIL (MIN.)	STD.DETAIL
	Rev. 2	2/7/94	ADDED NOTES A & B	3
	File: d-03		Date: 3/1/91	

SELECT BACKFILL FOR TRENCH PARALLEL TO ROADWAYS
(JANUARY 2012)



NOTE:

A. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

B. AN OSHA APPROVED MOVABLE 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 ONE INCH 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.

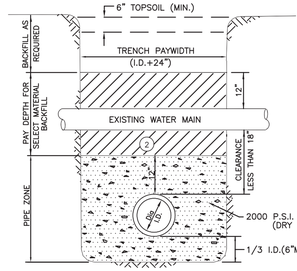
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

(2) 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)

NO SLAG SHALL BE ALLOWED FOR MATERIALS (1) & (2)

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 2	12/28/00	UPDATED MATERIALS TO NYSDOT LATEST EDITION	STD.DETAIL
	Rev. 3	12/01	Updated NYS DOT Editions	4
	File: d-04		Date: 3/1/91	

WATERMAIN CROSSING DETAIL
TYPICAL FOR ENCASEMENT
(JANUARY 2012)



NOTES:

A. IN ALL CASES WHERE THERE IS LESS THAN 18" CLEARANCE BETWEEN EXISTING WATER MAIN AND PROPOSED SEWER (INCLUDING HOUSE LATERALS) THE NEW WORK SHALL BE ENCASED IN CONCRETE AS SHOWN. WHEN A CASING PIPE IS SPECIFIED, NO CONCRETE ENCASEMENT IS REQUIRED.

B. THE CONCRETE ENCASEMENT SHALL EXTEND 3'-0" EACH SIDE OF THE WATER MAIN.

C. SEWERS SHALL BE LAID AT LEAST 10' (3.0 m) HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10' SEPARATION, THE APPROPRIATE REVIEWING AGENCY MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUP-PORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THE WATERMAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND THE ELEVATION OF THE BOTTOM OF THE WATERMAIN IS AT LEAST 18" (46 cm) ABOVE THE TOP OF SEWER.

D. SEWERS CROSSING WATERMAINS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF 18" (46 CM) BE-TWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHEN THE WATERMAIN IS ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THE JOINTS OF THE SEWER PIPE WILL BE EQUIDISTANT FROM AND AS FAR AWAY FROM THE WATERMAIN JOINTS AS POSSIBLE. WHERE THE WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATERMAIN.

E. WHEN IT IS IMPOSSIBLE TO OBTAIN THE PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER SHALL BE EITHER ENCASED IN CONCRETE OR CONSTRUCTED OF PIPE MATERIAL EQUAL TO THE WATERMAIN AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS.

F. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIALS PLACEMENT AND MAXIMUM PAY LIMITS.

G. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

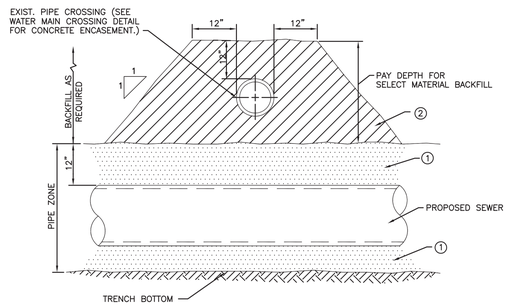
SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

(2) 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 (2)

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Revisions			STD.DETAIL
	2/7/94	ADDED 6" TOPSOIL(MIN.) & NOTE F&G		
	01/03/01	REVISED NOTE A		5
	12/01	Revised Note "A"		
	File: d-05		Date: 3/1/91	

PIPE CROSSING SUPPORT DETAIL
(JANUARY 2012)



MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

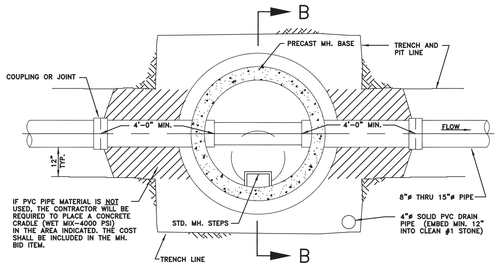
(1) NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE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

SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

(2) 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 (2)

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1	12/01	UPDATED MATERIALS TO NYSDOT LATEST EDITION	STD.DETAIL
	Rev. 2			9
	File: d-09		Date: 3/1/91	

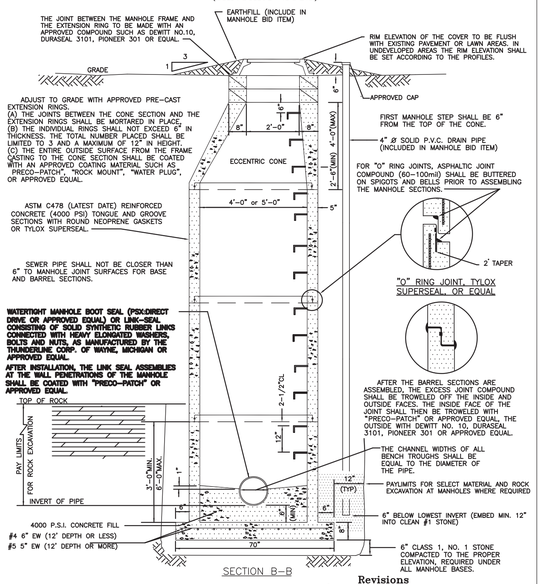
MONOLITHIC PRECAST BASE MANHOLES
4'-5' DIA. BASE FOR 15"ø SEWERS OR LESS
(JANUARY 2012)



PLAN

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1	12/01	REVISED 4" PVC TO SOLID PIPE IN #1 STONE BED	STD.DETAIL
	Rev. 2			10
	File: d-10		Date: 3/1/91	

MONOLITHIC PRECAST BASE MANHOLES 4'-5' DIA. BASE FOR 15"ø SEWERS OR LESS (SECTION B-B)
(JANUARY 2012)

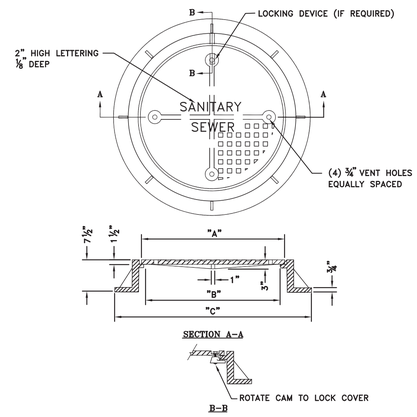


SECTION B-B

Revisions		
07/15/99	ADD ROCK EXCAVATION PAYLIMITS	
11/23/99	ADD 4"x4"x6" MARKER AND NOTES	
12/01	REVISED 4" P.V.C. TO SOLID PIPE	
03/04/03	ADDED WATER TIGHT BOOT SEAL NOTE	
06/22/05	CHECK TYLOX SUPERSEAL NOTE	
02/27/07	REMOVED WOOD POST AND NOTES	
	CHANGED THE NUMBER OF DIVISION RINGS FROM 2 TO 3	

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	STD.DETAIL
	11
File: d-11 Date: 3/1/91	

STANDARD FRAME AND COVER (PRIVATE SEWER)
(JANUARY 2012)



LOCKING DEVICE

TABLE				
PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	35"(MAX.)	150 LBS. ± 5%
OVER 18"	32"	30"	46"(MAX.)	200 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 210 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	Rev. 1			STD.DETAIL
	Rev. 2			
	Rev. 3			13P
	Rev. 4			
	File: d-13P		Date: 2/05	

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STATE OF NEW YORK CHRISTOPHER WOOD 075294 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Sanitary Sewer Details

DRAWING NO.

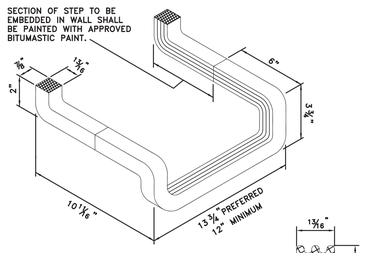
C-402

Project no.: 19-190

Attachment: SUB-2020-03PP, drawings 012121 (22546 : Sub-2020-03Pp)

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STANDARD MANHOLE STEP
(JANUARY 2012)

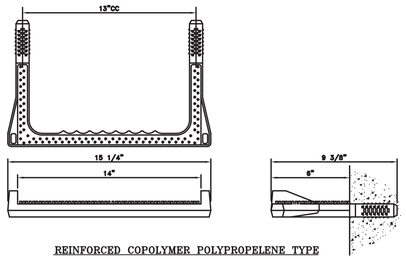


(DROP FRONT TYPE)



TYPICAL SECTION

NOTES:
1. MANHOLE STEPS SHALL BE OF FORGED ALUMINUM ALLOY.
2. AN ACCEPTABLE ALTERNATE IS THE STEEL REINFORCED COPOLYMER POLYPROPYLENE MANHOLE STEP.
3. THE STEPS SHALL BE EMBEDDED IN THE WALLS OF THE CONCRETE MANHOLE BARREL WHILE THE MANHOLE IS BEING CAST OR SECURELY GROUTED IN PLACE AFTER CASTING.



REINFORCED COPOLYMER POLYPROPELENE TYPE

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 12/9/08	ADDED REINFORCED COLPOLYMER TYPE STEP	STD.DETAIL 17
	Rev. 2		
	File: d-17	Date: 3/1/91	

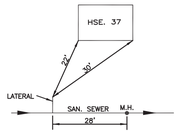
CONSTRUCTION SPECIFICATIONS FOR HOUSE LATERALS
(JANUARY 2012)

1. MATERIAL
   a. THICK WALL PVC – D – 3034, SDR–35
   b. EXTRA HEAVY CAST IRON
   c. DUCTILE IRON

2. FAR SIDE CROSSING
   a. LATERALS INSTALLED ACROSS TOWN ROADS MAY BE BY THE OPEN CUT METHOD WHERE ALLOWED BY THE HIGHWAY PERMIT.
   b. LATERALS INSTALLED ACROSS STATE OR COUNTY ROADS SHALL BE BY THE BORING AND JACKING METHOD (UNLESS OTHERWISE NOTED ON THE PLANS) USING A STEEL CASING PIPE. THE CARRIER PIPE SHALL CONFORM WITH THE MATERIAL SPECIFIED OR APPROVED BY THE ENGINEER.
   c. ALL PAVEMENT CROSSINGS (OPEN CUT METHOD) WITH LESS THAN 4'–0" COVER SHALL BE ENCASED WITH 2000 PSI CONCRETE.
   d. ALL FAR SIDE CROSSINGS SHALL BE INSTALLED UP TO ONE (1) FOOT OF THE R.O.W. LINE.
   e. THE CONTRACTOR SHALL SUPPLY A 2" X 4" WOOD MARKER EXTENDING FROM THE END OF THE CROSSING TO ONE FOOT BELOW GRADE. ALSO, RECORDS SHALL BE KEPT AS TO THE DEPTH OF THE HOUSE SERVICE AND A MINIMUM OF THREE (3) TIES SHALL BE ESTABLISHED FOR THE LOCATION OF THE SERVICE.
   f. LATERALS SHALL BE LAID AT A 2.0% MINIMUM GRADE. IN CASES OF A SHALLOW SEWER, A 1.0% SLOPE MAY BE APPROVED BY THE ENGINEER.

3. NEAR SIDE SERVICES
   a. THE CONTRACTOR SHALL SUPPLY WYE BRANCHES OF THE SAME MATERIAL AND CLASS AS THE SEWER MAIN.
   b. THE LOCATION OF THE WYE BRANCHES WILL BE DETERMINED BY THE CONTRACTOR AND ENGINEER IN THE FIELD AFTER CONFERRING WITH THE HOMEOWNER.
   c. THE LOCATION OF THE BRANCHES SHALL BE MEASURED FROM THE LAST DOWNSTREAM MANHOLE AND AT LEAST THREE (3) TIES FROM AN EXISTING STRUCTURE, NORMALLY THE HOME IT IS TO SERVICE.
   d. NEAR SIDE SERVICES SHALL BE INSTALLED UP TO ONE (1) FOOT OF THE, R.O.W. LINE.
   e. THE CONTRACTOR SHALL PROVIDE A 2" X 4" WOOD MARKER EXTENDED FROM THE WYE BRANCH TO ONE (1) FOOT BELOW GRADE.
   f. ON ALL SERVICES WHERE THE MAIN IS GREATER THAN 8' IN DEPTH, THE CONTRACTOR SHALL PROVIDE A RISER PIPE TO AN ELEVATION 8' BELOW EXISTING GRADE.

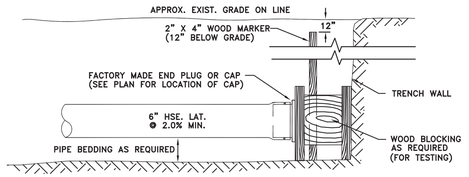
NOTES:
1. RECORDS OF THE DEPTH OF COVER SHALL BE KEPT FOR ALL HOUSE LATERALS BUILT ACROSS PAVEMENTS. SUCH RECORDS SHALL IDENTIFY THE LATERALS BY THE USE OF HOUSE NUMBERS AND SHALL SHOW LOCATION OF THE END OF THE HOUSE LATERAL WITH A MINIMUM OF THREE(3) TIES AS SHOWN IN EXAMPLE BELOW.



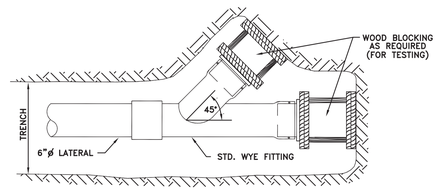
2. THE CONTRACTOR SHALL OBTAIN ALL HIGHWAY/R.O.W. PERMITS PRIOR TO START OF WORK.
3. VENTS AND CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS, PREFERABLY BETWEEN THE CURB OR EDGE OF PAVEMENT AND THE SIDEWALK.

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 7/1/93	NOTE 2a: DEPTH 4'–0"	STD.DETAIL 23
	Rev. 12/9/96	CHANGED NOTE 1 TO THREE(3) TIES	
	Rev. 3 7/14/99	ADDED TITLE	
	Rev. 4 12/01	ADDED NOTE 5 REGARDING LOCATION OF VENTS AND CLEAN OUTS	
	File: d-23	Date: 3/1/91	

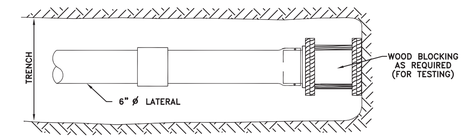
CAP & BLOCKING METHODS FOR AIR TESTING
(JANUARY 2012)



TYPICAL SECTION



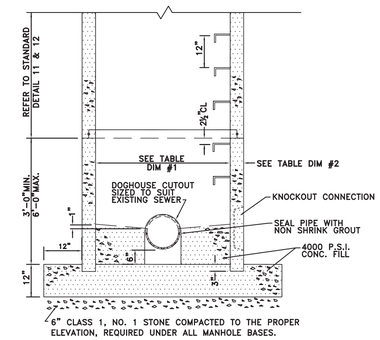
TYPE "2" SERVICE LATERAL FITTING



TYPE "1" SERVICE LATERAL FITTING

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1		STD.DETAIL 26
	Rev. 2		
	File: d-26	Date: 3/1/91	

PRECAST DOGHOUSE BASE MANHOLE
(JANUARY 2012)



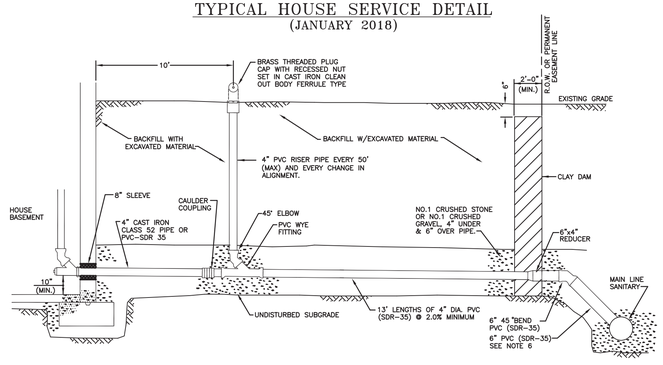
PIPE SIZE	DIMENSION #1	DIMENSION #2
8"–16"	4'–0"*	5"
18"	5'–0"	6"
21"–27"	5'–0"	6"
30"–36"	6'–0"	7"

* FOR DROP CONNECTIONS INSIDE DIAMETER SHALL BE 5'–0"

NOTE:
AREA AROUND DOGHOUSE CUTOUT & PIPE TO BE MADE WATERTIGHT UTILIZING A HYDRAULIC CEMENT MIXTURE (WATERPLUG,PRECO–PATCH, OR APPROVED EQUAL).

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1 11/08/91	ADDED PIPE SIZE CHART & NOTE	STD.DETAIL 35
	Rev. 2 2/7/94	REVISED STONE UNDER MANHOLE BASE TO CLASS 1, NO. 1	
	File: d-35	Date:10/16/91	

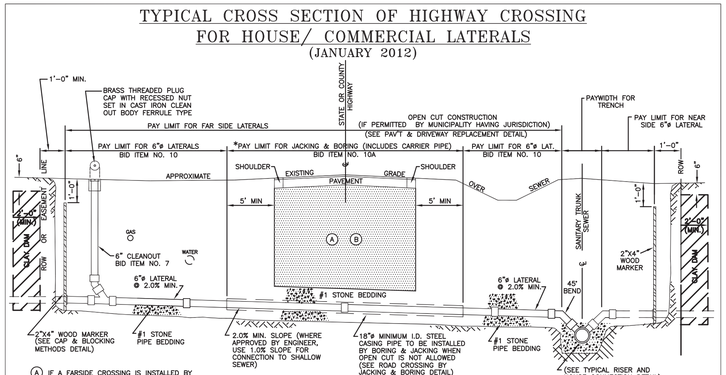
TYPICAL HOUSE SERVICE DETAIL
(JANUARY 2018)



NOTES:
1. NO INSPECTION WILL BE PROVIDED WITHOUT A PRIOR INSPECTIONS REQUEST AND ADVANCE NOTICE FOR SCHEDULING.
2. ALL WORK MUST BE INSPECTED BY A COUNTY INSPECTOR
3. PVC PIPE MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ASTM SPECIFICATION D-3034 SDR-35. FOR IRON PIPE MATERIAL SHALL BE EXTRA HEAVY CAST IRON MEETING THE REQUIREMENTS OF ASTM A74–42.
4. A MANUAL VALVE SHALL BE IN-STALLED IN BASEMENT LAUNDRY DRAIN LINE.
5. CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDWALKS OR DRIVEWAY AREAS, PREFERABLY BETWEEN THE CURB OR EDGE OF PAVEMENT AND THE SIDEWALK.
6. SELECT BACKFILL REQUIRED UNDER PAVED AREAS.
7. CONCRETE ENCASEMENT IF COVER DEPTH IS LESS THAN 4'–0" UNDER PAVED AREAS
8. FOR NEW CONSTRUCTION OF AN 8x6 TEE WITH 6" SIDE OUTLET, IF 8x6, THEN 6" x 4" REDUCER IS USED.
9. A 4" CLEAN OUT IS REQUIRED AT R.O.W. WHENEVER THE MAIN SEWER IS UNDER THE PAVEMENT LIMITS OR AT FAR SIDE OF PAVEMENT.
10. ANY EXCAVATION TO BE LEFT OPEN OVERNIGHT SHALL BE COMPLETELY FILLED IN FINISHING, OR WHERE NECESSARY, COVERED WITH STEEL PLATES.
11. DOWN SPOUTS, SUMP PUMPS, AND FOOTING DRAINS ARE NOT PERMITTED TO BE CONNECTED TO THE HOUSE LATERAL.
12. FOR NEW STRUCTURES, NO CONNECTION SHALL BE MADE UNTIL BUILDING ROOF IS, ERECTED AND BASEMENT FLOOR IS POURED.

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 6/05	ADDED NOTE 20 & CLASS 52 TYPE CI PIPE	STD. DETAIL 21
	Rev. 1/07	REMOVED OLD NOTES 1,3,8,10,12,13 AND 20 REVISED TO 6"PVC–DETR, 48 HR ADV NOTICE	
	Rev. 11/08	ADDED PVC TRAP AND SLEEVE	
	Rev. 01/12	REVISED 4" CAST IRON TRAP	
	Rev. 01/18	REMOVED TRAP AND RISER VENT	
	File: d–21	Date: 3/1/91	

TYPICAL CROSS SECTION OF HIGHWAY CROSSING FOR HOUSE/ COMMERCIAL LATERALS
(JANUARY 2012)



(A) IF A FARSIDE CROSSING IS INSTALLED BY OPEN CUT METHOD, FULL DEPTH SELECT FILL MATERIAL SHALL BE REQUIRED UNDER PAVEMENT & SHOULDER AREA AS DESCRIBED IN SECTION 01020– ITEM15 DESCRIPTION OF BID ITEMS–ECDEP SPECIFICATIONS.

(B) NO. 2 RUN OF CRUSHER STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304–2.02 TYPE 4 AND NYSDOT SECTION 703–02 (LATEST EDITION) COMPACTED IN 6" LIFTS TO 90% DENSITY.

NOTE:
SHEETING, SHORING MATERIALS OR SHIELD SYSTEM NOT SHOWN.

* LENGTH OF PAY LIMIT FOR JACKING AND BORING VARIES IN ACCORDANCE WITH DIMENSIONS SHOWN ON THE PLAN SHEETS.

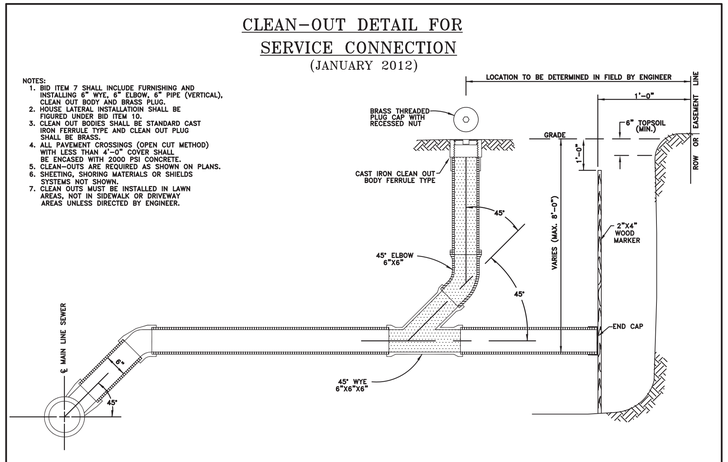
* CONCRETE ENCASEMENT IF COVER DEPTH IS LESS THAN 4'–0" UNDER PAVED AREAS (SEE TYP. CONCRETE ENCASEMENT DETAIL)

* CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS UNLESS DIRECTED BY ENGINEER

ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	REVISIONS		STD. DETAIL 24
	6/9/92	ADDED CUT OFF DAM	
	2/1/93	OPEN CUT CLARIFICATION	
	2/7/94	CHANGED NOTES	
	7/14/99	2" SELECT FILL UNDER PIPE	
	12/01	ADDED NOTE ON LOCATION OF VENTS & C.O.	
	File: d–24	Date: 3/1/91	

CLEAN–OUT DETAIL FOR SERVICE CONNECTION
(JANUARY 2012)

NOTES:
1. BID ITEM 7 SHALL INCLUDE FURNISHING AND INSTALLING 6" WYE, 6" ELBOW, 6" PIPE (VERTICAL), CLEAN OUT BODY AND BRASS PLUG.
2. HOUSE LATERAL INSTALLATION SHALL BE FIGURED UNDER BID ITEM 10.
3. CLEAN OUT BODIES SHALL BE STANDARD CAST IRON FERRULE TYPE AND CLEAN OUT PLUG SHALL BE BRASS.
4. ALL PAVEMENT CROSSINGS (OPEN CUT METHOD) WITH LESS THAN 4'–0" COVER SHALL BE ENCASED WITH 2000 PSI CONCRETE.
5. CLEAN–OUTS ARE REQUIRED AS SHOWN ON PLANS.
6. SHEETING, SHORING MATERIALS OR SHIELDS SYSTEMS NOT SHOWN.
7. CLEAN OUTS MUST BE INSTALLED IN LAWN AREAS, NOT IN SIDEWALK OR DRIVEWAY AREAS UNLESS DIRECTED BY ENGINEER.



