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### TOWN OF LEWISBORO Westchester County, New York



Planning Board 79 Bouton Road South Salem, New York 10590 Tel: (914) 763-5592 Fax: (914) 875-9148 Email: planning@lewisborogov.com

### AGENDA

Tuesday, February 15, 2022

Via Zoom videoconferencing and live streaming to Lewisboro TV YouTube channel

Meeting will start at 7:30 p.m. and end at or before 11:00 p.m.

### I. DECISION

### Cal #10-21PB

Palminteri Residence, 4 Bluestone Lane, South Salem; Sheet 40, Block 10552, Lot 42 (Chazz and Gianna Palminteri, owners of record) – Waiver of site development plan procedures application for the construction of a single-family house.

### II. EXTENSION OF TIME REQUESTS

### Cal #08-12PB

**Petruccelli/Badagliacca, Oscaleta Road, South Salem, NY 10590 Sheet 33B, Block 11157, Lot 46** (Steven Petruccelli and Teresa Badagliacca, owners of record) - Request for a 90-day Extension of Time to resolution granting Preliminary/Final Subdivision Plat, Negative Declaration Under SEQRA, dated October 21, 2014.

### Cal# 8-14PB, Cal# 95-14WP, Cal# 20-14SW

**Goldens Bridge Village Center, NYS Route 22, Goldens Bridge, NY 10526, Sheet 4, Block 11126, Lot 07** (**Stephen Cipes, owner of record**) - Request for Extension of Site Development Plan, Wetland and Stormwater Permit Approvals.

### Cal #04-19PB, Cal #17-19WP, Cal #06-19SW

**Pound Ridge Stone, 2 West Road, South Salem, NY 10590, Sheet 49B, Block 9831, Lot 1 (Two West Road LLC, owner of record)** – Request for Extension of Site Development Plan, Wetland and Stormwater Permit Approvals.

### III. SKETCH PLAN REVIEWS

### Cal #01-22PB, Cal #01-22WP, Cal #01-22SW

HVDDSO Hostel # 2273, 8 Waccabuc Road, Goldens Bridge, NY 10526, Sheet 12, Block 11362, Lot 2 (NYS Office of Mental Developmental Disabilities, owner of record) - Application for the reconstruction of an existing driveway and installation of stormwater practices.

### Cal #02-22PB, Cal #03-22WP and Cal #02-22SW

Hollander/Audemard residences, 153 Post Office Road, South Salem, NY 10590, Sheet 32A, Block 10804, Lot 19 (Cassie & Seth Hollander, owners of record) and 151 Post Office Road Sheet 32A, Block 10804, Lot 91 (Olivier & Rebecca Audemard, owners of record) - Application for lot line change and driveway work.

### IV. WETLAND PERMIT REVIEW

### Cal #70-21WP

Gardner Residence, 23 Waccabuc Road, Goldens Bridge, NY 10526, Sheet 12, Block 11360, Lot 12 (Laura and Todd Gardner, owners of record) - Application for an addition, pool and patio.

- V. MINUTES OF January 11, 2022.
- VI. NEXT MEETING DATE: March 15, 2022.
- VII. ADJOURN MEETING

### **Ciorsdan Conran**

From: Sent: To: Subject: Sirignano Law Office <lawoffice@sirignano.us> Tuesday, January 11, 2022 3:03 PM Ciorsdan Conran Petruccelli Subdivision

Ciorsdan,

Request is respectfully made for a further extension of the Planning Board approvals in this application. Thank you, Michael

### **Michael Fuller Sirignano**

Attorney and Counselor at Law Old Post Road Professional Building 892 Route 35, PO Box 784 Cross River, NY 10518 Telephone: (914) 763-5500 Fax: (914) 763-9589

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### **Ciorsdan Conran**

From: Sent: To: Subject: Nancy Tuccillo <nancytuccillo@aol.com> Friday, January 21, 2022 3:58 PM Ciorsdan Conran Re: ext request update

Hi Ciorsdan,

I just returned back to the office or I would have sent this earlier.

Please grant us another year extension. The management at the shopping center changed hands and the owner is working with a new architect on a new plan for the center. We need a month or two to get this before the board for approval.

We very much appreciate your help with our efforts. Please let me know if the extension is granted.

Sincerely,

Nancy Tuccillo (914) 769-3141

On Jan 21, 2022, at 3:35 PM, Ciorsdan Conran <Planning@lewisborogov.onmicrosoft.com> wrote:

Hi again Nancy-Just checking in on the status of the extension request. I'm going to be leaving the office shortly and would like to circulate it among my board and its consultants.

Also, any change of use at the shopping center will need to be reviewed by the Planning Board.

Thank you,

Ciorsdan

Ciorsdan Conran Town of Lewisboro ACARC/Comprehensive Plan Steering Committee/Planning Board Administrator email: <u>planning@lewisborogov.com</u> tel # 914-763-5592, fax # 914-875-9148 mailing and physical address: 79 Bouton Road, South Salem, NY 10590 typical hours: 9:00 a.m. - 4:30 p.m. (call to confirm) <image001.jpg>

## Site Design Consultants

Civil Engineers • Land Planners

January 27, 2022

Janet Andersen, Chair Members of the Lewisboro Planning Board Town of Lewisboro 79 Bouton Road South Salem, NY 10590

Attention: Ciorsdan Conran, Secretary

Re: Pound Ridge Stone and Landscaping 2 West Road and Smith Ridge Road

> Sheet 49B Block 9831 Lot 1 Cal. #04-19PB, Cal. #17-19WP, Cal. #06-195W Resolution dated August 17, 2021

Dear Chair Andersen and Members of the Planning Board:

On behalf of our client, we are requesting a time extension of this approval so that the property owner can complete the items in the Resolution. Also at this time, we are requesting that the Board amend the Resolution to state that the NYS DOT approval is required, but does not need to be issued until the DOT work is initiated.

If this is acceptable, we will submit the required sets of approved site plans for Town signature, and any other outstanding items.

If you have any questions or comments, please contact us. Thank you.

Sincerel Joseph C. Riina, P.E.

cc: Kellard Sessions Pound Ridge Stone and Landscaping

JCR / cm / sdc 04-04



251-F Underhill Avenue • Yorktown Heights, New York 10598 60 Walnut Grove Road • Ridgefield, Connecticut 06877

(914) 962-4488

(203) 431-9504

Fax (914) 962-7386



### MEMORANDUM

TO:	Chairperson Janet Andersen and Members of Lewisboro Planning Board
CC:	Ciorsdan Conran Judson Siebert, Esq. Joseph Angiello
FROM:	Jan K. Johannessen, AICP Joseph M. Cermele, P.E., CFM Town Consulting Professionals
DATE:	February 11, 2022
RE:	Wetland and Stormwater Permit HVDDSO 8 Waccabuc Road Sheet 32.1 Block 2 Lot 20

### PROJECT DESCRIPTION

The subject property consists of ±2.87 acres of land and is located at 8 Waccabuc Road within the R-2A Zoning District. The subject property is developed with residence that is utilized as a hostel and is operated by the NYS Office for People with Developmental Disabilities. The applicant is proposing to repair and replace an existing driveway, associated grading, stormwater improvements, and is proposing to add two (2) additional parking spaces. The subject property contains a wetland that is jurisdictional to the New York State Department of Environmental Conservation (NYSDEC) and the Town of Lewisboro and disturbance is proposed with the applicable regulatory buffers.

### <u>SEQRA</u>

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

### **REQUIRED APPROVALS/REFERRALS**

1. A Wetland Activity Permit and a Town Stormwater Permit are required from the Planning Board; a public hearing is required to be held on the Wetland Permit.

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | SITE & ENVIRONMENTAL PLANNING

Chairperson Janet Andersen February 11, 2022 Page 2 of 4

- 2. An Article 24 Freshwater Wetland Permit is required from the NYSDEC for work proposed within the 100-foot Wetland Adjacent Area.
- 3. The subject property is located within the NYC East of Hudson Watershed and proposed land disturbance exceeds 5,000 s.f. coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) will be required.
- 4. Work within the NYS right-of-way requires a Highway Work Permit from New York State Department of Transportation (NYSDOT).
- 5. Referral to the Westchester County Planning Board is required under Section 239-m of the General Municipal Law.

### COMMENTS

- 1. This office defers review of the plan for zoning compliance to the Building Inspector, it is recommended that the Planning Board refer the application to the Building Inspector for review.
- 2. A determination should be made as to whether Site Development Plan Approval is required.
- 3. The width of the driveway shall be dimensioned on the plan. The applicant should demonstrate that the vehicles parked in the new spaces have sufficient room to turn into the space and back out. Ensure that all applicable driveway widths and parking space dimensions comply with provisions of the Zoning Code and dimension same.
- 4. Please provide one accessible space and loading aisle on the plan if determined to be necessary by the Building Inspector.
- 5. It is recommended that the entire length of existing chain link fence, which runs along the wetland edge, be removed; the fence is in poor condition and is covered with invasive vegetation during the growing season. Invasive plants located between the driveway and the wetland edge should be removed. It is recommended that the proposed wood guiderail be extended to replace the fence, which would provide better vehicle protection, allow for animal passage, and plantings could be incorporated on the slope; all of the above would be considered mitigation.
- 6. The plan shall include a Bulk Zoning Table comparing the requirements of the underlying zoning district to the existing and proposed condition; required variances and existing nonconformities shall be noted below the table.
- 7. The plan shall be revised to illustrate and dimension all required minimum zoning setbacks lines (front, rear, side yard setbacks).

Chairperson Janet Andersen February 11, 2022 Page 3 of 4

- 8. The wetland boundary line should be shown more prominently on the plans; please label the wetland with the corresponding NYSDEC wetland identification number; illustrate or reference the applicable Town and NYSDEC regulatory buffers, 150 feet and 100 feet, respectively.
- 9. The applicant shall develop a Wetland Mitigation Plan, which provides, at a minimum, mitigation at a ratio of 1:1 (for every s.f. of wetland or wetland buffer disturbance proposed, an equal or greater amount of mitigation shall be provided). Reference is made to the Town's mitigation guidelines provided in Chapter 217, Appendix B.
- 10. The applicant shall coordinate with the New York City Department of Environmental Protection (NYCDEP) and provide written verification regarding their extent of jurisdiction.
- 11. The plans shall be revised to provide a table quantifying total change to impervious surface.
- 12. Land disturbance is proposed to exceed ≥5,000 s.f. and will therefore require conformance with the NYSDEC SPDES General Permit (GP-0-20-001) and filing of a Notice of Intent (NOI) and MS4 Acceptance Form with the NYSDEC. Submit draft copies to this office for review. The applicant submitted a Stormwater Pollution Prevention Plan Report (SWPPP); however, no appendices were provided.
- 13. The applicant shall provide stormwater mitigation and design calculations for the runoff generated by the net increase in impervious surface for the 25-year, 24-hour storm event. Provide details of the stormwater mitigation system.
- 14. Include erosion control measures on the plan, specifically a stabilized construction entrance and tree removal/tree protection. Details shall be provided and shall be in conformance with the most recent version of the New York State Standards and Specifications for Erosion and Sediment Control.
- 15. The staging/stockpile area appears to be located within an existing drainage swale; will this swale be eliminated? Clarify grading in this area and provide silt fencing down slope of any stockpile areas.
- 16. The proposed rock outlet appears to be proposed within an existing stream. Please relocate above the water line.
- 17. The names of the adjacent property owners and the location of any neighboring driveways, structures, buildings, wells and septic areas shall appear on the plan.
- 18. The Tax Parcel identification number(s) shall be identified on the plan.

Chairperson Janet Andersen February 11, 2022 Page 4 of 4

19. The owner/applicant's name and address shall be identified on the plan.

20. Please provide a copy of the most recent deed for the property.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

### PLANS REVIEWED, PREPARED BY C.T. MALE ASSOCIATES, DATED MAY 14, 2020:

- Cover Sheet
- Existing Conditions and Removals Plan (C-101)
- Proposed Plan (C-102)
- Details (C-103)
- Erosion and Sediment Control Notes & Details (C-104)

### **DOCUMENTS REVIEWED:**

- Stormwater Permit Application
- Wetland Permit Application
- Site Development Plan Approval Application
- NYSDEC Joint Application Form
- Project Narrative, prepared by C.T. Male Associates
- Short Environmental Assessment Form, dated August 17, 2020
- Topographic Survey

### JKJ/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2022\_02-11\_LWPB\_HVDDSO - 8 Waccabuc Road\_Review Memo.docx

TO:	The Town of Lewisboro Planning Board
FROM:	Lewisboro Conservation Advisory Council
SUBJECT:	HVDDSO Hostel # 2273, 8 Waccabuc Road, Goldens Bridge, NY
DATE:	February 8, 2022

The Conservation Advisory Council (CAC) has reviewed the application for the reconstruction of an existing driveway and installation of stormwater practices.

The CAC applauds the improvements to stormwater management. The only question that the CAC has, given the increased parking and improvements to the drive, will the stormwater and runoff management practices be sufficient to keep pollutants from cars, such as oil, gas and road salt from entering the wetland?

### TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590 Tel: (914) 763-5592 Email: planning@lewisborogov.com

### Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan Procedures       Image: Step I for the second sec			
Project Information			
Project Name:8 Waccabuc Road - Pavement and Drainage Improvements			
Project Address: 8 Waccabuc Road			
Gross Parcel Area: 2.87 AC Zoning District: R-2A Sheet(s): 32.1 Block (s): 2 Lot(s): 20			
Project Description: Includes reconstruction of existing asphalt driveway, repair/replacement of existing			
chain link fencing, a small amount of land grading and repair/installation of drainage culverts and			
catch basin structure(s).			
Is the site located within 500 feet of any Town boundary?YESNOIs the site located within the New York City Watershed?YESYESIs the site located on a State or County Highway?YESNO			
Does the proposed action require any other permits/approvals from other agencies/departments? Town Board ZBA Building Dept. Town Highway ACARC NYSDEC NYCDEP WCDH NYSDOT Town Wetland Town Stormwater			
Other			
Owner's Information Name: OPWDD/Office of Property Supports and Em <sub>Email:</sub> bill.x.miuca@opwdd.ny.gov			
Address: 1 Utility Road, Thiells, NY 10984 Phone: 845-947-6249			
Applicant's Information (if different)			
Name: Email:			
Address: Phone:			
Authorized Agent's Information			
Name: Email:			
Address: Phone:			
THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.			
THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.			
APPLICANT'S SIGNATURE DATE			
OWNER'S SIGNATURE DATE 12/18/2021			

# **TOWN OF LEWISBORO PLANNING BOARD**

79 Bouton Road, South Salem, NY 10590 Email: <u>planning@lewisborogov.com</u> Tel: (914) 763-5592 Fax: (914) 875-9148

## Affidavit of Ownership

State of :	New York	
County of:	Westchester	
Stephen Va	an Hoose, RA	, being duly sworn, deposes and says that he/she
resides at N	YS OPWDD, 44 Holland Ave. 5th Floc	or
in the Count	y of	, State ofNew York
		J the Director of Capital Services

of \_\_\_\_\_ The NYS Office for People With Developmental Disabilities

Name of corporation, partnership, or other legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the

Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of

Lewisboro as:

Lot<sup>20</sup> Block 2 32.1 on Sheet Digitally signed by Stephen Van Hoose, RA Date: 2021.11.18 15:50:56-05'00' **Owner's Signature** Sworn to before me this ber 202 day of \_ Alexandra Grace Schultz Notary Public, State of New York Qualified in Rensselaer County No. 01SC6400055 Commission Expires November 4, 2023 graa fihu Notary Public – affix stamp



Application	No.:		_
Fee:		Date:	

TOWN OF LEWISBORO WETLAND PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590 Phone: (914) 763-5592 Fax: (914) 875-9148

Project Address:	8 Waccabu	c Road	
Sheet: 32.1	Block: 2	Lot(s): 20	

Project Description (Identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): Includes reconstruction of existing asphalt driveway, repair/replacement of existing chain link fending,

OPWDD/Office of Property Supports and Emerg. Serv.	Phone: 845-947-6249
Owner's Address: 1 Utility Road, Thiells, NY 10984	Email:
Applicant's Name (if different):	Phone:
Applicant's Address:	Email:
Agent's Name (if applicable):	Phone:
Agent's Address:	_Email:

### TO BE COMPLETED BY OWNER/APPLICANT

What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)

Administrative Planning Board

Is the project located within the NYCDEP Watershed? 
Yes 
No

Total area of proposed disturbance: □ < 5,000 s.f. = 5,000 s.f. - < 1 acre □ ≥1 acre

Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: <u>NYSDOT, NYSDEC</u> ACOE, Town Stormwater Permit

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner Signature: MAnt Superinterdet

Date: 12/15/20-7

	Application No.:
	Fee: Date:
TOWN OF LEWISBORO	
STORMWATER PERMIT APPLIC	CATION
79 Bouton Road, South Salem, N Phone: (914) 763-5592	NY 10590
Fax: (914) 875-9148	
Project Address: 8 Waccabuc Road	
Sheet: <u>32.1</u> Block: <u>2</u> Lot(s): <u>20</u>	
Project Description (describe overall project including all propos Includes reconstruction of existing asphalt driveway, repair/replacement of existing of	ed land development activities): chain link fencing, a small amount of land grading
and repair/installation of drainage culverts and catch basin structure(s).	
OPWDD/Office of Property Supports and Emerg. Serv. Owner's Name:	Phone: 845-947-6249
Owner's Address: 1 Utility Road, Thiells, NY 10984	Email:
Applicant's Name (if different):	Phone:
Applicant's Address:	_Email:
Agent's Name (if applicable):	Phone:
Agent's Address:	_Email:
TO BE COMPLETED BY OWNER/A	APPLICANT

The approval authority is? (see §189-5 of the Town Code)

Town Engineer and Stormwater Management Officer 
Planning Board

Is the project located within the NYCDEP Watershed?

Will the project require coverage under the NYSDEC General Permit for Stormwater Discharges from Construction Activity?

Does the proposed action require any other permits/approvals from other agencies/departments? (Wetland Inspector, Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: NYSDEC, NYSDOT, ACOE, Town Wetland Permit

Note: The applicant, owner and/or agent is responsible for reviewing and complying with Chapter 189, "Stormwater Management and Erosion and Sediment Control," of the Town Code. This application must be submitted with all applicable plans, reports and documentation specified under §189-8, "SWPPP requirements," of the Town Code; all SWPPP's shall be prepared in conformance with Chapter 189 and shall be prepared by a qualified professional, as defined therein. The provision for obtaining a Town Stormwater Permit is in addition to the requirement of obtaining coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity, if applicable.

Owner Signature:

Superintello

Date: 12/10/2021

### TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590 Email: <u>planning@lewisborogov.com</u> Tel: (914) 763-5592 Fax: (914) 875-9148

### **Tax Payment Affidavit Requirement**

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)				
NYSOPWDD		8 Waccabuc Road Drainage Improvements		
Name of Applic	cant	Project Name		
Property Des	cription	Property Assessed to:		
Tax Block(s):	11362	The NYS Office for	People with Developme	ntal Disabilities
Tax Lot(s):	2	Name 44 Holland Ave	e., 5th Floor	5
Tax Sheet(s):	12	Address Albany, NY	12208	
		City	State	Zip

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: Sworn to before me this JANET L. DONOHUE NOTARY PUBLIC, STATE OF NEW YORK No. 01D06259627 Qualified in Westchester County Commission Expires April 16, 2020 hature - Notary Public (affix stamp)

### 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		
OPWDD/Office of Property Supports and Emerg. Serv.		
Name of Action or Project:		
Waccabuc Rd. Drainage ImprovHVDDSO Hostel #2273		
Project Location (describe, and attach a location map):		
8 Waccabuc Road, Goldens Bridge, NY 10526 (475' west of the intersection of Waccabuc Ro	ad and N. Salem Road - see a	attached map).
Brief Description of Proposed Action:		
The existing driveway serving the residence is failing and in need of replacement/reconstructi positive drainage needs to be re-established. The project includes reconstruction of existing a fencing, a small amount of land grading and repair/installation of drainage culverts and catch	on. Additionally, ponding is o asphalt driveway, repair/replac basin structures.	ccurring on the site and rement of existing chain link
Name of Applicant or Sponsor:	Telephone: 8459476249	
OPWDD/Office of Property Supports and Emerg. Serv.	E-Mail: bill.x.miuca@opw	rdd.ny.gov
Address:		
1 Utility Road		
City/PO: Thialla	State:	Zip Code:
1 Does the proposed action only involve the legislative adaption of a plan loss	1 law ordinance	10904
administrative rule, or regulation?	n law, orumanee,	NO YES
If Yes, attach a narrative description of the intent of the proposed action and the e may be affected in the municipality and proceed to Part 2. If no, continue to ques	nvironmental resources th tion 2.	at 🖌 🗌
2. Does the proposed action require a permit, approval or funding from any other	er government Agency?	NO YES
If Yes, list $agency(s)$ name and permit or approval: Joint Permit Application (NYSDEC	\$)	
<ul> <li>a. Total acreage of the site of the proposed action?</li> <li>b. Total acreage to be physically disturbed?</li> <li>c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?</li> </ul>	<u>2.89</u> acres <u>0.23</u> acres 2.89 <sub>acres</sub>	
4. Check all land uses that occur on, are adjoining or near the proposed action:		
5. Urban 🗌 Rural (non-agriculture) 🗌 Industrial 🔲 Commercia	al 🗹 Residential (subur	ban)
Forest Agriculture Aquatic Other(Spec	cify):	
Parkland		

5. Is the proposed action,	NO	YES	N/A							
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?			<ul> <li>Image: A start of the start of</li></ul>							
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		NO	YES							
If Yes, identify:										
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?		NO	YES							
If the proposed action will exceed requirements, describe design features and technologies:										
n/a - driveway reconstruction/land grading project.										
10. Will the proposed action connect to an existing public/private water supply?		NO	YES							
If No. describe method for providing poteble water:										
n/a - driveway reconstruction/land grading project. Water service will not be affected as part of this project.										
11. Will the proposed action connect to existing wastewater utilities?		NO	YES							
If No, describe method for providing wastewater treatment:										
n/a - driveway reconstruction/land grading project. There is an existing on-site septic system, which will not be affected as part project.	of this									
which is listed on the National or State Register of Historic Places, or that has been determined by the	t	NO	YES							
Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Pagieter of Historic Places?										
State Register of mistorie maters:										
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 wattends or other waterbadies applied by a federal state or least secure?										
wethinds of other waterboules regulated by a rederal, state of rocal 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:										