ERIE COUNTY DEPT. OF ENVIRONMENT & PLANNING DIVISION OF SEWERAGE MANAGEMENT	Rev. 1	5/93	4'–0" COVER, C.I. CAP "RECESSED NUT"	STD. DETAIL 28
	Rev. 2	2/94	CHANGED DIM LINE FOR MAX. DEPTH	
	Rev. 3	12/03	ADDED NOTE 7	
	Rev. 4	8/05	CHANGED CI. CAP TO BRASS	
	Rev. 5	6/05	1' MIN. FROM EDGE OF WALK NOTE	
	Rev. 6	1/12	CHANGED CI. TO BRASS NOTES 1 & 3	
	File: d–28		Date: 3/1/91	

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STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer Details

DRAWING NO.
C-403

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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GENERAL NOTES FOR SANITARY SEWER CONSTRUCTION WITHIN ERIE COUNTY SEWER DISTRICTS

1. The Erie County Division of Sewerage Management (DSM), who operates and maintains the existing sewer lines and appurtenances within Erie County Sewer Districts (ECSD), is to be notified at least 48 hours in advance of the start of construction.
2. Construction shall be in accordance with the Rules and Regulations for Erie County Sewer Districts.
3. All permits required by the Federal, State, County, City and/or Town governments to perform work must be obtained prior to the start of work, and paid for by the Contractor.
4. If easement and/or Out of District Agreements are required, they must be complete and ready to be filed before the project will be approved for construction.
5. The contractor shall comply in all respects to the Industrial Code Part (Rule No.) 53 relating to construction, excavation, and demolition operations at or near underground facilities, as issued by the State of New York Department of Labor, Board of Standard and Appeals.
6. The construction of the sanitary sewer facilities shall be under the supervision of a person or firm qualified to practice professional engineering in New York State under the Education Law of the State, whenever engineering services are required by such law for such purposes.
7. Where such sanitary sewer facilities are under the supervision of a professional engineer, he/she shall certify to the DSM and to the applicant that the constructed facilities have been under his/her supervision and that the work has been fully completed in accordance with the approved engineering reports, plans, specifications, and approvals.
8. The Contractor is solely responsible for all site safety. The Contractor's equipment and methods of operation shall be in full compliance with OSHA Standards and satisfy all Federal, State and Local Health and Safety Regulations.
9. The Contractor is advised a trench shield and/or shoring designed in accordance with OSHA Standards shall be used in all open trench excavations.
10. Any contractor and/or plumber performing work in a confined space (i.e. manholes, wetwells, and chambers) owned by an Erie County Sewer District, must certify to the County that they have their own Confined Space Entry Program that meets or exceeds OSHA's regulations. Certification must be notarized by a notary public.

11. The contractor shall expose existing utilities ahead of the pipe laying operation, so if minor adjustments must be made in the pipe elevation and/or alignment due to interference from these utilities, said changes can be made in advance of the work.
12. The contractor shall retain the services of a qualified tree expert to remove, where necessary, branches which interfere with the construction operation, or to repair trees having suffered damage by construction activities. The cost involved is to be included in the various items of the contract.
13. The proposed 8 through 12 inch diameter sanitary sewer pipe shall be polyvinyl chloride (PVC) sewer pipe conforming to the latest revisions of American Society for Testing and Materials (ASTM) designation D-3034, SDR-35, installed in accordance with the ASTM designation D-2321-83a or the latest revision thereof, or approved equal. Larger diameter pipes will be reviewed on a case by case basis.
14. Sewers shall be laid with straight alignment between manholes and shall be checked by using a laser beam or lamping.
15. Should a fluid condition be encountered at the trench bottom, the contractor is to undercut the trench and provide suitable fill material (stone & fabric) to stabilize the trench bottom.
16. Sanitary sewer bedding material shall be No. 1 crushed stone with a gradation conforming to the *DSM Specifications for Subdivisions and Sanitary Sewer Extensions.*
17. Backfill shall be of a suitable material removed from the excavation except where other material is specified. Debris, frozen material, large clods or stones, organic matter, or other unstable materials shall not be used for backfill within two (2') feet of the top of the pipe.
18. All pipes crossing under paved areas are to be backfilled to sub-grade with compacted select material (No. 2 crushed stone) to five (5') feet outside the pavement edges or as required by the highway permit. If any proposed sewer runs under paved areas and has less than four (4) feet of cover, then concrete encasement is required as shown on the DSM Typical Concrete Encasement Detail.
19. Sewers parallel to watermains - *Ten State Standards, Latest Edition, Chapter 30, Section 38.31, and Page 30-11:* Sewers shall be laid at least ten (10') feet (three (3) meters) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten (10') foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the sewer and at an elevation so the bottom of the water main is at least 18-inches (460 mm) above the top of the sewer.

If it is impossible to obtain proper horizontal and vertical separation as described above, both the water main and sewer must be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the regulatory agency and be pressure tested to 150 pounds per square inch (psi) (1034 kPa) to assure water tightness prior to backfilling.

20. Sewers crossing watermains - *Ten State Standards, Latest Edition, Chapter 30, Section 38.32, Page 30-11 to 30-12:* Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18-inches (460 mm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade.
21. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, one of the following methods must be specified:
    a. The sewer shall be designed and constructed equal to water pipe, and shall be pressure tested at 150 psi (1034 kPa) to assure water tightness prior to backfilling.
    b. Either the water main or the sewer line may be encased in a watertight carrier pipe which extends ten (10') feet (three (3) meters) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the regulatory agency for use in water main construction.
    c. The sewer shall be encased in concrete per the DSM Watermain Crossing Detail Typical For Encasement
22. The manhole covers are to bear the inscription "ECSD SANITARY" and comply with the DSM Standard Frame and Cover detail. For private projects the covers shall bear the inscription "SANITARY SEWER" and comply with the DSM Standard Frame and Cover (Private Sewer) detail.
23. Building sanitary sewer vents must be installed six (6) inches above finished grade in a grassy area with a mushroom cap. If the vent is in a sidewalk or paved area, then protect with 6" diameter bollards (2 minimum).
24. Cleanouts (c.o.) are required on 4" and 6" building sewers every fifty feet and one hundred feet respectively, and at every change of alignment.
25. Abandoned building sewer connections from the site, if any, require proof of a District Permit for Disconnection prior to the new connection being made.
26. The following pertains only for direct replacement of in service sanitary sewers:
    a. Each new pipe joint shall be ultrasonic tested after it is laid, but before the next pipe is laid. All tests shall be in accordance with the testing equipment manufacture recommendations.

    b. The ultrasonic test shall be performed in lieu of the hydrostatic and air tests.
    c. A video inspection of the entire sewer shall be performed. Forward the video inspection tape and related paperwork to DSM for review and approval.
    d. A deflection test is required in all cases.
27. For all sanitary sewer installations, a written certificate of construction completeness and compliance, including the results of the hydrostatic leakage test, lamp test, deflection test, air test, etc. shall be submitted to the Erie County Health Department and DSM within thirty (30) days after completion of construction.
28. For all public and private 8" diameter pipe or larger sanitary sewer installations, the developer/contractor must provide one (1) set of record drawings on "D" size paper (24" x 36") and in an electronic file format (CD or flash drive) compatible with the latest AutoCAD release.
29. All public sewer extension projects that consist of more than 750 LF of 8" diameter pipe or larger, shall furnish a 2 year maintenance bond to the DSM.
30. Final Certification will be issued upon the full completeness and compliance of the project including any requirement(s) of I&I remedial work.

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STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer General Notes

DRAWING NO.
C-404

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

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A. Requirements

1. After backfilling and prior to the final acceptance of the project, the Contractor will be required to perform the following three tests on all sewers built under this project:

a) Air Tests
b) Infiltration or Exfiltration
c) Deflection Test (15" dia. and smaller).

2. No more than 1,000 linear feet of installed sewer shall be allowed to remain untested.

3. In view of the fact that house laterals and riser pipes often contribute considerable infiltration, such laterals and risers are to be installed and capped, tied and blocked as the work progresses, prior to the air testing of the lines.

4. The Contractor's testing procedures shall be completed in accordance with OSHA Standards for confined space entry. The Contractor will be required to provide and operate all equipment necessary for full compliance for his operation. Equipment such as gas detectors, safety harnesses, ventilating blowers, respirators etc. shall be provided by the Contractor.

RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2014 EDITION

38.3 Relation to Water Mains

38.31 Horizontal and Vertical Separation

Sewers shall be laid at least 10 feet (3 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. For gravity sewers where it is not practical to maintain a 10 foot (3 m) separation, the appropriate reviewing agency may allow deviation on a case–by–case basis, if supported by data from the design engineer. Such deviation may allow installation of the gravity sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the gravity sewer and at an elevation so the bottom of the water main is at least 18 inches (460 mm) above the top of the sewer.
If it is impossible to obtain proper horizontal and vertical separation as described above for gravity sewers, both the water main and gravity sewer shall be constructed of slip–on or mechanical joint pipe complying with Section 8.1 and Section 8.7 of the 'Recommended Standards for Water Works – 2012 Edition' and shall be pressure rated to at least 150 psi (1034 kPa) and pressure tested to ensure watertightness.

38.32 Crossings

Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (460 mm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade.
When it is impossible to obtain proper horizontal and vertical separation as stipulated above, one of the following methods shall be specified:
30–11
a. The sewer shall be designed and constructed equal to water pipe, as described in Paragraph 38.31.
b. Either the water main or the sewer line may be encased in a watertight carrier pipe that extends 10 feet (3 m) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be made of materials approved by the regulatory agency for use in water main construction.

B. Air Tests (Required for All Diameters up to and including 36") 10 State Standards Section, 33.94

1) This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2) The procedure for air testing shall be as specified herein. The minimum allowable time for the test pressure to decrease from 3.5 psi to 3.0 psi shall be not less than as called for in the following table:

Minimum Acceptance Times* For Length Shown (min:sec)

Pipe Diameter	Up to 100'	100 - 200'	200 - 300'	300 - 400'
6"	2:50	2:50	2:50	2:51
8"	3:47	3:47	3:48	5:04
12"	5:40	5:42	8:33	11:24
15"	7:05	8:54	13:21	17:48
18"	8:30	12:49	19:14	25:38
21"	9:55	17:27	26:11	34:54
24"	11:24	22:48	34:11	45:35
27"	14:25	28:51	43:16	57:42
30"	17:48	35:37	53:25	71:13
33"	21:33	43:56	64:38	86:10
36"	25:39	51:17	76:55	102:34

* Erie County Sewer District Inspector will extend time to the next full minute during the test.

3. Pipe lines in sizes up to 36 inches in diameter can be air tested from manhole to manhole for distances not to exceed 400 feet.

4. In wet trenches where pumping to lower the water table is impractical, approved 4" diameter, solid PVC drain pipe (with approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Embed the pipe a minimum of 12" into clean #1 stone. Ground water elevations will be measured at each manhole in order to calculate the groundwater pressure acting on the pipe exterior. The initial air test pressure shall be increased as necessary to overcome the calculated groundwater pressure.

5. The testing procedures outlined shall be strictly adhered to.

6. All testing equipment shall be supplied by the Contractor and be in good working condition. Some of the major equipment required for air tests is:

a) Stop watch graduated in tenths of a second.
b) Compressor of 50 to 100 psi capacity.
c) Bulkheads for pipe.
d) Approximately 100 feet of 3/8" diameter air hose.
e) Pressure gauge - 0 to 5 psi graduated in 1/16th of a pound increments.
f) Three 3/8 inch diameter check valves.

C. Infiltration Tests (Applicable Only if Ground Water is Two Feet Above the Top of the Pipe)

1. This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2. Infiltration tests for all sewers constructed under this project shall not exceed 100 gallons per inch diameter per mile of sewer, per 24 hours. Each individual run of sewer (from one manhole to the next manhole if greater than 100 feet) shall comply with the allowable rate of infiltration. All equipment for the tests shall be furnished by the Contractor and be in good working condition.

3. The allowable rate of infiltration given in gallons per mile is not to be construed as a commitment on the part of the District to accept an entire line, where overall infiltration is less than the allowable, while one or more runs contribute excessive infiltration.

4. The infiltration test is intended to measure the water tightness of a sewer as related to the infiltration of ground water and is only applicable if the water table level is 2 feet or higher above the top of the pipe for the entire length of the test section.

a) Approved 4" diameter solid PVC drain pipe (with an approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Embed the pipe a minimum of 12" into clean #1 stone. Ground water elevations will be measured at each manhole so that the ground water level can be correlated with the infiltration measurements.

b) Before conducting the tests, the water table should be allowed to stabilize at its normal level and verified that it is 2 feet above the top of the pipe during the test period. The test is usually conducted between adjacent manholes with the upstream end of the sewer bulkheaded in a suitable manner to isolate the test section. All service laterals, stubs and fittings should be properly plugged or capped at the connections to the test pipe section to prevent the entrance of ground water at these locations.

c) A V-notch weir or other suitable measuring device should be installed in the inlet pipe of the downstream manhole. Infiltrating water is then allowed to build up and level off behind the weir until a steady, uniform flow occure over the weir. Leakage is determined by direct reading from graduations on the weir consecutively for five (5) days and converting the flow quantity to gallons per unit length of pipe per unit of time.

d) An important factor in applying the test criteria is to properly correlate the variable water head over the length of the sewer being tested to the high ground water level. A minimum of 2 feet of water over the pipe is required at the upper manhole before the infiltration test will be allowed.

5. When a sewer run between two consecutive manholes or chambers is found to contribute infiltration at a rate above the allowable, inspection by television or other cameras may be made by the Contractor so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole if greater than 100 feet) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

D. Exfiltration Tests

1. This test shall be performed no earlier than 14 calendar days after the trenches are backfilled.

2. The exfiltration test for all diameter sewers shall be as described below. Although actual infiltration will normally be less than that indicated by the water exfiltration test, the test does provide a positive means of subjecting the completed sewer system to an actual pressure test. Since sanitary sewers are not designed or expected to operate as a pressure system, care must be exercised in conducting the test and correlating the results with the allowable exfiltration limits.

a) The test is usually conducted between adjacent manholes. Prior to the test, all service laterals, stubs and fittings within the test section should be plugged or capped and adequately braced or blocked to withstand the water pressure resulting from the test.

b) If manholes are to be included in the test, the inlet pipe to each manhole should be bulkheaded and the test section filled with water through the upstream manhole. To allow air to escape from the sewer, the flow should be at a steady rate until the water level in the upstream manhole provides an average pressure of 5 psi (11.6' head) at the center point of the test section or the upstream manhole is filled. If necessary, provisions should be made to bleed off entrapped air during the filling of the test section.

c) Once the test section is filled, the water should be allowed to stand for an adequate period of time (one day minimum) to allow for water absorption by the pipe and manhole. After water absorption has stabilized, the water level in the upstream manhole is brought up to the proper test level and this level established by measuring down from the manhole rim or other convenient datum point. After 24 hours, the water elevation should be measured from the same reference point and the loss of water during the test period calculated, or the water can be restored to the level existing at the beginning of the test, and the amount added used to determine the leakage.

d) To exclude both manholes from the test,it is necessary to bulkhead the outlet pipe of the upstream manhole. Provision must be made in the bulkhead for filling the pipe and expelling trapped air.

e) The water level at the upstream manhole shall be computed and varies above the top of the pipe. Since the sewer is installed on a grade, the test section downstream will most likely be subjected to a greater pressure. Therefore, the test pressure head at the upstream manhole should be adjusted such that the maximum pressure on the pipe being tested is no greater than 10 psi, (23 feet of head).

3. When a sewer run between two consecutive manholes or chambers is found to exfiltrate at a rate above the allowable, inspection by television or other cameras may be made by the Contractor during wet weather, so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

E. Deflection Test

1. This test shall be performed no earlier than 30 calendar days after the trenches are backfilled.

2. All flexible (PVC) sewers 8" diameter or larger constructed under this project shall be internally checked with a five percent (5%) deflection "go-no-go pig" or Mandrel to determine if the pipes are deflecting excessively. Any section of pipe unable to pass the deflection test "pig test" shall be removed and replaced at the Contractor's expense.

3. Deflection testing mandrels or pig shall be pulled thru the pipe by hand or hand operated winch. Power winches or drives are not permitted.

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STATE OF NEW YORK · CHRISTOPHER WOOD · 076394 · LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Sanitary Sewer Testing Notes

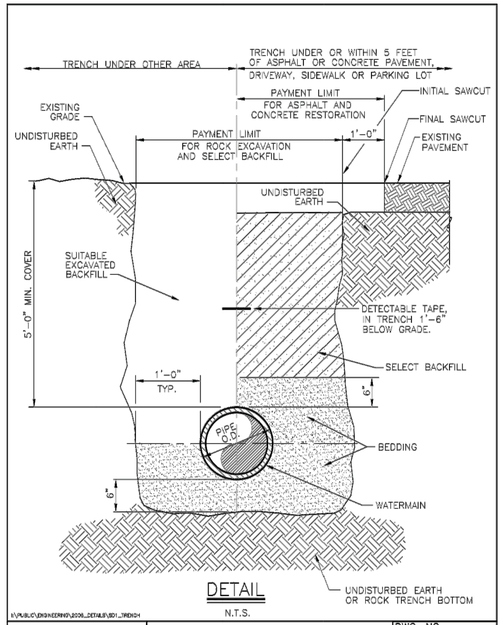
DRAWING NO.
C-405

Project no.: 19-190

Attachment: SUB-2020-03PP. drawings. 012121 (22546 : Sub-2020-03Pp)

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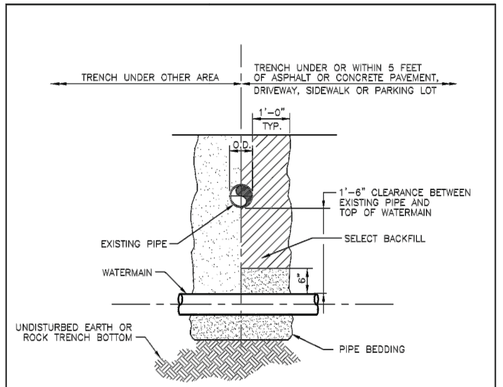
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DETAIL
N.T.S.

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD1_TRENCH

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TRENCH THROUGH 12–INCH DIAMETER WATERMAIN	DWG. NO. SD1	
		DATE 4/28/92	REVISED 10/05



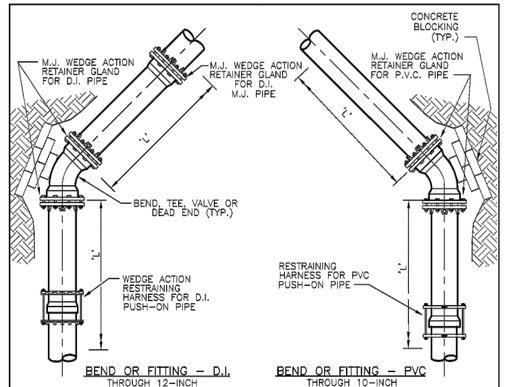
NOTES:

1. ALL EXISTING UTILITIES MUST BE SUPPORTED DURING CONSTRUCTION OF THE NEW WATERMAIN.
2. WHEN CROSSING A SEWERLINE WITH A NEW WATERMAIN, ONE FULL PIPE LENGTH (18 FT. MIN.) SHALL BE USED AT THE POINT OF CROSSING. THE WATERMAIN SHALL BE PLACED SO THAT BOTH JOINT ENDS ARE AS FAR AS POSSIBLE FROM THE EXISTING SEWERLINE.

SECTION
N.T.S.

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD2_PIPE_CROSSING

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL PIPE CROSSING	DWG. NO. SD2	
		DATE 4/28/92	REVISED 10/05



BEND OR FITTING – D.I.
THROUGH 12–INCH

BEND OR FITTING – PVC
THROUGH 10–INCH

RESTRAINED JOINT SCHEDULE					
PIPE SIZE	PIPE TYPE	11.25° ELBOW 'L'	22.5° ELBOW 'L'	45° ELBOW 'L'	TEE BRANCH, 90° BEND, VALVE OR DEAD END 'L'
6"	PVC	13'	25'	50'	120' MIN.
8"	PVC	15'	30'	59'	122' MIN.
8"	D.I.P.	15'	30'	59'	122' MIN.

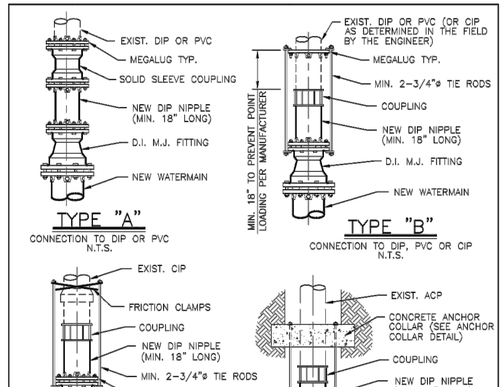
NOTES:

1. DIMENSION 'L' REPRESENTS THE LENGTH OF RESTRAINED PIPE REQUIRED IN FEET EACH SIDE OF THE PIPE FITTING.

PLAN
N.T.S.

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD4_REST_JOINT_SCHED

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL RESTRAINED JOINT SCHEDULE	DWG. NO. SD4	
		DATE 4/28/92	REVISED 10/05



TYPE "A"
CONNECTION TO DIP OR PVC
N.T.S.

TYPE "B"
CONNECTION TO DIP, PVC OR CIP
N.T.S.

TYPE "C"
CONNECTION TO CIP
N.T.S.

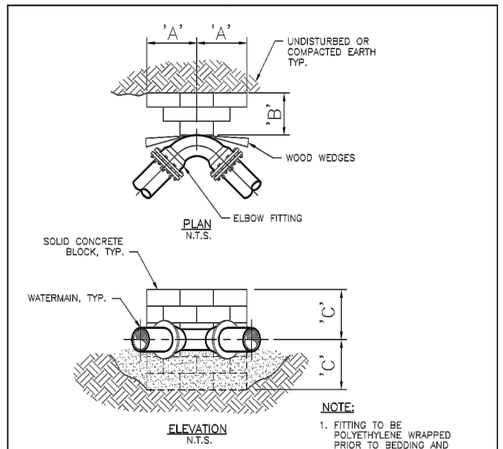
TYPE "D"
CONNECTION TO ACP
N.T.S.

NOTES:

1. VALVES AND TEES MAY BE HARNESSED SIMILARLY.
2. HARNESSING IS FOR RESISTANCE TO INTERNAL PRESSURE–PIPE ITSELF MUST BE SUPPORTED ON FIRM BEDDING AND CAREFULLY BACKFILLED.
3. COAT ALL EXPOSED SURFACES OF HARNESS ASSEMBLY WITH BITUMINOUS COATING.
4. TIE RODS SHALL BE PLACED ON SIDES OF PIPE.

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD5_CONN_EXIST_MAIN

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TYPICAL CONNECTION TO EXISTING WATERMAIN THROUGH 12–INCH DIAMETER WATERMAIN	DWG. NO. SD5	
		DATE 3/05	REVISED 10/05



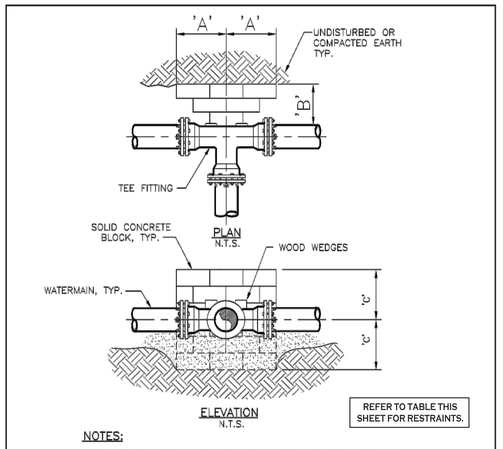
NOTE:

1. FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.

DIMENSION SCHEDULE												
PIPE SIZE	11.25° ELBOW			22.5° ELBOW			45° ELBOW			90° ELBOW		
	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'
8"	1.5'	1.5'	2.5'	2.5'	1.5'	2.5'	3.0'	1.5'	3.5'	3.5'	1.5'	5.0'

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD6_THRUST_BLOCKS_ELBOW

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR ELBOW FITTING	DWG. NO. SD6	
		DATE 4/28/92	REVISED 10/05



REFER TO TABLE THIS SHEET FOR RESTRAINTS.

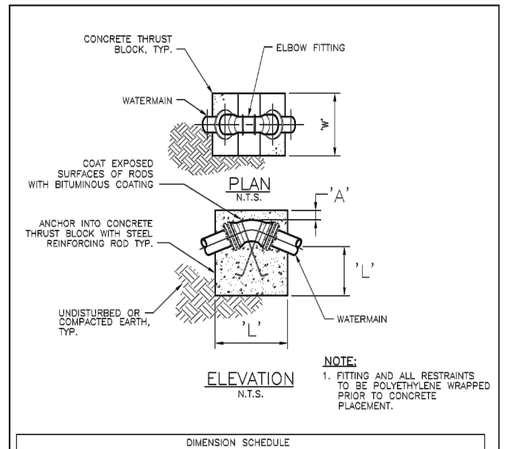
NOTES:

1. THRUST BLOCK REQUIRED FOR TEES, HYDRANT LATERAL TEES AND TAPPING SLEEVE INSTALLATIONS.
2. FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.

BRANCH TEE SIZE	DIMENSION SCHEDULE 'A'	'B'	'C'
6"	1'-0"	1'-0"	0'-6"
8"	1'-6"	1'-0"	0'-6"

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD7_THRUST_BLOCKS_TEE

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR TEE OR "DEAD END" FITTING	DWG. NO. SD7	
		DATE 4/28/92	REVISED 10/05



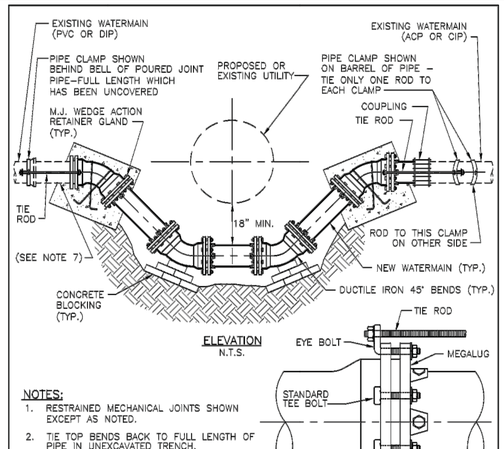
NOTE:

1. FITTING AND ALL RESTRAINTS TO BE POLYETHYLENE WRAPPED PRIOR TO CONCRETE PLACEMENT.

DIMENSION SCHEDULE													
PIPE SIZE	PIPE TYPE	11.25° ELBOW				22.5° ELBOW				45° ELBOW			
		'A'	'W'	'L'	ROD ø	'A'	'W'	'L'	ROD ø	'A'	'W'	'L'	ROD ø
8"	D.I.P		1'-0"	1'-0"	1/2"		1'-9"	1'-9"	1/2"		2'-0"	2'-0"	1/2"

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD8_THRUST_BLOCKS_VBEND

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL THRUST BLOCKS FOR VERTICAL BEND	DWG. NO. SD8	
		DATE 4/28/92	REVISED 10/05



NOTES:

1. RESTRAINED MECHANICAL JOINTS SHOWN EXCEPT AS NOTED.
2. TIE TOP BENDS BACK TO FULL LENGTH OF PIPE IN UNEXCAVATED TRENCH.
3. VALVES, TEES AND HYDRANTS MAY BE HARNESSED SIMILARLY.
4. HARNESSING IS FOR RESISTANCE TO INTERNAL PRESSURES–PIPE ITSELF MUST BE SUPPORTED ON FIRM BEDDING AND CAREFULLY BACKFILLED.
5. COAT ALL EXPOSED SURFACES OF HARNESS ASSEMBLY WITH BITUMINOUS COATING.
6. TIE RODS SHALL BE PLACED ON SIDES OF PIPE.
7. IF EXISTING PIPE IS CIP OR PVC, CONNECT TO NEW FITTING ONLY WHEN ALLOWED BY ENGINEER.

TIE ROD SCHEDULE			
PIPE SIZE	PIPE TYPE	ROD ø	NUMBER OF RODS
8"	PVC	3/4"	2

I:\PUBLIC\ENGINEERING\2006_DETAILS\SD10_HARN_OFFSET_EXIST_WMAIN

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL HARNESSING DETAILS–INSTALL OFFSET IN EXISTING WATERMAIN	DWG. NO. SD10	
		DATE 6/00	REVISED 10/05

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STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

REVISIONS:

No.	Description	Date

PROJECT NAME:

Site Development Plans for:

Fair Woods Estates Subdivision

775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:

Water Details

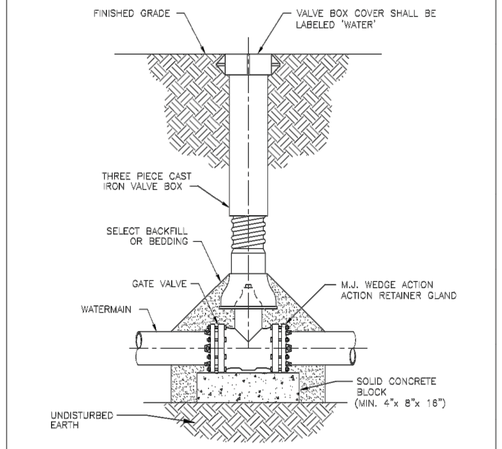
DRAWING NO.

C-406

Project no.: 19-190

Attachment: SUB-2020-03PP. drawings 012121 (22546 : Sub-2020-03Pp)

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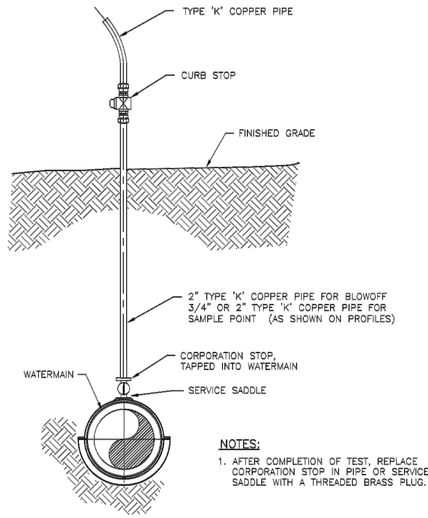


NOTES:
1. VALVE SHALL NOT SUPPORT VALVE BOX.
2. GATE VALVE SHALL BE INSTALLED LEVEL.
3. VALVE BOX SHALL BE PLUMB TO GRADE, WITH OPERATING NUT CENTERED IN BOX.

SECTION
N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD11_GATE_VALVE_SET

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GATE VALVE SETTING	DWG. NO. SD11	
		DATE 4/28/92	REVISED 02/17

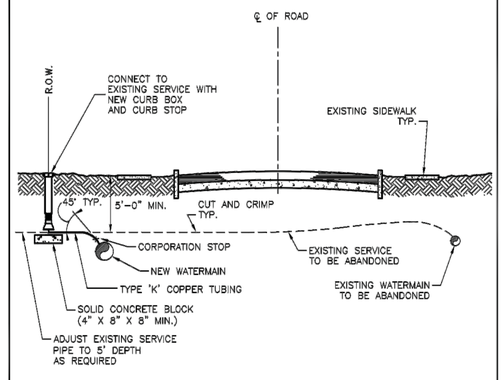


NOTES:
1. AFTER COMPLETION OF TEST, REPLACE CORPORATION STOP IN PIPE OR SERVICE SADDLE WITH A THREADED BRASS PLUG.

ELEVATION
N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD17_TEMP_BO_SAMP_PT

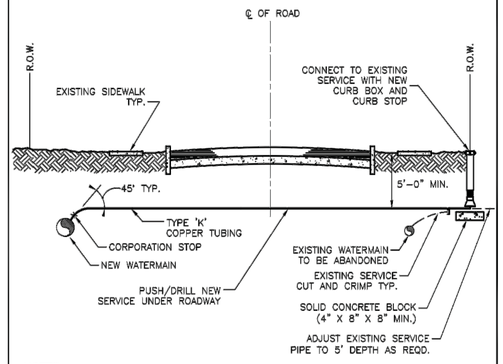
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL TEMPORARY BLOW-OFF/SAMPLING POINT	DWG. NO. SD17	
		DATE 4/28/92	REVISED 10/05



NOTES:
1. EXISTING SERVICES SHALL BE CRIMPED AND ABANDONED IN PLACE.
2. SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
   A. WHEN SERVICES ARE PLACED ON 4" OR SMALLER PIPES.
   B. WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
   C. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
   D. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
   E. WHEN TAPPING ALL PLASTIC (PVC) PIPE.
   F. WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
3. CURB BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR CURB RAMPS.
4. UNIONS ON COPPER TUBING ARE NOT ALLOWED UNLESS APPROVED BY ECWA PRIOR TO INSTALLATION.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD15_NR_SERV_REPLACE

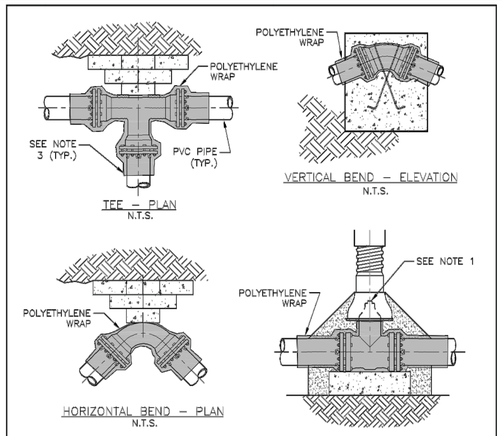
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL NEAR SIDE SERVICE REPLACEMENT/INSTALLATION	DWG. NO. SD15	
		DATE 4/92	REVISED 09/16



NOTES:
1. EXISTING SERVICES SHALL BE CRIMPED AND ABANDONED IN PLACE.
2. SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
   A. WHEN SERVICES ARE PLACED ON 4" OR SMALLER PIPES.
   B. WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
   C. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
   D. WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
   E. WHEN TAPPING ALL PLASTIC (PVC) PIPE.
   F. WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
3. CURB BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR CURB RAMPS.
4. USE POLYETHYLENE FOR 3/4" AND 1" SERVICES GREATER THAN 100 FEET IN LENGTH, AND FOR 1-1/2" AND 2" SERVICES GREATER THAN 60 FEET IN LENGTH. ALL POLYETHYLENE SERVICES SHALL INCLUDE A TRACER WIRE FOR DETECTION BY ECWA FORCES.
5. UNIONS ON COPPER TUBING ARE NOT ALLOWED UNLESS APPROVED BY ECWA PRIOR TO INSTALLATION.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD16_FR_SERV_REPLACE

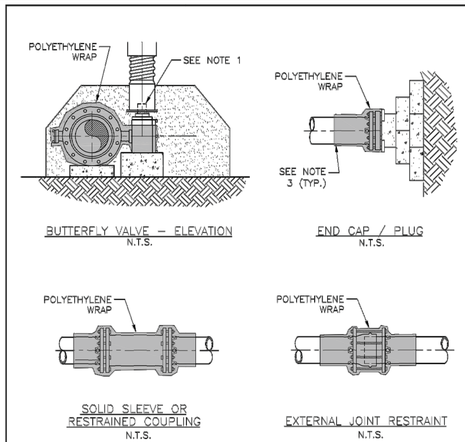
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL FAR SIDE SERVICE REPLACEMENT/INSTALLATION	DWG. NO. SD16	
		DATE 4/92	REVISED 09/16



NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP IS NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PIPE (OR POLYWRAP IF DIP) WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD39A_POLYWRAPPING_FITTINGS

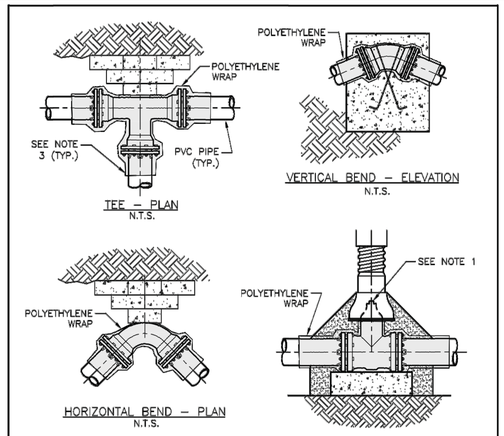
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING CAST/DUCTILE IRON FITTINGS	DWG. NO. SD39A	
		DATE 3/18	REVISED 12/18



NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP IS NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PIPE (OR POLYWRAP IF DIP) WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD39B_POLYWRAPPING_FITTINGS

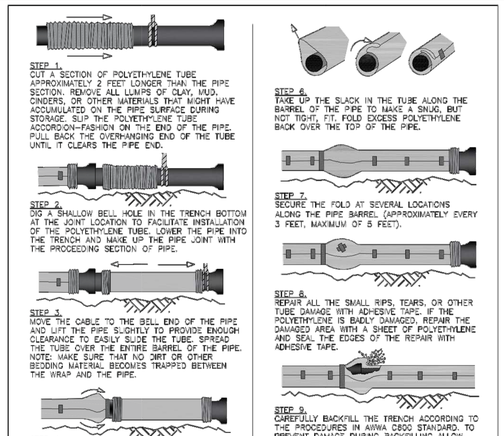
ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING CAST/DUCTILE IRON FITTINGS	DWG. NO. SD39B	
		DATE 12/18	REVISED



NOTES:
1. POLYETHYLENE WRAP IS TO BE PLACED AROUND THE ENTIRE FITTING, AND SECURED IN PLACE WITH POLYETHYLENE TAPE. PROVIDE SUFFICIENT SLACK SO THAT POLYETHYLENE WRAP IS NOT PUNCTURED DURING BACKFILL AND DOES NOT ENTRAP AIR. POLYETHYLENE WRAP NOT TO BE INSTALLED WITHIN 6 INCHES OF VALVE OPERATING NUT ON GATE VALVES.
2. ALL FITTINGS TO BE POLYETHYLENE WRAPPED PRIOR TO BEDDING AND CONCRETE BLOCK PLACEMENT.
3. POLYETHYLENE WRAP IS TO BE EXTENDED A MINIMUM OF 12" PAST THE FITTING ON EACH LEG AND SECURED TO THE PVC PIPE WITH AT LEAST TWO CIRCUMFERENTIAL WRAPS OF POLYETHYLENE TAPE.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD39_POLYWRAPPING_FITTINGS

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYWRAPPING DUCTILE IRON FITTINGS ON PVC PIPE	DWG. NO. SD39	
		DATE 3/18	REVISED



NOTES:
1 – POLYETHYLENE WRAP (POLYWRAP) SHALL BE OF PROPER DIAMETER TO FIT OVER BELLS AND EXTERNAL WEDGE-ACTION RETAINER GLANDS.
2 – CAST AND DUCTILE IRON FITTINGS (BENDS, TEES, VALVES, ETC.) ARE TO BE WRAPPED IN POLYWRAP AND SECURED IN PLACE.
3 – DO NOT USE CHAINS, METAL WIRE, OR OTHER SUPPORTING SYSTEMS WHICH MAY DAMAGE THE POLYETHYLENE ENCASEMENT. REPLACE DAMAGED POLYWRAP ACCORDINGLY.

I:\PUBLIC\ENGINEERING\CURRENT EDWA DETAILS\SD32_POLY_WRAP

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL POLYETHYLENE ENCASEMENT OF DUCTILE IRON PIPE	DWG. NO. SD32	
		DATE 06/18	REVISED 02/19

Carmina Wood Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

STATE OF NEW YORK CHRISTOPHER WOOD 076394 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

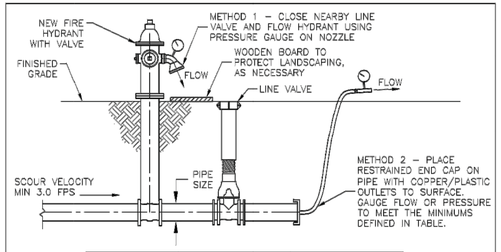
DRAWING NAME:
Water Details

DRAWING NO.
C-407

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

© Carmina Wood Morris DPC All rights reserved. Reuse of these documents without the expressed written permission of Carmina Wood Morris DPC is prohibited. WARNING. It is violation of article 145 sections 7209N and 7301 of the New York State education law for any person, unless acting under the direction of a registered architect, licensed engineer or land surveyor to alter this drawing. If altered such R.A., P.E. or L.L.S. shall affix his or her seal, signature, the date, the notation "altered by" and a specific description of the alteration.



PIPE SIZE (IN)	REQUIRED FLOW (GPM)	METHOD 1 HYDRANT FLOW		METHOD 2 END CAP FLOW	
		2 1/2" NOZZLE PRESSURE (PSI)	4" NOZZLE PRESSURE (PSI)	2" I.D. PRESSURE (PSI)	3" I.D. PRESSURE (PSI)
6	275	7	1	7	2
8	500	9	2	22	5
10	750	20	4	50	10
12	1100	44	7	–	22
16	1900	–	20	–	62
20	3000	–	50	–	–

I.D. = INNER DIAMETER

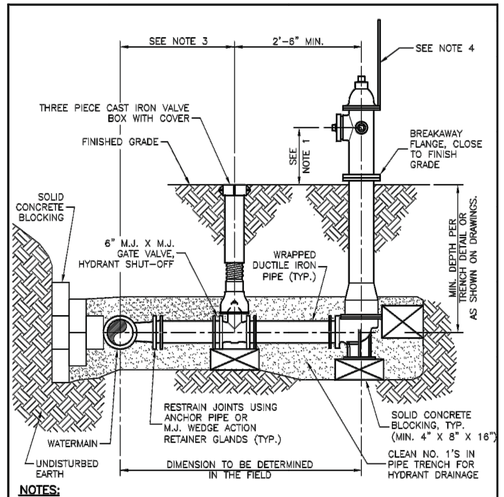
NOTES:

1. TO OBTAIN SCOUR VELOCITY (3.0 FPS) IN THE WATERLINE, CONTRACTOR SHALL ACHIEVE FLOWRATE AT NOZZLE DEFINED IN TABLE. PRESSURE GAUGE USED SHALL SHOW A HIGHER PRESSURE THAN THE MINIMUMS DEFINED IN THE TABLE.
2. OUTLET PRESSURE MEASURED BY PITOT GAUGE.
3. ENGINEER SHALL PROVIDE CALCULATIONS IF CONNECTIONS ARE OTHER THAN THOSE SHOWN, IF MULTIPLE CONNECTIONS ARE USED, OR AS REQUESTED BY ECWA.
4. TO FLUSH THREE PIPE VOLUMES, MINIMUM FLUSHING TIME (IN SECONDS) EQUALS THE LENGTH OF PIPE BEING FLUSHED, IN FEET.

SECTION
N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD36_WATERLINE_FLUSHING

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL WATERLINE FLUSHING	DWG. NO. SD36	
		DATE 6/16	REVISED 3/18



NOTES:

1. CENTERLINE OF THE LOWEST NOZZLE TO FINISHED GRADE SHALL BE A MIN. OF 15" & MAX. OF 18".
2. HYDRANT RISER SHALL BE INSTALLED PLUMB.
3. VALVE BOX SHALL NOT BE PLACED IN PAVEMENT.
4. RELOCATE HYDRANT MARKER (IF PRESENT), FOR WATERLINE REPLACEMENT PROJECTS ONLY.
5. HYDRANT FACE TO BE A MINIMUM OF 3' FROM THE BACK FACE OF ALL CURBS OR A MINIMUM OF 5' FROM ALL EDGES OF PAVEMENT (IF NO CURB).

SECTION
N.T.S.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD13_HYD_INST

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL FIRE HYDRANT INSTALLATION	DWG. NO. SD13	
		DATE 6/00	REVISED 11/16

NOTES

1. All elevations refer to USGS NAVD83 datum.
2. The CONTRACTOR shall obtain necessary permits and furnish copies to the ENGINEER prior to commencing work.
3. The CONTRACTOR'S work area shall be confined to the limits of the right-of-ways and easements. The CONTRACTOR shall obtain any additional easements or work releases should the CONTRACTOR require additional area to accommodate his operations.
4. The CONTRACTOR shall provide maintenance and protection of traffic in accordance with the Erie County Highway Department standards and the NYSDOT Manual of Uniform Traffic Control Devices.
5. The locations and depths of existing underground utilities as shown on the plans and profiles are approximate. Other underground utilities not shown may be encountered. The CONTRACTOR shall perform test pits to verify the location and elevation of utilities at interconnections and crossings as shown, directed, or required. The CONTRACTOR shall excavate in advance of the pipe laying operation and expose all existing underground utilities to prevent damage during construction and to determine required changes in grade necessary to install the watermain to avoid conflicts.
6. The CONTRACTOR shall install those measures required to limit erosion of areas disturbed by the work. Clearing shall be performed on an as-needed basis, phased to reduce erosion and visual impact.
7. Blasting will not be permitted.
8. No more than one connection may be made to any existing watermain prior to testing, disinfection, and approval of the Waterline Installation Completed Works Approval Report(s) by the Erie County Water Authority and the Erie County Health Department.
9. The Erie County Water Authority shall only operate existing valves and fire hydrants, including newly installed valves and fire hydrants that have been placed into service. The CONTRACTOR is advised that watertight conditions may not exist when existing valves are closed.
10. The CONTRACTOR shall have all equipment, manpower, and materials required on site and ready for use prior to commencing any shut-down or removing any existing facilities from service. The CONTRACTOR shall notify all affected customers in writing of any shut-down at least 48 hours in advance. The CONTRACTOR shall notify the appropriate fire stations 48 hours in advance prior to taking any fire hydrants out of service. Any fire hydrants not in service shall be bagged in burlap or plastic. Any shut-down shall be limited to 4 consecutive hours. It may be necessary to schedule shut-downs at night, weekends, or other off hours so as to not affect schools, businesses or other customers, as determined by the ENGINEER. Shut-down requests shall be submitted to the Erie County Water Authority a minimum of 5 business days in advance of the requested shut-down date.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD29_GENERAL_NOTES

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GENERAL NOTES	DWG. NO. SD29	
		DATE 3/05	REVISED 7/17

11. All watermain piping shall be installed with a minimum of 5'-0" of cover.
12. All watermain piping shall be installed with a minimum of 1'-6" of vertical clearance and 10'-0" of horizontal clearance from sanitary and storm piping, measured from the outside of the pipes at the point of crossing.
13. If the material at the design grade is unsuitable as determined by the ENGINEER, the CONTRACTOR, when ordered in writing, shall excavate additional material to the depth necessary and shall backfill to the proposed grade with the select granular material.
14. The installation of 90 degree bends in the watermain is not allowed, unless approved by the Erie County Water Authority.
15. Thrust restraint for watermain piping through 12-inch diameter shall consist of thrust blocks and pipe joint restraint.
16. The CONTRACTOR shall notify the owner of any utility pole in advance of any excavation work that will take place within 5'-0" of the utility pole. The CONTRACTOR shall include the cost of temporary pole support in the appropriate bid item.Where utility poles are required to be supported during construction, the CONTRACTOR shall make all necessary arrangements with the utility company.
17. If materials are encountered during the construction that are suspected of being contaminated, the CONTRACTOR shall immediately notify the NYSDEC for direction regarding testing, separation, containment, and disposal procedures.
18. Existing fire hydrants removed during construction and not reinstalled as part of the work shall be scheduled and returned to the Erie County Water Authority Service Center, 3030 Union Road, Cheektowaga, New York 14227.
19. The CONTRACTOR shall cold patch all trench excavations in traveled areas including roads, driveways, sidewalks, and parking areas.
20. The CONTRACTOR shall not restrict access for school buses or any emergency vehicles.
21. The use of existing fire hydrants for any reason is prohibited without prior approval of the Erie County Water Authority. This includes newly installed fire hydrants that have been placed into service.
22. The CONTRACTOR shall submit procedures for testing and disinfection of the watermain to the ENGINEER for review prior to the start of testing.
23. The CONTRACTOR shall be present and assist in the Final Walk inspection. The CONTRACTOR shall provide sufficient personnel and equipment to demonstrate to the ENGINEER that all valves, fire hydrants, and curb stops operate as required.