□ Shoreline       □ Forest       □ Agricultural/grasslands       □ Early mid-successional         □ Wetland       □ Urban       □ Suburban         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?       NO       YES         Nothern Long-arad Bat       NO       YES         16. Is the project site located in the 100-year flood plan?       NO       YES         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         17 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)?       I       I         17 Yes, briefly describe:       Image: State or include construction or ther activities that would result in the impoundment of water as part of this project. Stormwater currently discharging from the site, as no new paved surfaces will be created as part of this project dation oped, waste lagoon, dam?       NO       YES         18. Does the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES <t< th=""><th>14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:</th><th></th><th></th></t<>	14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
Wetland       Urban       Urban       Suburban         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?       NO       YES         Northern Long-eared Bat       NO       YES         16. Is the project site located in the 100-year flood plan?       NO       YES         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         17. Will the proposed action create storm water discharges, either from point or non-point sources?       I       I         17. Will the proposed action create storm water discharges be directed to established conveyance systems (runoff and storm drains)?       I       I         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 action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for harardous waste?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for harardous waste?       NO       YES         19. Has the site of the proposed action or an adjoining property been the subject of r	Shoreline 🗹 Forest 🗌 Agricultural/grasslands 🗌 Early mid-successional		
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?       NO       YES         Northern Long-eared Bat       NO       YES         16. Is the project site located in the 100-year flood plan?       NO       YES         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         18. Does the proposed action increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of his project. Stormwater currently discharging from the site, as no new paved surfaces will be created as part of his project. Stormwater on an adjacent wetland (delineated by NYSDEC staff in May 2020).       NO       YES         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)?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for haz	🗹 Wetland 🔲 Urban 🗹 Suburban		
Federal government as threatened or endangered?       Image: Compared Bat       Image: Compared Bat         Northern Long-bared Bat       Image: Compared Bat       Image: Compared Bat       Image: Compared Bat         16. Is the project site located in the 100-year flood plan?       Image: Compared Bat       Image: Compared Bat       Image: Compared Bat         17. Will the proposed action create storm water discharge, either from point or non-point sources?       Image: Compared Bat       Image: Compared Bat         17. Will the proposed action create storm water discharge, either from point or non-point sources?       Image: Compared Bat       Image: Compared Bat         17. Will the proposed action create storm water discharges be directed to established conveyance systems (runoff and storm drains)?       Image: Compared Bat       Image: Compared Bat         17. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?       Image: Compared Bat       Image: Compared Bat         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, describe:       Image: Compared Bat       Im	15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or	NO	YES
Nothern Long-ared Bat       No       YES         16. Is the project site located in the 100-year flood plan?       NO       YES         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         17. 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)?       I       I         17. Yes, briefly describe:       I       I       I         Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent wetland (delineated by NYSDEC staff in May 2020).       I       I         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, vaste lagoon, dam)?       I       I       I         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       II       II       III         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       II       III       III         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       IIII <td>Federal government as threatened or endangered?</td> <td></td> <td></td>	Federal government as threatened or endangered?		
16. Is the project site located in the 100-year flood plan?       INO       Fes         17. Will the proposed action create storm water discharge, either from point or non-point sources?       NO       YES         17. Will storm water discharges flow to adjacent properties?       NO       YES         16. Is the project star discharges be directed to established conveyance systems (runoff and storm drains)?       Imode the project star discharges will be created as part of this project. Stormwater currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent wetland (delineated by NYSDEC starf in May 2020).       NO       YES         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, describe:       Imode the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         11 CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE       Applicant/sponsor/name:       Sciencence       Sciencence         Applicant/sponsor/name:       Bit MuccA       Date: S/17/koco       Sciencence       Sciencence         10. Has the syncont/mathereadiation fora materior of the proposed action or an ad	Northern Long-eared Bat	NO	VES
Image: Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent welland (delineated by NYSDEC staff in May 2020).       Image: Stormwater or currently drains toward an adjacent welland (delineated by NYSDEC staff in May 2020).         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)?       Image: Stormwater or closed solid waste management facility?         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       Image: Stormwater or closed solid waste?         11 Y es, describe:       Image: Stormwater or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO         YES       Image: Stormwater or the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Y es, describe:       Image: Stormwater or the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Y es, describe:       Image: Stormwater or the BEST OF       Image: Stormwater or the BEST OF       NO       YES         If Y es, describe:       Image: Stormwater or the BEST OF       Image: Stormwater or the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazard	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?       NO       YES         If Yes,       a. Will storm water discharges flow to adjacent properties?       D       I         b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?       I       I         If Yes, briefly describe:       I       I       I         Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent welland (delineated by NYSDEC staff in May 2020).       NO       YES         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)?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         11 Yes, describe:			
17. Will the proposed action or an adjoining property been the location of an active or closed solid waste management facility?         19. Will storm water discharges flow to adjacent properties?         b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?         11. Yes, briefly describe:         Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent wetland (delineated by NYSDEC staff in May 2020).         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)?       NO         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO         19. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO         11. CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE       Applicant/sponsor/name:         Applicant/sponsor/name:       NI       MI       CA         Stormwater       Title: Mant       Supmuter with the Supmuter with the supervision of the support of the support with the suport of the support was the support of the su	17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES
a. Will storm water discharges flow to adjacent properties?       Image: Comparison of 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)?         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)?       Image: Comparison of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste       NO         20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Complete of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Complete of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Complete of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Complete of the proposed action or an adjoining property been the subject of remediation (ongoing or complete) for hazardous waste?         If Yes, describe:	If Yes,		~
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?       Image: Conversion of the storm water of 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)?         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)?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         11 Yes, describe:       Image: Converting the impound waste?       Image: Converting the converting the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         11 CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE       Applicant/sponsor/name:       Converting the convert	a. Will storm water discharges flow to adjacent properties?		$\checkmark$
If Yes, briefly describe:   Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent welland (delineated by NYSDEC staff in May 2020).   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)?   19. Has 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?   11 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?   11 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?   11 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?   11 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?   11 Yes, describe:   21 I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE   Applicant/sponsor/name:   Applicant/sponsor/name:   Simplicant/sponsor/name:   Simplicant/sponsor/name:   Simplicant/sponsor/name:   Simplicant/sponsor/name:   Simplicant/sponsor/name:   Simplicant/sponsor/name: <td>b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?</td> <td></td> <td><math>\checkmark</math></td>	b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?		$\checkmark$
Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent wetland (delineated by NYSDEC staff in May 2020).       NO       YES         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)?       NO       YES         14. Types, explain the purpose and size of the impoundment:       Impoundment       Impoundment       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?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         11 CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name:       Bill       MIUCA       Date: 8/17/10000         Applicant/sponsor/name:       Bill       MIUCA       Date: 8/17/10000       Spurin.ternched	If Yes, briefly describe:		
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)?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Struct And Accurate To THE BEST OF MY KNOWLEDGE       Applicant/sponsor/name:       Struct All OCA         Applicant/sponsor/name:       Bill MIUCA       Date: S/17/2000       Struct All OCA	Stormwater runoff should not increase beyond what is currently discharging from the site, as no new paved surfaces will be created as part of this project. Stormwater currently drains toward an adjacent wetland (delineated by NYSDEC staff in May 2020).		
or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: 	18. Does the proposed action include construction or other activities that would result in the impoundment of water	NO	YES
If Yes, explain the purpose and size of the impondations       Impondations         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste       NO         19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste       NO         20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       Impondentiation         20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO         YES       If Yes, describe:       Impondentiation         If Yes, describe:       Impondentiation     <	or other liquids (e.g., retention pond, waste lagoon, dam)?		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?       NO       YES         If Yes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Completed of the proposed action or an adjoint property been the subject of remediation (ongoing or completed) for hazardous waste?         If Yes, describe:       Image: Comp	If fes, 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       NO       YES         If Yes, describe:			
management facility?         If Yes, describe:	19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste	NO	YES
In Tes, describe:       Image: Completed of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed of the proposed action of the property been the subject of remediation (ongoing or completed) for hazardous waste?       Image: Completed of the proposed action o	management facility?		
20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?       NO       YES         If Yes, describe:       Image: Completed is the image: Completed is			
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:		110	VEG
completed) for hazardous waste?         If Yes, describe:         If Yes, describe:         I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF         MY KNOWLEDGE         Applicant/sponsor/name:         Bill         MIUCA         Date:         8/17/2000         Simplify	20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or	NO	YES
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: Bill MIUCA Date: 8/17/2000 Simplure: Ref Superinterrelect	If Yes, describe:		
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Bill MIUCA</u> <u>Date: 8/17/2000</u> Simplura: <u>Bill MIUCA</u> <u>Title: Plant Superinterceded</u>			
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF         MY KNOWLEDGE       Date: 8/17/2000         Applicant/sponsor/name:       Bill MIUCA       Date: 8/17/2000         Signature:       Title:       Plant       Support Interpretendent		FST OI	7
Applicant/sponsor/name: Bill MIUCA Date: 8/17/2000 Signature: Bill MIUCA Title: Plant Superintendent	I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE B		
Applicant/sponsor/name: 6111 PUIOCA Date: 0111 Date: 01	D. II MURCA Day 8/17	hoc	0
Similar Title: 1/Ant Schninferdert	Applicant/sponsor/name: OTT PUTOCA Date: Of The	+	/ /
Signature.	Signature:	fend	lest



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Νο
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]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Northern Long-eared Bat
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No



Date	RECORD OF	WORK	Appr.				
				FIGURE 1: SITE	LOCATION MAP		
				TOWN OF LEWISBORO	WESTCHESTE	R COUNTY, NY	
				C.T. MALE ASS	OCIATES		
				Engineering, Surveying, Architecture, Landscape A	rchitecture & Geology, D.P.C.		
Drafter: LJS Checker: JRE				50 CENTURY HILL DRIVE, LATHAM, NY 518.786.7400 COBLESKILL, NY - GLENS FALLS, NY - POUGHKEEPSIE, NY - JOHNSTOWN, NY LITTLE FALLS. NY - RED HOOK, NY - SYRACUSE. NY			
Appr. by: JRE Proj. No. 19.9171				SCALE: 1"=1000'	DATE:MAY 1, 2019		



Date	RECORD OF	WORK	Appr.				
				FIGURE 1: SITE	LOCATION MAP		
				TOWN OF LEWISBORO	WESTCHESTE	R COUNTY, NY	
				C.T. MALE ASS	OCIATES		
				Engineering, Surveying, Architecture, Landscape A	rchitecture & Geology, D.P.C.		
Drafter: LJS Checker: JRE				50 CENTURY HILL DRIVE, LATHAM, NY 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY • JOHNSTOWN, NY LITTLE FALLS, NY • RED HOOK, NY • SYRACUSE, NY			
Appr. by: JRE Proj. No. 19.9171				SCALE: 1"=1000'	DATE:MAY 1, 2019		

# **8 WACCABUC ROAD DRAINAGE IMPROVEMENTS GOLDENS BRIDGE, NY - DASNY PROJECT 351060**



**PROJECT SITE** SCALE: 1"=100'

### © 2020

C.T. MALE ASSOCIATES

WARNING: IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT IS ALTERED, THE ALTERING ARCHITECT SHALL AFFIX TO HIS ITEM THE SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION. ARCHITECTURE COMMISSIONER'S REGULATIONS PART 69.5

WARNING: IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION. PROFESSIONAL ENGINEERING AND LAND SURVEYING - ART. 145 SECTION. 7209





Sheet Descrip	otion Sheet Title	Sheet Numbe
G-001	TITLE SHEET	1
C-101	EXISTING CONDITIONS & REMOVALS PLAN	2
C-102	PROPOSED PLAN	3
C-103	DETAILS	4
C-104	EROSION AND SEDIMENT CONTROL NOTES & DETAIL	ILS 5

## **C.T. MALE ASSOCIATES** Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • HIGHLAND, NY • JOHNSTOWN, NY LITTLE FALLS, NY • RED HOOK, NY • SYRACUSE, NY



# SITE LOCATION MAP

NOT TO SCALE

# **Drawing List**

**PROJECT NO. 19.9171 DRAWING NO. 19-0666** 





### REFERENCE NOTES:

- TOPOGRAPHIC INFORMATION SHOWN HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY, CONDUCTED BY C.T. MALE ASSOCIATES, ON APRIL 16, 2019.
   NORTH ORIENTATION AND BEARINGS ARE REFERENCED TO GRID NORTH AND ARE BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83/2011 EPOCH 2010.00.
   VERTICAL DATUM SHOWN HEREON IS NAVD 88 (GEOID 12A) AND WAS OBTAINED FROM RTK BPS OBSERVATIONS USING THE NYLC, CTBR AND CTDA CORS AS A BASE STATION.
   THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS, IF ANY EXIST, OR AS SHOWN HERON, ARE NOT CERTIFIED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. DIG SAFELY NEW YORK MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.
   AERIAL IMAGERY WAS OBTAINED FROM THE NYSGIS CLEARINGHOUSE.

### BAR SCALE 1 inch = 20 ft.

Γ	JAMES R. EDWARDS P.E. 068519	DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	СНЕСК	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A	
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~								DATE : 01/30/2020	LITTLE FALLS, NY • RED HOOK, NY • SYRACUSE, NY www.ctmale.com DWG. NO: 19-0666





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# ADDO/ CUIDNAICCIDN

## **DUMPSTER PAD AND ENCLOSURE**

IRON, 180° OFFSET, INDUSTRIAL TYPE, HINGES SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. BOTH GATE PANELS SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON. HINGES SHALL BE GALVANIZED. 4. SS30 PIPE IS UNACCEPTABLE MATERIAL FOR THIS GATE AND POSTS.

MANUFACTURED BY HOOVER FENCE CO. AS THEIR STRONG ARM

INDUSTRIAL GATE LATCH PAD LOCKS WILL BE PROVIDED BY THE OWNER. G. GATE HINGES SHALL BE WELDABLE STEEL, CAST STEEL, OR MALLEABLE

F. THE GATE LATCH SHALL BE THE MALLEABLE IRON FORK TYPE AS

D. GATE PANELS SHALL EACH HAVE A HOLD OPEN DEVICE. E. GATE SHALL BE PROVIDED WITH A CENTER DROP ROD AND A DROP ROD CATCHMENT PIPE SET IN THE CONCRETE SLAB AND LOCATED SUCH THAT WHEN THE DROP ROD IS ENGAGED, THE GATE PANELS ARE IN CO-LINEAR ALIGNMENT.

HORIZONTAL AND DIAGONAL MEMBERS WITH 14 GAUGE GALVANIZED

C. FENCE FABRIC FOR GATE FRAMES SHALL BE 6' HIGH, 9 GA. WIRE SIZE, 2" MESH, KNUCKLED AT THE TOP AND BOTTOM. FENCE FABRIC SHALL BE GALVANIZED STEEL. FENCE FABRIC SHALL BE SECURED TO GATE FRAME WITH STRETCHER BARS SECURED BY SIX (6) CHAIN LINK BANDS ON EACH SIDE OF THE FRAME AND TIED TO

B. GATE FRAMES (PANELS) SHALL BE FABRICATED FROM 2" NOMINAL O.D. SCHEDULE 40 GALVANIZED STEEL PIPE, CONFORMING WITH ASTM F-1083. EACH FRAME (PANEL) SHALL HAVE A 2" NOMINAL O.D. SCHEDULE 40 GALVANIZED STEEL PIPE DIAGONAL BRACE. FABRICATION OF GATE FRAMES (PANELS) SHALL BE BY WELDING.

3. DOUBLE PANEL GATE (10' WIDE, 6' HIGH): A. THE GATE POSTS SHALL BE SET WHERE INDICATED WITH A CLEAR

STEEL PIPE CONFORMING WITH ASTM F-1083. 2. GATE POSTS SHALL BE SET IN A CONCRETE FOUNDATION 12" IN DIAMETER AND 3'-6' DEEP. ALL CONCRETE FOR POST FOUNDATIONS SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH (f'c) OF 3,000 PSI.

NOTES ON 10-FOOT DOUBLE PANEL GATE: 1. GATE POSTS SHALL BE 3" NOMINAL O.D. SCHEDULE 40 GALVANIZED





PIPE SIZE [d] (IN.)	PIPE SLOPE	STONE DIMENSION [d50] (IN.)	NYSDOT STANDARD STONE FILLING	APRON THICKNESS [T] (IN.)	APRON [La]
	0-3%	4	LIGHT	18	1
12	3-7%	6	LIGHT	18	1
	7-10%	9	MEDIUM	24	1

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### **GENERAL NOTES:**

- 1. THE SEDIMENT CONTROL MEASURES DETAILED IN THESE PLANS SHALL BE IN PLACE PRIOR TO THE START OF EACH CONSTRUCTION PHASE. ONCE CONSTRUCTED, ALL MEASURES SHALL BE PROPERLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD, AND THEN REMOVED FROM THE SITE ONCE THE SITE IS STABILIZED.
- 2. THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL THE FINAL SURFACE TREATMENT HAS BEEN INSTALLED AND VEGETATED AREAS HAVE ESTABLISHED 80% COVERAGE. AFTER THE VEGETATED AREAS HAVE BEEN STABILIZED WITH AT LEAST 80% VEGETATIVE COVER, AS DETERMINED BY THE ENGINEER, THE OWNER SHALL ASSUME RESPONSIBILITY FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL SYSTEM(S).
- OUTSIDE THE GROWING SEASON, OTHER METHODS OF SOIL STABILIZATION (SUCH AS THE USE OF JUTE MESH AND EXCELSIOR MATTING) SHALL BE USED UNTIL SUCH TIME AS VEGETATIVE COVER CAN BE ESTABLISHED.
- 4. EXISTING VEGETATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE. SITE WORK ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE AREA AND DURATION OF SOIL DISTURBANCE. REMOVAL OF WOODY VEGETATION SHALL BE KEPT TO THE MINIMUM EXTENT PRACTICABLE.

### STABILIZED CONSTRUCTION ACCESS NOTES:

- 1. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED WHERE NECESSARY TO PREVENT SEDIMENT FROM BEING TRACKED ONTO ROADWAYS.
- PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. 2. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES, AND SHALL NOT OPERATE UNNECESSARILY WITHIN WATERWAYS OR DRAINAGE DITCHES.
- 3. IF INTERNAL CONSTRUCTION ROADS ARE DETERMINED TO BE A SOURCE OF SEDIMENT-LADEN RUNOFF TO SENSITIVE AREAS, THEY SHALL BE STABILIZED AS SOON AS PRACTICABLE.

### SILT FENCE NOTES:

- 1. SILT FENCE SHALL BE PLACED ON THE DOWNSLOPE SIDE OF DISTURBED AREAS AND AROUND THE PERIMETER OF SOIL STOCKPILES.
- 2. SILT FENCE SHALL BE PLACED AROUND THE BOUNDARY OF WETLANDS ADJACENT TO THE WORK AREA, AND AT THE EDGE OF WETLANDS AFTER CONSTRUCTION IS COMPLETED.
- SILT FENCE SHALL BE REPAIRED OR REPLACED WHEN THE ENDS ARE FRAYED OR WORN, AND WHEN THE FENCE IS NOT ANCHORED 6" INTO THE GROUND. WHEN THE ACCUMULATED SEDIMENT REACHES 30% OF THE SILT FENCE HEIGHT, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE UPLAND AREA.

### SEEDING & MULCHING NOTES:

- PERMANENT SEEDING AND MULCH SHALL BE APPLIED AS SOON AS THE DISTURBED AREAS HAVE ACHIEVED FINAL GRADE. IF THE SPECIFIED SEEDING DATES ARE MISSED, MULCH SHALL BE APPLIED TO THE SLOPE AND SEED SHALL BE APPLIED TO THE TOP OF THE MULCH IN THE NEXT SEEDING SEASON AFTER RECONDITIONING THE TOPSOIL. WHEN THE FINAL GRADE CANNOT BE OBTAINED IN (7) DAYS, MULCH SHALL BE APPLIED FOR PURPOSES OF TEMPORARY EROSION CONTROL.
- FOR TEMPORARY STABILIZATION, THE GRASS SEED BLEND SHALL CONSIST OF A MINIMUM OF 30% ANNUAL 2. RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM) WITH ADDITIONAL NATIVE SPECIES OF THE OWNER'S CHOICE. THE SEEDING RATE SHALL BE 30 LBS. PER ACRE.
- FOR PERMANENT STABILIZATION, A MIX CONTAINING 30% ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM) AND 70% OF 2 OR MORE NATIVE GRASSES, SUCH AS BIG BLUESTEM (ANDROPOGON GERARDII), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), SWITCHGRASS (PANICUMM VIRGATUM), INDIANGRASS (SORGHASTRUM NUTANS), TUFTED HAIRGRASS (DECHAMPSIA CESPITOSA) DEERTONGUE (DICHANTHELIUM CLANDESTINUM), CANADA WILD RYE (ELYMUS CANADENSIS), VIRGINIA WILD RYE (ELYMUS VIRGINICUS) AND/OR SIDEOATS GRAMA (BOUTELOUA CURTIPENDULA) BE USED IN AREAS ADJACENT TO WETLANDS OR IN AREAS NOT TO BE MOWED REGULARLY. NATIVE GRASS/ANNUAL RYEGRASS MIXES SHOULD BE SEEDED AT A RATE OF 30 LBS./ACRE.



FILTER CLOTH— (GEOTEXTILE FABRIC)

\_M FLOW

EMBED FILTER CLOTH -MIN 6" INTO GROUND

REPLACE EXISTING-SOIL AND COMPACT

NOTES:

- 2. FILTER CLOTH SHALL BE FASTENED SECURELY TO POSTS.
- 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6", FOLDED AND STAPLED.
- 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE. WHEN THE ACCUMULATED SEDIMENT REACHES 30% OF THE SILT FENCE HEIGHT, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE UPLAND AREA.
- 6. PREFABRICATED UNITS SHALL BE MIRAFI SILT FENCE, MIRAFI ENVIROFENCE OR APPROVED EQUIVALENT.



### PERSPECTIVE VIEW



- 1. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- 4. FILTER CLOTH SHALL BE MIRAFI 100X OR APPROVED EQUAL.

## SILT FENCE DETAIL

CROSS REFERENCE:



NOTES:

1. SILT FENCING CAN BE INSTALLED IN LIEU OF COMPOST FILTER SOCK, AS LONG AS IT IS INSTALLED IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE NYSDEC BLUE BOOK (FIGURE 5.32 - FABRIC DROP INLET PROTECTION).



SCALE: NONE C-104 CROSS REFERENCE:

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FILTER CLOTH— (GEOTEXTILE FABRIC)

\_M FLOW

EMBED FILTER CLOTH -MIN 6" INTO GROUND

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### PERSPECTIVE VIEW



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SCALE: NONE C-104 CROSS REFERENCE:

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October 8, 2021



Erosion and Sediment Control SWPPP

HVDDSO Hostel #2273 8 Waccabuc Road, Goldens Bridge

> Town of Lewisboro Westchester County, New York

Prepared for: DASNY NEW YORK STATE OF ORTUNITY. 515 Broadway Albany, New York 12207

Prepared by: C.T. MALE ASSOCIATES 50 Century Hill Drive Latham, New York 12110 (518) 786-7400 FAX (518) 786-7299

C.T. Male Project No: 19.9171

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### EROSION AND SEDIMENT CONTROL SWPPP HVDDSO HOSTEL #2273 - 8 Waccabuc Road, Goldens Bridge, NY

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### APPENDICES

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### 1.0 CERTIFICATIONS

### 1.1 Contractor

All Contractors and Subcontractors who perform earth disturbance on the project site shall sign and date a copy of the following certification statement before undertaking any construction activity at the project site:

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

CONTRACTOR:	
Company	
Name/Title/Date	
SUBCONTRACTOR:	
Company	
Name/Title/Date	
SUBCONTRACTOR:	
Comnany	
Name/Title/Date	

If additional Contractors/Subcontractors must sign the *Stormwater Pollution Prevention Plan* (SWPPP), please continue on the back of this page.

### 1.2 Contractor Responsibilities

Prior to the commencement of construction activity, the Contractor(s) and Subcontractor(s) that shall be responsible for installing, constructing, repairing, inspecting and maintaining the erosion and sediment control measures included in the be identified.

The following chart shall be filled out prior to commencement of construction by Owner/Operator.

<u>Task:</u>	Responsible Contractor:
Installing erosion and sediment controls (ESC)	
Daily inspection of ESC	
Maintenance/Repair of ESC	
Seeding/stabilization of disturbed areas	

Each of the Contractors and Subcontractors shall identify at least one trained individual from their company who will be responsible for implementation of the SWPPP. One trained individual shall be on-site on a daily basis when soil disturbance activities are being performed.

### A trained contractor is defined by the General Permit as:

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. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years. This individual shall be responsible for implementation of the SWPPP.
# C.T. MALE ASSOCIATES

The following individuals have been identified on this project as **trained contractors**:

CONTRACTOR:	
Company	
Trained	
Individual	
<u>SUBCONTRACTOR</u> :	
Company	
Trained	
Individual	
SUBCONTRACTOR:	
Company	
Trained	
Individual	

### **1.3** Certification of 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 General Permit (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."

Name: Lauren J. Sherman

Title: <u>Project Engineer</u>

Signature: \_\_\_\_\_

Date: <u>October 8, 2021</u>

# 2.0 INTRODUCTION

The 8 Waccabuc Road project (Project) is anticipated to have less than one (1) acre of disturbance but greater than 5,000 SF of disturbance. Under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity; permit number GP-0-20-001, a SWPPP must be prepared for projects that is between 5,000 SF and one (1) acre of disturbance in certain watersheds. As such, a SWPPP (i.e. "Basic"/ESC SWPPP) has been prepared. This report will identify areas of disturbance and recommended Erosion and Sediment Control (ESC) measures that will mitigate the potential for sediment migration off-site, thereby ensuring that stormwater discharges do not pollute nearby water bodies caused by the Projects anticipated construction-related disturbances.

## 2.1 Site Description

The Project site is located at 8 Waccabuc Road in the Town of Lewisboro, Westchester County, New York.

HVDDSO Hostel # 2273 located at 8 Waccabuc Road (New York State Route 138) is situated on a 3± acre parcel. The northern section of the property is developed with a driveway, a fenced-in pond, a residence and a fenced-in rear yard. Behind the residence and the rear yard is predominantly a steep hill. Runoff flowing down this hill is diverted around the rear yard and the side yard by a swale that runs along the west property line that discharges to the roadside swale along Waccabuc Road. There is an existing pond on the property which is fenced in by an 8' high chain link fence. A stream enters this pond conveying water from offsite. Water exits the pond to the north, flowing through a 24" culvert under Waccabuc Road, and enters a wetland on the north side of the road. The pond and areas just upstream and downstream are all part of NYSDEC Regulated Freshwater Wetland F-6; therefore, a NYSDEC permit is required to complete work in the wetland or within the 100 foot adjacent area.

There are two (2) NYSDEC regulated wetlands located within the project site. Wetland A is in the southeast corner of the project site and Wetland B is located in the northwest corner of the project site. No impacts are anticipated to the NYSDEC regulated wetlands nor to the 100' buffer around those wetlands.

# 2.2 Proposed Construction Activities

The proposed Project will help to alleviate poor drainage conditions along an existing paved driveway and parking area and adjacent to the residential structure perimeter swale system located at HVDDSO Hostel #2273; 8 Waccabuc Road in Goldens Bridge, New York. A Site Location Map is included as Figure 1 of this report. Site visits were conducted on March 25, 2019 and on April 16, 2019 in order to better define areas of concern. Some of the issues observed during the site visits included selected areas prone to flooding/ poor drainage following storm events, damaged and plugged culverts, along with pavement observed to be poor condition, which appears to be worsened by the drainage issues. Several areas/issues were identified during the investigation; proposed remedial actions were developed.

The total land disturbance associated with the Project will be approximately  $\pm 0.27$  acres, which includes the driveway reconstruction and land grading.

Due to the location of this project and since the anticipated disturbance will be between 5,000 SF and less than 1 acre, obtaining coverage under the General Permit GP-0-20-001 (General Permit) is required. An electronic Notice of Intent (eNOI) will be prepared and submitted to the NYSDEC Central Office. A draft eNOI and a copy of the General Permit has been included in Appendix B. The objective of this SWPPP is to identify the areas of disturbances caused by the proposed construction and to implement Erosion and Sediment Control Best Management Practices (ESC BMP's) to prevent polluted runoff from discharging off-site. ESC plans and BMP details have been included in this report and can be found in Appendix C.

The Erosion and Sediment Controls being implemented in this project consist of compost filter sock/silt fence and inlet protection.

### 2.3 **Potential Sources of Pollution**

Potential sources of pollution resulting from construction activities at the site include:

• Eroded soils

- Construction chemicals (fuels, solvents, etc.)
- Construction debris
- Tracking of sediment onto area roadways
- Concrete washout operations
- Dust

# 3.0 EROSION AND SEDIMENT CONTROL PLAN

## 3.1 Description of Erosion and Sediment Control Practices

The following erosion and sediment control practices will be constructed as part of the project:

- Silt fence / compost filter socks
- Topsoiling, seeding and mulching

Refer to the project site plans for erosion and sediment control measures that are associated with this project. (Appendix C)

# 3.2 Maintenance of BMP's

All erosion and sediment control measures shall be inspected and maintained in accordance as follows:

# 3.2.1 <u>Silt Fence/Compost Filter Sock</u>

The Contractor shall visually inspect all silt fencing/compost filter socks at the site after every significant rainfall event, and at a minimum frequency of once a week during dry weather conditions. Sediment accumulated to a depth of three inches or more shall be immediately removed and either spoiled in an upland area, or disposed of as non-hazardous construction waste. Silt fence/compost filter sock which has been damaged or knocked over shall be repaired and/or replaced within 24 hours of the deficiency being noticed. Silt fencing/compost filter sock shall be installed per the manufacturers' recommendations. These measures shall remain in-place until tributary upland areas have achieved permanent stabilization (i.e., minimum of 80% vegetative growth over the entirety of areas disturbed by project work). The use of compost filter socks in accordance with the publication "New York State Standards and Specifications for Erosion and Sediment Control" is deemed an acceptable substitute for silt fence. Compost filter socks are the preferred method of sediment control in areas adjacent to wetland areas, as their installation requires less ground disturbance than traditional silt fence installation.