I:\PUBLIC\ENGINEERING\CURRENT ECWA DETAILS\SD30_GENERAL_NOTES

ERIE COUNTY WATER AUTHORITY BUFFALO, NEW YORK	STANDARD DETAIL GENERAL NOTES	DWG. NO. SD30	
		DATE 3/05	REVISED 7/17

Carmina Wood Morris DPC
487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Fair Woods Estates Subdivision
775 Heim Road
Amherst, New York

Date: 11/16/20
Drawn by: P. Sheedy
Scale: As Noted

DRAWING NAME:
Water Details & Notes

DRAWING NO.
C-408

Project no.: 19-190

Attachment: SUB-2020-03PP_drawings_012121 (22546 : Sub-2020-03Pp)

DRAFT

(1/21/21)

SEQR
Negative Declaration

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Planning Board	**Project:**	SUB-2020-03PP
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date:**	

This notice is issued pursuant to Part 617 and Local Law #3-82, as amended, of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The Lead Agency has determined that the proposed action described below will not have a significant adverse effect on the environment.

Title of Action: Site Plan Review

SEQR Status: Unlisted Action

Description of Action: Proposal to create a 26-lot single-family residential subdivision which will include extending Fair Woods Drive, a public road, westerly to Heim Road. Fair Woods Drive will intersect with Heim Road approximately 215 ft. northeast of Montbleu Road**.** The sketch plan shows 24 buildable lots, and two lots adjacent to Heim Road for storm management. All buildable lots meet the minimum required size for the R-3 district. A concrete roadway island is proposed roughly half-way along Fair Woods Drive as a traffic calming measure. Work will include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 775 Heim Road, Amherst, Erie County

Petitioner: Essex Homes of WNY, Inc.

Attachment: SUB-2020-03PP_neg_dec_012121 -(SEQR) (22546 : Sub-2020-03Pp)

Reasons Supporting This Determination

Based on information submitted by the applicant including a Short Environmental Assessment Form (EAF) - Part I, (as amended) and a complete subdivision application, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that this action will not have a significant impact on the environment, as follows:

1. The project is not expected to cause a substantial adverse change in existing air quality, ground or surface water quality or quantity, or noise levels; a substantial increase in solid waste production; or a substantial increase in the potential for erosion, flooding, leaching or drainage problems. The Engineering Department on January 4, 2021 reviewed the Grading, Drainage and Utility Plans submitted on December 2, 2020, the Engineer's Report submitted on November 16, 2020, the Erosion Control Plan submitted on December 28, 2020 and the Geotechnical Report prepared by Glynn Group Engineering & Architecture, PLLC.

2. The project will not result in the removal or destruction of large quantities of vegetation or fauna; or in significant adverse impacts to fish or wildlife species, habitats or other natural resources.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The Building Department has reviewed the application documents, along with the Geotechnical Report submitted on December 1, 2020, and determined in their review of _____ that the subject project has or will have met all Zoning Ordinance regulations.

4. The project is not within an area identified by the State as potentially containing significant cultural or archeological resources, nor will it impair the character or quality of important historical resources. This finding was confirmed by the NYS Office of Parks, Recreation and Historic Preservation in its letter dated November 25, 2020 which states that no historic properties, including archaeological and/or historic resources, will be affected by this project.

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The project is located in the Single Family Residential (R-3) zoning district; neighboring uses are single family homes, patio home developments and zoned Residential-3 and Multi-Family Residential - 5; therefore, the project is consistent with surrounding land use.

6. The proposed subject development will include a 26-lot residential subdivision which will cause a change in energy use, however the required utilities will be in place to adequately handle the anticipated increase.

7. The project will not create any hazard to human health. The Fire Chief's Association on December 3, 2020 has reviewed the project and has no objection to the approval of the site

Attachment: SUB-2020-03PP_neg_dec_012121 -(SEQR) (22546 : Sub-2020-03Pp)

plan, as all requirements of this agency has or will have been met.|

8. The project will cause a change in the use, or intensity of use, of land, however the 26-lot residential subdivision will be consistent with the scale of surrounding land uses.

9. The 26-lot residential subdivision development will increase the number of people using the site over its previous level of use. All required road and utility infrastructure is or will be in place to handle the increase.

10. Review by the Town Traffic/Safety Board dated December 3, 2020, and Erie County Dept. of Public Works –Highways Division dated December 16, 2020, indicates that significant negative traffic impacts are not expected to result from the proposed project.

11. A coordinated review of the project has been undertaken by Town Departments including, in addition to those mentioned above, Highway on December 14, 2020, Assessor on December 1, 2020, Plumbing Division on December 10, 2020, and Right-of-Way Agent on November 30, 2020. These reviews did not identify any potential significant adverse environmental issues and indicated that the proposal will not have a significant damaging impact on the environment.

12. Issues not specifically mentioned above and/or those not specifically reviewed were not raised by Town departments, outside agencies or the public and are not determined to cause significant negative environmental impacts.

Planning Board Approval
Moved by: ; Seconded by: Ayes; Noes Absent

_____ _____
signature & title of preparer Date

_____ _____
Robert J. Gilmour, Planning Board Chair Date

RR/bf
X:\CURRENT_PLANNING\FILES\SUBDIVISIONS\SUB-2020\SUB-2020-03_(775_HEIM_RD)_2020\SUB-2020-03PP_(775-HEIM_RD_2020\SUB-2020-03PP_BLURB_012121 -(SEQR).DOCdoc
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
Rob Savarino, Essex Homes of WNY, Inc., 8940 Main St, Clarence, NY 14031
Sean Hopkins, Hopkins, Sorgi & McCarthy, 5500 Main St, Williamsville, NY 14221

Attachment: SUB-2020-03PP_neg_dec_012121 -(SEQR) (22546 : Sub-2020-03Pp)

Amherst

Town of Amherst Planning Department *Erie County, New York*

Brian J. Kulpa
Supervisor

Daniel C. Howard, A
Planning Directo

Ellen M. Kost, AICP
Assistant Planning Dir

SEQR
Negative Declaration

JAN29'21 AM 8:32 RCVD

NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

Lead Agency:	Town of Amherst Planning Board	**Project:**	SUB-2020-03PP
Address:	5583 Main Street Williamsville, NY 14221 (716) 631-7051	**Date:**	January 21, 2021

This notice is issued pursuant to Part 617 and Local Law #3-82, as amended, of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The Lead Agency has determined that the proposed action described below will not have a significant adverse effect on the environment.

Title of Action: Preliminary Plat Review

SEQR Status: Unlisted Action

Description of Action: Proposal to create a 26-lot single-family residential subdivision which will include extending Fair Woods Drive, a public road, westerly to Heim Road. Fair Woods Drive will intersect with Heim Road approximately 215 ft. northeast of Montbleu Road. The sketch plan shows 24 buildable lots, and two lots adjacent to Heim Road for storm management. All buildable lots meet the minimum required size for the R-3 district. A concrete roadway island is proposed roughly half-way along Fair Woods Drive as a traffic calming measure. Work will include the site improvements not specifically stated above, including, stormwater, utilities, grading, lighting, paving, and landscaping.

Location: 775 Heim Road, Amherst, Erie County

Petitioner: Essex Homes of WNY, Inc.

Attachment: SUB-2020-03PP signed neg dec 012121 (22546 : Sub-2020-03Pp)

JAN29'21 AM 8:32 RCVD

Reasons Supporting This Determination

Based on information submitted by the applicant including a Short Environmental Assessment Form (EAF) - Part I, (as amended) and a complete subdivision application, a preliminary staff analysis was undertaken. Compared to the criteria listed in Section 617.7, all indications are that this action will not have a significant impact on the environment, as follows:

1. The project is not expected to cause a substantial adverse change in existing air quality, ground or surface water quality or quantity, or noise levels; a substantial increase in solid waste production; or a substantial increase in the potential for erosion, flooding, leaching or drainage problems. The Engineering Department on January 4, 2021 reviewed the Grading, Drainage and Utility Plans submitted on December 2, 2020, the Engineer's Report submitted on November 16, 2020, the Erosion Control Plan submitted on December 28, 2020 and the Geotechnical Report prepared by Glynn Group Engineering & Architecture, PLLC.

2. The project will not result in the removal or destruction of large quantities of vegetation or fauna; or in significant adverse impacts to fish or wildlife species, habitats or other natural resources.

3. The project is not expected to create any material conflict with the Town Comprehensive Plan. The Building Department in their review of January 7, 2021 and the Planning Department in their review of January 11, 2021 has reviewed the application documents, along with the Geotechnical Report submitted on December 1, 2020, and determined in their review of September 9, 2020 that the subject project has or will have met all International Building Code – 2015 and Zoning Ordinance regulations.

4. The project is not within an area identified by the State as potentially containing significant cultural or archeological resources, nor will it impair the character or quality of important historical resources. This finding was confirmed by the NYS Office of Parks, Recreation and Historic Preservation in its letter dated November 25, 2020 which states that no historic properties, including archaeological and/or historic resources, will be affected by this project.

5. The project will not impair the character or quality of important aesthetic resources or of existing community or neighborhood character. The project is located in the Single Family Residential (R-3) zoning district; neighboring uses are single family homes, patio home developments and zoned Residential-3 and Multi-Family Residential - 5; therefore, the project is consistent with surrounding land use.

6. The proposed subject development will include a 26-lot residential subdivision which will cause a change in energy use, however the required utilities will be in place to adequately handle the anticipated increase.

Attachment: SUB-2020-03PP signed neg dec 012121 (22546 : Sub-2020-03Pp)

JAN29'21 AM 8:32 RCVD

7. The project will not create any hazard to human health. The Fire Chief's Association on December 3, 2020 has reviewed the project and has no objection to the approval of the site plan, as all requirements of this agency has or will have been met.

8. The project will cause a change in the use, or intensity of use, of land, however the 26-lot residential subdivision will be consistent with the scale of surrounding land uses.

9. The 26-lot residential subdivision development will increase the number of people using the site over its previous level of use. All required road and utility infrastructure is or will be in place to handle the increase.

10. Review by the Town Traffic/Safety Board dated December 3, 2020, and Erie County Dept. of Public Works –Highways Division dated December 16, 2020, indicates that significant negative traffic impacts are not expected to result from the proposed project.

11. A coordinated review of the project has been undertaken by Town Departments including, in addition to those mentioned above, Highway on December 14, 2020, Assessor on December 1, 2020, Plumbing Division on December 10, 2020, and Right-of-Way Agent on November 30, 2020. These reviews did not identify any potential significant adverse environmental issues and indicated that the proposal will not have a significant damaging impact on the environment.

12. Issues not specifically mentioned above and/or those not specifically reviewed were not raised by Town departments, outside agencies or the public and are not determined to cause significant negative environmental impacts.

Planning Board Approval
Moved by: D Giuliani; Seconded by: S Gelber; Ayes 7; Noes 0

signature & title of preparer — Date: 1/28/21

Robert J. Gilmour, Planning Board Chair — Date: 1/28/21

RR/ac
X:\CURRENT_PLANNING\FILES\SUBDIVISIONS\SUB-2020\SUB-2020-03_(775_HEIM_RD)_2020\SUB-2020-03PP_(775-HEIM_RD_2020\SUB-2020-03PP_NEG_DEC_012121 -(SEQR).DOCdoc
cc: Amherst Town Clerk
Amherst Building Department
ECDEP
Rob Savarino, Essex Homes of WNY, Inc., 8940 Main St, Clarence, NY 14031
Sean Hopkins, Hopkins, Sorgi & McCarthy, 5500 Main St, Williamsville, NY 14221

Attachment: SUB-2020-03PP signed neg dec 012121 (22546 : Sub-2020-03Pp)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 01/21/21 06:30 PM
Department: Planning
Category: Rezoning and Relief from Conditions of Rezoning
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 22682

ADOPTED

PLANNING BOARD ITEM (ID # 22682)

Proposed Amendment #73 to the Audubon New Community Development Plan to Reclassify 2.35± Acres of Land from Ncd-Sa to Ncd-Nd, Z-2020-06

2160 and 2170 North Forest Road (NCD)
Coromandel Estates Amherst, LLC, Petitioner

ATTACHMENTS:

- Z-2020-06 application reports 012121 (PDF)
- Z-2020-06 drawing 012121 (PDF)
- Z-2020-06_draft resolution_012121 (PDF)
- Z-2020-06 signed resolution 012121 (PDF)

Amended Application - Reclassification 2160 and 2170 North Forest Road and to Amend the Audubon Development Plan
Date: December 17, 2020

Applicant: Coromandel Estates
Amherst LLC c/o Sean Hopkins, Esq.
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 716.510-4338
E-mail: shopkins@hsr-legal.com

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Rezoning Review and, if required Comprehensive Plan Amendment

For Official Use

File #: _____ **Acreage** _____ **Fee $** _____

Address Verified by Assessor's Office _____ VERIFIED BY DATE

Materials Accepted by Town Clerk & Fee Paid _____ ACCEPTED BY DATE

Materials Checked by Building Dept. _____ RECEIVED BY DATE

Materials Received by Planning Dept. _____ RECEIVED BY DATE

		Fill In Applicable Fees
2 ACRES OR LESS	**$1,250**	$1,250.00
2 – 20 ACRES **$1,250 + $250/acres or fraction thereof over 2 acres**		$250.00
20 – 30 ACRES **$5,700 + $150/acre or fraction thereof over 20 acres**		_____
OVER 30 ACRES **$6,900 +$75/acre or fraction thereof over 30 acres**		_____
Request for Relief of/Change to Conditions of Zoning Approval	**$ 1,200**	_____
AFFIDAVIT FEE FOR PUBLIC HEARING	**$ 15.00**	$15.00
	TOTAL FEE:	$ 1,515.00

[Note: A completed Amended Part 1 of the Full Environmental Assessment Form prepared pursuant to the State Environmental Quality Review Act ("SEQRA") is attached as Exhibit "2" of this Application.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

TO BE COMPLETED BY APPLICANT

1. **Petitioner:** Name: Coromandel Estates Amherst LLC

Address: c/o Sean Hopkins, Esq.
5500 Main Street, Suite 343
Williamsville, New York 14221
City State Zip Code

Phone: 510-4338 Fax:

E Mail shopkins@hsr-legal.com

2. **The undersigned hereby petitions the Honorable Town Board to rezone the following described property**

From: NCD-SA District

To: NCD-ND District

3. **Street address of land to be rezoned:** (must be verified by Town Assessor's Office)

2160 and 2170 North Forest Road

SBL #: 55.02-1-2 and 55.01-1-19.2

4. **Area of land to be rezoned** (in acres): 2.35

5. **Owner of Land:**

Name: Allen and Kristen Guerin

Address: 270 Rosedale Boulevard, Amherst, NY 14226

Telephone:

6. **Representative** (Architect, Engineer, Landscape Architect, Surveyor or Attorney):

Name: Sean W. Hopkins, Esq.

Address: 5500 Main Street, Suite 343
Williamsville, New York 14221
Tel: 716.510-4338 - E-mail: shopkins@hsr-legal.com
City State Zip Code

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

7. Petitioner's interest in property

_____ Option to purchase

_____ Owner

__x__ Other (explain) Petitioner has entered into a contract to purchase the Project Site. A signed Authorization Form is attached as Exhibit 1 of this Amended Application.

8. The following are all others having an interest in this application and join herein with the petitioner named above: (describe extent of interest; attach sheets as needed)

Not Applicable.

9. Attach Survey and Legal description of land to be rezoned. The Survey must be prepared by a New York State Licensed Land Surveyor. The legal description of property to be reclassified is attached as Exhibit "3" and a full size copy of the Survey prepared by GPI dated dated July 13, 2020 is attached. A reduced size copy of the Survey is also attached as Exhibit "4".

10. Said property has the following deed restrictions or Covenants: (attach copy) Not Applicable.

Liber _____ Page _____

11. Information on proposed project:

A. Description of the character of the proposed development:

See Exhibit 5.

B. Rationale for rezoning request:

1. Why was this site chosen?

See Exhibit 5.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

2. Why cannot land be used with the existing zoning?

See Exhibit 5.

3. How will this rezoning impact surrounding properties?

See Exhibit 5.

4. How will this rezoning impact the school system?

See Exhibit 5.

12. Quantitative Data:

A. Total # of dwelling units 8
[The density of the proposed project has been reduced from 18 units to 8 units.]

B. Distribution of dwelling units by type Attached residential units for lease

C. Gross Residential Density per acre 3.40 units per acre

D. Total amount of Open Space Approximately 1 acre of greenspace and landscaping

E. Proposed Non-Residential Floor Area Not Applicable

13. Development Schedule:

Start Spring/Summer 2021

Finish 2022

Stages (# of) 1

14. If any portion of the proposed development is planned to be sold or leased, please describe:

The attached residential units will be leased to residential tenants.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

15. Open Space ownership and maintenance provisions (if applicable):

Greenspace and landscaping will be privately owned and maintained.

16. Basis for Findings (Sec. 8-3-5 of the Town Zoning Code) (Attach sheets and supplemental materials as necessary.)

A. <u>The proposed zoning and development plan must be generally consistent with the policies of the Comprehensive Plan and the Town Zoning Ordinance.</u>

1. State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps, and/or figures in the plan that support the proposed zoning at this location (The Comprehensive Plan document is available at the Planning Department, Town Clerk's Office, Amherst libraries, or at www.amherst.ny.us). Add sheets as needed.

See Exhibit 6.

2. Pursuant to NYS Town Law Section 272a(11), "all Town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this Section." The Town Board adopted the Comprehensive Plan pursuant to NYS Town Law 272 on January 2, 2007. If the rezoning is approved, the Town Board may require the Plan to be amended, as applicable.

Cite all text, map, and / or figures that must be amended to support the proposed zoning at this location (attach pages as necessary) and provide detailed suggested amendments.

See Exhibit 6.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

3. State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance:

See Exhibit 6.

B. Adequate Services and Utilities are available or are proposed to be made available with the construction of the development:

1. Sanitary Sewer
   Yes.
2. Storm Sewer/Drainage
   Yes.
3. Water
   Yes.
4. Other Yes.

C. Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:

See Exhibit 6.

D. Suitability of the subject property for uses permitted by the current versus the proposed district:

See Exhibit 6.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

E. Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:

See Exhibit 6.

17. The petitioner encloses herewith the sum of $ 1,515.00 to pay the fee, and consents to the placement of a sign(s) at the described location identifying this request for a period of time to be determined by the Town Clerk.
[The filing fee was previously paid .]

18. The undersigned certifies that all information required to be disclosed pursuant to Section 809 of the General Municipal Law (see below) is as follows:

The undersigned swears or affirms that all statements made herein are true, that all drawings submitted correctly show the situation involved in this petition.

[Note: Authorization letter of property owners dated August 18, 2020 is attached to this Application.]

Counsel for Petitioner
Signature of Petitioner

Subscribed and sworn to before me this 17th day of December, 20 20

Notary Public, Erie County, New York

MARIANNE BRAUTLACHT
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 01/14/20 22

N.Y.S. General Municipal Law - Section 809 Disclosure in certain applications:

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provision of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state office or any office or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them

   (a) is the applicant, or
   (b) is an officer, director, partner or employee of the applicant, or
   (c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
   (d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such applicant, petition or request.

3. In the county of Nassau the provisions of subdivisions one and two of this section shall also apply to a party officer. "Party Officer" shall mean any person holding any position or office, whether by election, appointment or otherwise, in any party as defined by subdivision four or section two of the election law.

4. Ownership of less than five per cent of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

5. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

P/CurrPlan/Applications2007/Rezoning & Comp Plan Amend App.
10/08

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 1 – Authorization Form of Property Owners dated August 18, 2020

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

AUTHORIZATION

Allen Guerin and Kristen Guerin, as the record owners of the parcels of land located at 2160 North Forest Road [SBL No. 55.02-1-1] and 2170 North Forest Road [SBL No. 55.01-1-19.2] in the Town of Amherst (collectively the "Project Site") hereby authorizes Postwork Capital LLC and its consultants to seek a rezoning and all other required governmental approvals from the municipal boards of the Town of Amherst in connection with a proposed multifamily project to be located on the Project Site.

Date: August 18, 2020 Signature: Authentisign Allen Guerin 08/19/2020 8:14:43 AM EDT

Print Name: Allen Guerin

Date: August 18, 2020 Signature: Authentisign Kristen Guerin 08/19/2020

Print Name: Kristen Guerin

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 2 – Amended Part 1 of Full Environmental Assessment Form Prepared Pursuant to the State Environmental Quality Review Act ("SEQRA") with Attachments "A" and "B"

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Amended Part 1 of Full Environmental Assessment Form with Attachments
Date: December 17, 2020

Instructions for Completing Part 1

Full Environmental Assessment Form
Part 1 - Project and Setting

Prepared By: Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main Street, Suite 343
Williamsville, NY 14221
Tel: 510-4338
E-mail: shopkins@hsr-legal.com

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Proposed Multifamily Project		
Project Location (describe, and attach a general location map): 2160 and 2170 North Forest Road - Town of Amherst - Erie County		
Brief Description of Proposed Action (include purpose or need): The proposed action involves an amendment of the land use classification of 2160 and 2170 North Forest Road from NCD-SA to NCD-ND and an amendment of the Audubon Development Plan to accommodate the development of the Project Site as a three-story multifamily building consisting of 8 attached residential units for lease and all related site improvements as depicted on the Concept Site Plan prepared by Silvestri Architects, P.C. The proposed action has been defined broadly to include the construction of the proposed two-story multifamily building as well as all necessary site improvements including: parking spaces, a curb cut onto North Forest Road, access aisles, water and sanitary sewer lines as well as utility connections. Although the proposed project ("action") will not cross of any of the thresholds for a Type I action contained in 6 NYCRR Part 617.4. of SEQRA Regulations, it is a Type I action due the proximity of the Project Site to Ellicott Creek, which is a flowing watercourse, pursuant to a local law adopted by the Town of Amherst in 1982. The local law requires projects within 100 ft. of a flowing watercourse to be classified as Type I action. Given that the proposed project will not result in any potentially significant adverse environmental impacts, the issuance of a negative declaration pursuant to SEQRA is appropriate.		
Name of Applicant/Sponsor: Coromandel Estates Amherst LLC c/o Sean Hopkins, Esq.	Telephone: 716.510-4338 E-Mail: shopkins@hsr-legal.com	
Address: 5500 Main Street, Suite 343		
City/PO: Williamsville	State: NY	Zip Code: 14221
Project Contact (if not same as sponsor; give name and title/role): Same as Above.	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Allen and Kristen Guerin	Telephone: E-Mail:	
Address: 270 Rosedale Boulevard		
City/PO: Amherst	State: NY	Zip Code: 14226

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	Town of Amherst Town Board - Reclassification NCD Property and Amend. of Audubon Dev. Plan	August 24, 2020
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Planning Board - Site Plan Approval	To be Determined
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Building Dept. - Building and Floodplain Permits; Stormwater Permit - Eng. Dept.	To be Determined
e. County agencies ☑Yes ☐No	ECDPW - Curb cut onto North Forest Road; ECWA - Water	To be Determined
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - DSCA and SPDES Permit and NYSOPRHP - Cultural resource review	To be Determined
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):
NYS Heritage Areas:West Erie Canal Corridor

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
The zoning classification of the Project Site is NCD-SA.

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? NCD-ND

C.4. Existing community services.

a. In what school district is the project site located? Williamsville Central School District

b. What police or other public protection forces serve the project site?
Town of Amherst Police Department

c. Which fire protection and emergency medical services serve the project site?
Getzville Volunteer Fire Department

d. What parks serve the project site?
There are various Town parks that will be accessible to future residents of the project.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Multifamily residential consisting of attached residential units for lease.

b. a. Total acreage of the site of the proposed action? 2.35 acres
b. Total acreage to be physically disturbed? 1.3 +/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.35 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

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f. Does the project include new residential uses? ☑Yes ☐No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				8
At completion of all phases				8

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑Yes ☐No
If Yes,
i. Purpose of the impoundment: Stormwater management.
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑Other specify:
Runoff from impervious surfaces to be located on the Project Site.
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: TBD million gallons; surface area: 0.3 acres
v. Dimensions of the proposed dam or impounding structure: n/a height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
impoundment is an excavation, a dam is not required

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐Yes ☑No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i .What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

Attached as Attachment "A" of this Amended Part 1 of the Full EAF is a wetland investigation letter prepared by Scott Livingstone of Earth Dimensions, Inc. dated July 7, 2020 confirming there are not any wetland subject to the jurisdiction of either of the NYS Dept. of Environmental Conservation of the United States Army Corps of Engineers located on the Project Site.

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ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:

i. Total anticipated water usage/demand per day: 1,850 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No
If Yes:

- Name of district or service area: ECWA
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No
If Yes:

i. Total anticipated liquid waste generation per day: 1,850 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Town of Amherst Waste Water Treatment Plan on Tonawanda Creek Road
- Name of district: Town of Amherst Consolidated Sanitary Sewer District
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 0.5 acres (impervious surface)

_____ Square feet or 2.35 acres (parcel size)

ii. Describe types of new point sources. roof, parking lot

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Private on-site storm water management area. Discharge will be to Ellicott Creek.

- If to surface waters, identify receiving water bodies or wetlands: Ellicott Creek.
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☑No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐Morning ☐Evening ☐Weekend ☐Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

Typical energy usage for a project of this type

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

National Grid

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00 a.m. to 7:00 p.m.
- Saturday: 8:00 a.m. to 5:00 p.m.
- Sunday: As needed
- Holidays: Not Applicable

ii. During Operations:

- Monday - Friday: Not Applicable
- Saturday: Not Applicable
- Sunday: Not Applicable
- Holidays: Not Applicable

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

There will be short-term unavoidable noise impacts during the construction of the project that will result from construction equipment.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Parking lot lights, 15' mounting height, dark sky compliant, minimum of 30' from nearest residence.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 3 tons per week (unit of time)
- Operation : 2 tons per month (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: at the discretion of the contractor
- Operation: Project will follow town of Amherst recycling program

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: NYSDEC approved landfill
- Operation: NYSDEC approved landfill

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Asbury Pointe Retirement Community

ii. If mix of uses, generally describe:

There are a mixture of land uses in the vicinity of the Project Site including single-family homes, the Asbury Pointe Retirement Community and the Audubon Women's Health Medical Office.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	0.9	+0.9
• Forested	.5	.5	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	1.8	.4	-1.4
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: lawn/landscaping		0.3	+1.4

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑Yes ☐No
If Yes,
i. Identify Facilities:
The Asbury Pointe Retirement Community is located at 50 Stahl Road.

e. Does the project site contain an existing dam? ☐Yes ☑No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No
If Yes:
i. Has the facility been formally closed? ☐Yes ☐No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes ☑No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☐No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >5 feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☑No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: Cosad loamy fine sand 100 %

d. What is the average depth to the water table on the project site? Average: >5 feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☑ Poorly Drained 100 % of site

f. Approximate proportion of proposed action site with slopes: ☑ 0-10%: 100 % of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐Yes ☑No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 837-25 Classification B
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☑Yes ☐No

If yes, name of impaired water body/bodies and basis for listing as impaired:
Name - Pollutants - Uses:Ellicott Creek, Lower, and tribs – Nutrients;Silt/Sediment – Aquatic Life

i. Is the project site in a designated Floodway? [There will not be any development in the Floodway associated with Ellicott Creek.] ☑Yes ☐No

j. Is the project site in the 100-year Floodplain? ☑Yes ☐No

k. Is the project site in the 500-year Floodplain? ☑Yes ☐No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☑No
If Yes:

i. Name of aquifer: _____

[Note: Attached as Attachment "A" of this Amended Part 1 of the Full EAF is a wetland investigation letter prepared by Scott Livingstone of Earth Dimensions, Inc. dated July 7, 2020 confirming there are not any wetland subject to the jurisdiction of either of the NYS Dept. of Environmental Conservation of the United States Army Corps of Engineers located on the Project Site.]

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

m. Identify the predominant wildlife species that occupy or use the project site:
Typical suburban species

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: acres
- Following completion of project as proposed: acres
- Gain or loss (indicate + or -): acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No
If Yes:
i. Species and listing (endangered or threatened):

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

[Note: A copy of the No Impact determination letter issued by the NYS Office of Parks, Recreation and Historic Preservation dated October 30, 2020 is provided at Attachment "B" of this Amended Part 1 of the Full EAF.]

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Coromandel Estates Amherst LLC Date December 17, 2020

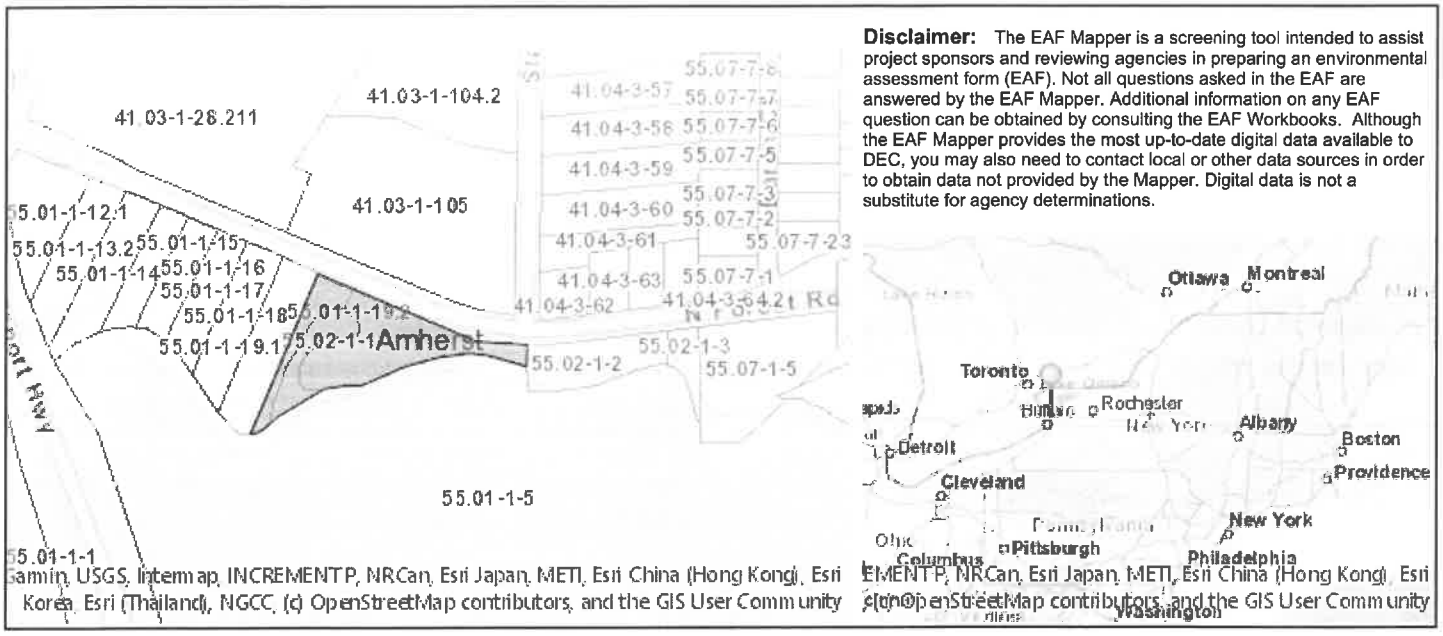
Signature _____ Title Counsel for Project Sponsor

PRINT FORM

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

EAF Mapper Summary Report

Monday, August 17, 2020 7:45 AM



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

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	837-25
E.2.h.iv [Surface Water Features - Stream Classification]	B
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Ellicott Creek, Lower, and tribs – Nutrients;Silt/Sediment – Aquatic Life

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Attachment "A" of Amended Part 1 of Full Environmental Assessment Form – Wetland Investigation Letter of Scott J. Livingstone of Earth Dimensions, Inc. dated July 7, 2020

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

EARTH DIMENSIONS, INC.
* Soil & Hydrogeologic Investigations * Wetland Delineations
1091 Jamison Road, Elma NY 14059
(716) 655-1717 * Fax (716) 655-2915 www.earthdimensions.com

July 7, 2020 W4E87a

Thiru Vikram
4515 Chestnut Ridge Road
Amherst, New York 14228

Re: Preliminary Wetland Investigation – 1.9± acres
2160-2170 North Forest Road
Town of Amherst
Erie County, New York

Dear Mr. Vikram:

Earth Dimensions, Inc. (EDI) has completed a preliminary wetland investigation at the above referenced site for the purpose of identifying potential regulated wetlands and waterways. The site investigation was conducted on July 7, 2020. The attached map depicts the limits of our investigation. EDI did not identify any federally regulated wetlands as defined by the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manuals within the limits of investigation. However, Ellicott Creek abuts the site on the south boundary and would be regulated by USACE under Section 404 of the Clean Water Act.

The New York State Department of Environmental Conservation (NYSDEC) On-line Resource Mapper does not depict any Freshwater Wetlands within or adjacent to the subject parcel. NYSDEC, thus, has no jurisdiction over any wetlands within the site. However, Ellicott Creek is a Class B stream and is regulated under Article 15 of New York Conservation Law.

Based on this investigation, it is our professional opinion that as long as no disturbance is proposed to the bed and banks of Ellicott Creek, your project may move forward without the need for a Section 404 permit from USACE or Article 15 permit from NYSDEC. Should your project propose impacts to the bed or banks of Ellicott Creek, we recommend that a Joint Application for permit be submitted to USACE and/or NYSDEC with a request for a Section 404 and/or an Article 15 permit, respectively.

If you have any questions, please contact our office at (716) 655-1717 or email slivingstone@earthdimensions.com.

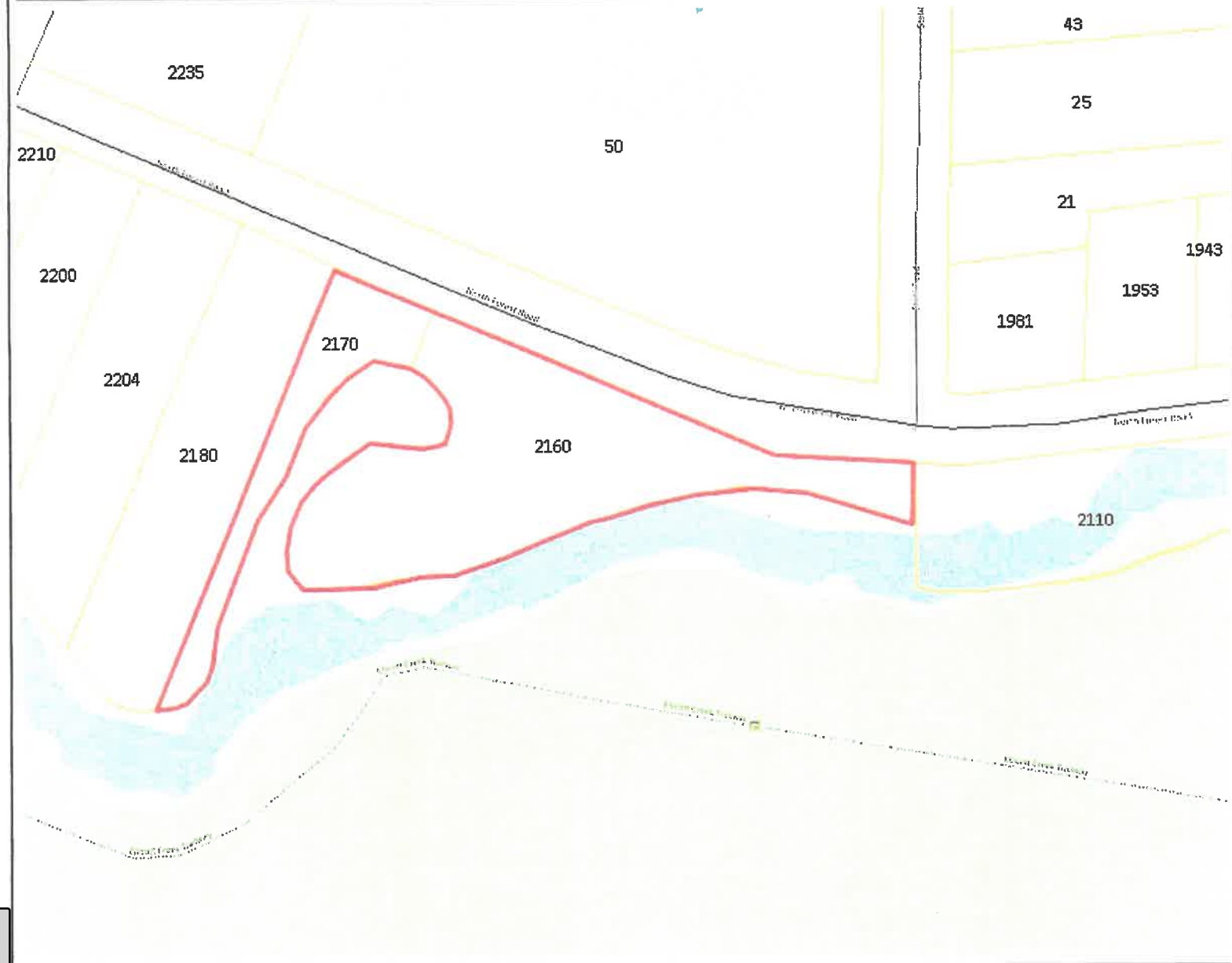
Very truly yours,
Earth Dimensions, Inc.

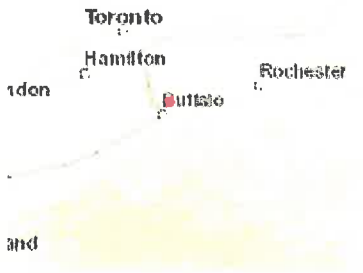
Scott J. Livingstone
Wetlands Operations Manager

Encl.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Erie County On-Line Mapping Application





Legend

- Parcels
- Streets and Highways
  - Interstate
  - Primary State Road
  - Secondary State Road
  - County Road
  - Local Road

0 0.04 0.1 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: 2,257

Attachment "B" of Amended Part 1 of Full Environmental Assessment Form – No Impact Determination Letter of Josalyn Ferguson of the New York State Office of Parks, Recreation and Historic Preservation dated October 30, 2020

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

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

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 30, 2020

Roberta Rappoccio
Associate Planner
Town of Amherst, NY Planning Department
5583 Main Street
Amherst, NY 14221

Re: DEC
Rezoning for 18-Unit 3-story New Construction Project
2160 North Forest Rd, Amherst, Erie County, NY
20PR05460
Z-2020-06

Dear Roberta Rappoccio:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the Phase I Archaeological Reconnaissance Survey report prepared by the University at Buffalo's Archaeological Survey (Whalen & Angelini, October 2020; 20SR00539) in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation, and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

Based on this review, it is OPRHP's understanding that no archaeological sites were identified during the above-noted investigation, and we concur with the report's conclusion that no further archaeological investigations are warranted. It is, therefore, OPRHP's opinion that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project. Should the project design be changed OPRHP recommends further consultation with this office.

If you have any questions, I can be reached via e-mail at Josalyn.Ferguson@parks.ny.gov.

Sincerely,

Josalyn Ferguson, Ph.D.
Scientist Archaeology

via email only

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 3 – Legal Description of Property to be Reclassified from NCD-SA to NCD-ND

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

EXHIBIT 3 OF AMENDED APPLICATION

LEGAL DESCRIPTION OF PROPERTY TO BE RECLASSFIED FROM NCD-SA TO NCD-ND – 2160 AND 2170 NORTH FOREST ROAD

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Amherst, County of Erie, State of New York, being part of Lot 68, Township 12, Range 7 of the Holland Land Survey so-called and further bounded and described as follows.

BEGINNING at the intersection of the centerline of Stahl Road (66.0 feet wide) with the centerline of North Forest Road (66.0 feet wide):

THENCE: Southerly, along the centerline of Stahl Road extended southerly, a distance of 108 feet more or less to the north bank of Ellicott Creek;

THENCE: Westerly along said north bank of Ellicott Creek, a distance of 583 feet more or less to the west line of lands conveyed to Peter D. Durham by deed recorded in the Erie County Clerk's Office in Liber 9264 of Deeds at page 188;

THENCE: Northerly along said west line of Peter D. Durham lands, a distance of 10 feet more or less to the north bank of Ellicott Creek;

THENCE: Westerly and southerly along said north bank of Ellicott Creek, a distance of 227 feet more or less to a point distant 100 feet westerly from the said west line of Peter D. Durham lands as measured at right angles;

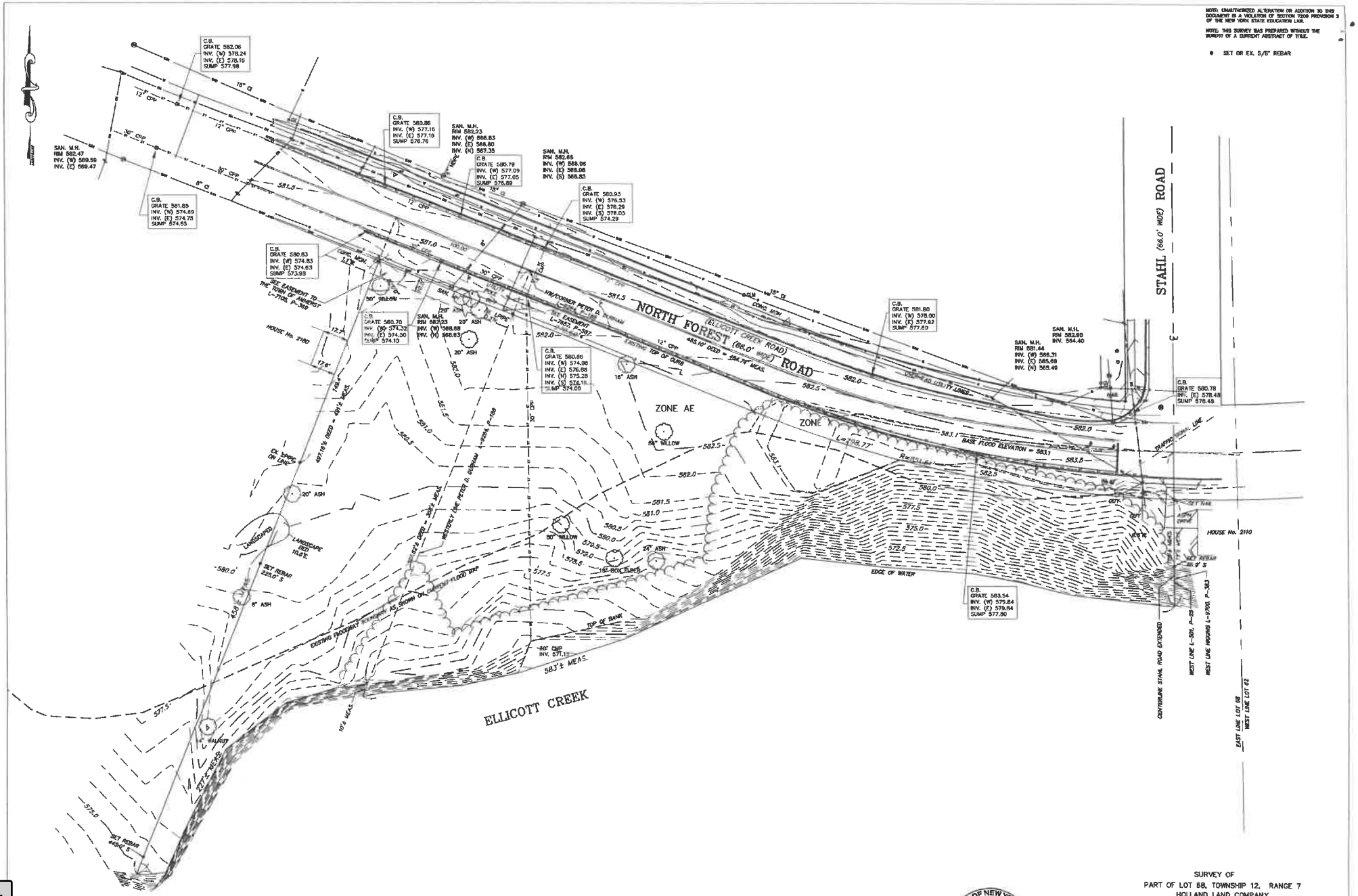
THENCE: Northerly along a line parallel with the west line of said Peter D. Durham lands distant 100.00 feet westerly therefrom measured at right angles, a distance of 491 feet more or less to the centerline of North Forest Road;

THENCE: Easterly, along said centerline of North Forest Road, a distance of 564.74 feet to the POINT OR PLACE OF BEGINNING.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 4 – Reduced Size Copy of Survey of 2160 and 2170 North Forest Road as Prepared by GPI Surveying dated July 13, 2020

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)



DATE	REVISION/TYPE
/13/20	UPDATE SURVEY AND TOPOGRAPHY
/14/18	RE-SURVEY
/26/17	REVISED FLOODWAY BOUNDARY

REFERENCES:

SEE SURVEY PREPARED BY GORDON & BRODERICK ASSOCIATES JOB No. 2-18-218
SEE SURVEY PREPARED BY GORDON & BRODERICK ASSOCIATES JOB No. 2-24-219
LETTER OF MAP REVISION (LOMR) CASE No. 95-02-015P DATED 1/11/96
FLOOD INSURANCE RATE MAP NUMBER 36029C0069H DATED JUNE 7, 2019*
*MAP NUMBER 36029C0069H DATED 6/7/18 SUPERCEDES LOMR CASE No. 95-02-015P DATED 1/11/96

EQUITY TITLE REPORT No. ET8-107581 EXCEPTIONS:

EASEMENT TO THE TOWN OF AMHERST L-7105, P-369 - AS SHOWN
EASEMENT TO NEW YORK TELEPHONE COMPANY L-7857, P-587 - AS SHOWN

STATE OF NEW YORK
MARK J. ANDREWS
050435
LICENSED LAND SURVEYOR

SURVEY OF
PART OF LOT 68, TOWNSHIP 12, RANGE 7
HOLLAND LAND COMPANY
TOWN OF AMHERST, ERIE COUNTY, NEW YORK

GPI ENGINEERING, LANDSCAPE ARCHITECTURE & SURVEYING, LLP
ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE
4820 DOBBINS STREET, SUITE 100
BUFFALO, NEW YORK 14226
(716) 833-4844 FAX 833-4940

Job No. 5063-BOUNDARY Date: JUNE 24, 2014
Scale 1" = 40' Tax No.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 5 – Responses to Questions 11A & 11B of the Rezoning Application

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

EXHIBIT 5

AMENDED APPLICATION TO RECLASSIFY 2160 AND 2170 NORTH FOREST ROAD FROM NCD-SA TO NCD-ND

Question 11(A): Description of the character of the proposed development:

Response to Question 11(A): The modified layout of the proposed residential project is depicted on the updated Concept Site Plan prepared by Silvestri Architects P.C. A full size copy of the updated Concept Site Plan [Drawing AS-101 – Date: 12/16/20] is attached to this Amended Application and a reduced size copy is also provided at Exhibit "7". The updated layout of the proposed residential project consists of a two-story building consisting of eight (8) units for lease with related site improvements as depicted on the updated Concept Site Plan. It is important to mention that the updated Concept Plan reflects a deliberate effort made by the project team to reduce the density of the proposed multifamily project that previously consisted of a three-story building with eighteen (18) units. A copy of the previous Concept Plan for the project as prepared by Carmina Wood Morris DPC is provided at Exhibit "8" of this Amended Application.