## 3.3 Control of Litter, Construction Chemicals, and Construction Debris

During construction, the following materials could be used and stored on-site: Concrete additives, paints/solvents, acids, cleaning products, petroleum-based products/fuel, pesticides, fertilizers, construction wastes, sanitary wastes, and tackifier for soil stabilization. The aforementioned materials shall be managed using the following procedures:

### 3.3.1 Good Housekeeping

- 1. Store only products required to do the job on the site, and use all of a product before disposing of the container.
- 2. All materials stored on-site shall be stored in a neat and orderly manner. Containers shall be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.
- 3. Products shall be kept in their original container with manufacturer's label.
- 4. For all products, the manufacturer's recommendations for proper use and disposal shall be followed.

### 3.3.2 <u>Hazardous Products</u>

- 1. Material Safety Data Sheets (MSDS) for each substance with hazardous properties shall be maintained on-site. Each employee who must use the product shall be instructed on the use of MSDS Sheets and specific information applicable to that product.
- 2. If a surplus of the hazardous product must be disposed of, manufacturer's, local/state/federal recommended methods for disposal shall be followed.

### 3.3.3 <u>Petroleum Products</u>

- 1. All on-site vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- 2. Petroleum products shall be sealed in properly labeled containers.

### 3.3.4 Fertilizers

- 1. Fertilizers shall be applied in the minimum amounts recommended by the manufacturer and be immediately worked into the soil to limit exposure to stormwater.
- 2. Fertilizers shall be stored in a plastic bin with a lid. The bin shall be kept in a covered area to prevent spills.

### 3.3.5 Paints and Solvents

1. Excess paint and solvents shall not be discharged into the storm sewer and shall be properly disposed of according to New York State regulations.

### 3.3.6 <u>Concrete Wastes</u>

- 1. Washwater may be disposed of on the site in a specifically designed diked area or into forms to make other useful concrete products.
- 2. Hardened residue from the concrete washout area shall be disposed of as construction waste.
- 3. All concrete wash areas shall be located in an area where they are not likely to contribute to stormwater runoff. This determination shall be made by the Engineer or qualified professional during construction.

### 3.3.7 Solid/Construction Wastes

- 1. All waste materials shall be stored in an appropriate lidded dumpster, and disposed of by a waste management company licensed in New York State.
- 2. No construction materials shall be buried on-site, and all personnel shall be instructed on correct procedures for waste disposal.

### 3.3.8 Sanitary Wastes

1. All sanitary waste shall be collected from portable units by a New York State licensed portable facility provider. 2. All portable units shall be located in a place where they are not likely to contribute to stormwater runoff.

### 3.4 Stormwater Discharges Associated with Industrial Activity

This project does not include industrial activities.

### 3.5 Non-Conforming Elements

All elements of the erosion and sediment control plan are in conformance with the requirements of the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.

# APPENDIX A

Site Location Map

# **APPENDIX B**

# General Permit and Draft eNOI (Notice of Intent)

# **APPENDIX C**

Erosion & Sediment Control Plans

# NOI for coverage under Stormwater General Permit for Construction Activity

version 1.31

(Submission #: HPC-AED1-R3AYN, version 1)

# Details

Originally Started By Lauren Kohl

Submission ID HPC-AED1-R3AYN

Submission Reason New

Status Draft

# **Form Input**

# **Owner/Operator Information**

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.) OPWDD

**Owner/Operator Contact Person Last Name (NOT CONSULTANT)** Miuca

Owner/Operator Contact Person First Name Bill

**Owner/Operator Mailing Address** 1 Utility Road

**City** Theills

State NY **Zip** 10984

**Phone** 845-947-6249

Email bill.x.miuca@opwdd.ny.gov

Federal Tax ID NONE PROVIDED

# **Project Location**

Project/Site Name 8 Waccabuc Road Drainage Improvements and Driveway Repairs

# Street Address (Not P.O. Box)

8 Waccabuc Road

Side of Street South

City/Town/Village (THAT ISSUES BUILDING PERMIT) Lewisboro

### State

NY

**Zip** 10526

**DEC Region** 3

County WESTCHESTER

Name of Nearest Cross Street N. Salem Road

**Distance to Nearest Cross Street (Feet)** 400

Project In Relation to Cross Street West Tax Map Numbers Section-Block-Parcel NONE PROVIDED

Tax Map Numbers NONE PROVIDED

### 1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are: - Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.

- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates 41.3025223,-73.6161590000001

8 Waccabuc Rd, Goldens Bridge, NY 10526, USA

# **Project Details**

### 2. What is the nature of this project?

Redevelopment with no increase in impervious area

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

### **Pre-Development Existing Landuse**

Single Family Home

**Post-Development Future Land Use** Single Family Home

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

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

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

**Total Site Area (acres)** 3 **Total Area to be Disturbed (acres)** 0.27

**Existing Impervious Area to be Disturbed (acres)** 0.13

**Future Impervious Area Within Disturbed Area (acres)** 0.13

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

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

A (%) NONE PROVIDED

**B (%)** NONE PROVIDED

C (%) NONE PROVIDED

**D (%)** 100

7. Is this a phased project? No

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

Start Date 11/1/2021

End Date 12/31/2021

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

9a. Type of waterbody identified in question 9?

Wetland/State Jurisdiction On Site (Answer 9b)

Other Waterbody Type Off Site Description NONE PROVIDED **9b. If "wetland" was selected in 9A, how was the wetland identified?** Other: Delineated by NYSDEC Region 3

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

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? NONE PROVIDED

**12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?** NONE PROVIDED

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?

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

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? Yes

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

**16. What is the name of the municipality/entity that owns the separate storm sewer system?** Town of Lewisboro and/or NYSDEC

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?

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

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

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

## **Required SWPPP Components**

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

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

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

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? NONE PROVIDED

**24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:** Professional Engineer (P.E.)

**SWPPP Preparer** C.T. Male Associates

Contact Name (Last, Space, First) Sherman Lauren

Mailing Address 50 Century Hill Drive

City Latham

State

NY

**Zip** 12110 Phone 5187867618

### Email

l.sherman@ctmale.com

### **Download SWPPP Preparer Certification Form**

Please take the following steps to prepare and upload your preparer certification form:

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

- 2) The certified SWPPP preparer should sign this form
- 3) Scan the signed form
- 4) Upload the scanned document

Download SWPPP Preparer Certification Form

### Please upload the SWPPP Preparer Certification

NONE PROVIDED Comment NONE PROVIDED

# **Erosion & Sediment Control Criteria**

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

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

**Temporary Structural** Silt Fence Storm Drain Inlet Protection

Biotechnical NONE PROVIDED

Vegetative Measures NONE PROVIDED

Permanent Structural NONE PROVIDED

Other NONE PROVIDED

# **Post-Construction Criteria**

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

**27.** Identify all site planning practices that were used to prepare the final site plan/layout for the project. NONE PROVIDED

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). NONE PROVIDED

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet) NONE PROVIDED

### 29. Post-construction SMP Identification

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

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

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

**30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet)** NONE PROVIDED

**31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28)?** NONE PROVIDED

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

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

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

### If Yes, go to guestion 33.

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

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

### 33. SMPs

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

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

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

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

NONE PROVIDED

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

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

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

If Yes, go to question 36.

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

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

CPv Required (acre-feet) NONE PROVIDED

CPv Provided (acre-feet) NONE PROVIDED

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

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

**Overbank Flood Control Criteria (Qp)** 

Pre-Development (CFS) NONE PROVIDED

Post-Development (CFS) NONE PROVIDED

**Total Extreme Flood Control Criteria (Qf)** 

Pre-Development (CFS) NONE PROVIDED

Post-Development (CFS) NONE PROVIDED

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

**38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?** NONE PROVIDED

If Yes, Identify the entity responsible for the long term Operation and Maintenance NONE PROVIDED

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

# **Post-Construction SMP Identification**

### Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs

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

### **RR Techniques (Area Reduction)**

Round to the nearest tenth

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

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

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

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

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

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

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

**RR Techniques (Volume Reduction)** 

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

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

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

**Total Contributing Impervious Acres for Stormwater Planter (RR-7)** NONE PROVIDED **Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)** NONE PROVIDED

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

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

Standard SMPs with RRv Capacity

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

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

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

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

**Total Contributing Impervious Acres for Bioretention (F-5)** NONE PROVIDED

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

**Standard SMPs** 

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

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

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

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

**Total Contributing Impervious Acres for Pocket Pond (P-5)** NONE PROVIDED **Total Contributing Impervious Acres for Surface Sand Filter (F-1)** NONE PROVIDED

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

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

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

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

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

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

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

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

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

**Total Contributing Impervious Area for Hydrodynamic** NONE PROVIDED

**Total Contributing Impervious Area for Wet Vault** NONE PROVIDED

**Total Contributing Impervious Area for Media Filter** NONE PROVIDED

"Other" Alternative SMP? NONE PROVIDED

**Total Contributing Impervious Area for "Other"** NONE PROVIDED

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

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

Manufacturer of Alternative SMP NONE PROVIDED

Name of Alternative SMP NONE PROVIDED

# **Other Permits**

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

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

If Other, then identify NONE PROVIDED

**41. Does this project require a US Army Corps of Engineers Wetland Permit?** NONE PROVIDED

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

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

# **MS4 SWPPP Acceptance**

**43.** Is this project subject to the requirements of a regulated, traditional land use control MS4? NONE PROVIDED

If No, skip question 44

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

### **MS4 SWPPP Acceptance Form Download**

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

MS4 Acceptance Form Upload NONE PROVIDED

Comment NONE PROVIDED

# **Owner/Operator Certification**

### **Owner/Operator Certification Form Download**

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form. <u>Owner/Operator Certification Form (PDF, 45KB)</u>

### **Upload Owner/Operator Certification Form**

NONE PROVIDED Comment NONE PROVIDED





### JOINT APPLICATION FORM

For Permits for activities activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

# You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

>US Army Corps of Engineers       Check here to confirm you sent this form to USACE.         Check all permits that apply:       Section 404 Clean Water Act       Section 10 Rivers and Harbors Act         Is the project Federally funded?       Yes       No         If yes, name of Federal Agency:       General Permit Type(s), if known:	1. Applications To:         >NYS Department of Environmental Conservation         ✓       Check here to confirm you sent this form to NYSDEC.         Check all permits that apply:       Dams and Impoundment Structures         Stream Disturbance       Tidal Wetlands         Excavation and Fill in Navigable Waters       401 Water Quality Certification         Docks, Moorings or       ✓         Freshwater Wetlands       Management				
>NYS Office of General Services       Check here to confirm you sent this form to NYSOGS.         Check all permits that apply:       Check here to confirm you sent this form to NYSOGS.         State Owned Lands Under Water       Utility Easement (pipelines, conduits, cables, etc.)       Docks, Moorings or Platforms         >NYS Department of State       Check here to confirm you sent this form to NYSDOS.         Check if this applies:       Coastal Consistency Concurrence         2. Name of Applicant       Taxpayer ID (if applicant is NOT an individual)         OPWDD/Office of Property Supports and Emerg. Serv.       Post Office / City       State Zip         1 Utility Road       Thiells       NY       10984         Telephone       8459476249       Email       bill.x.miuca@opwdd.ny.gov         Applicant Must be (check all that apply):       ✓ Owner       ✓ Operator       Lessee         3. Name of Property Owner (if different than Applicant)       Post Office / City       State Zip         Mailing Address       Post Office / City       State Zip	Platforms         >US Army Corps of Engineers       Check here to confirm you sent this form to USACE.         Check all permits that apply:       Section 404 Clean Water Act       Section 10 Rivers and Harbors Act         Is the project Federally funded?       Yes       No         If yes, name of Federal Agency:       General Permit Type(s), if known:       Image: Comparison of the project is a comparison of the proje				
Check if this applies:       Coastal Consistency Concurrence         2. Name of Applicant       Taxpayer ID (if applicant is NOT an individual)         OPWDD/Office of Property Supports and Emerg. Serv.       Post Office / City       State       Zip         Mailing Address       Post Office / City       State       Zip         1 Utility Road       Thiells       NY       10984         Telephone       8459476249       Email       bill.x.miuca@opwdd.ny.gov         Applicant Must be (check all that apply):       Image: Comparison of the comparison of t	>NYS Office of General Services       Check here to confirm you sent this form to NYSOGS.         Check all permits that apply:       State Owned Lands Under Water         Utility Easement (pipelines, conduits, cables, etc.)       Docks, Moorings or Platforms         >NYS Department of State       Check here to confirm you sent this form to NYSDOS.				
2. Name of Applicant       Taxpayer ID (if applicant is NOT an individual)         OPWDD/Office of Property Supports and Emerg. Serv.       Post Office / City       State       Zip         Mailing Address       Post Office / City       State       Zip         1 Utility Road       Thiells       NY       10984         Telephone       8459476249       Email       bill.x.miuca@opwdd.ny.gov         Applicant Must be (check all that apply):       ✓       Owner       ✓       Operator       Lessee         3. Name of Property Owner (if different than Applicant)	Check if this applies: Coastal Consistency Concurrence				
3. Name of Property Owner (if different than Applicant)	2. Name of Applicant       Taxpayer ID (if applicant is NOT an individual)         OPWDD/Office of Property Supports and Emerg. Serv.       Image: Constraint of the serve of th				
Telephone Email	3. Name of Property Owner (if different than Applicant) Mailing Address Post Office / City State Zip Telephone Email				

For Agency Use Only Agency Application Number:

JOINT APPLICATION FORM – Continued. Submit this completed page as part of your Application.

1 Name of Contract / Agent				
4. Name of Contact / Agent				
C.T. Male Associates / James R. Edwards, P.E.				
	Post Office / City	State Zip		
50 Century Hill Drive	Latham	NY 12110		
Telephone 5187867400 Email Liedwar	rds@ctmale.com			
5 Project / Eccility Name	Droporty Toy Man Spation	/ Dlook / Lot Number		
Waccabuc Rd, Drainage Improv -HVDDSO Hostel #2273		/ BIOCK / LOLINUMDER.		
Droiget Street Address, if applicable	[11302-002-0012	Ctoto Zin		
R Wassabus Boad	Post Office / City	State Zip		
o wattabut Roau	Goldens Bridge	10526		
Provide directions and distances to roads, intersections, brid	ges and bodies of water			
475' west of the intersection of Waccabuc Road and N. Salem Road	d.			
Town Village City County	Stream/Waterbody Name			
Town of Lewisboro Westchester	FW Wetland F-6, Class 1			
Project Location Coordinates: Enter Latitude and Longitude in	in degrees, minutes, seconds:			
Latitude: 41 ° 18 ' 9.14 "	Longitude: -73 ° 36	' 58.14 "		
<ol> <li>6. Project Description: Provide the following information all any additional information on other pages. <u>Attach plans on</u></li> <li>a. Purpose of the proposed project:</li> </ol>	bout your project. Continue each re <u>separate pages.</u>	sponse and provide		
The existing driveway serving the residence is failing and in need of replacement/reconstruction. Additionally, ponding is occurring on the site and positive drainage needs to be re-established. The project includes reconstruction of existing asphalt driveway, repair/replacement of existing chain link fencing, a small amount of land grading and repair/installation of drainage culverts and catch basin structures.				
b. Description of current site conditions: There is currently developed with one (1) main residence located onsite, associated driveway and parking areas.				
c. Proposed site changes: There will be a small amount of land grading on the west side of 0.057 ac. disturbance). The reconstruction of existing pavement in-kind. Chain link fencing to be replaced in-kind. A wetland de office) on Friday May 1, 2020.	of the property to create a grassed drain nt and installation/repair of driveway cu elineation was performed by Joshua Fig	nage swale (approx. Ilvert crossings will be sher (NYSDEC Region 3		
<ul> <li>d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):</li> <li>N/a - No building structures will be installed and fill is not proposed.</li> </ul>				
e. Area of excavation or dredging, volume of material to be N/a - no material will be dredged; any pavement debris/materia	e removed, location of dredged mat als will be removed from the site and pro	erial placement: operly disposed of.		
f. Is tree cutting or clearing proposed? Yes If Y	és, explain below. ✓ No			
Number of Arrow to be suite				
	eage of trees to be cleared.			

g. Work methods and type of equipment to be used:
Typical construction equipment/methods will be employed; including hand work, milling machine and excavator.
h. Describe the planned sequence of activities:
Mobilization, installation of erosion and sediment control measures, removal of existing pavement/subbase, installation of
drainage piping and new subbase/binder courses, land grading for grassed swale, topsoil/seed/mulch placement, pavement top
course installation, final cleaning, demobilization.
i Pollution control methods and other actions proposed to mitigate environmental impacts:
The project disturbs less than one (1) acre of disturbance: therefore, a Stormwater Pollution Prevention Plan (SWPPP) has not
been prepared. No fueling of vehicles will be permitted on-site.
i Fresion and silt control methods that will be used to prevent water quality impactor
Silt fencing and/or compost filter socks, vegetation stabilization (seeding/mulching/topsoiling).
k. Alternatives especidered to avoid regulated groop. If no feasible alternatives exist, explain how the project will
k. Alternatives considered to avoid regulated areas. If no reasible alternatives exist, explain now the project will minimize impacts:
The existing project work will generally occur in areas that have previously been disturbed and/or are currently surfaced with
impervious cover. The area(s) to be graded (grassed swale and low area on west side of driveway) are not located within a
wetland; however, they are located within the 100-foot adjacent area. All of these areas have been previously disturbed; the
amount of grading in this area is approximately 0.057 acres.
Proposed use:
m. Proposed Start Date: June 2020 Estimated Completion Date: September 2020
n Has work begun on project? Yes If Yes explain below.
o Will project occupy Federal. State or Municipal Land? Yes If Yes, explain below. No
The project site is owned by the New York State Office for People With Developmental Disabilities (OPWDD) (HVDDSO Hostel
#2273).
n List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:
None known.
a. Will this project require additional Federal. State, or Local authorizations, including zoning changes?
Yes If Yes, list below.

#### 7. Signatures.

Applicant and Owner (If different) must sign the application.

Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant	Date
But In	7/2/2020
Applicant Must be (check all that apply):	Operator Lessee
Printed Name	Title
Bill Miuca	Plant Superintendent
Signature of Owner (if different than Applicant)	Date
Printed Name	Title
Signature of Contact / Agent	Date
And the	7/9/2020
Ripted Name	Title
James R. Edwards, P.E./C.T. Male Associates	VP Risk Management & Regional Office Dev

For Agency Use Only	Agency Application Number
	(Agency Name) has determined that No Permit is
required from this Age	ney for the project described in this application
required from this Age	
Agency Representative:	
Agency Representative: Printed Name	Title



Date	RECORD OF	WORK	Appr.			
				FIGURE 1: SITE	LOCATION MAP	
				TOWN OF LEWISBORO WESTCHESTER COUN		R COUNTY, NY
				C.T. MALE ASS	OCIATES	
				Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.		
Drafter:	LJS	Checker: JRE		50 CENTURY HILL DRIVE, LATHAM, NY 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY • JOHNSTOWN, NY LITTLE FALLS, NY • RED HOOK, NY • SYRACUSE, NY		
Appr. by	: JRE	Proj. No. 19.9171		SCALE: 1"=1000'	DATE:MAY 1, 2019	



### Site Location Map 8 Waccabuc Road

Town of Lewisboro

Brundige Dr

Westchester County, NY





#### 1 inch = 200 feet

Map Note: The locations and features depicted on this map are approximate and do not represent a field survey.



0

#### Legend

8 Waccabuc Rd Parcel Site
 Westchester County Tax Parcels
 DEC Watlands

Z DEC Wetlands

/// NWI Wetlands



## **PHOTO LOG** 8 Waccabuc Road – Golden's Bridge, Lewisboro, NY



Photo 1 – View of Driveway Facing SE



Photo 2 – Existing Driveway Facing North toward Waccabuc Road

C.T. MALE ASSOCIATES





Photo 3 – Ex. Driveway Culvert at Waccabuc Road. (Facing East)








0 o<sup>ER</sup> GMTR oGR GP MB UMH 0 YL BRW TRW O WLF

-----

LEGEND

# MAP NOTES:

- System, East Zone, NAD 83/2011 epoch 2010.00
- CTBR and CTDA CORS as a base station.

The freshwater wetlan Wetland F. 6
DEC Staff: AI
Date Valid: 6/ 11/2

	CARL M. RIGDON P.L.S. NO. 50711	DATE		<b>REVISIONS RECORD/DESCRIPTION</b>	DRAFTER	СНЕСК	APPR.	UNAUTHORIZED ALTERATI ADDITION TO THIS DOCUM
		5/11/20	$\mathbb{A}$	WETLANDS ADDED	DBT	CMR		VIOLATION OF THE NEW YOU EDUCATION LAW.
	THE ON NEWLOOD		$\frac{\mathbb{A}}{\mathbb{A}}$					© 2019 C.T. MALE ASSOCIA
	Contra a Stal		A					DESIGNED: WJN
	A SHANNE 2		A					DRAFTED : MDD
40 I	101 - Bar 101							CHECKED : JAM
	SE 050711 E		$\mathbb{A}$					PROJ. NO : 19.917
	LAND SU		$\mathbb{A}$					SCALE : 1"=20'
								DATE : APR. 16, 2

PROJECT NUMBER: 19.9171



DRAINAGE MANHOLE ELECTRIC METER ELECTRIC RISER GAS METER GAS RISERX GATE POST MAIL BOX UNKNOWN MANHOLE UTILITY POLE YARD LIGHT BOTTOM OF RETAINING WALL TOP OF RETAINING WALL WETLAND FLAG EDGE OF WETLANDS



1. Topographic information shown hereon was compiled from an actual field survey conducted on April 16, 2019.

2. North orientation and bearings are referenced to Grid North and are based on the New York State Plane Coordinate

3. Vertical datum shown hereon is NAVD 88 (Geoid 12A) and was obtained from RTK GPS observations using the NYLC,

4. The location of underground improvements or encroachments, if any exist, or as shown hereon, are not certified. There may be underground utilities, the existence of which are not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Dig Safely New York must be notified prior to conducting test borings, excavation and construction.

NUN I 2020 RECEIVED NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION  $\frac{6}{1000}$  Surveyor/Engineer:  $\frac{6}{10000}$  Expiration Date:  $\frac{6}{10}$ and MA /t Wetland boundary delineations as validated by the New York State Department of Environment Conservation remain valid for five (5) years unless existing exempt activities, area hydrology, or land use

Natural Resources

NYSDEC Region 3

practices change (e.g., agriculture to residential). After five (5) years the boundary must be revalidated by **DEC staff**. Revalidation may include a new delineation and survey of the wetland boundary. Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

ATION OR UMENT IS A YORK STATE W.	TOPOGRAPHIC SU 8 WACCABUC R	POGRAPHIC SURVEY WACCABUC ROAD					
CIATES	ES PREPARED FOR DASNY - ROCKLAND PC						
	HAMLET OF GOLDENS BRIDGE, TOWN OF LEWISBORO	WESTCHES	TER COUNTY, NEW YORK				
171	C.T. MALE ASSOCIATES Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.		SRVY				
2019	50 CENTURY HILL DRIVE, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299		SHEET 1 OF 1 DWG. NO: 19-280				



Department of Environmental Conservation

#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

#### SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES

From

#### CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

**Chief Permit Administrator** 

Authorized Signature

1-23-20

Date

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

#### PREFACE

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

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

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

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

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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.*
- 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.

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

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
  - (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
  - (ii) Control stormwater *discharges*, 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 *discharges* from the site;
  - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
  - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
  - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
  - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. Soil Stabilization. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

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

- c. **Dewatering**. *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.
- d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
  - (i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;
  - (ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use); and
  - (iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.
- e. Prohibited Discharges. The following discharges are prohibited:
  - (i) Wastewater from washout of concrete;
  - (ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
- (iv) Soaps or solvents used in vehicle and equipment washing; and
- (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

## C. Post-construction Stormwater Management Practice Requirements

- The owner or operator of a construction activity that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the owner or operator must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
- 2. The owner or operator of a construction activity that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

## a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

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

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

- (iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
  - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
  - (2) The site discharges directly to tidal waters, or fifth order or larger streams.
- (iv) Overbank Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
  - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
  - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.

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

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

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

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

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

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
  - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
  - (2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.
- (iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
  - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
  - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.