It is important to mention that the layout of the proposed project as depicted on the updated Concept Site Plan provided is not meant to represent the final layout of the proposed project since modifications may be necessary based on the project review process and the preparation of fully engineered plans.

Question 11(B)(1): Rationale for rezoning request: 1. Why was this site chosen?

Response to Question 11(B)(1): The Project Site is an appropriate location for the proposed project given its location on North Forest Road in an area that consist of a mixture of uses and zoning

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

classifications. The Project Site was listed for sale and the Petitioner has entered into a contract to purchase the Project Site.

Question 11(B)(2): Why cannot land be used with the existing zoning?

Response to Question 11(B)(2): The Project Site is currently zoned NCD-SA. The allowable uses of property zoned NCD-SA are extremely limited given that the NCD-SA classification is intended for agricultural uses in rural areas.

Question 11(B)(3): How will this rezoning impact surrounding properties?

Response to Question 11(B)(3): The requested reclassification of the Project Site from NCD-SA to NCD-ND to accommodate the proposed residential project will not result in any potentially significant adverse impacts on surrounding properties. The density of the proposed residential project has been reduced from eighteen (18) units to eight (8) units as depicted on the updated Concept Plan prepared by Silvestri Architects P.C. [Drawing AS-101 – Date: 12/16/20]. An effort has been to reduce the density of the residential project and also to design the residential project to minimize environmental impacts associated with the proximity of Ellicott Creek. A completed Amended Part 1 of the Full Environmental Assessment Form prepared pursuant to the State Environmental Quality Review Act ("SEQRA") is attached as Exhibit "2".

Question 11(B)(4): How will this rezoning impact the school system?

Response to Question 11(B)(4): The proposed project will have positive impacts on the school district since the project will generate annual property taxes to be received by taxing jurisdictions. The proposed project will not generate a substantial demand for educational services.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 6 – Responses to Questions 16A, 16B, 16D & 16E of the Rezoning Application

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

EXHIBIT 6

AMENDED APPLICATION TO RECLASSIFY 2160 AND 2170 NORTH FOREST ROAD FROM NCD-SA TO NCD-ND

Question 16(A)(1): **State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps and/or figures in the plan that support the proposed zoning at this location.**

Response to Question 16(A)(1): The request to reclassify the Project Site from NCD-SA to NCD-ND to accommodate the proposed residential project consisting of eighteen attached units for lease is consistent with the adopted Bicentennial Comprehensive Plan. The Town of Amherst adopted the Bicentennial Comprehensive Plan in January of 2007 after completing a lengthy planning process that included numerous public meetings and public hearings involving the Comprehensive Plan Advisory Committee, the Planning Board and the Town Board.[1] On September 3, 2019, the Town Board most recently adopted an amendments to the Bicentennial Comprehensive Plan. The Comprehensive Plan is intended to guide future growth and redevelopment in the Town.

Figure 6 of the Bicentennial Comprehensive Plan is the Conceptual Land Use Plan and it depicts the Project Site as being appropriate for "Mixed Residential" use. A copy of Figure 6 of the Comprehensive Plan is provided at Exhibit "9". The Conceptual Land Use Plan is intended to communicate the overall direction and concept of future development in the Town of Amherst. The Mixed-Residential land use category is described in Chapter 3 of the Comprehensive Plan as

[1] A copy of the resolution adopted by the Town Board on January 2, 2007 for the purpose of adopting the Bicentennial Comprehensive Plan pursuant to Town Law Section 272-a is included at the beginning of the Comprehensive Plan. This resolution recites the lengthy planning history that incorporated numerous opportunities for public input as well as a coordinated environmental review pursuant to SEQRA that involved the preparation a Generic EIS and the issuance of a Findings Statement.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

being appropriate for a residential density of 4-12 units per acre the density of the proposed project is 7.66 units per acre.

Question 16(A)(2): Cite all text, map, and/or figures that must be amended to support the proposed zoning at this location and provide detailed suggested amendments.

Response to Question 16(A)(2): The adopted Comprehensive Plan does not need to be amended to accommodate the requested reclassification of the Project Site from NCD-SA to NCD-ND.

Question 16(A)(3): State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance:

Response to Question 16(A)(3): Section 1-2-1 of the Zoning Code is titled "Purpose" and it states as follows:

> *"The purpose of this Zoning Ordinance and the intent of the legislative authority in its adoption is to promote the environment of the town and its public health, safety, convenience, comfort, prosperity and the general welfare by regulating the use of buildings, other structures and land for residences, open space, public facilities, business, services, industry or other purposes; by regulating and restricting the bulk, height, design, building coverage and location of structures; by regulating and limiting population density; and for the aforesaid purposes, to divide the land within the limits of the town into districts of such number and dimensions generally consistent with the policies of the Comprehensive Plan and to provide procedures for the administration and amendment of said Zoning Ordinance."*

The request reclassification of the Project Site from NCD-SA to NCD-ND to accommodate the proposed residential project is consistent with the "Purpose" of the Zoning Code. Section 1-2-2 of the Zoning Code sets forth the objectives of the Zoning Code. This section of the Zoning Code lists thirteen (13) objectives that are discussed below as follows:

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

A. To protect the character and values of residential, institutional and public uses, business, commercial and manufacturing uses and to insure their orderly and beneficial development;

Response: The proposed project will be consistent with the objective of protecting the character and value of existing land uses and represents orderly and beneficial development.

B. To provide adequate open spaces for light, air and outdoor uses to include public, common and private open space areas;

Response: The proposed project is consistent with this objective.

C. To prevent overcrowding of land;

Response: The proposed residential project will not result in the overcrowding of land.

D. To prevent excessive concentration of population and to prevent spare and uncoordinated development;

Response: The proposed residential project will not result in an excessive concentration of population. The proposed residential project is not an example of uncoordinated development.

E. To regulate and control the location and spacing of buildings on the lot and in relation to the surrounding property generally consistent with the policies of the Comprehensive Plan.

Response: The requested reclassification of the Project Site from NCD-SA to NCD-ND and the proposed residential project are consistent with the policies of the Comprehensive Plan.

F. To protect persons and property from damage and injury due to fire or flood;

Response: The Site Plan review process will trigger the need for an Engineer's Report and SWPPP prepared by a licensed engineer to be prepared for review and approval by the Town's Engineering Department. The residential project will not increase the

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

likelihood of damage and injury due to fire and flood. The proposed project will be constructed per the stringent requirements of the NYS Building Code including the fire safety standards contained therein.

G. To preserve and protect significant natural features and vegetation, thereby preventing ecological damage and visual blight which occur when those features or vegetation are eliminated or substantially altered to serve development purposes only.

Response: The proposed residential project will not be inconsistent with this objective.

H. To assure that structure and land use arrangements are aesthetically harmonious with nearby areas and structures.

Response: The development of the Project Site in a manner consistent with the updated Concept Site Plan depicting a two-story building with 8 units will result in a residential project that is aesthetically harmonious with nearby areas and structures.

I. To regulate the location of buildings and intensity of uses in relation to streets according to plans so as to cause the least interference with and be damaged least by traffic movements and hence result in lessened street congestion and improved public safety.

Response: The proposed residential project will not result in any potentially significant traffic impacts and only curb cut will be provided onto North Forest Road, which is an Erie County Highway. The potential traffic impacts of the proposed project will be evaluated in connection with the coordinated environmental review of the project pursuant to SEQRA.

J. To establish zoning patterns that insure economical extensions for sewers, water supply waste disposal and other public utilities, as well as development of recreation, schools and other public facilities;

Response: The Project Site has access to sanitary sewer and water lines as well as necessary public utilities.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

K. To guide the future development of the town so as to being the gradual conformity of land, structures and uses generally consistent with the policies of the Comprehensive Plan.

Response: The proposed reclassification of the Project Site from NCD-SA to NCD-ND is consistent with this objective since the project is generally consistent with the recommended land use category of "Mixed Residential" as well as the planning objectives and policies in the Comprehensive Plan.

L. To accomplish the specific intents and goals set forth in the introduction to the respective sections.

Response: The proposed residential project is consistent with this objective.

M. To protect the community from visual pollution resulting from the unregulated use of signs and other advertising devices.

Response: The proposed residential project will not be inconsistent with this objective.

Question 16(C): Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:

Response to Question 16(C): The proposed project is compatible with the present zoning and conforming uses of nearby properties and the character of the neighborhood.

Question 16(D): Suitability of the subject property for uses permitted by the current versus the proposed district:

Response to Question 16(D): The Project Site is not suitable for agricultural uses allowed in the NCD-SA district given its size, location and nearby land uses.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

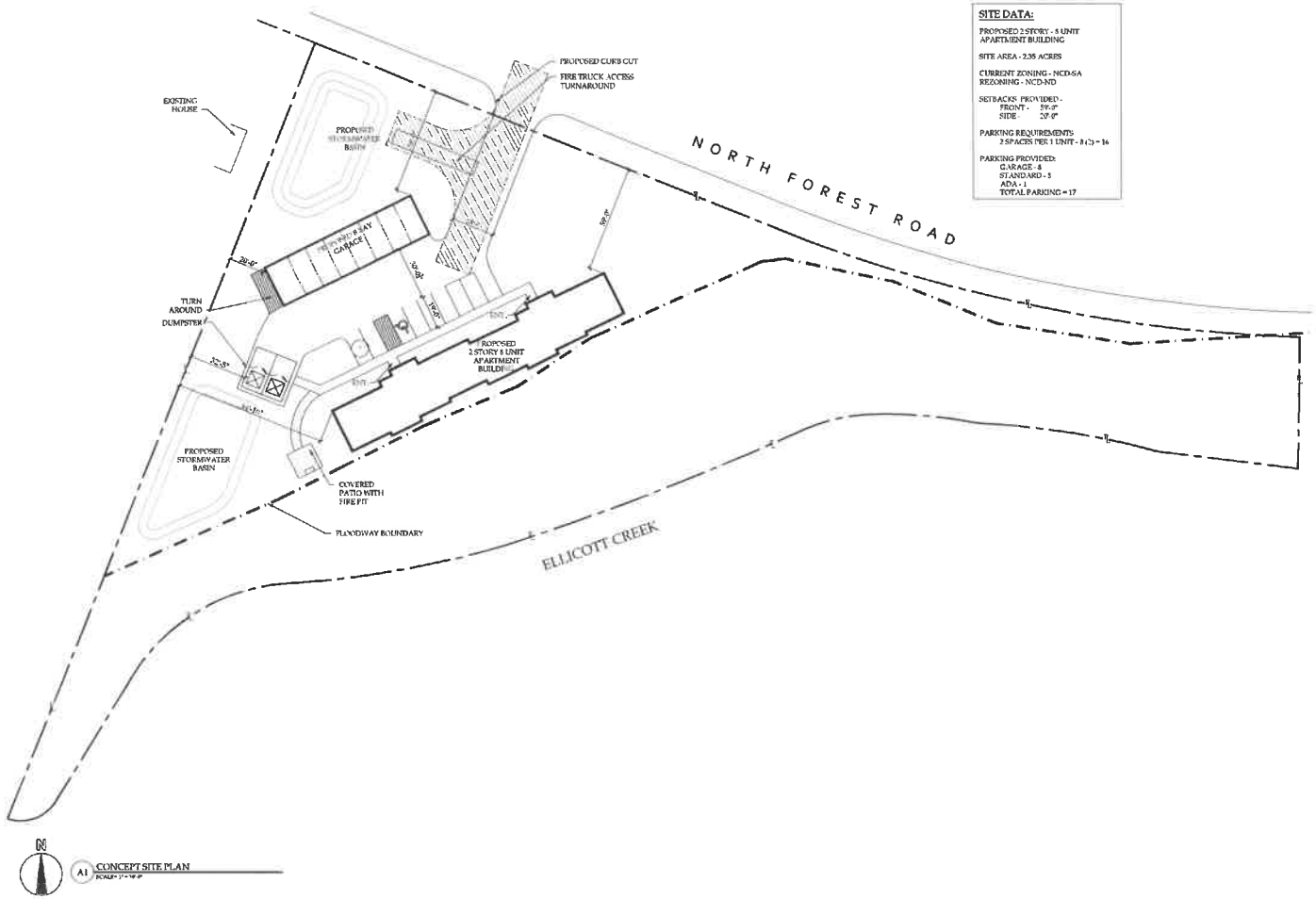
Question 16(E): **Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:**

Response to Question 16(D): The requested reclassification of the Project Site from NCD-SA to NCD-ND to accommodate the proposed residential project will have positive impacts on the balance of uses in the Town since there is demand for upscale attached residential units for lease in the Town.

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 7 – Reduced Size Copy of the Updated Concept Site Plan for the Proposed Project as Prepared by Silvestri Architects PC [Drawing AS-101 – Date: 12/16/20] [Note: A full size copy of Updated Concept Site Plan is also attached to this Amended Application]

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)



NOTICE

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The document is the exclusive property of the architect, no rights to ownership are transferable, or shall be lost by the filing of this document with any and all public authorities for the purpose of compliance with Codes and or Ordinances. i.e. Building Permit, etc.

NORTH FOREST APARTMENTS

2160-2170 North Forest Rd
Amherst, ny

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. S.Hunt DRAFTER W.Manhardt
JOB CAPT. _____ INTERIORS K.Hamann

SEAL:

TITLE:

CONCEPT SITE PLAN

SILVESTRI
ARCHITECTS • PC
1321 MILLERSPORT HWY PH. 716.691.0800
AMHERST NY 14221 FAX 716.691.4773

SA JOB #: 20060.02
DATE: 12/16/20

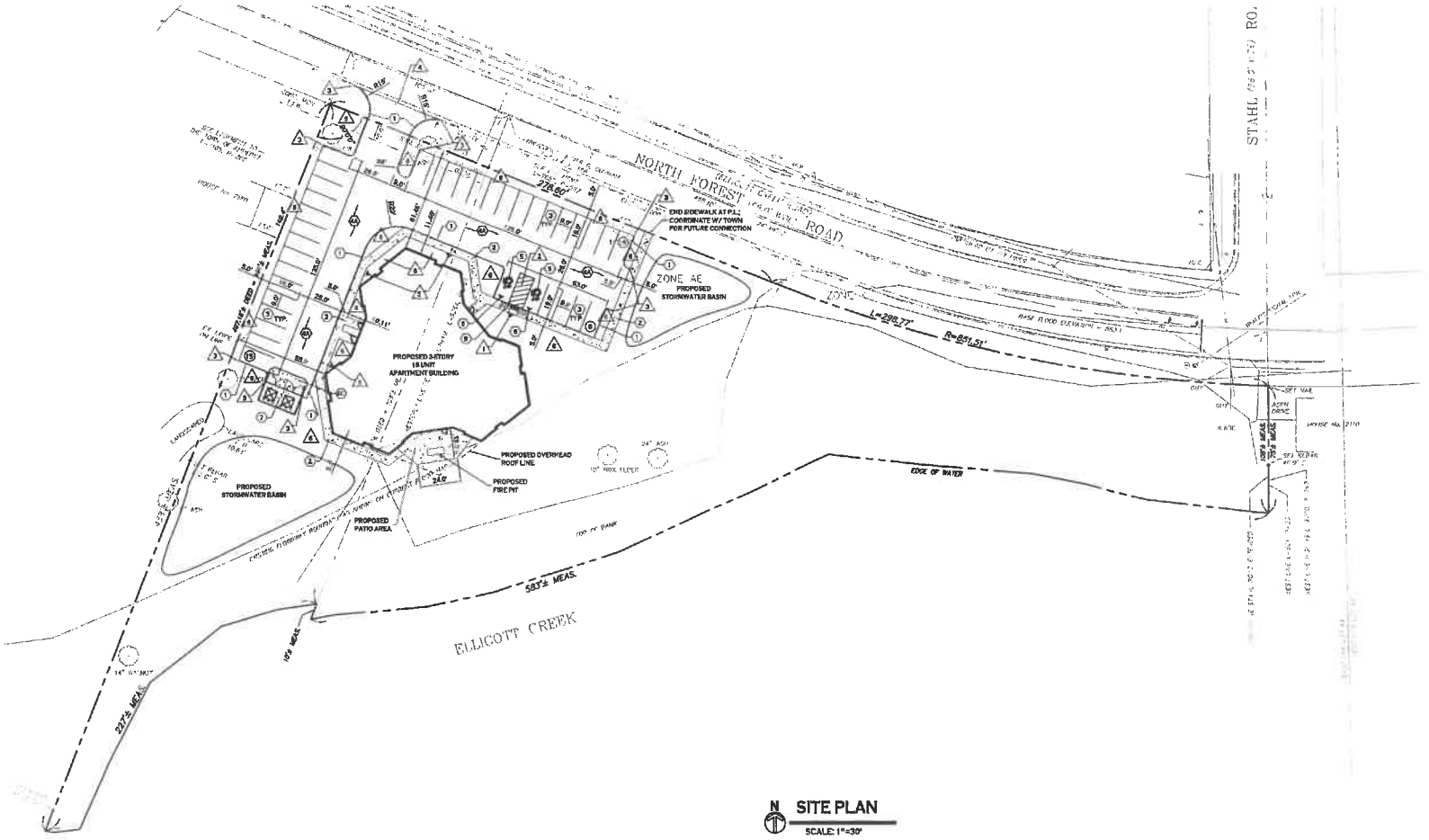
DRAWING #: AS-101

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 8 – Reduced Size Copy of the Previous Concept Site Plan as Prepared by Carmina Wood Morris DPC [Drawing C-100 – Date: August 2020]

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

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N **SITE PLAN**
SCALE: 1"=30'

SITE DATA

TOTAL SITE: 2.35 ACRES
ZONED: NC-SA (CURRENT) TO BE REZONED TO NC-SD-18
USE: PROPOSED 3-STORY 18 UNIT APARTMENT BUILDING

PARKING REQ'D: 2 SPACE PER UNIT.
18 UNITS x 2 = 36 SPACES REQ'D.
36 SPACES PROVIDED.

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEAN-UP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. ALL OTHER PERMITS REQUIRED BY STATE OF NEW YORK, COUNTY OF ERIE, AND TOWN OF AMHERST ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER.

SITE NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.

DETAIL LEGEND SEE SITE DETAIL SHEET

1. CONCRETE CURB
2. CONCRETE SIDEWALK, 5' WIDE UNLESS OTHERWISE NOTED
3. 90° PARKING STALL
4A. STANDARD DUTY ASPHALT
4C. EXTERIOR CONCRETE SLAB ON GRADE
5. HANDICAP PAVEMENT MARKINGS
6. HANDICAPPED PARKING SIGN
7. DUMPSTER ENCLOSURE
8. LIGHT POLE FOUNDATION
9. HANDICAP PAVEMENT RAMP

NOTE LEGEND

1. INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. R7-1C
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 E.X. EDGE OF PAVEMENT, SAWCUT AS REQ'D TO ACHIEVE SQUARE EDGE TO MATCH
5. INSTALL "NO PARKING - FIRE LANE" SIGN, M.U.T.C.D. SIGN NO. R8-3
6. LANDSCAPED AREA - SEE LANDSCAPE PLAN. IF NO PLANTINGS, INSTALL TOPSOIL & SEED

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED SIGN
- PROPOSED PARKING NUMBER (P7)
- PROPOSED LIGHT POLE
- PROPOSED WALL MOUNTED LIGHT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

30 0 30 60Ft.

Carmina Wood Morris DPC
437 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

REVISIONS:
No. Description Date

PROJECT NAME:
Site Development Plans for:
Proposed 3-Story Apartment bldg
2160 - 2170 North Forest Road
Amherst, New York

Date: 08/2020
Drawn by: C. Wood
Scale: As Noted

DRAWING NAME:
Concept
Site Plan

DRAWING NO.
C-100
Project no.: 20.14

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Exhibit 9 - Color Copy of Figure 6 of the Adopted Bicentennial Comprehensive Plan (titled "Conceptual Land Use Plan")

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)

Town of Amherst Bicentennial Comprehensive Plan

The Conceptual Land Use Plan is intended to communicate the overall direction and concept of future development. While it is not a zoning map and does not show the existing or proposed use of individual parcels, it is intended to show land use relationships, provide a generalized guide for future development, and establish a context for detailed area planning and design.