#### c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for redevelopment activity shall be addressed by one of the following options. Redevelopment activities located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other redevelopment activities shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
  - (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
  - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, impervious area by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, impervious area by the application of RR techniques or standard SMPs with RRv capacity., or
  - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
  - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

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

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) Overbank Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

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

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

## D. Maintaining Water Quality

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

- 1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
- 2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
- 3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

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

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

### E. Eligibility Under This General Permit

- 1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
- 2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
- 3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
- 4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

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

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

- 1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
- Discharges that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
- 3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
- 4. Construction activities or discharges from construction activities that may adversely affect an endangered or threatened species unless the owner or

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

- 5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
- 6. Construction activities for residential, commercial and institutional projects:
  - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
  - b. Which are undertaken on land with no existing impervious cover, and
  - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.
- 7. *Construction activities* for linear transportation projects and linear utility projects:
  - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
  - b. Which are undertaken on land with no existing impervious cover, and

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

- 8. Construction activities that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
  - a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
    - 1-5 acres of disturbance 20 feet
    - 5-20 acres of disturbance 50 feet
    - 20+ acres of disturbance 100 feet, or
  - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
    - the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
    - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
    - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
    - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
  - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or
- d. Documentation that:
- SHPA Section 14.09 has been completed by NYS DEC or another state agency.
- 9. *Discharges* from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

#### Part II. PERMIT COVERAGE

#### A. How to Obtain Coverage

- An owner or operator of a construction activity that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
- 2. An owner or operator of a construction activity that is subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the regulated, traditional land use control MS4 prior to submitting the NOI to the Department. The owner or operator shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
- 3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*. This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

#### B. Notice of Intent (NOI) Submittal

 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, 4<sup>th</sup> 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 <u>all</u> 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 (<u>http://www.dec.ny.gov/</u>) for more information,
  - b. where required, all necessary Department permits subject to the Uniform Procedures Act ("UPA") (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). Owners or operators of construction activities that are required to obtain UPA permits

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

- c. the final SWPPP has been prepared, and
- d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
- 3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
  - a. For construction activities that are <u>not</u> subject to the requirements of a *regulated, traditional land use control MS4*:
    - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
    - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has <u>not</u> been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
    - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

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

- The owner or operator shall ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
- 2. The owner or operator shall maintain a copy of the General Permit (GP-0-20-001), NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the construction site until all disturbed areas have achieved final stabilization and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
- 3. The owner or operator of a construction activity shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

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

- a. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
- b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
- c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
- d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
- e. The *owner or operator* shall include the requirements above in their SWPPP.
- 4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
- 5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
- 6. For construction activities that are subject to the requirements of a regulated, traditional land use control MS4, the owner or operator shall notify the

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

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

 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

- When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
- 2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
- 3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

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

#### Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

#### A. General SWPPP Requirements

- 1. A SWPPP shall be prepared and implemented by the owner or operator of each construction activity covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the commencement of construction activity. A copy of the completed, final NOI shall be included in the SWPPP.
- 2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
- 3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
- 4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
  - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
- c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and
- d. to document the final construction conditions.
- 5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
- 6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

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

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

(Part III.A.6)

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

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

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

## **B. Required SWPPP Contents**

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

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

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

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
- k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
- I. 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.
- Post-construction stormwater management practice component The owner or operator of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable sizing criteria in Part I.C.2.a., c. or d. of this permit and the performance criteria in the technical standard, New York State Stormwater Management Design Manual dated January 2015

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

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

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

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
  - Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
  - 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 postdevelopment runoff rates and volumes for the different storm events;
  - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
  - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
  - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

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

## C. Required SWPPP Components by Project Type

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

## Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

## A. General Construction Site Inspection and Maintenance Requirements

- 1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
- 2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

## **B.** Contractor Maintenance Inspection Requirements

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

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

- 2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
- 3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

## C. Qualified Inspector Inspection Requirements

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

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

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
- 1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, <u>with the exception of</u>:
  - 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 <u>not</u> located

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

- 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 <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E;
- c. construction on agricultural property that involves a soil disturbance of one
  (1) or more acres of land but less than five (5) acres; and
- d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
- 2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
  - a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
  - b. For construction sites where soil disturbance activities are on-going and the owner or operator has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
  - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The owner or operator shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the owner or operator shall have the qualified inspector perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction" Stormwater Management Practice" certification statements on the NOT. The owner or operator shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
- e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
- 3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
- 4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- 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;
- 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 postconstruction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. 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

- 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; <u>and</u> all areas of disturbance have achieved *final stabilization*; <u>and</u> all temporary, structural erosion and sediment control measures have been removed; <u>and</u> all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all postconstruction 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-ofway(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

## Part VI. REPORTING AND RETENTION RECORDS

## A. Record Retention

The owner or operator shall retain a copy of the NOI, NOI

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

## **B.** Addresses

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

## Part VII. STANDARD PERMIT CONDITIONS

## A. Duty to Comply

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

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

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

#### **B.** Continuation of the Expired General Permit

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

#### C. Enforcement

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

#### D. Need to Halt or Reduce Activity Not a Defense

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

#### E. Duty to Mitigate

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

#### F. Duty to Provide Information

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

#### G. Other Information

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

#### H. Signatory Requirements

- 1. All NOIs and NOTs shall be signed as follows:
  - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
- (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
- c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
  - (i) the chief executive officer of the agency, or
  - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- 2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

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

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
- 3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
- 4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

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

#### I. Property Rights

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

#### J. Severability

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

#### K. Requirement to Obtain Coverage Under an Alternative Permit

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

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

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

#### L. Proper Operation and Maintenance

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

#### M. Inspection and Entry

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

- 1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- 2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

- 3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
- 4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

#### N. Permit Actions

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

#### O. Definitions

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

#### P. Re-Opener Clause

- If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
- 2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

#### **Q.** Penalties for Falsification of Forms and Reports

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

#### **R. Other Permits**

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

#### **APPENDIX A – Acronyms and Definitions**

#### Acronyms

APO – Agency Preservation Officer

BMP – Best Management Practice

CPESC – Certified Professional in Erosion and Sediment Control

Cpv – Channel Protection Volume

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DOW – Division of Water

EAF – Environmental Assessment Form

ECL - Environmental Conservation Law

EPA – U. S. Environmental Protection Agency

HSG – Hydrologic Soil Group

MS4 – Municipal Separate Storm Sewer System

NOI – Notice of Intent

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

OPRHP – Office of Parks, Recreation and Historic Places

Qf – Extreme Flood

Qp – Overbank Flood

RRv – Runoff Reduction Volume

RWE – Regional Water Engineer

SEQR – State Environmental Quality Review

SEQRA - State Environmental Quality Review Act

SHPA – State Historic Preservation Act

SPDES – State Pollutant Discharge Elimination System

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

UPA – Uniform Procedures Act

USDA – United States Department of Agriculture

WQv – Water Quality Volume

#### Definitions

<u>All definitions in this section are solely for the purposes of this permit.</u> **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 postdevelopment peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix A

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

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

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

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

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

#### **APPENDIX B – Required SWPPP Components by Project Type**

#### Table 1

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

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single family home not located in one of the watersheds listed in Appendix C or not *directly* discharging to one of the 303(d) segments listed in Appendix E Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E • Construction of a barn or other agricultural building, silo, stock yard or pen. The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land. The following construction activities that involve soil disturbances of one (1) or more acres of land: • Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains · Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover · Cross-country ski trails and walking/hiking trails Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development; • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk,

- bike path or walking path.Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Appendix B

# Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP

#### THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

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

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

#### Table 2

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

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

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

#### Table 2 (Continued)

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

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

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

#### **APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal**

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

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

#### Figure 1 - New York City Watershed East of the Hudson







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#### Figure 3 - Greenwood Lake Watershed



#### Figure 4 - Oscawana Lake Watershed



#### Figure 5 - Kinderhook Lake Watershed



#### **APPENDIX D – Watersheds with Lower Disturbance Threshold**

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

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

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

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

COUNTY	WATERBODY	POLLUTANT	
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients	
Albany	Basic Creek Reservoir	Nutrients	
Allegany	Amity Lake, Saunders Pond	Nutrients	
Bronx	Long Island Sound, Bronx	Nutrients	
Bronx	Van Cortlandt Lake	Nutrients	
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients	
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients	
Broome	Whitney Point Lake/Reservoir	Nutrients	
Cattaraugus	Allegheny River/Reservoir	Nutrients	
Cattaraugus	Beaver (Alma) Lake	Nutrients	
Cattaraugus	Case Lake	Nutrients	
Cattaraugus	Linlyco/Club Pond	Nutrients	
Сауида	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	

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

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond Nutrients	
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs Nutrien	
Monroe	Minor Tribs to Irondequoit Bay Nutrien	
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 Nutrier	
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	

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 Nutrien	
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	

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake Nutrients	
Schenectady	Mariaville Lake Nutrien	
Schoharie	Engleville Pond Nutrien	
Schoharie	Summit Lake Nutrien	
Seneca	Reeder Creek and tribs Nutrient	
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 Nutrie	
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	

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs Silt/Sedime	
Warren	Lake George Silt/Sedim	
Warren	Tribs to L.George, Village of L George Silt/Sed	
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 Nutrier	
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

<u>Region</u>	<u>Covering the</u> <u>Following counties:</u>	DIVISION OF ENVIRONMENTAL PERMITS (DEP) <u>PERMIT ADMINISTRATORS</u>	DIVISION OF WATER (DOW) <u>Water (SPDES) Program</u>
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, Ро Вох 296 Ray Brook, Ny 12977-0296 Tel. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

## APPENDIX F – List of NYS DEC Regional Offices



John Kellard, P.E. David Sessions, RLA, AICP Joseph M. Cermele, P.E., CFM Jan K. Johannessen, AICP

#### MEMORANDUM

TO:	Chairperson Janet Andersen and Members of Lewisboro Planning Board
CC:	Ciorsdan Conran Judson Siebert, Esq. Joseph Angiello
FROM:	Jan K. Johannessen, AICP Joseph M. Cermele, P.E., CFM Town Consulting Professionals
DATE:	February 11, 2022
RE:	Hollander/Audemard Lot Line Change Sheet 32A Block 10804 Lot 19 (Hollander) Sheet 32A Block 10804 Lot 19 (Audemard)

#### **PROJECT DESCRIPTION**

The subject property consists of two (2) parcels located at 151 and 153 Post Office Road (referred to herein as 151 and 153) both within the R-2A Zoning District. Both properties are developed with single-family homes. 151 and 153 consist of  $\pm 2.07$  acres and  $\pm 5.08$  acres, respectively, and the lots currently share a driveway off of Post Office Road. The proposed action includes a lot line realignment and the elimination of the shared driveway. 153 is proposing a new driveway entrance onto Autumn Ridge Road, which is proposed to cross a Town jurisdictional wetland; the connection between the two (2) driveways would be eliminated. The lot line change will result in an equal transfer of land between the two (2) parcels.

#### <u>SEQRA</u>

The proposed action has been preliminarily identified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA). Prior to taking action on this pending application, the Planning Board must issue a determination of significance.

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | SITE & ENVIRONMENTAL PLANNING

Chairperson Janet Andersen February 11, 2022 Page 2 of 4

#### **REQUIRED APPROVALS**

- 1. Subdivision approval and a Wetland Activity Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.
- 2. Work proposed within the Town right-of-way will require a Driveway Opening Permit from the Town Highway Superintendent.
- 3. The proposed subdivision requires realty subdivision approval from the Westchester County Department of Health (WCDH).

#### COMMENTS

- 1. In accordance with Section 195-13 of the Town's Subdivision Regulations, the Planning Board may adjust the normal 3-step subdivision application process and waive the public hearing for a line change that does not result in the formation of any new lots or result in a zoning nonconformity; the subject application appears to qualify for this waiver.
- 2. This office defers review of the plan for zoning compliance to the Building Inspector. It is recommended that the application be referred to the Building Inspector for review.
- 3. The applicant shall prepare and submit Parts 1 and 2 of the Short Environmental Assessment Form (EAF) for review.
- 4. Provide an update existing conditions survey, including 2-foot topography, wetland boundary, and trees (≥8" dbh) within the vicinity of the work area.
- 5. The site plan shall illustrate existing topography (2-foot contours) and any proposed grading, including spot grades, as appropriate.
- 6. The plat and site plan shall be revised to illustrate and dimension all required minimum zoning setbacks lines (front, rear, side yard setbacks) on the plan.
- 7. The plat and site plan shall illustrate the location of the existing utilities (well, septic, etc.).
- 8. The width of the driveway shall be dimensioned on the site plan. Further, in accordance with Section 195-24A of the Subdivision Regulations, the applicant shall demonstrate that the driveway grade does not exceed 3% within 30 feet of the edge of street pavement; provide a driveway profile.
- 9. Provide sight distances looking both directions onto Autumn Ridge Road.
Chairperson Janet Andersen February 11, 2022 Page 3 of 4

- 10. The wetland boundary shall be delineated in accordance with Chapter 217, Wetlands and Watercourse, of the Town Code. Wetland flags shall be survey located and shall appear on the plan along with the Town's 150-foot regulated wetland buffer line.
- 11. The new driveway appears to cross the existing wetland; alternatives should be considered which do not result in a direct wetland disturbance.
- 12. The applicant shall develop a Wetland Mitigation Plan, which provides, at a minimum, mitigation at a ratio of 1:1 (for every s.f. of wetland or wetland buffer disturbance proposed, an equal or greater amount of mitigation shall be provided). Reference is made to the Town's mitigation guidelines provided in Chapter 217, Appendix B.
- 13. The subject property is located within the NYC East of Hudson Watershed. The applicant shall coordinate with the New York City Department of Environmental Protection (NYCDEP) and provide written verification regarding their extent of jurisdiction.
- 14. The site plan shall note that the limit of disturbance line shall be staked in the field prior to construction.
- 15. Please demonstrate how stormwater runoff from the new driveway connection to Autumn Ridge Road will be handled.
- 16. The applicant should coordinate with the Highway Department regarding the new curb cut.
- 17. It is not clear which section of the existing wall will be removed; please clarify.
- 18. The subdivision plat shall be revised for clarity. It would be helpful if different line types/weights were used to identify various features. It would also be helpful to have an inset plan on the plat which is focused on the area of the lot line realignment.
- 19. The filed map from 2002 which created the subject parcel illustrates a large 48" oak tree with a "zone of non-disturbance"; this tree and protection zone should be carried over onto the proposed plat and should any other applicable notes.
- 20. The Bulk Zoning Table on the Plat should be revised to reference each parcel by lot number and not address.
- 21. Autumn Ridge Road should be labeled on the plat and site plan; the full paved width of the road should be illustrated on the site plan for clarity.

Chairperson Janet Andersen February 11, 2022 Page 4 of 4

- 22. The site plan is prepared at a scale of 1'' = 15'; please revise to either 1'' = 10' or 1'' = 20; provide a north arrow.
- 23. The Tax Parcel identification numbers and parcel ownership, for both parcels, shall appear on all plans.
- 24. The vicinity map on both the subdivision and site plan are not legible; provide a smaller scale.
- 25. Please ensure all notes are applicable to the proposed action and jurisdiction.
- 26. The Planning Board's standard signature blocks shall appear on all sheets (available upon request); the receiver of taxes blocks can be removed from the plat.
- 27. The applicant shall submit a copy the current property deed for both parcels.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

#### PLAN REVIEWED, PREPARED BY GABRIEL E. SENOR, P.C., DATED JANUARY 1, 2022:

- Site Plan and Erosion Control Plan
- 151 & 153 Post Office Road Lot Line Adjustment

#### **DOCUMENTS REVIEWED:**

- Stormwater Permit Application
- Wetland Permit Application
- Site Development Plan & Subdivision Plat Approval Application
- Short Environmental Assessment Form, dated January 10, 2022

#### JKJ/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2022\_02-11\_LWPB\_Hollander Audemard - Post Office Rd Lot Line \_Review Memo.docx

TO:	The Town of Lewisboro Planning Board
FROM:	Lewisboro Conservation Advisory Council
SUBJECT:	Hollander/Audemard residences, 153 Post Office Road, South Salem, NY 10590
DATE:	February 8, 2022

The Conservation Advisory Council (CAC) has reviewed the application for lot line change and driveway work. The driveway intersects a small wetland.

Although the extension of the driveway to Autumn Ridge is small, it does cross the wetland. The CAC would like to see more definition of the wetland itself and a wetland mitigation plan. With all driveway construction, the CAC would also like to know the materials being used.

79 Bouton Road, South Salem, NY 10590 Tel: (914) 763-5592 Email: planning@lewisborogov.com

Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan ProceduresImage: Step 1Site Development Plan ApprovalStep 1Special Use Permit ApprovalStep 1Subdivision Plat ApprovalStep 1	Step II Step II Step III
Project Information	•
Project Name:153 Post Office Rd - Lot Line Adjustmen	it and Proposed Driveway
Project Address: 153 Post Office Rd, South Salem, NY 1	10590 - Town of Lewisboro
Gross Parcel Area: 5.81 AC Zoning District: R-2A Sheet(	(s): $\frac{43.1}{\text{Block (s): }}$ $\frac{2}{\text{Lot(s): }}$ $\frac{33}{2}$
Project Description: 1) Adjust Lot Line separating 151 ar	nd 153 Post Office Rd resulting in a net zero
exchange in lot area. 2)Construction of a proposed of	friveway with a curb cut on Autumn Ridge Rd
which will require disturbance within the wetland buf	fer. No New Lot being Created.
Is the site located within 500 feet of any Town boundary? Is the site located within the New York City Watershed? Is the site located on a State or County Highway?	YES V NO V YES V NO V
Does the proposed action require any other permits/approvals from Town Board I ZBA I ACARC I NYSDEC I NYSDOT I Town Wetland I I I I I I I I I I I I I I I I I I I	om other agencies/departments? Building Dept. ✓ Town Highway ✓ NYCDEP WCDH □ Town Stormwater ✓
Other The project involves less than 5000 SF Distu	urbance
¢	
Owner's Information	hallandar@kablbarg.com
Name: Setti Hollander	
Address: 153 Post Office Rd, South Salem, NY 10590	Phone: 914-241-7430
Applicant's Information (if different)	
Name: Same as Owner	_ Email:
Address:	Phone:
Authorized Agent's Information	
Name: N/A	_ Email:
Address:	Phone:
THE APPLICANT understands that any application is considered complete only	
received by the Planning Board. The applicant further understands that the applicant further understands that the applicant for the Planning Board. THE UNDERSIGNED WARRANTS the truth of all statements contained herein and and belief, and authorizes visitation, and inspection of the subject property by the APPLICANT'S SIGNATURE	when all information and documents required have been submitted and plicant is responsible for the payment of all application and review fees nd in all supporting documents according to the best of his/her knowledge he Town of Lewisboro and its agents.

79 Bouton Road, South Salem, NY 10590 Email: planning@lewisborogov.com Tel: (914) 763-5592 Fax: (914) 875-9148

## Affidavit of Ownership

State of :	New York	
County of:	Westchester	
Seth Hollar	nder	being duly sworn, deposes and says that he/she
resides at 1	53 Post Office Rd, South Sa	alem, NY 10590, Town of Lewisboro
in the Count	ty of	, State of
and that he	/she is (check one) 🚺 the	owner, or the
of the prop	erty at 153 Post Office Rd,	South Salem, NY 10590, Town of Lewisboro
	Name of corporation, partne	rship, or other legal entity
which is the	e owner, in fee of all that cert	ain log, piece or parcel of land situated, lying and being in the
Town of Lev	wisboro, New York, aforesaid	l and know and designated on the Tax Map in the Town of
Lewisboro a	as:	
Bloc	k <sup>2</sup> , Lot <sup>33</sup>	, on Sheet <u>43.1</u>
2100	,,	Owner's Signature
Sworn to b	efore me this	
<u>2210</u> da	y of SEPTEMBER	, 2 <u>0</u> 2-1
1 la	m- Ann E	Wary-Ann Sievert Notary Public, State of New York No. 01SI6045090 Qualified in Putnam County Certified in Westchester County

Notary Public - affix stamp

Commission Expires July 24, 20-22

79 Bouton Road, South Salem, NY 10590 Email: planning@lewisborogov.com Tel: (914) 763-5592 Fax: (914) 875-9148

### **Affidavit of Ownership**

State of :	New York	
County of:	Westchester	
Olivs resides at	ev AUDEMAND 151 Post Office Road, South Salem	being duly sworn, deposes and says that he/she , NY 10590
in the County	of Westchester	, State of New York
and that he/sh	ie is (check one) 🗹 the owner, or	the
of 151 Po	st Office Road, South Salem, NY 10590	Title
Ne	ame of corporation, partnership, or other	r legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the

Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of

Lewisboro as:

ŧ

Block 10804	, Lot	2	on Sheet 271
			Andenand
		Own	er's Signature

Sworn to before me this

15 day of JANURY 202

Notary Public -

Mix stamp

Revised 2: 2019

STUART FELDMAN NOTARY PUBLIC, STATE OF NEW YORK N.Y. GUTL (22078 QUALIFIED III: WHET JIESTHER COUNTY COMMISSION EXPIRES JANUARY 24, 20 2.6

1

	Application No.:
TOWN OF LEWISBORG WETLAND PERMIT APPLICA	Fee: Date: D ATION
79 Bouton Road, South Salem, Phone: (914) 763-5592 Fax: (914) 875-9148	NY 10590 2
Project Address: 153 Post Office Rd	
Sheet: 43.1 Block: 2 Lot(s): 33	
Project Description (Identify the improvements proposed wit approximate amount of wetland/wetland buffer disturbance): Construction of a proposed driveway within a wetland b	hin the wetland/wetland buffer and the uffer with approx. 3277 SF of disturbance.
Owner's Name: Seth Hollander	_Phone:914-241-7430
Owner's Address: 153 Post Office Rd	Email: hollander@kohlberg.com
Applicant's Name (if different): Same as owner	Phone:
Applicant's Address:	_ Email:
Agent's Name (if applicable):	_ Phone:
Agent's Address:	_ Email:
TO BE COMPLETED BY OWNER/	APPLICANT
What type of Wetland Permit is required? (see §217-5C and §2	17-5D of the Town Code)
🗆 Administrative 🛛 🖪 F	Planning Board
Is the project located within the NYCDEP Watershed?	🗆 No
Total area of proposed disturbance: $\blacksquare < 5,000 \text{ s.f.}$ $\Box 5,000 \text{ s.f.}$	s.f < 1 acre □ ≥1 acre
Does the proposed action require any other permits/appro (Planning Board, Town Board, Zoning Board of Appeals, Build NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other per ZBA, Building Dept., Town Wetland & Stormwater, Town Highway	ovals from other agencies/departments? ding Department, Town Highway, ACARC, mits/approvals required:

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see at ached Administrative Wetland Permit Fee Schedule.

Owner Signature:

Date: 9 22 2.

79 Bouton Road, South Salem, NY 10590 Email: <u>planning@lewisborogov.com</u> Tel: (914) 763-5592 Fax: (914) 875-9148

#### **Tax Payment Affidavit Requirement**

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)				
Seth Hollander	153 Post Office Rd - Lot Line Ad	dj. and Propos	sed Driveway	
Name of Applicant	Project Name			
Property Description	Property Assessed to:			
Tax Block(s): 10804	Hollander, Seth H. & Cassie B.	200		
Tax Lot(s): 19	Name 153 Post Office Rd			
Tax Sheet(s): $32A$	Address South Salem, NY 10590			
· ····································	City	State	Zip	

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes	9.22.2021
Signature - Receiver of ruxes	Date
Sworn to before me this	2400
And day of Statember	.2.021
	JANET L. DONOHUE NOTARY PUBLIC, STATE OF NEW YORK No. 01D06259627
Attut Schothie	Qualified in Westchester County C Commission Expires April 16, 2020
Signature - Notary Public (affix stamp)	

79 Bouton Road, South Salem, NY 10590 Email: planning@lewisborogov.com Tel: (914) 763-5592 Fax: (914) 875-9148

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To Be Completed by Applicant (Please type or print)				
HOLLANDER & AVDEMARD HOLLANDER WT LINE CHANGE Name of Applicant IEL DOGT VEELCE				
Property Description Property Assessed to:				
Tax Block(s): / 0 804	OLIVIER & REBECCA AUDEMARD			
Tax Lot(s):9/	Name P.O. BOX 78			
Tax Sheet(s): 32A	Address WACCABUC NY 10597			
	City State Zip			

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes:

Date

Sworn to before me this

JANET L. DONOHUE NOTARY PUBLIC, STATE OF NEW YORK No. 01D06259627 Qualified in Westchester County 4 Commission Expires April 16, 202

Signature - Notary Public (affix stamp)

79 Bouton Road, South Salem, NY 10590 Email: planning@lewisborogov.com Tel: (914) 763-5592 Fax: (914) 875-9148

#### **Tax Payment Affidavit Requirement**

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)				
HOLLANDER & AVDEMARD HOLLANDER WT LINE CHANGE Name of Applicant IEL DOGT VEELCE				
Property Description Property Assessed to:				
Tax Block(s): / 0 804	OLIVIER & REBECCA AUDEMARD			
Tax Lot(s):9/	Name P.O. BOX 78			
Tax Sheet(s): 32A	Address WACCABUC NY 10597			
	City State Zip			

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes:

Date

Sworn to before me this

JANET L. DONOHUE NOTARY PUBLIC, STATE OF NEW YORK No. 01D06259627 Qualified in Westchester County 4 Commission Expires April 16, 202

Signature - Notary Public (affix stamp)

## 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			
153 Post Office Rd			
Name of Action or Project:			
153 Post Office Rd			
Project Location (describe, and attach a location map):			
153 Post Office Rd, South Salem NY 10590			
Brief Description of Proposed Action:			
Construction of a new curb cut.			
Name of Applicant or Sponsor:	T 1 1 014 044 7400	\ \	
	Telephone: 914-241-7430	) 	
Seth Hollander	E-Mail: hollander@kohlberg.com		
Address:			
153 Post Office Rd			
City/PO:	State:	Zip Code:	
		10390	1
1. Does the proposed action only involve the legislative adoption of a plan, loca administrative rule, or regulation?	l law, ordinance,	NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the e	nvironmental resources th	at 🔽	
may be affected in the municipality and proceed to Part 2. If no, continue to ques	tion 2.		
2. Does the proposed action require a permit, approval or funding from any other	er government Agency?	NO	YES
If Yes, list agency(s) name and permit or approval:			
3. a. Total acreage of the site of the proposed action?	5.78 acres		ic
b. Total acreage to be physically disturbed?	.08 acres		
or controlled by the applicant or project sponsor?	5.78 acres		
4. Check all land uses that occur on, are adjoining or near the proposed action:	3		
Urban 🗌 Rural (non-agriculture) 🗌 Industrial 🔲 Commercia	al 🗹 Residential (subur	ban)	
Forest Agriculture Aquatic Other(Spec	cify):		
Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?			
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
o. Is the proposed action consistent with the predominant character of the existing built of natural fandscape:			
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		NO	YES
If Yes, identify:			
		NO	VES
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?			
9. Does the proposed action meet or exceed the state energy code requirements?		NO	YES
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?		NO	YES
If No, describe method for providing potable water:			
11. Will the proposed action connect to existing wastewater utilities?		NO	YES
If No, describe method for providing wastewater treatment:			
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or distric	t	NO	YES
which is listed on the National or State Register of Historic Places, or that has been determined by 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?			
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?		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 acrest			
The total disturbance in the wetlanarea including buffer is 3,277 SF			

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		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or	NO	YES
Federal government as threatened or endangered?		
16. Is the project site located in the 100-year flood plan?	NO	YES
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES
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)?	$\checkmark$	
If Yes, briefly describe:	Nei Nei	
		5. AR
		MEG
or other liquids (e.g., retention pond, waste lagoon, dam)?	NO	YES
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	NO	YES
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?	NO	YES
If Yes, describe:		
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE RE	L ST OF	
MY KNOWLEDGE		
Applicant/sponsor/name: Greg Caccioppoli Date: 01/10/2022		
Signature:		_



		151 & 153 POST OFFICE ROA	D - ZONING CHART		
LOT IDENTIFICATIO	N	151 POST OFFICE RD	151 POST OFFICE RD	153 POST OFFICE RD	
R-2A ZONE	Required/Allowable	Existing Lot	Proposed LOT	Existing Lot	
Lot Area (Sq. Ft.)	87,120	89,951.5	89,951.5	252,942.9	
Width/Circle (Ft.)	200	328	328	300	
Front Yard Setback (Ft.) "Center Street"	75	80.9	80.9	127 (FLAG LOT)	
Front Yard Setback (Ft.) "Lot Line"	50	56.9	56.9	127.0	
Side Yard (Ft.)	40	111.1	111.1	65.9	
Rear Yard (Ft.)	50	130.0	130.0	608.4	
Building Height Stories	2.5	2.5	2.5	2.5	
Building Height Feet	35	32.0	32.0	34.0	
Maximum Building Coverage (%)	9%	6.6%	6.6%	1.4%	

LOT 1

BOULDER

EQUIPT. ON PLAT

IRREGULAR DEER

ENCE

N81° 00' 50.00'E 138."