Location of Project Site - Designated as Appropriate for Mixed Residential Use

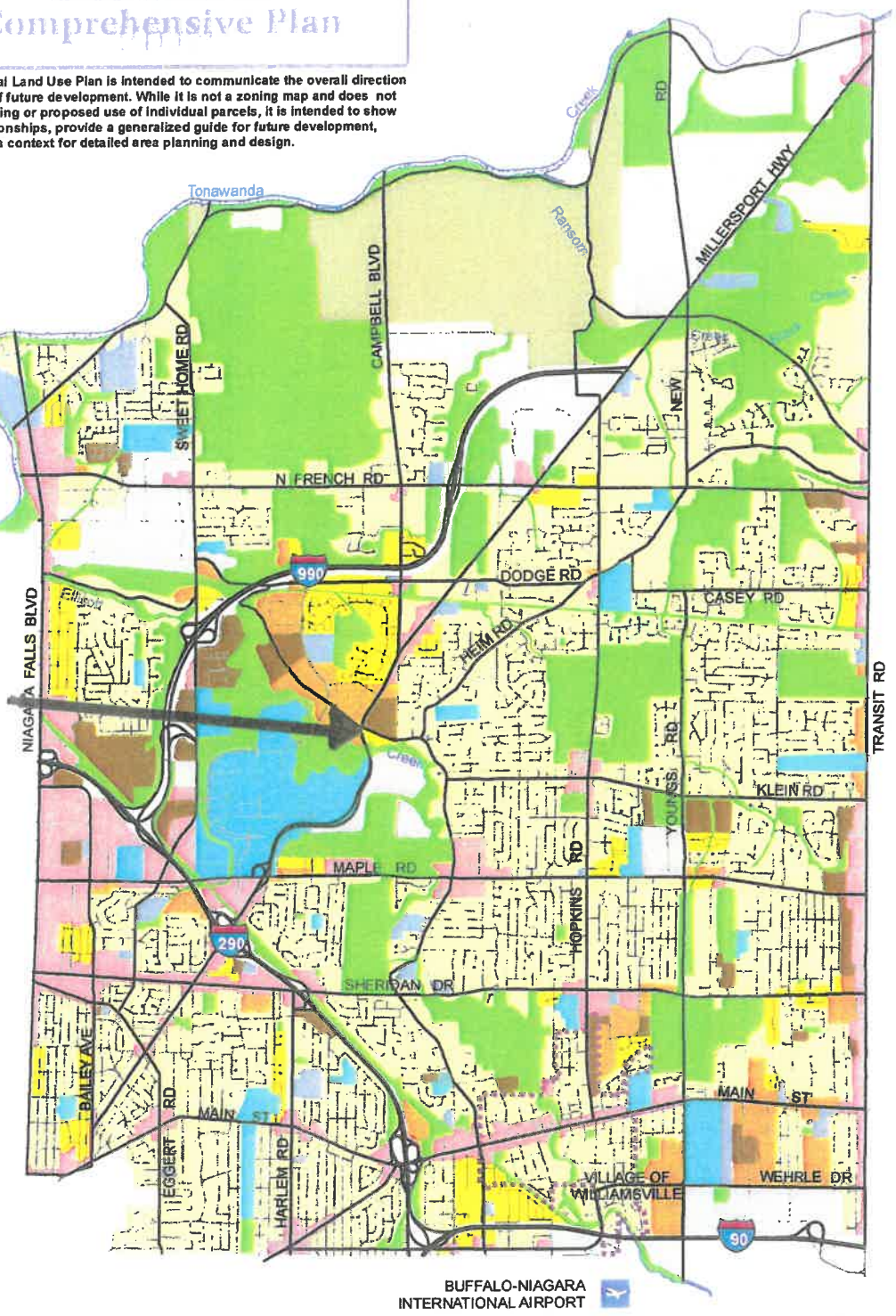


FIGURE 6

Conceptual Land Use Plan

- Rural Residential
- Single Family Residential
- Mixed Residential
- Medium Residential
- Commercial / Mixed Use*
- Special Use Center
- Commercial - Office
- Industrial - Office
- Community Facilities
- Educational Campus
- Recreation, Open Space & Greenways
- Agriculture
- Transportation
- Surface Water
- Village of Williamsville Boundary

* See Map Figure 6-A for Additional Designations

SOURCE NOTES:

Original Source Data Provided by the Town of Amherst Information Technology Department, URS Corporation and Wallace Roberts & Todd, LLC

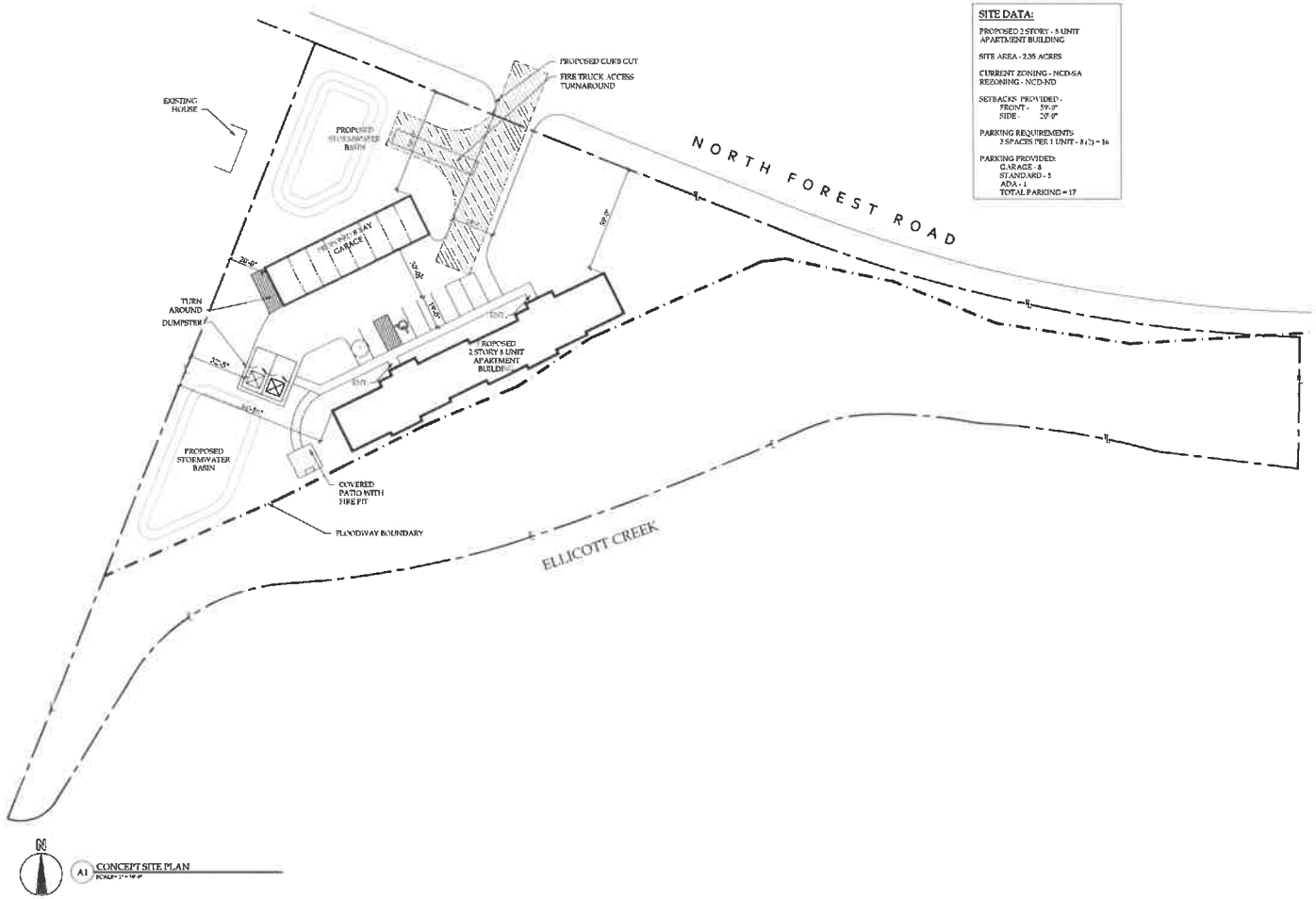
Map Compiled by the Town of Amherst Planning Department

Date: September 2019

N

0 0.25 0.5 0.75 1 1.25 Miles

Attachment: Z-2020-06 application reports 012121 (22682 : Z-2020-06)



NOTICE

This document, the property of, prepared and issued by the architect, is submitted for the specific project namely _____ and the recipient by accepting this document assumes custody and agrees that this document will not be copied or reproduced in part or as whole, and any special features peculiar to this design shall not be incorporated in any other project, unless prior agreement has been obtained in writing. These documents will be returned immediately upon completion of the project or upon the request of the architect.
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i.e. Building Permit, etc.

NORTH FOREST APARTMENTS

2160-2170 North Forest Rd
Amherst, ny

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. S.Hunt DRAFTER W.Manhardt
JOB CAPT. _____ INTERIORS K.Hamann

SEAL:

TITLE:

CONCEPT SITE PLAN

SILVESTRI
ARCHITECTS • PC
1321 MILLERSPORT HWY PH. 716.691.0800
AMHERST NY 14221 FAX 716.691.4773

SA JOB #: 20060.02
DATE: 12/16/20
DRAWING #: AS-101

Attachment: Z-2020-06 drawing 012121 (22682 : Z-2020-06)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD RESOLUTION
AMENDMENT #73 TO THE AUDUBON DEVELOPMENT PLAN
Z-2020-06

PETITIONER
Coromandel Estates Amherst LLC
c/o Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main St., Suite 343
Williamsville, NY 14221

PROPERTY LOCATION
2160 & 2170 North Forest Road (NCD)

WHEREAS the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on Amendment #73 to the Audubon New Community District Development Plan to classify the subject property as suitable for use as an apartment development, and

WHEREAS the Planning Board has reviewed the Amendment plans and supporting documentation, and

WHEREAS the Amendment has been referred to the various Town review agencies, and

WHEREAS the Planning Board finds that:

A. The proposed Revision to the Development Plan meets the intent and objectives of a New Community District as expressed in Subsection 1-1.1.

B. The proposed Revision to the Development Plan meets all the requirements of Section 5-2-3 through 5-2-6.

C. The proposed Revision to the Development Plan is conceptually sound in that it meets present and future community needs.

D. There are or will be adequate services and utilities available or proposed to be made available in the construction of the development.

E. The proposed Amendment to the Development Plan is consistent with the Town Comprehensive Plan.

Pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

NOW THEREFORE BE IT RESOLVED that the Planning Board, in accordance with Section 8-15-2 of the Zoning Ordinance offers a positive report and recommends Town Board **approval** of Amendment #73 to the Audubon Development Plan with the following conditions:

Attachment: Z-2020-06_draft resolution_012121 (22682 : Z-2020-06)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD RESOLUTION
AMENDMENT #73 TO THE AUDUBON DEVELOPMENT PLAN
Z-2020-06

PETITIONER
Coromandel Estates Amherst LLC

PROPERTY LOCATION
2160 & 2170 North Forest Road (NCD)

1.

The foregoing resolution was adopted by the Town of Amherst Planning Board, _____; moved by –_____; seconded by – _____; ayes _ , noes _; absent -__-.

_____ _____
Robert J. Gilmour, Chair Date

EK/ac
X:\Current_Planning\Files\Rezonings\2020\Z-2020-06_(2160 &_2170_North_Forest_Rd_NCD)_2020\Z-2020-06_Blurb_NCD_012121.doc
cc: Commissioner of Building
Town Engineer
Highway Superintendent
Traffic/Safety Coordinator
Coromandel Estates Amherst LLC, c/o Sean Hopkins, 5500 Main St., Suite 343, Williamsville, NY 14221
Thiru Vikram, c/o Coromandel Estates LLC, 4515 Chestnut Ridge Road, Unit 106, Amherst NY 14228
Chris Wood, Carmina Wood Morris, 487 Main St., Suite 500, Buffalo NY 14203
Christina Barmosz, Silvestri Architects, 1321 Millersport Hwy., Amherst, NY 14221
David Pawlik, Creative Structures Services, 550 Seneca St., Suite 100, Buffalo NY 14204

Attachment: Z-2020-06_draft resolution_012121 (22682 : Z-2020-06)

TOWN OF AMHERST
PLANNING BOARD RESOLUTION
AMENDMENT #73 TO THE AUDUBON DEVELOPMENT PLAN
Z-2020-06

PETITIONER
Coromandel Estates Amherst LLC
c/o Sean Hopkins, Esq.
Hopkins Sorgi & McCarthy PLLC
5500 Main St., Suite 343
Williamsville, NY 14221

PROPERTY LOCATION
2160 & 2170 North Forest Road (NCD)

JAN29'21 AM 8:32 RCVD

WHEREAS the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on Amendment #73 to the Audubon New Community District Development Plan to classify the subject property as suitable for use as an apartment development, and

WHEREAS the Planning Board has reviewed the Amendment plans and supporting documentation, and

WHEREAS the Amendment has been referred to the various Town review agencies, and

WHEREAS the Planning Board finds that:

A. The proposed Revision to the Development Plan meets the intent and objectives of a New Community District as expressed in Subsection 1-1.1.

B. The proposed Revision to the Development Plan meets all the requirements of Section 5-2-3 through 5-2-6.

C. The proposed Revision to the Development Plan is conceptually sound in that it meets present and future community needs.

D. There are or will be adequate services and utilities available or proposed to be made available in the construction of the development.

E. The proposed Amendment to the Development Plan is consistent with the Town Comprehensive Plan.

Pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

NOW THEREFORE BE IT RESOLVED that the Planning Board, in accordance with Section 8-15-2 of the Zoning Ordinance offers a positive report and recommends Town Board approval of Amendment #73 to the Audubon Development Plan with the following condition:

Attachment: Z-2020-06 signed resolution 012121 (22682 : Z-2020-06)

TOWN OF AMHERST
PLANNING BOARD RESOLUTION
AMENDMENT #73 TO THE AUDUBON DEVELOPMENT PLAN
Z-2020-06

PETITIONER
Coromandel Estates Amherst LLC

PROPERTY LOCATION
2160 & 2170 North Forest Road (NCD)

JAN29'21 AM 8:38 RCVD

1. That the petitioner include additional parking spaces beyond the 17 spaces shown on the concept plan at the site plan stage.

The foregoing resolution was adopted by the Town of Amherst Planning Board, January 21, 2021; moved by Chmiel; seconded by Giuliani; ayes 7, noes 0.

Robert J. Gilmour, Chair — Date 1/28/21

EK/ac
X:\Current_Planning\Files\Rezonings\2020\Z-2020-06_(2160 &_2170_North_Forest_Rd_NCD)_2020\Z-2020-06_resolution_012121.doc
cc: Commissioner of Building
Town Engineer
Highway Superintendent
Traffic/Safety Coordinator
Coromandel Estates Amherst LLC, c/o Sean Hopkins, 5500 Main St., Suite 343, Williamsville, NY 14221
Thiru Vikram, c/o Coromandel Estates LLC, 4515 Chestnut Ridge Road, Unit 106, Amherst NY 14228
Chris Wood, Carmina Wood Morris, 487 Main St., Suite 500, Buffalo NY 14203
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David Pawlik, Creative Structures Services, 550 Seneca St., Suite 100, Buffalo NY 14204

Attachment: Z-2020-06 signed resolution 012121 (22682 : Z-2020-06)

Amherst Planning Board
5583 Main Street
Williamsville, NY 14221

Meeting: 01/21/21 06:30 PM
Department: Planning
Category: Rezoning and Relief from Conditions of Rezoning
Prepared By: Amy Carrato
Initiator: Dan Howard
Sponsors:
DOC ID: 22545

ADOPTED

PLANNING BOARD ITEM (ID # 22545)

Proposed Rezoning from R-3 to CF, Z-2020-10

Property located at 39 Getzville Road
Daemen College, Petitioner

ATTACHMENTS:

- Z-2020-10_application_012121 (PDF)
- Z-2020-10_drawings_012121 (PDF)
- Z-2020-10_draft resolution_012121 (PDF)
- Z-2020-10 signed resolution 012121 (PDF)

TOWN OF AMHERST PLANNING DEPARTMENT

Application for Rezoning Review and, if required Comprehensive Plan Amendment

For Official Use

File #: _____ Acreage _____ Fee $ _____

Address Verified by
Assessor's Office _____
VERIFIED BY DATE

Materials Accepted by
Town Clerk & Fee Paid _____
ACCEPTED BY DATE

Materials Checked by
Building Dept._____
RECEIVED BY DATE

Materials Received by
Planning Dept. _____
RECEIVED BY DATE

		Fill In Applicable Fees
2 ACRES OR LESS	$1,250	_____
2 – 20 ACRES $1,250 + $250/acres or fraction thereof over 2 acres		_____
20 – 30 ACRES $5,700 + $150/acre or fraction thereof over 20 acres		_____
OVER 30 ACRES $6,900 +$75/acre or fraction thereof over 30 acres		_____
Request for Relief of/Change to Conditions of Zoning Approval	$ 1,200	_____
AFFIDAVIT FEE FOR PUBLIC HEARING	$ 15.00	_____
TOTAL FEE:		$_____

Town of Amherst Planning Department 5583 Main Street Williamsville New York 14221
(716) 631-7051 Fax (716) 631-7153 Web www.amherst.ny.us

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

TO BE COMPLETED BY APPLICANT

1. **Petitioner**: Name: Daemen College

Address: 4380 Main Street

Amherst NY 14226
City State Zip Code

Phone: _____ Fax: _____

E Mail _____

2. **The undersigned hereby petitions the Honorable Town Board to rezone the following described property**

From: R-3 District

To: CF District

3. **Street address of land to be rezoned:** (must be verified by Town Assessor's Office)

39 Getzville Rd.

SBL #: 68.17-2-19 ~~39~~

4. **Area of land to be rezoned** (in acres): 1.32 and 1.4

5. **Owner of Land**:

Name: Daemen College

Address: 4380 Main Street, Amherst, NY 14226

Telephone: _____

6. **Representative** (Architect, Engineer, Landscape Architect, Surveyor or Attorney):

Name: LaBella Associates

Address: Attn: Don Hoefler

300 Pearl Street, Suite 301

Buffalo NY 14202
City State Zip Code

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

7. **Petitioner's interest in property**

_____Option to purchase

__X____Owner

_____Other (explain) _____

8. **The following are all others having an interest in this application and join herein with the petitioner named above:** (describe extent of interest; attach sheets as needed)

N/A

9. **Attach Survey and Legal description of land to be rezoned. The Survey must be prepared by a New York State Licensed Land Surveyor.**

10. **Said property has the following deed restrictions or Covenants:** (attach copy)

Liber _____ Page _____

11. **Information on proposed project:**

A. Description of the character of the proposed development:

Please see attached narrative.

B. Rationale for rezoning request:

1. Why was this site chosen? Please see attached narrative.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

2. Why cannot land be used with the existing zoning?

Please see attached narrative.

3. How will this rezoning impact surrounding properties?

Please see attached narrative.

4. How will this rezoning impact the school system?

Please see attached narrative.

12. Quantitative Data:

A. Total # of dwelling units N/A

B. Distribution of dwelling units by type N/A

C. Gross Residential Density per acre N/A

D. Total amount of Open Space N/A

E. Proposed Non-Residential Floor Area N/A

13. Development Schedule:

Start _____

Finish _____

Stages (# of) 1

14. If any portion of the proposed development is planned to be sold or leased, please describe:

Please see attached narrative.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

3. State why the proposed zoning is consistent with intent and objectives (Sec. 1-2-2) of the Zoning Ordinance:

Please see attached narrative.

B. **Adequate Services and Utilities are available or are proposed to be made available with the construction of the development:**

1. Sanitary Sewer Please see attached narrative.

2. Storm Sewer/Drainage Please see attached narrative.

3. Water Please see attached narrative.

4. Other Please see attached narrative.

C. **Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:**

Please see attached narrative.

D. **Suitability of the subject property for uses permitted by the current versus the proposed district:**

Please see attached narrative.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

E. **Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:**

Please see attached narrative.

17. The petitioner encloses herewith the sum of $_____ to pay the fee, and consents to the placement of a sign(s) at the described location identifying this request for a period of time to be determined by the Town Clerk.

18. The undersigned certifies that all information required to be disclosed pursuant to Section 809 of the General Municipal Law (see below) is as follows:

The undersigned swears or affirms that all statements made herein are true, that all drawings submitted correctly show the situation involved in this petition.

Donald W Phillips
Signature of Petitioner

Subscribed and sworn to before me this 16th day of November 2020

Notary Public, Erie County, New York Robyn M Kulczyk

ROBYN M KULCZYK
Notary Public - State of New York
NO. 01KU4988670
Qualified in Erie County
My Commission Expires 11/2/2021

N.Y.S. General Municipal Law - Section 809 Disclosure in certain applications:

1. Every application, petition or request submitted for a variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provision of any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state office or any office or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

15. **Open Space ownership and maintenance provisions (if applicable):**

Please see attached narrative.

16. **Basis for Findings (Sec. 8-3-5 of the Town Zoning Code) (Attach sheets and supplemental materials as necessary.)**

A. **The proposed zoning and development plan must be generally consistent with the policies of the Comprehensive Plan and the Town Zoning Ordinance.**

1. State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps, and/or figures in the plan that support the proposed zoning at this location (The Comprehensive Plan document is available at the Planning Department, Town Clerk's Office, Amherst libraries, or at www.amherst.ny.us). Add sheets as needed.

Please see attached narrative.

2. Pursuant to NYS Town Law Section 272a(11), "all Town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this Section." The Town Board adopted the Comprehensive Plan pursuant to NYS Town Law 272 on January 2, 2007. If the rezoning is approved, the Town Board may require the Plan to be amended, as applicable.

Cite all text, map, and / or figures that must be amended to support the proposed zoning at this location (attach pages as necessary) and provide detailed suggested amendments.

Please see attached narrative.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

2. For the purpose of this section an officer or employee shall be deemed to have an interest in the applicant when he, his spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them

   (a) is the applicant, or
   (b) is an officer, director, partner or employee of the applicant, or
   (c) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
   (d) is a party to an agreement with such an applicant, express or implied, whereby he may receive any payment or other benefit, whether or not for services rendered, dependent or contingent upon the favorable approval of such applicant, petition or request.

3. In the county of Nassau the provisions of subdivisions one and two of this section shall also apply to a party officer. "Party Officer" shall mean any person holding any position or office, whether by election, appointment or otherwise, in any party as defined by subdivision four or section two of the election law.

4. Ownership of less than five per cent of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

5. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

Attachment to Application Package for
Rezoning, Town of Amherst
Daemen College

11. Information on proposed project:

A. Description of the character of the proposed development:
The proposed overall development has not been finalized at this time. Daemen College has been encouraged to rezone these parcels to be consistent with the Campus zoning classification of Community Facility (CF). Development of the northernmost parcel was complicated by the existing R3 zoning. The existing house is anticipated to be utilized to house the nuns that currently reside on campus.

B. Rationale for rezoning request:

1. **Why was this site chosen?** Daemen College has been purchasing the adjacent residential lots as they have become available. These properties are adjacent to the campus.

2. **Why cannot land be used with the existing zoning?** The existing zoning designation of R-3 does not permit transition to college/university use.

3. **How will this rezoning impact surrounding properties?** The proposed rezoning is not anticipated to impact neighboring properties. The existing residential structure will be utilized for housing nuns that currently reside on campus. It is not anticipated that any additional structures/traffic generators will be developed.

4. **How will this rezoning impact the school system?** The proposed rezoning would not impact the public school system.

12. Quantitative Data:

- **A. Total # of dwelling units:** N/A
- **B. Distribution of dwelling units by type:** N/A
- **C. Gross Residential Density per acre:** N/A
- **D. Total amount of Open Space:** N/A
- **E. Proposed Non-Residential Floor Area:** N/A

13. Development Schedule: None currently planned

14. If any portion of the proposed development is planned to be sold or leased, please describe:
N/A

15. Open Space ownership and maintenance provisions (if applicable): All property will continue to be owned and maintained by Daemen College.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

16. Basis for Findings (Sec. 8-3-5 of the Town Zoning Code)

A. The proposed zoning and development plan must be generally consistent with the policies of the Comprehensive Plan and the Town Zoning Ordinance.

1. State in detail why the proposed zoning is consistent with the adopted Town of Amherst Bicentennial Comprehensive Plan. Cite specific sections, maps, and/or figures in the plan that support the proposed zoning at this location.

- Section 3, Land Use and Development, Figure 6 (Conceptual Land Use Plan) identifies the properties being considered as part of this rezoning proposal as "Educational Campus" (see attached Figure 6 excerpt).

- Section 3, Land Use and Development (C, Reinvestment), Page 3-13 mentions the following:

  Spurring revitalization of and reinvestment in Amherst's older neighborhood and commercial areas is one of four key Comprehensive Plan Initiatives, both to reinforce the health and vitality of these areas and to reduce pressures for "greenfield" development in fringe areas.

  Daemen College is reinvesting in the subject properties to allow for continued use and continuation of the existing structures that are part of the neighborhood fabric on Getzville Road. This project would also serve the demand for parking adjacent to the college campus, while preserving the unique character of the existing community.

- Section 3, Land Use and Development (C, Reinvestment), Page 3-16 mentions the following:

  Depending on market conditions and other site and location factors, revitalization may feature one or more of the following:

  Adaptive reuse – Existing buildings are retained but are converted or adapted for new uses. This approach has the potential benefit of retaining buildings with an established neighborhood presence or that are historic and valued assets within the neighborhood.

2. Pursuant to NYS Town Law Section 272a(11), "*all Town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this Section*." The Town Board adopted the Comprehensive Plan pursuant to NYS Town Law 272 on January 2, 2007. If the rezoning is approved, the Town Board may require the Plan to be amended, as applicable.

Cite all text, map, and/or figures that must be amended to support the proposed zoning at this location and provide detailed suggested amendments.