		I, ELIOT SENOR, THE SURVEYOR WHO MADE THIS N HEREBY CERTIFY THAT THE SURVEY OF THE PROPI	MAP DO ERTY SHOWN HEREON	
53 POST OFFICE RD	STE OF NEW YO	WAS COMPLETED APRIL 2, 2021 AND THAT THI	IS MAP WAS COMPLETED	
Proposed LOT	* W K TA	* 711		-
252,942.9	Par 10. 049822	5MUL	DATE	
300	LAND SUT	ELIÖT SENOR, L.S. LICENSE # 049822		
127 (FLAG LOT)				
127.0		DIVISION OF LAND RECORDS.		·
65.9				
608.4				
			DATE	
2.5		SETH H. HOLLANDER 153 POST OFFICE ROAD		
34.0		SOUTH SALEM, NEW YORK 10590		
1.4%				-
			DATE	
· · ·		OLIVIER AUDEMARD 151 POST OFFICE ROAD SOUTH SALEM, NEW YORK 10590		
		ALL EXISTING LOTS ARE SERVED BY EXISTING UTILITIE	ES WHICH WILL NOT BE AL	TERED
		APPROVED PURSUANT TO CHAPTER 873, OF THE WES SUBJECT TO WESTCHESTER COUNTY DEPARTMENT (	STCHESTER COUNTY SANI OF HEALTH APPROVAL OF	TARY CODE PROPOSED SEPTIC
		EACH PURCHASER OF PROPERTY SHOWN HEREON SH TRUE COPY OF THIS PLAT SHOWING THIS ENDORSMEN CHANGES, ADDITIONS OR ALERATIONS OF ANY KIND, OF SIGNATURES OF OTHER APPROVING AUTHORITY AN MADE ON THIS PLAN AFTER THIS APPROVAL, SHALL IN APPROVAL.	HALL BE FURNISHED A NT. ANY ERASURES, EXCEPT THE ADDITION ND THE DATE THEREOF NVALIDATE THIS	
		APPROVED BY THE ASSISTANT COMMISSIONER	DATE	. · · ·
		APPROVED UNDER AUTHORITY OF A RESOLUTION AD BY THE PLANNING BOARD OF THE TOWN OF LEWISB	00PTED 30RO, N.Y.	
		TOWN OF LEWISBORO PLANNING BOARD APPLICATION APPROVAL:	DN #	
BOULDER		CLERK TO PLANNING BOARD	DATE	
B1* 32 00.00 E 55.210				· · · ·
BOL		ALL CONDITIONS OF APPROVAL AS NOTED IN FORMA APPROVAL OR FINDINGS ARE A PART OF THE APPROV	L LETTERS OF /ED SITE PLAN,	
H.DER		SUBDIVISION OR VARIANCE PLATS, DRAWINGS OR PL HEREBY REFERENCED FOR ADDITIONAL APPROVAL D	LANS, AND ARE DETAILS.	

# 151 & 153 POST OFFICE ROAD LOT LINE ADJUSTMENT LOT No.1 & No. 2

AS SHOWN ON MAP TITLED FINAL SUBDIVISION PLAT KNOWN AS OAK PASTURE SITUATE IN THE

## TOWN OF LEWISBORD

WESTCHESTER COUNTY, NEW YORK

WESTCHESTER COUNTY INDEX SYSTEM SHEET 271, BLOCK 10804

TOWN OF LEWISBORO TAX MAP DESIGNATION 153 POST OFFICE ROAD SECTION 43.1 BLOCK 2 LOT 33 151 POST OFFICE ROAD SECTION 43.1 BLOCK 2 LOT 28

SCALE: 1" = 50' DATE: JANUARY 01, 2022

ALL TAXES DUE TO DATE HAVE BEEN PAID.

RECEIVER OF TAXES TOWN OF LEWISBORO

TAX ASSESSMENT MAP DESIGNATION :

151 POST OFFICE ROAD SECTION 43.1 BLOCK 2 ALL TAXES DUE TO DATE HAVE BEEN PAID.

RECEIVER OF TAXES TOWN OF LEWISBORO

\_\_\_ DATE \_\_\_\_\_ DATE \_\_\_\_\_

TAX ASSESSMENT MAP DESIGNATION : 153 POST OFFICE ROAD LOT 28 SECTION 43.1 BLOCK 2

LOT 33





#### MEMORANDUM

TO:	Chairperson Janet Andersen and Members of Lewisboro Planning Board
CC:	Ciorsdan Conran Judson Siebert, Esq. Joseph Angiello
FROM:	Jan K. Johannessen, AICP Joseph M. Cermele, P.E., CFM Town Consulting Professionals
DATE:	February 11, 2022
RE:	Wetland and Stormwater Permit Gardner Residence 23 Waccabuc Road Section 21, Block 11360, Lot 12

#### PROJECT DESCRIPTION

The subject property consists of ±5.968 acres of land and is located at 23 Waccabuc Road within the R-2 Zoning District. The subject property is developed with a single-family residence, driveway off Waccabuc Road, septic system and potable water well. The subject property contains wetlands that are jurisdictional to the New York State Department of Environmental Conservation (NYSDEC) and the Town of Lewisboro and the majority of the property consists of wetland and wetland buffer. The applicant is proposing an addition to the residence, deck, inground pool, pool terrace and related improvements, all of which are proposed within in the wetland buffer.

#### **SEQRA**

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | SITE & ENVIRONMENTAL PLANNING

Chairperson Janet Andersen February 11, 2022 Page 2 of 3

#### **REQUIRED APPROVALS**

- 1. A Wetland Activity Permit and Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.
- 2. An Article 24 Freshwater Wetland Permit is required from the New York State Department of Environmental Conservation (NYSDEC).
- 3. The subject property is located within the NYC East of Hudson Watershed and proposed land disturbance exceeds 5,000 s.f. Coverage under New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) will be required.

#### **COMMENTS**

- 1. It is recommended that all site plan, site work, zoning, wetland mitigation, and construction details be provided in a single set prepared by one design professional; there are currently eight (8) sheets prepared by two (2) firms which results in duplicative and potentially inconsistent information/details. These site/civil plans should be prepared by the Project Engineer.
- 2. A wetland mitigation area is shown on Sheet C-101, which consists of 12,425 s.f. While mitigation is touched upon within the submitted wetland delineation report, additional detail is required. Please identify the number or density of plants to be removed. A wetland mitigation protocol should be established, which provides detailed notes to the contractor as to how the invasive species removal will be effectuated, installation of plant material, as well as a long-term maintenance plan. The mitigation area is currently proposed to be seeded with a wet meadow seed mix. It is recommended that in addition to the seed mix, a tree and shrub layer be incorporated; provisions for deer protection should be specified. It is recommended that the mitigation area extend along the wetland/stream corridor.
- 3. As previously requested, the applicant shall perform deep and percolation soil testing in the vicinity of the proposed mitigation system to be witnessed by the Town Engineer. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.

Chairperson Janet Andersen February 11, 2022 Page 3 of 3

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

#### PLANS REVIEWED, PREPARED BY CROSS RIVER ARCHITECTS, LLC, DATED JANUARY 12, 2022:

- Site Plan (S/1 & S/2)
- Details (S/3)
- Location Plan (S/4)

#### PLANS REVIEWED, PREPARED BY ALP ENGINEERING, DATED JANUARY 21, 2022:

- Stormwater Management Plan (C-101)
- Erosion and Sediment Control Plan (C-102)
- Erosion and Sediment Control Plan Details (C-111)
- Construction Details (C-112)

#### **DOCUMENTS REVIEWED:**

- Letter, prepared by Cross River Architects, LLC, dated January 21, 2022
- Stormwater Management Report, prepared by Alan Pilch, P.E., dated January 21, 2022
- Wetland Delineation Report, prepared by Evans Associates, dated January 14, 2022
- Topographic Survey

JKJ/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2022-02-11\_LWPB\_Gardner - 23 Waccabuc Road\_Review Memo.docx

TO:	The Town of Lewisboro Planning Board
FROM:	Lewisboro Conservation Advisory Council
SUBJECT:	Gardner Residence, 23 Waccabuc Road, Goldens Bridge, NY 10526
DATE:	February 8, 2022

The Conservation Advisory Council (CAC) has reviewed the materials submitted by the applicant for the construction a pool, fire pit and pavers. The new construction is within the wetland

The CAC commends the applicants for the various changes in the plan to minimize the impact on the wetland and also for supplying the requested information. The wetland mitigation consists of a planting of a meadow seed mix in an area very close to the wetland. In order to preserve that effectiveness of the mitigation both for now and in the future, the CAC would like to see the area both marked as a no-mow area and delineated in some way by rocks or other material. In areas that are rain gardens, the CAC would like the planting of shrubs to be considered as a way of providing better effectiveness over time.

#### TOWN OF LEWISBORO Westchester County, New York

CLEWISBORO CLEWISBORO CLEWISBORO NEW ORK NEW

Tel: (914) 763-3060 Fax: (914) 875-9148 Email: jangiello@lewisborogov.com

February 1, 2022

**Building Department** 

South Salem, New York 10590

79 Bouton Road

Ms. Janet Andersen, Chair Town of Lewisboro Planning Board

Re: Cal#70-21WP Gardner Addition/ Pool/Patio, 23 Waccabuc Rd., sheet 0012, block 11360, lot 012

Dear Ms. Andersen and Members of the Board,

I have reviewed the plans from Robert J. Eberts, R.A. latest revision dated 11/14/2021, as well as memos from Jan K. Johannessen, AICPI and Joseph M. Cermele, P.E. dated 11/12/21 and 12/16/21.

I have the following comments:

- 1. The project is zoning compliant.
- 2. I will seek specific pool barrier details during my building code compliance review.

Please do not hesitate to contact me with any questions.

Sincerely,

Joseph Angiello Building Inspector

CROSS RIVER ARCHITECTS, LLC ROBERT J. EBERTS, R.A. PRINCIPAL ARCHITECT	<ul> <li>DATE: January 21, 2022</li> <li>TO: Hon. Janet Andersen, Chairwoman and Members of the Planning Board Town of Lewisboro 79 Bouton Road South Salem, NY 10590</li> <li>FROM: Bob Eberts Cross River Architects, LLC</li> <li>RE: 23 Waccabuc Road Sheet 12, Block 11360, Lot 12 Application for Wetland Activity Permit and Stormwater Management Permit</li> </ul>
	Dear Chairwoman Andersen and Members of the Planning Board:We are pleased to submit three (4) copies of the following revised drawings and reports in support of this application by Todd and Laura Gardner, the owners of the property located at 23 Waccabuc Road for Wetlands and Stormwater Management Permits:Drawing No.: Drawing Title: Dwg. S-1Dwg. S-1Site PlanDwg. S-2Enlarged Site PlanRevision Date Jan 21,2022 Dwg. S-3DetailsDwg. S-4Location PlanRevision Date Jan 21,2022 Dwg. C-101Stormwater Management PlanRevision Date Jan 21,2022 Dwg. C-111Erosion & Sediment Control PlanDwg. C-112Construction DetailsRevision Date Jan 21,2022 Dwg. C-112Revision Date Jan 21,2022Dwg. C-112Erosion & Sediment Control PlanRevision Date Jan 21,2022 Dwg. C-112Revision Date Jan 21,2022Dwg. C-112Construction DetailsRevision Date Jan 21,2022Revision Date Jan 21,2022Dwg. C-112Construction DetailsRevision Date Jan 21,2022Dwg. C-112Construction DetailsRevision Date Jan 21,2022Dwg. C-112Construction DetailsRevision Date Jan 21,2022The comments that were received at the Planning Board meeting of December 21, 2021 are in italics below, followed by the response.COMMENTS
PO Box 384 19 NO. SALEM RD. 2 <sup>nd</sup> FL. CROSS RIVER, NY 10518 914.763.5887 Email RJE@CRARCH.com	<ol> <li>Site plans have been provided by both the project Architect and Engineer. For clarity and ease of coordination, it is recommended that one uniform set of plans be submitted for engineering review, as there are discrepancies between the site plans submitted.</li> <li>Response: The drawings have been coordinated between the Architect and Engineer.</li> <li>The submitted Wetland Report must be revised to contain the information required, under Sections 217-5 and 6 of the Town's Wetland Ordinance.</li> <li>Response: A revised wetland report is attached.</li> <li>As previously requested, the applicant shall develop a Wetland Mitigation Plan, which provides, at a minimum, mitigation at a ratio of 1:1 (for every s.f. of wetland or wetland buffer disturbance proposed, an equal or greater amount of mitigation shall be provided). Reference is made to the Town's mitigation area of 8,600 s.f., no wetland mitigation is provided.</li> </ol>

<u>Response</u>: With the updated plans, the disturbance area within the Town's 150-foot wetland buffer is calculated to be 11,900 square feet. The increase in the proposed disturbance is as a result of the small shift in the location of the proposed bioretention facility and the inclusion of all of the proposed erosion and sediment control measures within the limits of disturbance. A proposed mitigation area is depicted on drawing S1 and C-101. The mitigation area covers 12,425 square feet, for a ratio of mitigation to wetland buffer disturbance of 1.04:1. Within the mitigation area, it is proposed to remove the plentiful and invasive Japanese Barberry and Multiflora Rose and overseed the area with a conservation seed mix. The seed mix that is proposed is the Ernst Seeds FACW Wetland Meadow Mix. The composition of the mix is listed on sheet C-101.

4. As previously requested, the plan shall illustrate and identify the location, specie type and diameter at breast height (dbh) of all trees with a dbh of 8 inches or greater and located within the limits of disturbance and 25 feet beyond. Indicate trees to be removed and/or protected.

<u>Response</u>: The attached survey from Paul Rowan of Rowan Land Surveying shows all trees with a diameter at breast height of 8" or more. Three trees are proposed to be removed, two maple trees and one apple tree.

5. As previously requested, the applicant shall perform deep and percolation soil testing in the vicinity of the proposed mitigation system to be witnessed by the Town Engineer. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.

<u>Response</u>: We will perform the deep hole soil testing when the weather conditions permit. In that the modeling of the stormwater runoff conveyed to both the proposed bioretention facilities do not include an exfiltration rate, we respectfully request that the soil percolation testing not be required.

6. We note that the area of land disturbance is inconsistently referenced on the plans. The limits of disturbance shall be updated to include all proposed work. Proposed erosion controls must be located within the limits of disturbance.

<u>Response</u>: The area of land disturbance is shown on drawing C-102, Erosion and Sediment Control Plan. The land disturbance area, adjusted as noted above, is calculated to be 11,900 square feet. All of the proposed work, including the erosion and sediment controls that are proposed, are within the depicted limits of disturbance.

7. As previously requested, the plan shall demonstrate compliance with all applicable Westchester County Department of Health (WCDH) separation distance requirements between septic, wells, stormwater, pools, etc.

<u>Response</u>: The proposed Bio-Retention Facility #2 lies more than 50 feet downgradient from the septic system. This is in accordance with the minimum separation distance with the Westchester County Department of Health Rules and Regulations. In addition, the proposed bioretention facility#1, which will receive only roof and pool patio runoff, exceeds the 50-foot minimum separation distances in accordance with *Table 1- Separation Distances from Wastewater Sources of the WCHD Rules and Regulations and Table 1 - Required Minimum Separation Distances to Protect Water Wells From Contamination* of the New York State Department of Health Part 5, Subpart 5-1 Standards for Water Wells - Appendix 5B, which requires a separation distance of at least 50 feet for surface water recharge absorption system with no automotive-related wastes, which would include the roof runoff and pool patio runoff.

Also, the building addition and pool are located more than 10 feet from the existing well in accordance with Section 8.0 – Private Drilled Wells of the WCHD Rules and Regulations.

8. As previously requested, identify the location for temporary construction access; illustrate a stabilized construction access drive and provide a detail.

<u>Response</u>: The temporary construction access will be off the existing driveway. A stabilized construction entrance to access the construction area is shown on sheet C-102. The detail for this erosion control measure is on sheet C-111.

9. As previously requested, the plan shall illustrate the location and connection of all existing and proposed roof drains and shall identify the size, slope, and material of all proposed drainage pipe. Provide details and include outlet protection.

<u>Response</u>: The location of all proposed storm drainage pipes is shown on sheet C-101. The Storm Drainage Pipe Table on that sheet identifies the size and slope of all proposed drainage pipes. Materials for the storm drainage pipes are found in the notes on sheet C-101. The details for the storm drainage system are shown on sheet C-112.

10. Provide elevations associated with the proposed bioretention garden details. The depth of the various layers shall be specified as opposed to a range. Coordinate between the details and the Stormwater Pollution Prevention Plan (SWPPP).

<u>Response</u>: Elevations for the bioretention facilities are shown on sheet C-101 and the detail for both on sheet C-112.

11. Provide spot grades for both rip-rap overflow spillway locations for the proposed rain garden and bio-retention garden.

<u>Response</u>: Spot grades for the bioretention facilities are shown in detail on sheet C-101.

12. Please add the overflow weir to the model for the rain garden.

Response: An overflow weir has been added to both the bioretention facilities.

13. Within the WQv calculations, the filter depth for the rain garden bioretention garden shall be 2½ feet, not 4 feet, as shown. It appears that the reference to "WQv Calculated" should read as "WQv Provided".

<u>Response</u>: The filter depth (i.e., planting soil mix) for both bioretention facilities is to be 3 feet.

14. Topography is taken from Westchester County GIS; as previously requested, survey topography shall be utilized for the design.

<u>Response</u>: The site plans submitted herein are drawn on the survey drawing prepared by Paul Rowan of Rowan Land Surveying, PLLC of Garrison, New York. Contours are provided on a one-foot interval.

15. As previously requested, the names of the adjacent property owners and the location of any neighboring driveways, structures, buildings, wells, and septic areas shall appear on the plan.

<u>Response</u>: Drawing S-4 – Location plan was added to show the location of the subject property and proposed work as well as the neighboring properties and the location of their respective driveways, structures, buildings, wells and septic areas. No adjacent structure, well or septic area is located closer than 200' to any proposed disturbance.

Thank you for your time in review this submission.



	FACW Wetland Meadow Mix		FROM		St
	Mix Composition 29.8% Carex vulpinoidea, BA Ecotype (Eox Sedae, BA Ecotype)	Key #	Grnd.	Invert	t
	21.2% Elymus virginicus, PA Ecotype (Virginia Wildrye, PA Ecotype)	From	Elev.	Elev.	
	11.0% Carex lupulina, PA Ecotype (Hop Sedge, PA Ecotype) 11.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)	Key A-4	390.30	389.22	K
	8.5% Carex Iurida, PA Ecotype (Lurid Sedge, PA Ecotype)	Key A-3 Key A-2	390.30	388.94	K
	4.0% verbena nastata, PA Ecotype (Blue Vervain, PA Ecotype) 3.0% Juncus effusus (Soft Rush)				1
	2.0% Asclepias incarnata, PA Ecotype (Swamp Milkweed, PA Ecotype)	Key A-7	390.30	389.22	K
	2.0% Heliopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype) 1.0% Bidens cernua, PA Ecotype (Nodding Bur Marigold, PA Ecotype)	Key A-6	390.30	389.12	K
	1.0% Onoclea sensibilis (Sensitive Fern)	Key A-5	390.30	500.95	
	0.8% Helenium autumnale, PA Ecotype (Common Sneezeweed, PA Ecotype)	Key B-4	386.50	384.92	K
	0.8% Sisyrinchium angustifolium (Narrowleaf Blue Eyed Grass) 0.7% Zizia gureg (Golden Alexanders)	Key B-3	386.00	384.33	K
	0.3% Aster novae-angliae, PA Ecotype (New England Aster, PA Ecotype)	Key B-2	385.80	384.10	K
	0.3% Aster prenanthoides, PA Ecotype (Zigzag Aster, PA Ecotype) 0.3% Eupatorium fistulosum PA Ecotype (Joe Pye Weed PA Ecotype)	Key B-7	387.50	385.92	K
	0.3% Lobelia siphilitica, PA Ecotype (Great Blue Lobelia, PA Ecotype)	Key B-6	387.50	385.92	K
	0.3% Scirpus cyperinus, PA Ecotype (Woolgrass, PA Ecotype) 0.2% Aster puniceus. PA Ecotype (Purplestem Aster. PA Ecotype)	Key B-5	387.25	385.50	K
	0.2% Aster umbellatus, PA Ecotype (Flat Topped White Aster, PA Ecotype)	Koy C 2	296 15	201 22	V
	0.2% Penthorum sedoides, PA Ecotype (Ditch Stonecrop, PA Ecotype) 0.2% Solidago rugosa, PA Ecotype (Wrinkleleaf Goldenrod, PA Ecotype)	Key C-2	380.13	304.33	
	0.1% Mimulus ringens, PA Ecotype (Square Stemmed Monkeyflower, PA Ecotype)				
	Item Number: ERNMX-122 (Product Categories:Wet Meadows & Wetlands)				
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## Concrete Washout Area

#### NOTES:

1. Concrete washout areas shall be installed prior to concrete placement of on-site. The concrete washout area shall be entirely self-contained. 2. The contractor shall submit the design, location and sizing of the concrete washout area(s) with the project's erosion and sedimentation control plan and shall be approved by the engineer. Location: Washout area(s) are to be located at least 50 feet from any stream, wetland, storm drains, or other sensitive resource. The flood contingency plan must address the concrete washout if the washout is to be located within the floodplain Size: the washout must have sufficient volume to contain all liquid and concrete waste generated by washout operations including, but not limited to, operations associated with grout and mortar.

3. Surface discharge is unacceptable. Therefore, hay bales or other control measures, as approved by the engineer, should be used around the perimeter of the concrete washout area for containment.

4. Signs should be placed at the construction entrance, at the concrete area(s) and elsewhere as necessary to clearly indicate the location of the concrete washout to operators of concrete trucks and pump rigs. Washout area(s) should be flagged with safety fencing or other approved method.

5. Washout area(s) are to be inspected at least once a week for structural integrity, adequate holding capacity and check for leaks, tears or overflow. (As required by the construction site environmental inspection report, washout areas should be checked after heavy rains.)

6. Hardened concrete waste should be removed and disposed of when the waste has accumulated to half the concrete washout's height. The waste can be stored at an upland location, as approved by the engineer. All concrete waste shall be disposed of in a manner consistent with all applicable laws, regulations and auidelines.

7. Payment for this item is to be included under the general cost of the work for the project, including site restoration.





## <u>Civil engineer</u> : Alan L. Pilch ALP Engineering & Landscape Architecture,

P.O. Box 843, Ridgefield, CT 06877 162 Falls Road, Bethany, CT 06524 P.E. #80167 C. of A. #0016331 Tel: (475) 215-5343

DRAINAGE AREA I ACRE	
D FROM DETAILS PROVIDED BY: USDA – NRCS, ORK STATE DEPARTMENT OF TRANSPORTATION, ATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, STATE SOIL & WATER CONSERVATION, COMMITTEE	STONE & BLOCK DROP INLET



1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.

2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.

3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING (WHICH IS PREFERRED) OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

4. SEE SPECIFICATIONS (THIS MANUAL) FOR INSTALLATION OF SILT FENCE.





Alan L. Pilch ALP Engineering \$ Landscape Architecture, PLLC P.O. Box 843, Ridgefield, CT\_06877 162 Falls Road, Bethany, CT-06524 P.E. #80167 C. of A. #0016331 Tel: (475) 215-5343



D=INSIDE DIAMETER, SPAN, OR RISE O.D.=OUTSIDE BARREL DIAMETER, SPAN OR RISE H.D.=OUTSIDE DIAMETER, SPAN, OR RISE @ BELL OR BAND W=H.D. + 2.0' - FOR 48" OR SMALLER DIAMETER, SPAN, OR RISE W=H.D. + 2.5' - FOR GREATER THAN 48" DIAMETER, SPAN, OR RISE

## NOTES:

1. FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE: A. EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH. B. CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.

- 2. TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES: A. FOR ALL PVC PIPE AND CONDUIT INSTALLATION. B. WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
- C. WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM. 3. FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.

4. SELECT BEDDING - SHALL CONSIST OF A BED OF PROPERLY COMPACTED GRANULAR BEDDING MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) HAVING A COMPACTED THICKNESS OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE OR CONDUIT AND EXTENDING AROUND THE PIPE OR CONDUIT FOR AT LEAST 30% OF ITS DIAMETER OR RISE. THE LAYER OF BEDDING MATERIAL SHALL BE SHAPED TO FIT THE PIPE OR CONDUIT FOR AT LEAST 15% OF THE OUTSIDE DIAMETER OR RISE OF THE PIPE OR CONDUIT AND SHALL HAVE RECESSES SHAPED TO RECEIVE THE BELL OF BELL AND SPIGOT PIPE. SAND BEDDING SHALL BE CLEAN, WELL-GRADED SAND CONSISTING OF HARD, DURABLE PARTICLES FREE FROM LUMPS OF CLAY, LOAM AND ALL OTHER DELETERIOUS SUBSTANCES. CRUSHED STONE BEDDING SHALL BE WELL-GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C-33, SIZE NO. 67.

5. STANDARD BACKFILL - SHALL CONSIST OF ON-SITE MATERIAL (EARTH) APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SHOULD THERE BE A DEFICIENCY OF PROPER ON-SITE MATERIAL FOR BACKFILLING, THE CONTRACTOR SHALL FURNISH, PLACE AND COMPACT ADDITIONAL PROPER BACKFILL MATERIAL.

6. SELECT BACKFILL - SHALL CONSIST OF GRANULAR MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SAND SHALL CONSIST OF CLEAN, WELL GRADED, HARD, DURABLE PARTICLES, FREE OF LUMPS OF CLAY, LOAM AND ALL OTHER DELETERIOUS SUBSTANCES. CRUSHED STONE SHALL CONSIST OF WELL GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C-33, SIZE NO. 67.

7. BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL SHALL THEN BE PLACED AND COMPACTED IN MAXIMUM TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES.

CONSULTANTS: ARCHITECT: BOB EBERTS Cross River Architects, P.O. Box 384 19 North Salem Road Cross River, NY 10518 Tel: 914-763-5887 Cell: 914-494-7692 ENVIRONMENTAL O Evans Associates Envir 162 Falls Road Bethany, CT 06524 Tel: (203) 393-0690 SURVEYOR: Paul Rowan	LLC CONSULTANT ronmental Consu	: Ilting, Inc.
Paul Rowall         Rowan Land Surveying         333 Old Albany Post Re         Garrison, NY 10524         Tel: (203) 661-9748         ISSUED:         Rev. layout as per arc         plans         Rev. as per Planning         Town consultant comp	, P.C. bad hitect's 11, Board & 01, ments 01,	/29/2021 /21/2022
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SEQUENCE OF CONSTRUCTION

- 1. NO WORK SHALL BEGIN ON SITE UNTIL A BUILDING PERMIT FROM THE TOWN OF LEWISBORO BUILDING DEPT. HAS BEEN ISSUED AND POSTED ON SITE. CALL 811 CALL BEFORE YOU DIG. MAP ALL UNDRGROUND UTILITIES IN AREA OF DISTURBANCE.
- EROSION CONTROL WORK AS DESCRIBED IN THE APPROVED PLANS SHALL BE IN 2 PLACE PRIOR TO DISTURBANCE OF ANY EARTH. INSTALL ALL NECESSARY TEMPORARY BARRICADES AND FENCING FOR 3.
- PROTECTION OF THE SEPTIC SYSTEM AND WELL. PROTECT ALL LANDSCAPING TO REMAIN IN THE AREA OF DISTURBANCE. 4. LOCATE CONSTRUCTION DUMPSTER IN LOCATION APPROVED IN ADVANCE BY THE OWNER.
- REMOVE TREES, SHRUBS AND OTHER PLANTINGS AS INDICATED IN THE 5 DRAWINGS COMPLETELY FROM SITE IN ACCORDANCE WITH TOWN REGULATIONS. 6. REMOVE EXISTING DECK. LEAVE GRAVEL UNDER DECK IN PLACE TO ACT AS
- STABALIZED CONSTRUCTION ACCESS. 7. STRIP AND STOCKPILE ALL TOPSOIL FROM THE AREA OF THE POOL AND ADDITION
- AND STOCKPILE FOR LATER USE. SURROUND THE STOCKPILE WITH HAY BALES. 8. ROUGH GRADE THE SITE TO THE APPROXIMATE GRADES INDICATED ON THE DRAWINGS AND EXCAVATE FOR AND INSTALL THE POOL. REMOVE EXCESS FILL FROM SITE
- 9. EXCAVATE FOR THE FOUNDATION OF THE BUILDING TO LEVELS INDICATED. BACKFILL AFTER FOUNDATION HAS BEEN COMPLETED. 10. EXCAVATE FOR AND INSTALL ALL STORM DRAINAGE BASINS, YARD DRAINS AND
- PIPING AS INDICATED ON THE DRAWINGS. 11. EXCAVATE FOR AND INSTALL ALL UNDERGROUND UTILITIES. 12. AFTER BUILDING IS FRAMED, INSTALL PATIOS, WALKS AND SECTION OF
- DRIVEWAY. 13. COMPLETE BUILDING CONSTRUCTION.
- 14. SPREAD STOCKPILED TOPSOIL TO DEPTHS INDICATED ON DRAWINGS. AFTER SIDING AND ROOFING HAS BEEN COMPLETED, INSTALL LANDSCAPING AND OTHER PLANTINGS PER DRAWINGS. WATER DAILY FOR A MINIMUM OF 60 DAYS. 15. CLEAN ALL STORM DRAINAGE BASINS AND YARD DRAINS.
- 16. BROOM CLEAN DRIVEWAY AND REMOVE ALL TEMPORARY CONSTRUCTION BARRIERS. REMOVE DUMPSTER.

-A20

#MI-A21

WB-N.Y.S.D.E.C.

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### WETLAND DELINEATION REPORT

November 24, 2020, revised January 14, 2022

PROPERTY: Gardner Property at 23 Waccabuc Road Town of Lewisboro (Hamlet of Goldens Bridge) Westchester County, New York

**REPORT BY:** Evans Associates Environmental Consulting, Inc.





#### **INTRODUCTION**

DATE:

Wetlands and watercourses on the above-captioned property were delineated in accordance with Chapter 217, Wetlands and Watercourses, of the Code of the Town of Lewisboro, Article 24 (New York State Freshwater Wetlands Act) of the New York State Environmental Conservation Law (ECL), and the technical criteria in the 1987 Army Corps of Engineers (ACOE) Wetland Delineation Manual (TR-Y-87-1) as modified by the 2012 Regional Supplement for the Northcentral and Northeast Region (TR-12-1). The field delineation was conducted on November 4, 2020 by a Certified Professional Wetland Scientist and a Certified Professional Soil Scientist of Evans Associates Environmental Consulting, Inc. The temperature on the day of the site visit was ~58°F and skies were mostly sunny. Some vegetation data that were collected on a previous site visit, October 18, 2018, are listed in this report.

The approximately 6-acre subject property is located north of Waccabuc Road. The residential parcel is mainly wooded and contains a residence and driveway, and portions of a wetland and a watercourse.

The existing conditions of the wetlands and uplands on the property are discussed below, followed by a discussion of the regulatory jurisdictions of the wetlands and watercourse. Photos were taken on the day of the 2020 site visit.

162 Falls Road Bethany, CT 06524 Tel: 203.393.0690

#### **EXISTING CONDITIONS**

#### Wetlands

The wetland on the property is located to the north of the residence and uplands on the property. The wetland comprises a mixture of forested, scrub-shrub, and emergent wetland types. The wetland on the property is part of a larger wetland, DEC-regulated Freshwater Wetland F-6, that continues off site to the north and east. A watercourse flows through the wetland from southwest to northeast.



On-site wetlands with watercourse, facing approximately east.

The wetland/upland boundary on the subject property was flagged using sequentially numbered, orange ribbon flagging depicting the words "Wetland Boundary." Wetland flags were numbered A-1 through A-26 from east to west.

Vegetation in the wetlands includes red maple (Acer rubrum) and American elm (Ulmus americana) trees and saplings, winterberry (Ilex verticillata), spicebush (Lindera benzoin), and Japanese barberry (Berberis thunbergii) shrubs, dewberry (Rubus sp.) and poison ivy (Toxicodendron radicans) vines, along with Japanese stilt-grass (Microstegium vimineum), skunk cabbage (Symplocarpus foetidus), cinnamon fern (Osmunda cinnamomea), royal fern (Osmunda regalis), clearweed (Pilea pumila), wood reed grass (Cinna arundinacea), New York fern (Thelypteris noveboracensis), iris (Iris sp.), avens (Geum sp.), wool grass (Scirpus cyperinus), and green ash (Fraxinus pennsylvanica) seedlings.



On-site wetlands with watercourse, facing approximately west.

The wetland areas are mapped as Natchaug muck and Sun loam.<sup>1</sup> Natchaug muck is a very deep, very poorly drained soil that is formed in highly decomposed woody and herbaceous organic materials in depressions. Sun loam is a poorly drained mineral soil that is very deep to bedrock, and is found in low-lying areas, in depressions and along drainageways.

The wetland and watercourse on the property are sustained by the interception of the groundwater table. These areas also receive runoff from upgradient areas. Evidence of wetland hydrology includes flowing or standing water, saturated soils, drainage patterns, and the presence of seeps.

<sup>1</sup> Soils information taken from: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/.

#### Uplands

The uplands on the property are mainly wooded with an abundance of Japanese barberry shrubs. Some landscaped areas are located immediately adjacent to the residence and driveway.

Vegetation in the wooded uplands includes American beech (*Fagus grandifolia*), Norway maple (*Acer platanoides*), sugar maple (*Acer saccharum*), and black cherry (*Prunus serotina*) trees and saplings, Japanese barberry, multiflora rose (*Rosa multiflora*), and winged euonymous (*Euonymous alatus*) shrubs, Japanese honeysuckle (*Lonicera japonica*) and poison ivy vines, along with Japanese stilt-grass, dock (*Rumex sp.*), aster (*Eurybia sp.*), and pachysandra (*Pachysandra terminalis*).

Soils in the uplands are mapped as Paxton loam. This soil is well drained and deep to bedrock, but moderately deep to a dense layer. Paxton loam is found on hilltops and hillsides, and is formed in glacial till.

#### **REGULATORY JURISDICTIONS**

The wetland, including the watercourse, is regulated under the jurisdiction of the Town of Lewisboro and the New York State DEC. In addition to regulating the wetland, the Town of Lewisboro also regulates a 150-foot wetland buffer; the DEC regulates a 100-foot wetland Adjacent Area. The site is also under the jurisdiction of the New York City Department of Environmental Protection (DEP) because it is part of the Croton River Basin. The wetland, including the watercourse, is also federally regulated by the ACOE. There is no wetland buffer regulated under federal jurisdiction.

#### PROPOSED CONDITIONS AND MITIGATION

The current plan calls for disturbance area within the Town's 150-foot wetland buffer of 11,890 square feet. The proposed disturbance is the result of construction of an addition to the existing residence, as well as construction of a pool and deck in the side yard. The calculated disturbance also includes the proposed stormwater management measures and all of the proposed erosion and sediment control measures within the regulated wetland buffer.

The proposed structural improvements to the property are within areas currently maintained as lawn surrounding the residence or the existing deck. There are currently no stormwater management practices on the property, and the majority of the site between the road and the stream (other than the landscaped area immediately around the residence) is thickly vegetated with invasive shrubs and grasses.

A proposed mitigation area is depicted on drawing C-101. The mitigation area covers 12,425 square feet, for a ratio of mitigation to wetland buffer disturbance of 1.04:1. Within the mitigation area, it is proposed to remove the plentiful and invasive Japanese Barberry and Multiflora Rose and overseed the area with a conservation seed mix. The seed mix that is proposed is the Ernst Seeds FACW Wetland Meadow Mix. The composition of the mix is listed on sheet C-101.

## PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE AVAILABLE. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS. PLAN PREPARED PURSUANT TO SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. SUBJECT TO THE FINDINGS OF AN UP TO DATE TITLE SEARCH. UNLESS THE SURVEYOR'S ORIGINAL SIGNATURE AND SEAL APPEARS RAISED ON THIS MAP, IT SHOULD NOT BE CONSIDERED A TRUE AND CORRECT COPY OF THE SURVEYOR'S ORIGINAL WORK AND OPINION.





LEG	<u>END</u>
IRON	ROD

PROPERTY LINE
OVERHEAD WIRES
STONE WALL
WETLAND LINE
TREE LINE
POINT OF BEGINNING
POINT OF BEGINNING
EDGE OF ASPHALT
CONCRETE
STONE RETAINING WALL
CONCRETE RETAINING WA
WOOD RETAINING WALL
FINISHED FLOOR ELEVATION
#### STORMWATER MANAGEMENT REPORT FOR 23 WACCABUC ROAD GOLDENS BRIDGE, NEW YORK Date: January 21, 2022 (revised)

#### PREPARED BY: ALAN L. PILCH, PE, RLA ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC

#### Report Contents:

- 1) Existing Site Conditions
- 2) Stormwater Management Design Criteria and Plan
- 3) Stormwater Analysis
- 4) Stormwater Modeling Peak Rate Attenuation

Figures Supporting Documentation Appendix A Hydrographs and Routings

This Stormwater Management Report is submitted in support of the application of the owner of the above-noted property for the construction of a pool, pool patio, deck and house addition on the subject property. The site modifications include: (i) construction of a 511 square foot footprint addition to the existing house, (ii) removal of an existing deck from the north side of the house, (iii) construction of a new 867 s.f. deck on the northwest side of the house, and (iv) construction of a 15'x30' in ground pool and surrounding bluestone deck to the west of the existing house.

#### 1) <u>Existing Site Conditions</u>:

The subject property is 259,960 square feet (5.968 acres) in size and is located on the north side of Waccabuc Road (see **Figure 1**). There is an existing 2 story residence on the lot, as well an existing deck and shed. The property also contains some areas of the typical residential landscape of mown lawn and shrubs, although much of the lot is wooded or is brush.

The property is located in the Croton River East Basin watershed. The majority of the runoff from the property is conveyed generally to the north and east towards New York State Freshwater Wetland F-6 and an unnamed watercourse which discharges into the New Croton Reservoir.

*Soils* - According to the Web Soil Survey, the soils in the area of the proposed work are mapped as PnD - Paxton fine sandy loam, 15 to 25 percent slopes (see **Figure 2**). The wetland soils are mapped as NcA—Natchaug muck, 0 to 2 percent slopes.

According to the Web Soil Survey, Paxton fine sandy loam soils are very deep, well drained, and consists of fine sandy loam and gravelly fine sandy loam to a depth of 65 inches. These soils are classified as hydrologic soils group C. These soils typically have a depth to a restrictive feature

Stormwater Management Report for 23 Waccabuc Road January 21, 2022 Page 2

which is 20 to 39 inches in depth. Natchaug muck soils consist of muck to a depth of about 31", then silt loam and fine sandy loam to a depth of 79". The water table is near the surface year round. This soil is classified as being in hydrologic soils group D.

#### 2) <u>Stormwater Management Design Criteria and Plan</u>

Since the runoff from the entire property drains to the north toward the wetland (regulated by the Town and State of New York) and an unnamed watercourse within the wetland, a design point along this watercourse just west of the eastern property line was selected since all of the runoff from the existing developed and the new areas of the property to be modified will be conveyed to this point. In this way, the modeling would quantify and compare the existing condition runoff to the future condition runoff at the design point.

#### 3) <u>Stormwater Analysis</u>

Existing Condition - In the existing condition, one drainage area was defined.

*Existing Condition Drainage Area* #1 (*XDA-1*) is 112,337 square feet in size, consists of 6,406 square feet of impervious surfaces (house and driveway, as well as walkway to the front door of the house), with the remainder being mostly woods and some lawn. A curve number of 73 was calculated for this drainage area. See **Figure 3** for the drawing depicting existing drainage area XDA-1 and the location of the design point.

<u>Future Condition</u> – In the future condition, three drainage areas were defined, as follows:

*Future Condition Drainage Area* #1 (*FDA-1*) is 4,333 square feet in size and consists of the pool and pool patio, the canopy over the new deck, and the proposed Bioretention Facility #1 for treatment purposes. A curve number of 81 was calculated for this drainage area.

*Future Condition Drainage Area #2 (FDA-2)* is 3,300 square feet in size and consists of the new house addition, a portion of the existing driveway, and the proposed Bioretention Facility #2 for treatment purposes. A curve number of 94 was calculated for this drainage area.

*Future Condition Drainage Area* #3 (*FDA-3*) is 104,744 square feet in size and consists of the remainder of the property that contributes runoff to the design point. A curve number of 73 was calculated for this drainage area.

With the proposed construction, the amount of impervious surfaces to the design point will increase from 6,406 square feet to 8,735 square feet, an increase of 2,329 square feet. The amount of semi-pervious surfaces (i.e., deck) will decrease from 1,298 s.f. to 1,042 s.f., a decrease of 256 square feet.

Stormwater Management Plan - The stormwater management plan for the property has been designed to meet the requirements of the Town of Lewisboro. To this end, the project will provide

Stormwater Management Report for 23 Waccabuc Road January 21, 2022 Page 3

peak rate attenuation for all storm events up to the 25-year storm in two bioretention facilities. The water quality volume from the new construction (pool and pool terrace as well as the house addition) will also be treated (see Tables 2 and 3 in the supporting documentation section of this report). It is also proposed to direct at least 6" of pool drawdown water to proposed subsurface chambers, as is described below.

The runoff from the pool patio will be directed to slot drains which will surround the entire pool patio. Runoff from the canopy over a portion of the deck will be directed into roof drain leaders. A 6" diameter PVC pipe will convey the runoff into the bioretention facility which will be located about 90 feet to the west of the pool patio.

The runoff from the house addition will be conveyed from the roof drain leaders to a storm drainage pipe to Bioretention Facility #2. Bioretention Facility #2 will be located about 65 feet to the northeast from the house addition.

#### 4) <u>Stormwater Modeling – Peak Rate Attenuation</u>

The peak rate of runoff has been calculated for the 1-year through 25-year storm events. The analysis was performed in accordance with the methodology of the United States Department of Agriculture Soil Conservation Service (now Natural Resources Conservation Service) publication *Urban Hydrology for Small Watersheds*, *Technical Release 55* (TR-55), 1986. To calculate the peak rate of runoff, the following information used in the analysis: (i) Runoff depths for the 24-hour design storms used in the calculations were as follows: 2.81" for the one-year storm, 5.06" for the ten-year storm, and 6.36" for the 25-year storm, based on the data from the Northeast Regional Climate Center for the property; (ii) A 24-hour rainfall duration was used in calculating the hydrographs, (iii) a Type III storm distribution was used in the analysis. Finally, hydrographs and pond routings were created using the computer program *HydroCAD* (ver. 10.00-25), by HydroCAD Software Solutions, LLC.

Two bioretention facilities will be installed to provide peak rate attenuation and water quality improvement of the runoff. The analysis shows that for all modeled storm events to the design point, the peak rate of runoff is less than or equal to the existing peak rate of runoff.

**Table 1**, Peak Rates of Runoff summarizes the peak rates of flow at the design point in the existing and future conditions for the modeled storms.

Stormwater Management Report for 23 Waccabuc Road January 21, 2022 Page 4

(un nows in cubic receiper second)					
Drainage Area/ Storm Interval	1 year	2 year	10 year	25 year	
Existing Condition					
Flows to Design Point	1.47	2.30	5.11	7.50	
Future Condition					
Flows to Design Point	1.38	2.18	4.95	7.32	

## Table 1. Peak Rates of Runoff to Design Point

(all flows in cubic feet per second)

For pool drawdown purposes, 4 Cultec 280HD chambers are to be installed to the north of the proposed pool patio. Six inches of pool drawdown would result in a removal of (15 feet x 30 feet x 6") 225 cubic feet of water from the pool. The 4 Cultec 280HD chambers would have a storage volume of 335.4 cubic feet, well in excess of the drawdown volume.

Soil testing for the proposed stormwater management practices and the chambers for the pool drawdown will be conducted when the weather is more favorable and the ground surface is not frozen.

#### 5) <u>Summary</u>:

The proposed stormwater management facilities to consist of two bioretention facilities which will provide peak rate attenuation of runoff across all of the modeled storm events. The installation of 4 Cultec 280HD chambers will accommodate the entire volume from 6" of pool drawdown within the chambers.

# **FIGURES**



Figure 1 SITE LOCATION MAP Scale: Not to Scale



LEGEND: PnD—Paxton fine sandy loam, 15 to 25 percent slopes NcA—Natchaug muck, 0 to 2 percent slopes

Figure 2 **SOILS MAP** Scale: Not to Scale





SUPPORTING DOCUMENTATION

#### Table 1 23 Waccabuc Road WATER QUALITY VOLUME (WQv) CALCULATION

Under the Watershed Regulations, the requirement is to capture and treat the runoff from the 1-year, 24 hour storm event which is equal to 2.81 inches of precipitation, or the water quality volume, whichever is greater. The following calculates the treatment volume of runoff from the 1-year storm (using TR-55 in accordance with the New York Stormwater Management Design Manual) and the Water Quality Volume - 1.5" of precipitation (using the 90% Rule).

1-year, 24 hour precipitation =	2.81	inches
90% rule precipitation depth =	1.5	inches

				Runoff	1 yr, 24 hr storm	90% Rule
	Area	Area	CN	Depth	Treatment Vol.	Treatment Vol.
Drainage Area	(in sq feet)	(in acres)	Value	(inches)	(cu feet)	(cu feet)
FDA-1 TO BIORETENTION FACILITY #1					•	
Pool and Pool Patio	1,435	0.033	98			
Canopy over Deck	195	0.004	98			
Lawn/landscape, good condition, HSG C	748	0.017	74			
Woods, good condition, HSG C	1,955	0.045	70			
TOTALS / WEIGHTED CN	4,333	0.099	81	1.17	422	210
New Impervious Surfaces =	1,630	sq feet				
Existing Impervious Surfaces =	0	sq feet				
TOTAL Impervious Surfaces =	1,630	sq feet				
% Impervious =	37.6					
Rv =	0.39					
Water Quality Volume, WQv =	0.010	acre-feet	1 year storm			
Water Quality Volume, WQv =	0.005	acre-feet	90% Rule			

				Runoff	1 yr, 24 hr storm	90% Rule
	Area	Area	CN	Depth	Treatment Vol.	Treatment Vol.
Drainage Area	(in sq feet)	(in acres)	Value	(inches)	(cu feet)	(cu feet)
FDA-2 TO BIORETENTION FACILITY #2						-
House Addition Roof	511	0.012	98			
Paved parking, HSG C	2,274	0.052	98			
Lawn/landscape, good condition, HSG C	515	0.012	74			
TOTALS / WEIGHTED CN	3,300	0.076	94	2.17	596	78
New Impervious Surfaces =	511	sq feet				
Existing Impervious Surfaces =	0	sq feet				
TOTAL Impervious Surfaces =	511	sq feet				
% Impervious =	15.5					
Rv =	0.19					
Water Quality Volume, WQv =	0.014	acre-feet	1 year storm			
Water Quality Volume, WQv =	0.002	acre-feet	90% Rule			

# Table 2 23 Waccabuc Road BIORETENTION FACILITY #1 TREATMENT CALCULATIONS

Using equations provided in the 2015 New York State Stormwater Management Design Manual chapter 6, filtering systems, page 6-50 and 6-51:

#### 1. WQv Calculation:

WQv =

422 cubic feet 0.010 acre feet, or as per calculation as per calculation

#### 2. Determine Size of Bioretention Area

Using the equation, Af = (WQv)(df)/[(k)(hf+df)(tf)]

Where,

- WQv = water quality volume, in cubic feet
  - Af = surface area of filter bed in sq feet
  - df = filter bed depth in feet
  - k = coefficient of permeability
  - *hf* = average height of water above filter bed in feet
  - tf = design filter bed drain time in days

#### Notes:

Use 1.67 days for filter bed drain time for sand filters; 2 days for bioretention

Factors used for k,	sand - 3.5 feet/day
	peat - 2.0 feet/day
	leaf compost - 8.7 feet per day
	bioretention soil - 0.5 feet per day

		Coeff of	
PLANTING SOIL MIX:	<u>In %</u> Per	meabilit <u>y</u>	
Sand	80.0	3.5	
Bioretention Soil	20.0	0.5	
k value =		2.9	
Therefore, with the following:			Remarks
WQv =	0.010 acre	feet	calculated
df =	4 feet		as per Sec. 6.4.4 of 2010 SMDM
k =	2.9 feet/	day	as per Sec. 6.4.4 of 2010 SMDM
hf =	0.25 feet		as per Sec. 6.4.4 of 2010 SMDM
tf =	2 days		as per Sec. 6.4.4 of 2010 SMDM
Af =	69 sq fe	et	calculated as per equation
Bioretention filter area req'd, ABF = Bioretention filter area provided =	69 sq fe 568 sq fe	et et	required filter surface area provided surface filter area as per design

#### Table 2 23 Waccabuc Road

# BIORETENTION FACILITY #1 TREATMENT CALCULATIONS

Equations as per 2015 NYS SMDM:  $WQv \le VSM + VDL + (DP x ARG)$  VSM = ABF x DSM x nSM VDL (optional) = ABF x DDL x nDLwhere: VSM = volume of the soil media [cubic feet] VDL = volume of the gravel drainage layer [cubic feet] ARG = surface area [square feet] DSM = depth of the soil media, typically\* 1.0 to 1.5 [feet] DDL = depth of the drainage layer, minimum 0.5 [feet]DP = depth of ponding above surface, maximum 0.5 feet [feet]

nSM = porosity of the soil media ( $\geq 20\%$ )

nDL = porosity of the drainage layer ( $\geq 40\%$ )

WQv = Water Quality Volume [cubic feet], as defined in Chapter 4

		<u>Remarks</u>
Surface Area of Bioretention Facility, ABF =	568 sq feet	as per design
Depth of the Soil Media, DSM =	3 foot	as per design
Porosity of the Soil Media, nSM =	20 %	typical
Depth of the Gravel Drainage Layer =	1 foot	as per design
Porosity of the Drainage Layer, nDL =	40 %	typical
Depth of Ponding above Surface =	0.50 feet	as per design
Volume Available in Soil Media, VSM =	341 cubic feet	calculated
Volume of Gravel Drainage Layer, VDL =	227 cubic feet	calculated
WQv Calculated =	422 cubic feet	calculated
WQv <= VSM + VDL + (DP x ABF) =	852 cubic feet	calculated

Since the WQv is less than the equation above, the design is acceptable.