The proposed rezoning would not appear to require amendment of the adopted Comprehensive Plan, as the rezoning seems to be consistent with the Plan.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

3. **State why the proposed zoning is consistent with intent and objectives (Sec 1-2-2) of the Zoning Ordinance.**
   As Section 1-2-2 Paragraph K of the Amherst Town Zoning Ordinance states "To guide the future development of the town so as to bring about the gradual conformity of land, structures and uses generally consistent with the policies of the Comprehensive Plan;", the proposed rezoning would be consistent with this intent and objective. As previously noted, the proposed project is consistent with Figure 6, Concept Land Use Plan within the Comprehensive Plan.

B. Adequate Services and Utilities are available or are proposed to be made available with the construction of the development:

1. **Sanitary Sewer:** Eliminate the existing septic and tie into the Daemen College sewer.
2. **Storm sewer / Drainage:** Adequate drainage will be maintained so as not to adversely affect existing conditions or the public right-of-way.
3. **Water:** N/A
4. **Other:** N/A

C. Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood:

The character of the neighborhood would not change as a result of the proposed rezoning. The present zoning (R-3) does not allow for college/university uses. However, as the properties under consideration as part of this proposal are adjacent to the Community Facilities (CF) zoning district, the rezoning is merely an extension of an adjacent zoning district.

D. Suitability of the subject property for uses permitted by the current versus the proposed district:

Although the subject property was formerly suited for residential use within the existing R-3 zoning district, Daemen College currently owns the properties and is pursuing the adaptive reuse of the properties. It is anticipated that the existing structure will be utilized to house the nuns that currently reside on campus.

E. Whether the proposed change tends to improve the balance of uses, or meets a specific demand in the Town:

The proposed zoning change would create a consistent campus zoning classification to allow for clarity in its future development. The location is ideal for the rezoning as the parcels under consideration are adjacent to an existing CF zoning district.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

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Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information

Name of Action or Project:
Daemen College Rezoning

Project Location (describe, and attach a location map):
39 Getzville Road

Brief Description of Proposed Action:
Daemen College proposes to amend the zoning map of the Town of Amherst so as to extend the Community Facilities (CF) zoning district to encompass 39 Getzville Road. The project would allow for consistent zoning for the entire college campus.

Name of Applicant or Sponsor:	Telephone: 839-8222
Daemen College	E-Mail: dphillip@daemen.edu

Address:
4380 Main Street

City/PO:	State:	Zip Code:
Amherst	NY	14226

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☐	☑
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Town Board Rezoning approval	☐	☑

3.a. Total acreage of the site of the proposed action? 1.43 acres
b. Total acreage to be physically disturbed? N/A acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

4. Check all land uses that occur on, adjoining and near the proposed action.
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☑ Residential (suburban)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Community Facility
☐ Parkland

RESET

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☐	☑
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	☑	☐
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation service(s) available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☐	☑
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	☑	☐
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	☑	☐
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	☑	☐
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	☑	☐
b. Is the proposed action located in an archeological sensitive area?	☑	☐
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☑	☐
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	☑	☐

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional
☐ Wetland ☐ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100 year flood plain?	☐	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☐ NO ☐ YES	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: ☐ NO ☐ YES _____		

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

RESET

	NO	YES
18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	✔	
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	✔	
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	✔	

I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor name: Daemen College - Don Phillips Date: 11/16/20

Signature: _____

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing: a. public / private water supplies?		
b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

RESET

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT

RESET

Attachment to SEQR Short EAF, Part 1
Town of Amherst, Daemen College, Zoning Map Amendment

As directed in Question 1 of the Short Environmental Assessment Form, the below description identifies that the proposed action involved the legislative adoption of a zoning regulatory tool (Zoning Map).

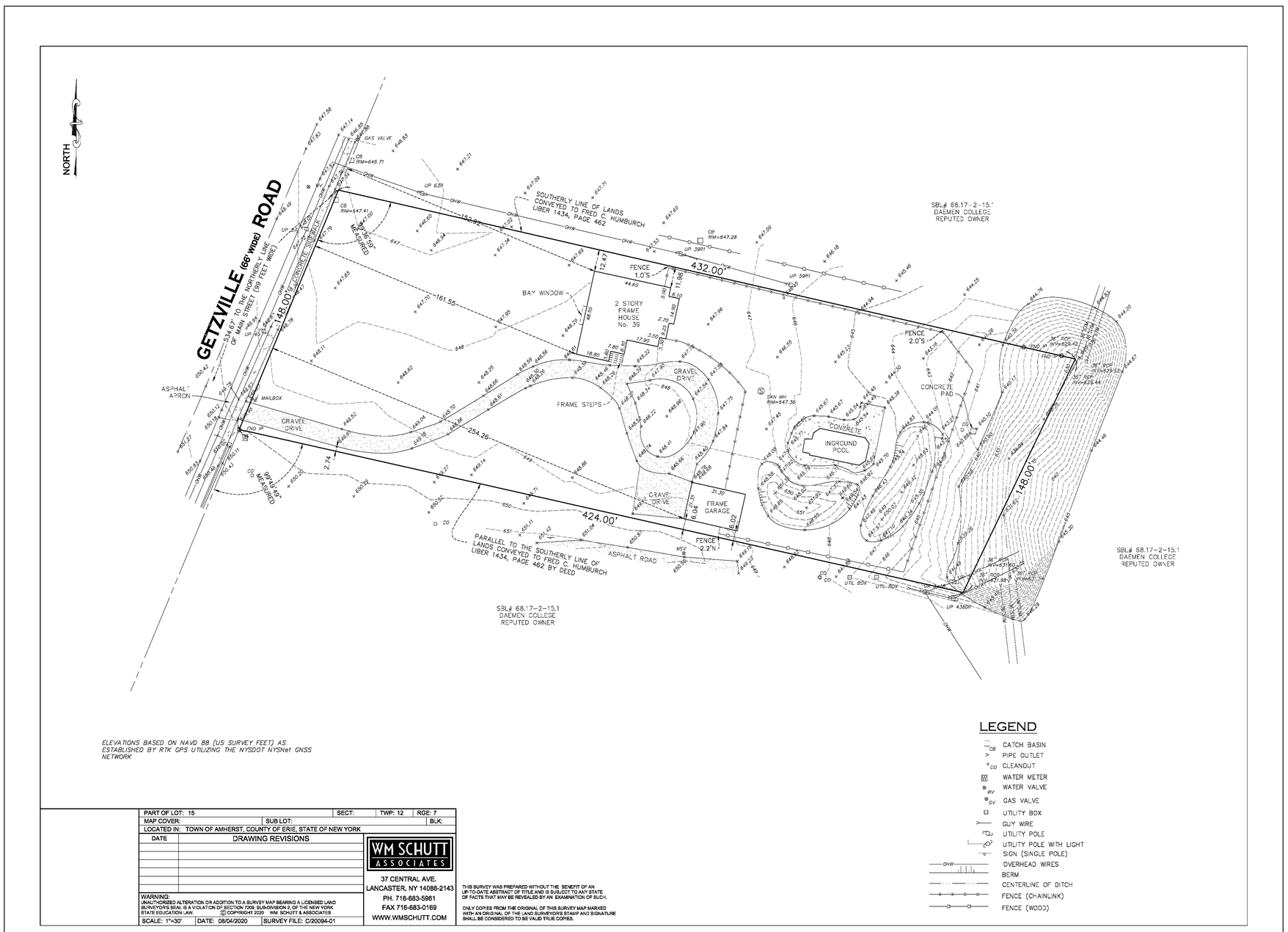
The proposed action includes amending the Town's zoning map by changing the zoning district designation from the R-3 to CF (Community Facilities) District for the following Tax Map parcel numbers:

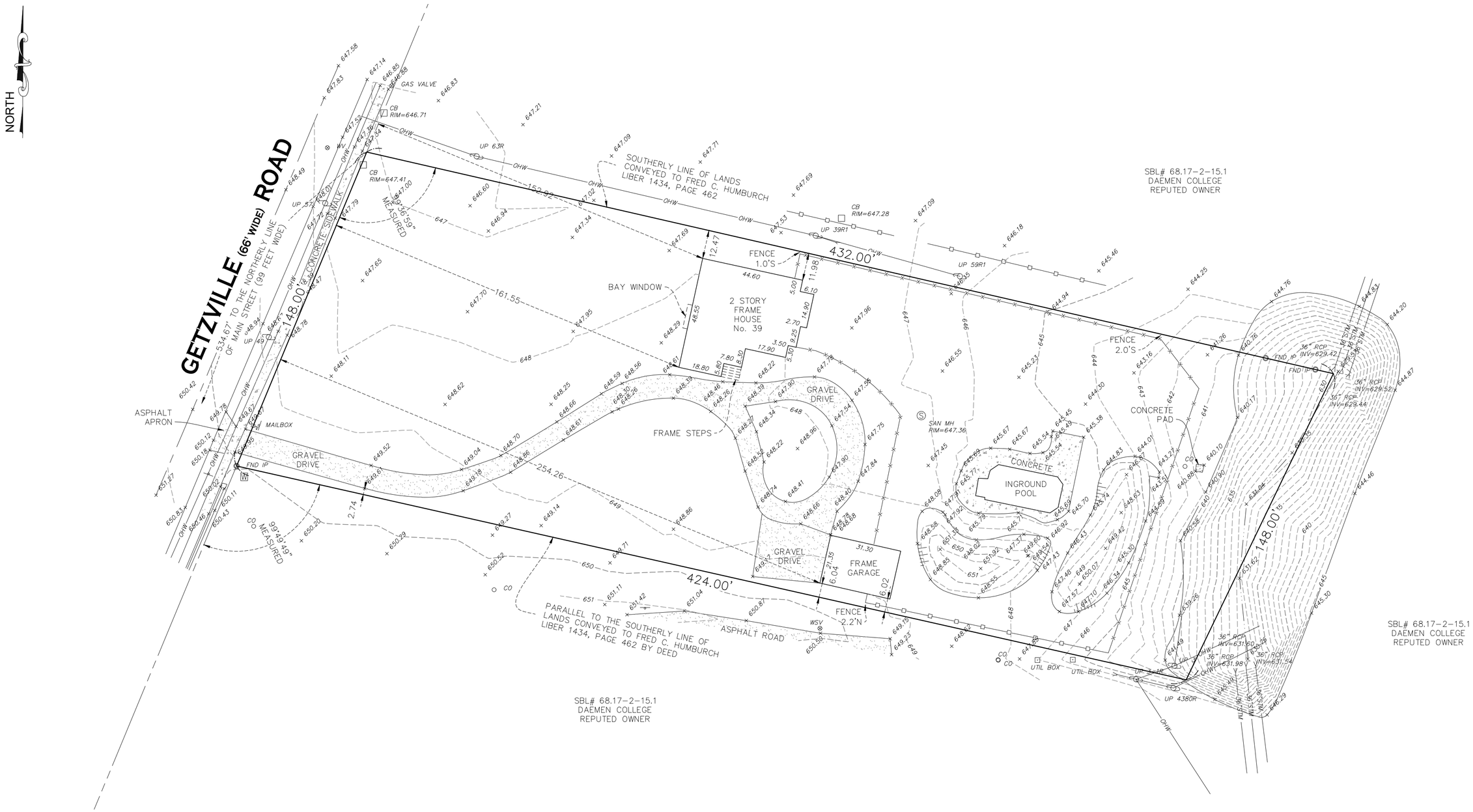
- 68.17-2-19 (39 Getzville Road)

Please see attached Project Area Map for Daemen College, Proposed Zoning Map Amendment.

The proposed action of amending the zoning map is not anticipated to cause adverse environmental impacts to the community.

Attachment: Z-2020-10_application_012121 (22545 : Z-2020-10)


NORTH
GETZVILLE (66' wide) ROAD
SOUTHERLY LINE OF LANDS CONVEYED TO FRED C. HUMBURCH LIBER 1434, PAGE 462
SBL# 68.17-2-15.1
DAEMEN COLLEGE
REPUTED OWNER
432.00'
148.00'
424.00'
254.26'
161.55'
152.92'
FENCE 1.0'S
FENCE 2.0'S
FENCE 2.2'N
2-STORY FRAME HOUSE No. 39
BAY WINDOW
FRAME STEPS
GRAVEL DRIVE
ASPHAL APRON
MAILBOX
CONCRETE SIDEWALK
INGROUND POOL
CONCRETE PAD
FRAME GARAGE
ASPHALT ROAD
PARALLEL TO THE SOUTHERLY LINE OF LANDS CONVEYED TO FRED C. HUMBURCH LIBER 1434, PAGE 462 BY DEED
SAN MH RIM=647.36
CB RIM=647.41
CB RIM=646.71
CB RIM=647.28
GAS VALVE
UTIL BOX
UP 63R
UP 39R1
UP 59R1
UP 43BR
36" RCP INV=629.42
36" RCP INV=629.44
36" RCP INV=631.98
36" RCP INV=631.80
24" RCP INV=631.93
24" RCP INV=631.88
24" RCP INV=631.83
24" RCP INV=631.78
24" RCP INV=631.73
24" RCP INV=631.68
24" RCP INV=631.63
24" RCP INV=631.58
24" RCP INV=631.53
24" RCP INV=631.48
24" RCP INV=631.43
24" RCP INV=631.38
24" RCP INV=631.33
24" RCP



ELEVATIONS BASED ON NAVD 88 (US SURVEY FEET) AS ESTABLISHED BY RTK GPS UTILIZING THE NYSDOT NYSNet GNSS NETWORK

LEGEND

- CB — CATCH BASIN
- PIPE OUTLET
- CO — CLEANOUT
- W — WATER METER
- WV — WATER VALVE
- GV — GAS VALVE
- UTILITY BOX
- GUY WIRE
- UTILITY POLE
- UTILITY POLE WITH LIGHT
- SIGN (SINGLE POLE)
- OHW — OVERHEAD WIRES
- BERM
- CENTERLINE OF DITCH
- FENCE (CHAINLINK)
- FENCE (WOOD)

PART OF LOT: 15		SECT:	TWP: 12 RGE: 7
MAP COVER:	SUB LOT:		BLK:
LOCATED IN: TOWN OF AMHERST, COUNTY OF ERIE, STATE OF NEW YORK			

DATE	DRAWING REVISIONS

WARNING:
UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ©COPYRIGHT 2020 WM. SCHUTT & ASSOCIATES

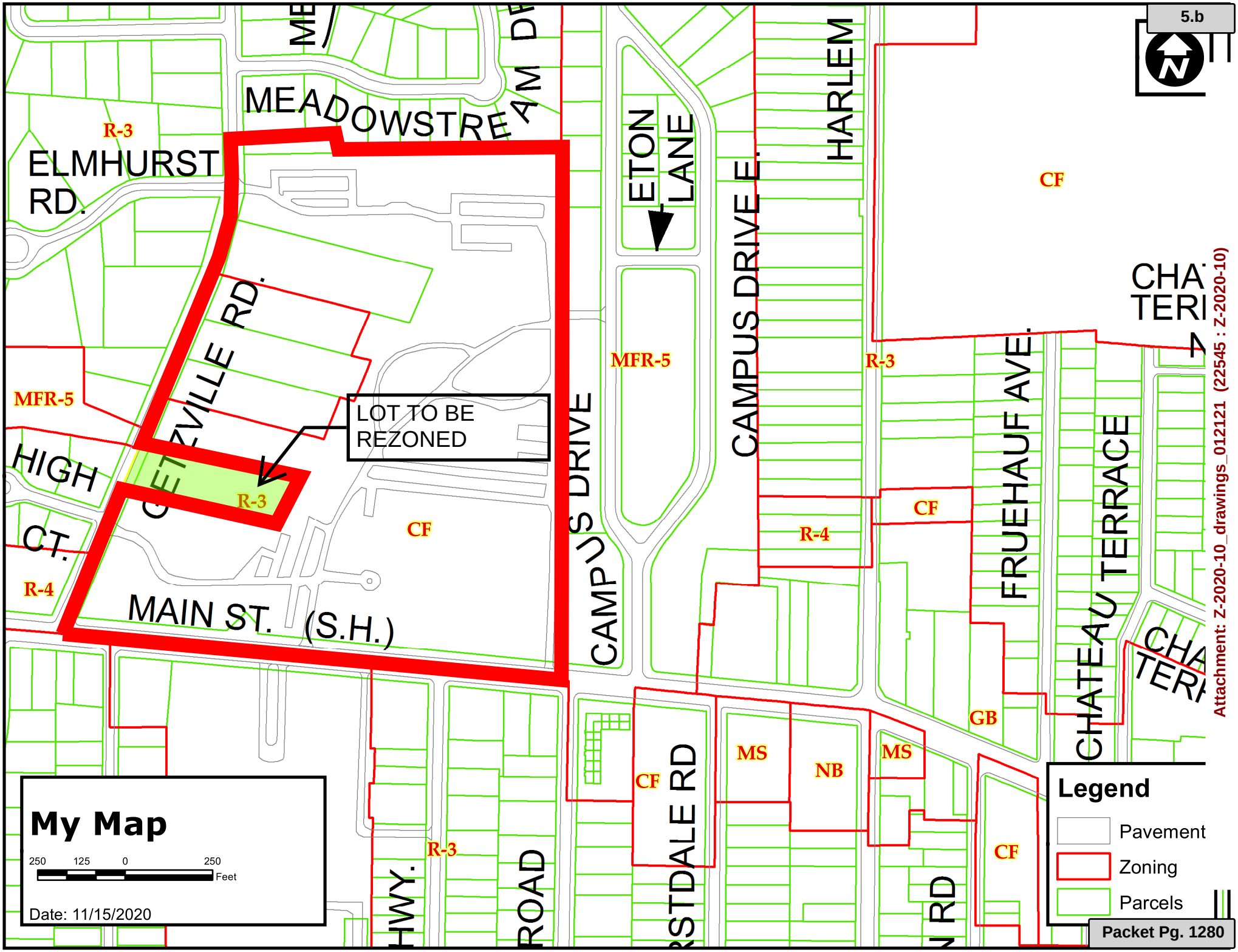
SCALE: 1"=30'	DATE: 08/04/2020	SURVEY FILE: C/20094-01

WM SCHUTT ASSOCIATES
37 CENTRAL AVE.
LANCASTER, NY 14086-2143
PH. 716-683-5961
FAX 716-683-0169
WWW.WMSCHUTT.COM

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN UP-TO-DATE ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MAP MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S STAMP AND SIGNATURE SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

Attachment: Z-2020-10 drawings_012121 (22545 : Z-2020-10)



Attachment: Z-2020-10_drawings_012121 (22545 : Z-2020-10)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2020-10

PETITIONER

Daemen College
4380 Main St.
Amherst, NY 14226

PROPERTY LOCATION

39 Getzville Road

WHEREAS the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on the proposed rezoning of land from R-3 to CF, and

WHEREAS the Planning Board has reviewed plans and other materials regarding the rezoning proposal, and

WHEREAS the materials and plans have been referred to the Town's various review agencies, and

WHEREAS in accordance with Section 8-3-5 of the Zoning Ordinance the Planning Board finds that:

A. The proposed zoning and development plan is generally consistent with the policies of the Comprehensive Plan and the Zoning Ordinance. The proposal is consistent with "Educational Campus" uses proposed in the Comprehensive Plan's Conceptual Land Use Plan (Figure 6). It is also consistent with Section 3.3.5, "Community Facilities". The rezoning of the subject parcel will maintain the scale and character of the surrounding area.

B. There are adequate services and utilities available or proposed to be made available in the construction of the development.

C. The proposal is compatible with the present zoning and conforming uses of nearby property and with the character of the neighborhood.

D. The subject property is suitable for uses permitted by the current versus the proposed district.

E. The proposed change does tend to improve the balance of uses, or meets a specific demand in the Town.

Attachment: Z-2020-10_draft resolution_012121 (22545 : Z-2020-10)

DRAFT (01/21/21)
TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2020-10

PETITIONER	PROPERTY LOCATION
Daemen College	39 Getzville Road

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act may be waived since hydric/potentially hydric soils have not been identified on the parcel.

Pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

NOW THEREFORE BE IT RESOLVED that the Planning Board recommends to the Town Board in accordance with Section 8-3-4 of the Zoning Ordinance, that the rezoning request be **approved/denied** subject to the following conditions:

1.

The foregoing resolution was adopted by the Town of Amherst Planning Board, _____; moved by - _____; seconded by - _____; ayes _, noes _; absent - ____.

_____ _____
Robert J. Gilmour, Chair Date

TV/ac
X:\Current_Planning\Files\Rezonings\2020\Z-2020-10_(39 Getzville)_2020\Z-2020-10_Blurb_011821.doc
Cc: Town Clerk
Commissioner of Building
Highway Superintendent
Town Engineer
Traffic/Safety Coordinator
LaBella Associates, Don Hoefler, 300 Pearl St. Suite 301, Buffalo, NY 14202
Daemen College, 4380 Main St., Amherst, NY 14226

Attachment: Z-2020-10_draft resolution_012121 (22545 : Z-2020-10)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2020-10

PETITIONER

Daemen College
4380 Main St.
Amherst, NY 14226

PROPERTY LOCATION

39 Getzville Road

JAN29'21 AM 9:33 RCVD

WHEREAS the Town of Amherst Planning Board on Thursday, January 21, 2021 held a public hearing on the proposed rezoning of land from R-3 to CF, and

WHEREAS the Planning Board has reviewed plans and other materials regarding the rezoning proposal, and

WHEREAS the materials and plans have been referred to the Town's various review agencies, and

WHEREAS in accordance with Section 8-3-5 of the Zoning Ordinance the Planning Board finds that:

A. The proposed zoning and development plan are generally consistent with the policies of the Comprehensive Plan and the Zoning Ordinance.
The proposal is also consistent with the Comprehensive Plan's Conceptual Land Use Plan which projects "Educational Campus" uses in this area of Town. and is consistent with the uses outlined in Section 3.3.5, "Community Facilities". The rezoning of the subject parcel will assist in maintaining the scale and character of the surrounding area.

B. There are adequate services and utilities available or proposed to be made available in the construction of the development.

C. The proposal is compatible with the proposed zoning and conforming uses of nearby properties and with the character of the neighborhood.

D. The subject property is more suitable for uses permitted by the proposed district versus the current district.

E. The proposed change does tend to improve the balance of uses, or meets a specific demand in the Town.

F. Review by the US Army Corps of Engineers under Section 404 of the Clean Water Act may be waived since hydric/potentially hydric soils have not been identified on the parcel.

Attachment: Z-2020-10 signed resolution 012121 (22545 : Z-2020-10)

TOWN OF AMHERST
PLANNING BOARD
ZONING RESOLUTION
Z-2020-10

PETITIONER

Daemen College

PROPERTY LOCATION

39 Getzville Road

JAN29'21 AM 8:33 RCVD

Pursuant to Local Law #3-82, as amended, the Planning Board recommends that the Town Board determine that the requirements of SEQR are complete and that the subject proposal is not expected to have a significant adverse effect on the environment.

NOW THEREFORE BE IT RESOLVED that the Planning Board recommends to the Town Board in accordance with Section 8-3-4 of the Zoning Ordinance, that the rezoning request be approved.

The foregoing resolution was adopted by the Town of Amherst Planning Board, January 21, 2021; moved by Chmiel; seconded by Penberthy; ayes 7, noes 0.

Robert J. Gilmour, Chair

1/28/21
Date

TV/ac
X:\Current_Planning\Files\Rezonings\2020\Z-2020-10_(39 Getzville)_2020\Z-2020-10_resolution_012121_TV.doc
cc: Town Clerk
Commissioner of Building
Highway Superintendent
Town Engineer
Traffic/Safety Coordinator
LaBella Associates, Don Hoefler, 300 Pearl St. Suite 301, Buffalo, NY 14202
Daemen College, 4380 Main St., Amherst, NY 14226

Attachment: Z-2020-10 signed resolution 012121 (22545 : Z-2020-10)