# Table 323 Waccabuc RoadBIORETENTION FACILITY #2 TREATMENT CALCULATIONS

Using equations provided in the 2015 New York State Stormwater Management Design Manual chapter 6, filtering systems, page 6-50 and 6-51:

#### 1. WQv Calculation:

WQv =

596 cubic feet 0.014 acre feet, or as per calculation as per calculation

#### 2. Determine Size of Bioretention Area

Using the equation, Af = (WQv)(df)/[(k)(hf+df)(tf)]

Where,

- WQv = water quality volume, in cubic feet
  - Af = surface area of filter bed in sq feet
  - df = filter bed depth in feet
  - k = coefficient of permeability
  - *hf* = average height of water above filter bed in feet
  - tf = design filter bed drain time in days

#### Notes:

Use 1.67 days for filter bed drain time for sand filters; 2 days for bioretention

Factors used for k,	sand - 3.5 feet/day
	peat - 2.0 feet/day
	leaf compost - 8.7 feet per day
	bioretention soil - 0.5 feet per day

		Coeff of	
PLANTING SOIL MIX:	<u>In %</u> Per	<u>meability</u>	
Sand	80.0	3.5	
Bioretention Soil	20.0	0.5	
k value =		2.9	
Therefore, with the following:			Remarks
WQv =	0.014 acre	feet	calculated
df =	4 feet		as per Sec. 6.4.4 of 2010 SMDM
k =	2.9 feet/	day	as per Sec. 6.4.4 of 2010 SMDM
hf =	0.25 feet		as per Sec. 6.4.4 of 2010 SMDM
tf =	2 days	5	as per Sec. 6.4.4 of 2010 SMDM
Af =	97 sq fe	eet	calculated as per equation
Bioretention filter area req'd, ABF =	97 sq fe	et	required filter surface area
Bioretention filter area provided =	529 sq fe	eet	provided surface filter area as per HydroCAD

# Table 3 23 Waccabuc Road BIORETENTION FACILITY #2 TREATMENT CALCULATIONS

Equations as per 2015 NYS SMDM:  $WQv \le VSM + VDL + (DP \times ARG)$   $VSM = ABF \times DSM \times nSM$   $VDL (optional) = ABF \times DDL \times nDL$ where: VSM = volume of the soil media [cubic feet] VDL = volume of the gravel drainage layer [cubic feet] ARG = surface area [square feet] DSM = depth of the soil media, typically\* 1.0 to 1.5 [feet] DDL = depth of the drainage layer, minimum 0.5 [feet] DP = depth of ponding above surface, maximum 0.5 feet [feet] $nSM = porosity of the soil media (\ge 20%)$ 

nDL = porosity of the drainage layer ( $\geq 40\%$ )

WQv = Water Quality Volume [cubic feet], as defined in Chapter 4

		<u>Remarks</u>
Surface Area of Bioretention Facility, ABF =	568 sq feet	as per design
Depth of the Soil Media, DSM =	3 foot	as per design
Porosity of the Soil Media, nSM =	20 %	typical
Depth of the Gravel Drainage Layer =	0.5 foot	as per design
Porosity of the Drainage Layer, nDL =	40 %	typical
Depth of Ponding above Surface =	0.50 feet	as per design
Volume Available in Soil Media, VSM =	341 cubic feet	calculated
Volume of Gravel Drainage Layer, VDL =	114 cubic feet	calculated
WQv Calculated =	596 cubic feet	calculated
WQv <= VSM + VDL + (DP x ABF) =	738 cubic feet	calculated

Since the WQv is less than the equation above, the design is acceptable.

# Table 423 Waccabuc RoadBIORETENTION FACILITY #1 VOLUME CALCULATIONS

BIORETENTION FACILITY #1			WQv =	422
Elevation	Area	Incremental Volume	Volume Sum	Volume Sum
feet	s.f.	c.f.	cu. ft.	acre-feet
386.00	403	0	0	0
386.25	484	111	111	0.0025
386.50	568	132	242	0.0056
387.00	748	329	571	0.0131

# Table 523 Waccabuc RoadBIORETENTION FACILITY #2 VOLUME CALCULATIONS

BIORETENTION	I FACILITY #2		WQv =	596
Elevation	Area	Incremental Volume	Volume Sum	Volume Sum
feet	s.f.	c.f.	cu. ft.	acre-feet
381.50	404	0	0	0
381.75	465	109	109	0.0025
382.00	529	124	233	0.0053
382.50	667	299	532	0.0122

Appendix A

Stormwater Management Report Hydrographs and Routings



**23 Waccabuc Rd SW Plan\_01-21-2022.1** Prepared by ALP Engineering & Land. Arch. PLLC HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-year	Type III 24-hr		Default	24.00	1	2.81	2
2	2-year	Type III 24-hr		Default	24.00	1	3.39	2
3	10-year	Type III 24-hr		Default	24.00	1	5.06	2
4	25-year	Type III 24-hr		Default	24.00	1	6.36	2

## **Rainfall Events Listing**

**23 Waccabuc Rd SW Plan\_01-21-2022.1** Prepared by ALP Engineering & Land. Arch. PLLC HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

# Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
0.359	74	>75% Grass cover, Good, HSG C (1S, 3S, 4S)
0.017	74	Bioretention, Use >75% Grass cover, Good, HSG C (2S)
0.004	98	Canopy over Deck, HSG B (2S)
0.024	96	Deck (use Gravel surface), HSG C (4S)
0.030	89	Gravel roads, HSG C (1S)
0.052	98	Paved parking, HSG C (3S)
0.033	98	Pool & Pool Patio, HSG C (2S)
0.255	98	Roofs, HSG C (1S, 3S, 4S)
3.350	70	Woods, Good, HSG C (1S, 2S, 4S)
1.035	77	Woods, Good, HSG D (1S, 4S)
5.159	74	TOTAL AREA

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HSG-A	HSG-B	HSG-C	HSG-D	Other	Total	Ground	Sub
(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	Cover	Nur
 0.000	0.000	0.359	0.000	0.000	0.359	>75% Grass cover, Good	
0.000	0.000	0.017	0.000	0.000	0.017	Bioretention, Use >75% Grass	
						cover, Good	
0.000	0.004	0.000	0.000	0.000	0.004	Canopy over Deck	
0.000	0.000	0.024	0.000	0.000	0.024	Deck (use Gravel surface)	
0.000	0.000	0.030	0.000	0.000	0.030	Gravel roads	
0.000	0.000	0.052	0.000	0.000	0.052	Paved parking	
0.000	0.000	0.033	0.000	0.000	0.033	Pool & Pool Patio	
0.000	0.000	0.255	0.000	0.000	0.255	Roofs	
0.000	0.000	3.350	1.035	0.000	4.385	Woods, Good	
0.000	0.004	4.119	1.035	0.000	5.159	TOTAL AREA	

# Ground Covers (all nodes)

Type III 24-hr 1-year Rainfall=2.81"

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Time span=0.00-48.00 hrs, dt=0.02 hrs, 2401 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: XDA-1 TO DESIGN	Runoff Area=112,337 sf 5.70% Impervious Runoff Depth=0.74" Flow Length=621' Tc=16.3 min CN=73 Runoff=1.47 cfs 0.160 af
Subcatchment 2S: FDA-1 TO SW PRAC	CTICE Runoff Area=4,333 sf 37.62% Impervious Runoff Depth=1.17" Tc=6.0 min CN=81 Runoff=0.13 cfs 0.010 af
Subcatchment 3S: FDA-2 TO SW PRAC	CTICE Runoff Area=3,300 sf 84.39% Impervious Runoff Depth=2.17" Tc=6.0 min CN=94 Runoff=0.19 cfs 0.014 af
Subcatchment 4S: FDA-3 TO DESIGN	Runoff Area=104,744 sf 3.98% Impervious Runoff Depth=0.74" Flow Length=626' Tc=15.8 min CN=73 Runoff=1.38 cfs 0.149 af
Reach 9R: REACH 1.1 n=0.050	Avg. Flow Depth=0.00' Max Vel=0.25 fps Inflow=0.01 cfs 0.004 af L=62.0' S=0.0968 '/' Capacity=2.07 cfs Outflow=0.01 cfs 0.004 af
Reach 10R: REACH 1.2 n=0.070	Avg. Flow Depth=0.03' Max Vel=0.17 fps Inflow=0.01 cfs 0.004 af L=330.0' S=0.0091 '/' Capacity=1.52 cfs Outflow=0.01 cfs 0.004 af
Reach 11R: REACH 2.1 n=0.050	Avg. Flow Depth=0.02' Max Vel=0.48 fps Inflow=0.08 cfs 0.008 af L=89.0' S=0.0618 '/' Capacity=1.65 cfs Outflow=0.08 cfs 0.008 af
Reach 12R: REACH 2.2 n=0.070	Avg. Flow Depth=0.11' Max Vel=0.27 fps Inflow=0.08 cfs 0.008 af L=147.0' S=0.0034 '/' Capacity=0.93 cfs Outflow=0.07 cfs 0.008 af
Pond 5P: BIORET FACILITY #1	Peak Elev=386.52' Storage=255 cf Inflow=0.13 cfs 0.010 af Outflow=0.01 cfs 0.004 af
Pond 6P: BIORET FACILITY #2	Peak Elev=382.08' Storage=278 cf Inflow=0.19 cfs 0.014 af Outflow=0.08 cfs 0.008 af
Link 7L: DESIGN POINT	Inflow=1.38 cfs 0.161 af Primary=1.38 cfs 0.161 af

Total Runoff Area = 5.159 acRunoff Volume = 0.332 afAverage Runoff Depth = 0.77"93.33% Pervious = 4.815 ac6.67% Impervious = 0.344 ac

Type III 24-hr 1-year Rainfall=2.81"

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### Summary for Subcatchment 1S: XDA-1 TO DESIGN POINT

Runoff = 1.47 cfs @ 12.25 hrs, Volume= 0.160 af, Depth= 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 1-year Rainfall=2.81"

A	rea (sf)	CN	Description						
	6,406	98	Roofs, HSC	ЭC					
	1,298	89	Gravel roads, HSG C						
	74,751	70	Woods, Go	Voods, Good, HSG C					
	22,542	77	Woods, Go	od, HSG D					
	7,340	74	>75% Gras	s cover, Go	ood, HSG C				
1	12,337	73	Weighted A	verage					
1	05,931		94.30% Pei	rvious Area					
	6,406		5.70% Impe	ervious Area	а				
Tc	Length	Slope	e Velocity	Capacity	Description				
(min)	(feet)	(ft/ft	(ft/sec)	(cfs)					
7.9	84	0.1607	0.18		Sheet Flow, A-B				
					Woods: Light underbrush n= 0.400 P2= 3.39"				
1.7	137	0.0766	5 1.38		Shallow Concentrated Flow, B-C				
					Woodland Kv= 5.0 fps				
6.7	400	0.0088	1.00	1.50	Trap/Vee/Rect Channel Flow, C-D				
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'				
					n= 0.070 Sluggish weedy reaches w/pools				
16.3	621	Total							

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#### Hydrograph Runoff 1.47 cfs Type III 24-hr 1-year Rainfall=2.81" Runoff Area=112,337 sf Runoff Volume=0.160 af 1 Flow (cfs) Runoff Depth=0.74" Flow Length=621' Tc=16.3 min **CN=73** 0-2 4 10 12 14 16 18 20 22 24 26 6 8 28 30 32 34 36 38 40 42 44 46 48 Ó Time (hours)

### Subcatchment 1S: XDA-1 TO DESIGN POINT

Type III 24-hr 1-year Rainfall=2.81"

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#### Summary for Subcatchment 2S: FDA-1 TO SW PRACTICE #1

Runoff = 0.13 cfs @ 12.09 hrs, Volume= Routed to Pond 5P : BIORET FACILITY #1 0.010 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 1-year Rainfall=2.81"

	Area (sf)	CN	Description					
*	1,435	98	Pool & Poo	l Patio, HS0	GC			
*	748	74	Bioretentior	n, Use >75%	% Grass cover, Good, HSG C			
*	195	98	Canopy ove	er Deck, HS	SG B			
	1,955	70	Woods, Go	od, HSG C				
	4,333	81	Weighted Average					
	2,703		62.38% Pervious Area					
	1,630		37.62% Impervious Area					
Г	Fc Length	Slop	e Velocity	Capacity	Description			
(mi	n) (feet)	(ft/f	t) (ft/sec)	(cfs)				
6	.0				Direct Entry,			

### Subcatchment 2S: FDA-1 TO SW PRACTICE #1



Type III 24-hr 1-year Rainfall=2.81"

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#### Summary for Subcatchment 3S: FDA-2 TO SW PRACTICE #2

Runoff = 0.19 cfs @ 12.09 hrs, Volume= Routed to Pond 6P : BIORET FACILITY #2 0.014 af, Depth= 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 1-year Rainfall=2.81"

A	rea (sf)	CN	Description				
	511	98	Roofs, HSC	ЭC			
	2,274	98	Paved park	ing, HSG C	)		
	515	74	>75% Gras	s cover, Go	ood, HSG C		
	3,300	94	Weighted Average				
	515		15.61% Pervious Area				
	2,785		84.39% Impervious Area				
Tc	Length	Slop	e Velocity	Capacity	Description		
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)			
6.0					Direct Entry,		

#### Subcatchment 3S: FDA-2 TO SW PRACTICE #2



Type III 24-hr 1-year Rainfall=2.81"

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# Summary for Subcatchment 4S: FDA-3 TO DESIGN POINT

Runoff = 1.38 cfs @ 12.24 hrs, Volume= Routed to Link 7L : DESIGN POINT 0.149 af, Depth= 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 1-year Rainfall=2.81"

	Ar	rea (sf)	CN	Description						
		4,172	98	Roofs, HSC	G C					
*		1,042	96	Deck (use (	Deck (use Gravel surface), HSG C					
		69,199	70	Woods, Go	od, HSG C					
		22,542	77	Woods, Go	od, HSG D					
		7,789	74	>75% Gras	s cover, Go	ood, HSG C				
	1	04,744	73	Weighted A	verage					
	1	00,572		96.02% Pe	rvious Area					
		4,172		3.98% Impe	ervious Area	а				
	Тс	Length	Slope	e Velocity	Capacity	Description				
(n	nin)	(feet)	(ft/ft	) (ft/sec)	(cfs)					
	7.2	79	0.1772	2 0.18		Sheet Flow, A-B				
						Woods: Light underbrush n= 0.400 P2= 3.39"				
	1.9	147	0.0680	) 1.30		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	6.7	400	0.0088	3 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D				
						Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'				
						n= 0.070				
1	5.8	626	Total							

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#### Hydrograph Runoff 1.38 cfs Type III 24-hr 1-year Rainfall=2.81" Runoff Area=104,744 sf 1 Runoff Volume=0.149 af Flow (cfs) Runoff Depth=0.74" Flow Length=626' Tc=15.8 min **CN=73** 0-2 4 10 12 14 16 18 20 22 24 26 6 8 28 30 32 34 36 38 40 42 44 46 48 Ó Time (hours)

#### Subcatchment 4S: FDA-3 TO DESIGN POINT

Inflow Area =

=

Inflow

Type III 24-hr 1-year Rainfall=2.81"

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### Summary for Reach 9R: REACH 1.1

0.099 ac, 37.62% Impervious, Inflow Depth = 0.50" for 1-year event

0.004 af

0.01 cfs @ 13.78 hrs, Volume= 0.01 cfs @ 13.89 hrs, Volume= Outflow 0.004 af, Atten= 0%, Lag= 7.0 min = Routed to Reach 10R : REACH 1.2 Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.25 fps, Min. Travel Time= 4.2 min Avg. Velocity = 0.15 fps, Avg. Travel Time= 6.7 min Peak Storage= 3 cf @ 13.82 hrs Average Depth at Peak Storage= 0.00', Surface Width= 10.09' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 2.07 cfs 10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 62.0' Slope= 0.0968 '/' Inlet Invert= 381.00', Outlet Invert= 375.00' ‡ Reach 9R: REACH 1.1 Hydrograph Inflow 0.012-Outflow 0.01 0.011 0.01 cfs Inflow Area=0.099 ac 0.011 0.01 Avg. Flow Depth=0.00' 0.01 0.009 0.009 Max Vel=0.25 fps 0.008 0.008 n=0.050 0.007 0.007 (s) 0.007 L=62.0' 0.006 **0.006 0.005** S=0.0968 '/' 0.005 0.004 Capacity=2.07 cfs 0.004 0.003 0.003 0.002 0.002 0.001 0.001 0.000 0-Ó ż 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

Time (hours)

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Reach 9R: REACH 1.1

Type III 24-hr 1-year Rainfall=2.81"

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#### Summary for Reach 10R: REACH 1.2

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.02' @ 14.64 hrs

Inflow Area = 0.099 ac, 37.62% Impervious, Inflow Depth = 0.50" for 1-year event Inflow = 0.01 cfs @ 13.89 hrs, Volume= 0.004 af Outflow = 0.01 cfs @ 15.11 hrs, Volume= 0.004 af, Atten= 14%, Lag= 73.1 min Routed to Link 7L : DESIGN POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.17 fps, Min. Travel Time= 31.7 min Avg. Velocity = 0.10 fps, Avg. Travel Time= 56.5 min

Peak Storage= 17 cf @ 14.58 hrs Average Depth at Peak Storage= 0.03' , Surface Width= 2.10' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 1.52 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 330.0' Slope= 0.0091 '/' Inlet Invert= 375.00', Outlet Invert= 372.00'

‡

0.1 0.08 0.06 0.04 0.02

0 20 40 60

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80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480

Storage (cubic-feet)

Type III 24-hr 1-year Rainfall=2.81"

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#### Summary for Reach 11R: REACH 2.1

Inflow Area =0.076 ac, 84.39% Impervious, Inflow Depth =1.32" for 1-year eventInflow =0.08 cfs @12.27 hrs, Volume=0.008 afOutflow =0.08 cfs @12.37 hrs, Volume=0.008 af, Atten= 3%, Lag= 6.0 minRouted to Reach 12R : REACH 2.22.2

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.48 fps, Min. Travel Time= 3.1 min Avg. Velocity = 0.15 fps, Avg. Travel Time= 9.8 min

Peak Storage= 15 cf @ 12.31 hrs Average Depth at Peak Storage= 0.02', Surface Width= 10.33' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 1.65 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 89.0' Slope= 0.0618 '/' Inlet Invert= 378.00', Outlet Invert= 372.50'



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# Reach 11R: REACH 2.1

Type III 24-hr 1-year Rainfall=2.81"

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#### Summary for Reach 12R: REACH 2.2

[62] Hint: Exceeded Reach 11R OUTLET depth by 0.10' @ 12.54 hrs

 Inflow Area =
 0.076 ac, 84.39% Impervious, Inflow Depth =
 1.32" for 1-year event

 Inflow =
 0.08 cfs @
 12.37 hrs, Volume=
 0.008 af

 Outflow =
 0.07 cfs @
 12.68 hrs, Volume=
 0.008 af, Atten=

 Routed to Link 7L : DESIGN POINT
 0.008 af, Atten=
 19%, Lag=

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.27 fps, Min. Travel Time= 9.2 min Avg. Velocity = 0.08 fps, Avg. Travel Time= 29.5 min

Peak Storage= 37 cf @ 12.53 hrs Average Depth at Peak Storage= 0.11', Surface Width= 2.45' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 0.93 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 147.0' Slope= 0.0034 '/' Inlet Invert= 372.50', Outlet Invert= 372.00'

‡
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Reach 12R: REACH 2.2

Reach 12R: REACH 2.2



Type III 24-hr 1-year Rainfall=2.81"

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# Summary for Pond 5P: BIORET FACILITY #1

Inflow Area	ı =	0.099 ac, 3	7.62% Imp	ervious, Inflow D	epth = 1.1	17" for 1-ye	ar event
Inflow	=	0.13 cfs @	12.09 hrs,	Volume=	0.010 af	-	
Outflow	=	0.01 cfs @	13.78 hrs,	Volume=	0.004 af,	Atten= 92%,	Lag= 101.1 min
Primary	=	0.01 cfs @	13.78 hrs,	Volume=	0.004 af		•
Routed	to Reac	h 9R : REĂC	H 1.1				

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 386.52' @ 13.78 hrs Surf.Area= 576 sf Storage= 255 cf

Plug-Flow detention time= 309.4 min calculated for 0.004 af (43% of inflow) Center-of-Mass det. time= 182.0 min (1,028.2 - 846.2)

Volume	Inv	ert Avail.St	orage	Storage	Description					
#1	386.	DO' 5	571 cf	Custom	Stage Data (Pris	smatic)	Listed belo	w (Recalc)		
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc. (cubic	.Store c-feet)	Cum.Store (cubic-feet)					
386.0	00	403		0	0					
386.2 386.5	25 50	484 568		111 132	111 242					
387.0	00	748		329	571					
Device	Routing	Invert	Outle	et Device	S					
#1 #2	Primary Primary	386.50 386.75	<b>4.0"</b> <b>3.0' I</b> Head Coef	Horiz. O ong (Pr d (feet) (	rifice/Grate C= ofile 7) Broad-Cr 0.49 0.98 1.48	0.600 rested l	Limited to <b>Rectangula</b>	weir flow at lo r <b>Weir</b>	w heads	
Primary	Primary OutFlow Max=0.01 cfs @ 13.78 hrs HW=386.52' (Free Discharge)									

**—1=Orifice/Grate** (Weir Controls 0.01 cfs @ 0.48 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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#### Pond 5P: BIORET FACILITY #1

Type III 24-hr 1-year Rainfall=2.81"

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# Summary for Pond 6P: BIORET FACILITY #2

Inflow Area	=	0.076 ac, 8	34.39% Impe	ervious, Inflo	w Depth = 2	2.17" f	or 1-yea	ar event
Inflow	=	0.19 cfs @	12.09 hrs,	Volume=	0.014 a	f	-	
Outflow	=	0.08 cfs @	12.27 hrs,	Volume=	0.008 a	f, Atten	= 55%,	Lag= 10.8 min
Primary	=	0.08 cfs @	12.27 hrs,	Volume=	0.008 a	f		-
Routed	to Reacl	h 11R : RĒA	CH 2.1					

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 382.08' @ 12.27 hrs Surf.Area= 552 sf Storage= 278 cf

Plug-Flow detention time= 200.4 min calculated for 0.008 af (61% of inflow) Center-of-Mass det. time= 98.1 min ( 889.6 - 791.5 )

Volume	Inv	ert Avail.St	orage	Storage	Description					
#1	381.	50' 5	532 cf	Custom	Stage Data (Pr	ismatic	) Listed belo	ow (Recalc)		
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc (cubio	.Store c-feet)	Cum.Store (cubic-feet)					
381.5	50	404		0	0					
381.7	75	465		109	109					
382.0	00	529		124	233					
382.5	50	667		299	532					
Device	Routing	Invert	Outle	et Device	S					
#1	Primary	382.00	4.0"	Horiz. O	rifice/Grate C=	= 0.600	Limited to	weir flow at	low heads	
#2	Primary	382.25	3.0'	long (Pr	ofile 6) Broad-C	rested	Rectangula	ır Weir		
			Hea	d (feet) (	0.49 0.98 1.48					
			Coe	f. (Englisl	n) 3.12 3.41 3.	59				
Primary	Primary OutFlow Max=0.08 cfs @ 12.27 hrs HW=382.08' (Free Discharge)									

-1=Orifice/Grate (Weir Controls 0.08 cfs @ 0.95 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Storage (cubic-feet)

#### Pond 6P: BIORET FACILITY #2

Type III 24-hr 1-year Rainfall=2.81"

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## Summary for Link 7L: DESIGN POINT

Inflow Area	a =	2.580 ac,	7.64% Impervious,	Inflow Depth = $0.7$	75" for 1-year event
Inflow	=	1.38 cfs @	12.24 hrs, Volume	= 0.161 af	-
Primary	=	1.38 cfs @	12.24 hrs, Volume	= 0.161 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs



## Link 7L: DESIGN POINT

Type III 24-hr 2-year Rainfall=3.39"

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Time span=0.0 Runoff by SCS Reach routing by Stor-Ind+	)0-48.00 hrs, dt=0.02 hrs, 2401 points TR-20 method, UH=SCS, Weighted-CN -Trans method - Pond routing by Stor-Ind method
Subcatchment 1S: XDA-1 TO DESIGN	Runoff Area=112,337 sf 5.70% Impervious Runoff Depth=1.11" Flow Length=621' Tc=16.3 min CN=73 Runoff=2.30 cfs 0.238 af
Subcatchment 2S: FDA-1 TO SW PRAC	<b>FICE</b> Runoff Area=4,333 sf 37.62% Impervious Runoff Depth=1.62" Tc=6.0 min CN=81 Runoff=0.19 cfs 0.013 af
Subcatchment 3S: FDA-2 TO SW PRAC	<b>FICE</b> Runoff Area=3,300 sf 84.39% Impervious Runoff Depth=2.73" Tc=6.0 min CN=94 Runoff=0.23 cfs 0.017 af
Subcatchment 4S: FDA-3 TO DESIGN	Runoff Area=104,744 sf 3.98% Impervious Runoff Depth=1.11" Flow Length=626' Tc=15.8 min CN=73 Runoff=2.17 cfs 0.222 af
Reach 9R: REACH 1.1 n=0.050	Avg. Flow Depth=0.01' Max Vel=0.43 fps Inflow=0.04 cfs 0.008 af L=62.0' S=0.0968 '/' Capacity=2.07 cfs Outflow=0.04 cfs 0.008 af

 Reach 10R: REACH 1.2
 Avg. Flow Depth=0.05'
 Max Vel=0.27 fps
 Inflow=0.04 cfs
 0.008 af

 n=0.070
 L=330.0'
 S=0.0091 '/'
 Capacity=1.52 cfs
 Outflow=0.03 cfs
 0.008 af

 Reach 11R: REACH 2.1
 Avg. Flow Depth=0.02'
 Max Vel=0.61 fps
 Inflow=0.15 cfs
 0.012 af

 n=0.050
 L=89.0'
 S=0.0618 '/'
 Capacity=1.65 cfs
 Outflow=0.15 cfs
 0.012 af

 Reach 12R: REACH 2.2
 Avg. Flow Depth=0.16'
 Max Vel=0.33 fps
 Inflow=0.15 cfs
 0.012 af

 n=0.070
 L=147.0'
 S=0.0034 '/'
 Capacity=0.93 cfs
 Outflow=0.12 cfs
 0.012 af

 Pond 5P: BIORET FACILITY #1
 Peak Elev=386.56' Storage=274 cf Inflow=0.19 cfs 0.013 af Outflow=0.04 cfs 0.008 af

Pond 6P: BIORET FACILITY #2 Peak Elev=382.13' Storage=305 cf Inflow=0.23 cfs 0.017 af Outflow=0.15 cfs 0.012 af

Link 7L: DESIGN POINT

Inflow=2.18 cfs 0.241 af Primary=2.18 cfs 0.241 af

Total Runoff Area = 5.159 acRunoff Volume = 0.490 afAverage Runoff Depth = 1.14"93.33% Pervious = 4.815 ac6.67% Impervious = 0.344 ac

Type III 24-hr 2-year Rainfall=3.39"

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Summary for Subcatchment 1S: XDA-1 TO DESIGN POINT

[47] Hint: Peak is 154% of capacity of segment #3

Runoff = 2.30 cfs @ 12.24 hrs, Volume= 0.238 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-year Rainfall=3.39"

A	rea (sf)	CN	Description					
	6,406	98	Roofs, HSG	ЭC				
	1,298	89	Gravel road	ls, HSG C				
	74,751	70	Woods, Go	od, HSG C				
	22,542	77	Woods, Go	od, HSG D				
	7,340	74	>75% Gras	s cover, Go	ood, HSG C			
1	12,337	73	Weighted A	verage				
1	105,931 94.30% Pervious Area							
	6,406		5.70% Impe	ervious Area	а			
Tc	Length	Slope	e Velocity	Capacity	Description			
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
7.9	84	0.1607	0.18		Sheet Flow, A-B			
					Woods: Light underbrush n= 0.400 P2= 3.39"			
1.7	137	0.0766	5 1.38		Shallow Concentrated Flow, B-C			
					Woodland Kv= 5.0 fps			
6.7	400	0.0088	3 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D			
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'			
					n= 0.070 Sluggish weedy reaches w/pools			
16.3	621	Total						

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#### Subcatchment 1S: XDA-1 TO DESIGN POINT

Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Subcatchment 2S: FDA-1 TO SW PRACTICE #1

Runoff = 0.19 cfs @ 12.09 hrs, Volume= Routed to Pond 5P : BIORET FACILITY #1 0.013 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-year Rainfall=3.39"

Area (sf)	CN	Description								
1,435	98	Pool & Poo	Pool & Pool Patio, HSG C							
748	74	Bioretentior	า, Use >75%	% Grass cover, Good, HSG C						
195	98	Canopy ove	Canopy over Deck, HSG B							
1,955	70	Woods, Go	Voods, Good, HSG C							
4,333	4,333 81 Weighted Average									
2,703	703 62.38% Pervious Area									
1,630		37.62% Imp	pervious Are	ea						
Fc Length	Slop	e Velocity	Capacity	Description						
n) (feet)	(ft/f	t) (ft/sec)	(cfs)							
.0				Direct Entry,						
	Area (sf) 1,435 748 195 1,955 4,333 2,703 1,630 Tc Length n) (feet) .0	Area (sf)         CN           1,435         98           748         74           195         98           1,955         70           4,333         81           2,703         1,630           Tc         Length         Slop           n)         (feet)         (ft/f	Area (sf)         CN         Description           1,435         98         Pool & Poo           748         74         Bioretentior           195         98         Canopy ove           1,955         70         Woods, Go           4,333         81         Weighted A           2,703         62.38%         Pei           1,630         37.62%         Imp           Tc         Length         Slope         Velocity           n)         (feet)         (ft/ft)         (ft/sec)	Area (sf)CNDescription1,43598Pool & Pool Patio, HSG74874Bioretention, Use >75919598Canopy over Deck, HS1,95570Woods, Good, HSG C4,33381Weighted Average2,70362.38% Pervious Area1,63037.62% Impervious Area1,630(ft/ft)CLengthN(ftet)(ft/ft)(ft/sec).0						

### Subcatchment 2S: FDA-1 TO SW PRACTICE #1



Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Subcatchment 3S: FDA-2 TO SW PRACTICE #2

Runoff = 0.23 cfs @ 12.08 hrs, Volume= Routed to Pond 6P : BIORET FACILITY #2 0.017 af, Depth= 2.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-year Rainfall=3.39"

A	rea (sf)	CN	Description						
	511	98	Roofs, HSG	Roofs, HSG C					
	2,274	98	Paved park	Paved parking, HSG C					
	515	74	>75% Gras	75% Grass cover, Good, HSG C					
	3,300	94	Weighted A						
	515		15.61% Pervious Area						
	2,785		84.39% Impervious Area						
Тс	Length	Slop	e Velocity	Capacity	Description				
(min)	(feet)	(ft/f	i) (ft/sec)	(cfs)					
6.0					Direct Entry,				

#### Subcatchment 3S: FDA-2 TO SW PRACTICE #2



Type III 24-hr 2-year Rainfall=3.39"

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## Summary for Subcatchment 4S: FDA-3 TO DESIGN POINT

[47] Hint: Peak is 145% of capacity of segment #3

Runoff	=	2.17 cfs @	12.23 hrs,	Volume=	0.222 af,	Depth=	1.11"
Routed	d to Li	ink 7L : DESIGN	POINT			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-year Rainfall=3.39"

	Area (sf)	CN	Description		
	4,172	98	Roofs, HSC	ЭС	
*	1,042	96	Deck (use (	Gravel surfa	ace), HSG C
	69,199	70	Woods, Go	od, HSG C	
	22,542	77	Woods, Go	od, HSG D	
	7,789	74	>75% Gras	s cover, Go	bod, HSG C
	104,744	73	Weighted A	verage	
	100,572		96.02% Pe	rvious Area	
	4,172		3.98% Impe	ervious Area	а
Т	c Length	Slope	e Velocity	Capacity	Description
(mir	n) (feet)	(ft/ft	) (ft/sec)	(cfs)	
7.	2 79	0.1772	2 0.18		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.39"
1.	9 147	0.0680	) 1.30		Shallow Concentrated Flow, B-C
					Woodland Kv= 5.0 fps
6.	7 400	0.0088	3 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'
					n= 0.070
15.	8 626	Total			

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#### Subcatchment 4S: FDA-3 TO DESIGN POINT

Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Reach 9R: REACH 1.1

Inflow Area =0.099 ac, 37.62% Impervious, Inflow Depth =0.95" for 2-year eventInflow =0.04 cfs @12.51 hrs, Volume=0.008 afOutflow =0.04 cfs @12.58 hrs, Volume=0.008 af, Atten= 1%, Lag= 4.1 minRouted to Reach 10R : REACH 1.21.2

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.43 fps, Min. Travel Time= 2.4 min Avg. Velocity = 0.18 fps, Avg. Travel Time= 5.7 min

Peak Storage= 6 cf @ 12.54 hrs Average Depth at Peak Storage= 0.01', Surface Width= 10.20' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 2.07 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 62.0' Slope= 0.0968 '/' Inlet Invert= 381.00', Outlet Invert= 375.00'





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Reach 9R: REACH 1.1

Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Reach 10R: REACH 1.2

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.04' @ 12.94 hrs

Inflow Area = 0.099 ac, 37.62% Impervious, Inflow Depth = 0.95" for 2-year event Inflow = 0.04 cfs @ 12.58 hrs, Volume= 0.008 af Outflow = 0.03 cfs @ 13.26 hrs, Volume= 0.008 af, Atten= 37%, Lag= 40.8 min Routed to Link 7L : DESIGN POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.27 fps, Min. Travel Time= 20.7 min Avg. Velocity = 0.11 fps, Avg. Travel Time= 48.1 min

Peak Storage= 35 cf @ 12.91 hrs Average Depth at Peak Storage= 0.05' , Surface Width= 2.20' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 1.52 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 330.0' Slope= 0.0091 '/' Inlet Invert= 375.00', Outlet Invert= 372.00'

‡

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Reach 10R: REACH 1.2

Reach 10R: REACH 1.2



Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Reach 11R: REACH 2.1

 Inflow Area =
 0.076 ac, 84.39% Impervious, Inflow Depth =
 1.88" for 2-year event

 Inflow =
 0.15 cfs @
 12.17 hrs, Volume=
 0.012 af

 Outflow =
 0.15 cfs @
 12.25 hrs, Volume=
 0.012 af, Atten= 2%, Lag= 4.7 min

 Routed to Reach 12R : REACH 2.2
 Reach 12R : REACH 2.2
 0.012 af, Atten= 2%, Lag= 4.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.61 fps, Min. Travel Time= 2.4 min Avg. Velocity = 0.17 fps, Avg. Travel Time= 8.9 min

Peak Storage= 22 cf @ 12.21 hrs Average Depth at Peak Storage= 0.02', Surface Width= 10.48' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 1.65 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 89.0' Slope= 0.0618 '/' Inlet Invert= 378.00', Outlet Invert= 372.50'





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# Reach 11R: REACH 2.1

Type III 24-hr 2-year Rainfall=3.39"

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#### Summary for Reach 12R: REACH 2.2

[62] Hint: Exceeded Reach 11R OUTLET depth by 0.14' @ 12.38 hrs

 Inflow Area =
 0.076 ac, 84.39% Impervious, Inflow Depth =
 1.88" for 2-year event

 Inflow =
 0.15 cfs @
 12.25 hrs, Volume=
 0.012 af

 Outflow =
 0.12 cfs @
 12.50 hrs, Volume=
 0.012 af, Atten=

 Routed to Link 7L : DESIGN POINT
 0.012 af, Atten=
 18%, Lag=

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.33 fps, Min. Travel Time= 7.4 min Avg. Velocity = 0.09 fps, Avg. Travel Time= 27.2 min

Peak Storage= 55 cf @ 12.37 hrs Average Depth at Peak Storage= 0.16' , Surface Width= 2.64' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 0.93 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 147.0' Slope= 0.0034 '/' Inlet Invert= 372.50', Outlet Invert= 372.00'

‡

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Reach 12R: REACH 2.2

Reach 12R: REACH 2.2



Type III 24-hr 2-year Rainfall=3.39"

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# Summary for Pond 5P: BIORET FACILITY #1

Inflow Area	a =	0.099 ac, 3	7.62% Impe	ervious, Inflow D	epth = 1	.62" for	2-year	event
Inflow	=	0.19 cfs @	12.09 hrs,	Volume=	0.013 af			
Outflow	=	0.04 cfs @	12.51 hrs,	Volume=	0.008 af	, Atten=	76%, La	ag= 25.2 min
Primary	=	0.04 cfs @	12.51 hrs,	Volume=	0.008 af			-
Routed	to Reac	h 9R : REĀC	H 1.1					

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 386.56' @ 12.51 hrs Surf.Area= 588 sf Storage= 274 cf

Plug-Flow detention time= 220.6 min calculated for 0.008 af (59% of inflow) Center-of-Mass det. time= 107.5 min (944.1 - 836.7)

Volume	Inv	ert Avail.Sto	orage	Storage	Description				
#1	386.0	00' 5	71 cf	Custom	Stage Data (Pr	ismatic)	) Listed belo	ow (Recalc)	
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc.s cubic)	Store -feet)	Cum.Store (cubic-feet)				
386.0	00	403		0	0				
386.2	25	484		111	111				
386.5	50	568		132	242				
387.0	00	748		329	571				
Device	Routing	Invert	Outle	t Devices	6				
#1	Primary	386.50'	4.0" H	loriz. Or	ifice/Grate C:	= 0.600	Limited to	weir flow at low	w heads
#2	Primary	386.75'	3.0' lo	ong (Pro	ofile 7) Broad-C	rested	Rectangula	r Weir	
			Head	(feet) 0	.49 0.98 1.48		•		
			Coef.	(English	) 2.99 3.41 3.	62			
Primary	OutFlow	Max=0.04 cfs	@ 12.5	1 hrs HV	V=386.56' (Fre	ee Disch	narge)		

-1=Orifice/Grate (Weir Controls 0.04 cfs @ 0.77 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Pond 5P: BIORET FACILITY #1

Type III 24-hr 2-year Rainfall=3.39"

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# Summary for Pond 6P: BIORET FACILITY #2

Inflow Area	ı =	0.076 ac, 8	4.39% Impe	ervious,	Inflow Dept	h = 2	2.73"	for 2-year	ar event
Inflow	=	0.23 cfs @	12.08 hrs,	Volume	= 0.	017 a	af	-	
Outflow	=	0.15 cfs @	12.17 hrs,	Volume	= 0.	012 a	f, Atte	n= 34%,	Lag= 5.4 min
Primary	=	0.15 cfs @	12.17 hrs,	Volume	= 0.	012 a	ıf		-
Routed	to Reac	h 11R : RĒA	CH 2.1						

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 382.13' @ 12.17 hrs Surf.Area= 565 sf Storage= 305 cf

Plug-Flow detention time= 173.7 min calculated for 0.012 af (69% of inflow) Center-of-Mass det. time= 80.8 min ( 866.0 - 785.2 )

Volume	Inv	ert Avail.Sto	orage	Storage	Description					
#1	381.	50' 5	32 cf	Custom	Stage Data (Pris	matic)	Listed be	elow (Re	ecalc)	
Elevatio (fee	n t)	Surf.Area (sq-ft)	Inc. (cubic	Store -feet)	Cum.Store (cubic-feet)					
381.5	0	404		0	0					
381.7	5	465		109	109					
382.0	0	529		124	233					
382.5	0	667		299	532					
Device	Routing	Invert	Outle	et Device	S					
#1	Primary	382.00'	4.0"	Horiz. O	rifice/Grate C=	0.600	Limited	to weir fl	ow at low h	eads
#2	Primary	382.25'	3.0' l	ong (Pr	ofile 6) Broad-Cre	ested F	Rectangu	ılar Weir	•	
			Head	l (feet) C	).49 0.98 1.48					
			Coef	. (Englisł	n) 3.12 3.41 3.59	9				
Primary	OutFlow	Max=0.15 cfs	@ 12.1	7 hrs H	W=382.13' (Free	Discha	arge)			

**1=Orifice/Grate** (Orifice Controls 0.15 cfs @ 1.74 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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# Pond 6P: BIORET FACILITY #2



Type III 24-hr 2-year Rainfall=3.39"

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## Summary for Link 7L: DESIGN POINT

Inflow Area	a =	2.580 ac,	7.64% Impervious,	Inflow Depth = $1.7$	12" for 2-year event
Inflow	=	2.18 cfs @	12.24 hrs, Volume	= 0.241 af	
Primary	=	2.18 cfs @	12.24 hrs, Volume	= 0.241 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs



## Link 7L: DESIGN POINT

Type III 24-hr 10-year Rainfall=5.06"

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Time span=0.00-48.00 hrs, dt=0.02 hrs, 2401 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Runoff Area=112,337 sf 5.70% Impervious Runoff Depth=2.33" Subcatchment 1S: XDA-1 TO DESIGN Flow Length=621' Tc=16.3 min CN=73 Runoff=5.11 cfs 0.500 af Subcatchment 2S: FDA-1 TO SW PRACTICE Runoff Area=4,333 sf 37.62% Impervious Runoff Depth=3.04" Tc=6.0 min CN=81 Runoff=0.35 cfs 0.025 af Subcatchment 3S: FDA-2 TO SW PRACTICE Runoff Area=3,300 sf 84.39% Impervious Runoff Depth=4.37" Tc=6.0 min CN=94 Runoff=0.36 cfs 0.028 af Runoff Area=104.744 sf 3.98% Impervious Runoff Depth=2.33" Subcatchment 4S: FDA-3 TO DESIGN Flow Length=626' Tc=15.8 min CN=73 Runoff=4.81 cfs 0.466 af Avg. Flow Depth=0.02' Max Vel=0.76 fps Inflow=0.19 cfs 0.020 af Reach 9R: REACH 1.1 n=0.050 L=62.0' S=0.0968 '/' Capacity=2.07 cfs Outflow=0.19 cfs 0.020 af Reach 10R: REACH 1.2 Avg. Flow Depth=0.14' Max Vel=0.50 fps Inflow=0.19 cfs 0.020 af n=0.070 L=330.0' S=0.0091 '/' Capacity=1.52 cfs Outflow=0.16 cfs 0.020 af Avg. Flow Depth=0.03' Max Vel=0.70 fps Inflow=0.22 cfs 0.022 af Reach 11R: REACH 2.1 n=0.050 L=89.0' S=0.0618 '/' Capacity=1.65 cfs Outflow=0.22 cfs 0.022 af Avg. Flow Depth=0.22' Max Vel=0.39 fps Inflow=0.22 cfs 0.022 af Reach 12R: REACH 2.2 n=0.070 L=147.0' S=0.0034 '/' Capacity=0.93 cfs Outflow=0.21 cfs 0.022 af Pond 5P: BIORET FACILITY #1 Peak Elev=386.70' Storage=366 cf Inflow=0.35 cfs 0.025 af Outflow=0.19 cfs 0.020 af Peak Elev=382.26' Storage=378 cf Inflow=0.36 cfs 0.028 af Pond 6P: BIORET FACILITY #2 Outflow=0.22 cfs 0.022 af Inflow=4.95 cfs 0.508 af Link 7L: DESIGN POINT Primary=4.95 cfs 0.508 af

Total Runoff Area = 5.159 acRunoff Volume = 1.019 afAverage Runoff Depth = 2.37"93.33% Pervious = 4.815 ac6.67% Impervious = 0.344 ac

Type III 24-hr 10-year Rainfall=5.06"

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## Summary for Subcatchment 1S: XDA-1 TO DESIGN POINT

[47] Hint: Peak is 341% of capacity of segment #3

Runoff = 5.11 cfs @ 12.23 hrs, Volume= 0.500 af, Depth= 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-year Rainfall=5.06"

A	rea (sf)	CN	Description						
	6,406	98	98 Roofs, HSG C						
	1,298	89	Gravel roads, HSG C						
	74,751	70	Woods, Go	od, HSG C					
	22,542	77	Woods, Go	od, HSG D					
	7,340	74	>75% Gras	s cover, Go	ood, HSG C				
1	12,337	73	Weighted A	verage					
1	05,931		94.30% Pe	rvious Area					
	6,406		5.70% Impe	ervious Area	a				
Tc	Length	Slope	e Velocity	Capacity	Description				
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)					
7.9	84	0.1607	0.18		Sheet Flow, A-B				
					Woods: Light underbrush n= 0.400 P2= 3.39"				
1.7	137	0.0766	5 1.38		Shallow Concentrated Flow, B-C				
					Woodland Kv= 5.0 fps				
6.7	400	0.0088	3 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D				
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'				
					n= 0.070 Sluggish weedy reaches w/pools				
16.3	621	Total							

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Type III 24-hr 10-year Rainfall=5.06"

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#### Summary for Subcatchment 2S: FDA-1 TO SW PRACTICE #1

Runoff = 0.35 cfs @ 12.09 hrs, Volume= Routed to Pond 5P : BIORET FACILITY #1 0.025 af, Depth= 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-year Rainfall=5.06"

	Area (sf)	CN	Description						
*	1,435	98	Pool & Poo	l Patio, HSC	GC				
*	748	74	Bioretentior	n, Use >75%	% Grass cover, Good, HSG C				
*	195	98	Canopy ove	er Deck, HS	SG B				
	1,955	70	Woods, Go	od, HSG C					
	4,333	81	Weighted Average						
	2,703		62.38% Pervious Area						
	1,630		37.62% Impervious Area						
Т	c Length	Slop	e Velocity	Capacity	Description				
(mir	n) (feet)	(ft/f	t) (ft/sec)	(cfs)					
6.	0				Direct Entry,				

## Subcatchment 2S: FDA-1 TO SW PRACTICE #1



Type III 24-hr 10-year Rainfall=5.06"

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#### Summary for Subcatchment 3S: FDA-2 TO SW PRACTICE #2

Runoff = 0.36 cfs @ 12.08 hrs, Volume= Routed to Pond 6P : BIORET FACILITY #2 0.028 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-year Rainfall=5.06"

A	rea (sf)	CN	Description						
	511	98	Roofs, HSC	ЭC					
	2,274	98	Paved park	ing, HSG C	C				
	515	74	>75% Gras	s cover, Go	ood, HSG C				
	3,300	94	Weighted A	Weighted Average					
	515		15.61% Pe	15.61% Pervious Area					
	2,785		84.39% Imp	pervious Ar	rea				
Тс	Length	Slop	e Velocity	Capacity	Description				
(min)	(feet)	(ft/f	t) (ft/sec)	(cfs)					
6.0					Direct Entry,				

#### Subcatchment 3S: FDA-2 TO SW PRACTICE #2



Type III 24-hr 10-year Rainfall=5.06"

af, Depth= 2.33"

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# Summary for Subcatchment 4S: FDA-3 TO DESIGN POINT

[47] Hint: Peak is 322% of capacity of segment #3

Runoff	=	4.81 cfs @	12.22 hrs,	Volume=	0.466
Route	d to L	ink 7L : DESIGN	POINT		

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-year Rainfall=5.06"

	Area (sf)	CN	Description								
	4,172	98	Roofs, HSC	ЭС							
*	1,042	96	Deck (use (	eck (use Gravel surface), HSG C							
	69,199	70	Woods, Go	od, HSG C							
	22,542	77	Woods, Go	Voods, Good, HSG D							
	7,789	74	>75% Gras	s cover, Go	bod, HSG C						
	104,744	73	Weighted A	verage							
	100,572		96.02% Pe	rvious Area							
	4,172		3.98% Impe	ervious Area	а						
Т	c Length	Slope	e Velocity	Capacity	Description						
(mir	n) (feet)	(ft/ft	) (ft/sec)	(cfs)							
7.	2 79	0.1772	2 0.18		Sheet Flow, A-B						
					Woods: Light underbrush n= 0.400 P2= 3.39"						
1.	9 147	0.0680	) 1.30		Shallow Concentrated Flow, B-C						
					Woodland Kv= 5.0 fps						
6.	7 400	0.0088	3 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D						
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'						
					n= 0.070						
15.	8 626	Total									

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#### Subcatchment 4S: FDA-3 TO DESIGN POINT

Type III 24-hr 10-year Rainfall=5.06"

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#### Summary for Reach 9R: REACH 1.1

Inflow Area = 0.099 ac, 37.62% Impervious, Inflow Depth = 2.37" for 10-year event Inflow 0.19 cfs @ 12.22 hrs, Volume= 0.020 af = 0.19 cfs @ 12.26 hrs, Volume= Outflow = 0.020 af, Atten= 0%, Lag= 2.3 min Routed to Reach 10R : REACH 1.2 Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.76 fps, Min. Travel Time= 1.4 min Avg. Velocity = 0.23 fps, Avg. Travel Time= 4.4 min Peak Storage= 15 cf @ 12.24 hrs Average Depth at Peak Storage= 0.02', Surface Width= 10.49' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 2.07 cfs 10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 62.0' Slope= 0.0968 '/' Inlet Invert= 381.00', Outlet Invert= 375.00'



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Reach 9R: REACH 1.1

Type III 24-hr 10-year Rainfall=5.06"

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#### Summary for Reach 10R: REACH 1.2

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.12' @ 12.52 hrs

 Inflow Area =
 0.099 ac, 37.62% Impervious, Inflow Depth =
 2.37" for 10-year event

 Inflow =
 0.19 cfs @
 12.26 hrs, Volume=
 0.020 af

 Outflow =
 0.16 cfs @
 12.67 hrs, Volume=
 0.020 af, Atten=
 13%, Lag=

 Routed to Link 7L : DESIGN POINT
 0.020 af, Atten=
 13%, Lag=
 24.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.50 fps, Min. Travel Time= 10.9 min Avg. Velocity = 0.14 fps, Avg. Travel Time= 38.9 min

Peak Storage= 108 cf @ 12.49 hrs Average Depth at Peak Storage= 0.14', Surface Width= 2.57' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 1.52 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 330.0' Slope= 0.0091 '/' Inlet Invert= 375.00', Outlet Invert= 372.00'

‡
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### Reach 10R: REACH 1.2





Type III 24-hr 10-year Rainfall=5.06"

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### Summary for Reach 11R: REACH 2.1

 Inflow Area =
 0.076 ac, 84.39% Impervious, Inflow Depth =
 3.52" for 10-year event

 Inflow =
 0.22 cfs @
 12.19 hrs, Volume=
 0.022 af

 Outflow =
 0.22 cfs @
 12.25 hrs, Volume=
 0.022 af, Atten= 1%, Lag= 3.5 min

 Routed to Reach 12R : REACH 2.2
 12.25 hrs, Volume=
 0.022 af, Atten= 1%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.70 fps, Min. Travel Time= 2.1 min Avg. Velocity = 0.20 fps, Avg. Travel Time= 7.4 min

Peak Storage= 28 cf @ 12.21 hrs Average Depth at Peak Storage= 0.03', Surface Width= 10.60' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 1.65 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 89.0' Slope= 0.0618 '/' Inlet Invert= 378.00', Outlet Invert= 372.50'





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## Reach 11R: REACH 2.1

Type III 24-hr 10-year Rainfall=5.06"

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### Summary for Reach 12R: REACH 2.2

[62] Hint: Exceeded Reach 11R OUTLET depth by 0.19' @ 12.34 hrs

Inflow Area = 0.076 ac, 84.39% Impervious, Inflow Depth = 3.52" for 10-year event Inflow = 0.22 cfs @ 12.25 hrs, Volume= 0.022 af Outflow = 0.21 cfs @ 12.44 hrs, Volume= 0.022 af, Atten= 5%, Lag= 11.6 min Routed to Link 7L : DESIGN POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.39 fps, Min. Travel Time= 6.3 min Avg. Velocity = 0.11 fps, Avg. Travel Time= 23.1 min

Peak Storage= 77 cf @ 12.33 hrs Average Depth at Peak Storage= 0.22' , Surface Width= 2.86' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 0.93 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 147.0' Slope= 0.0034 '/' Inlet Invert= 372.50', Outlet Invert= 372.00'

‡

Type III 24-hr 10-year Rainfall=5.06"

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Reach 12R: REACH 2.2

Reach 12R: REACH 2.2



Type III 24-hr 10-year Rainfall=5.06"

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# Summary for Pond 5P: BIORET FACILITY #1

Inflow Area	=	0.099 ac, 3	7.62% Impe	ervious,	Inflow Depth =	3.04	l" for	10-ye	ear event
Inflow	=	0.35 cfs @	12.09 hrs,	Volume	= 0.025	af			
Outflow	=	0.19 cfs @	12.22 hrs,	Volume	= 0.020	af, A	Atten= 4	46%,	Lag= 8.2 min
Primary	=	0.19 cfs @	12.22 hrs,	Volume	= 0.020	af			-
Routed	to Reac	h 9R : REĀC	H 1.1						

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 386.70' @ 12.22 hrs Surf.Area= 642 sf Storage= 366 cf

Plug-Flow detention time= 136.8 min calculated for 0.020 af (78% of inflow) Center-of-Mass det. time= 55.2 min ( 873.8 - 818.6 )

Volume	Inv	ert Avail.Sto	orage	Storage	Description				
#1	386.	00' 5	71 cf	Custom	Stage Data (Pri	ismatic)	Listed be	low (Reca	alc)
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc. (cubic	Store -feet)	Cum.Store (cubic-feet)				
386.0	00	403		0	0				
386.2	25	484		111	111				
386.5	50	568		132	242				
387.0	00	748		329	571				
Device	Routing	Invert	Outle	t Devices	6				
#1	Primary	386.50'	4.0"	Horiz. Or	ifice/Grate C=	= 0.600	Limited to	o weir flow	v at low heads
#2	Primary	386.75'	<b>3.0' l</b> Heac	ong (Pro	ofile 7) Broad-C	rested I	Rectangu	lar Weir	
			Coef	(English	) 2.99 3.41 3.6	62			
Primary	OutFlow	Max=0.19 cfs	@ 12.2	2 hrs HV	V=386.70' (Fre	e Disch	arge)		

-1=Orifice/Grate (Orifice Controls 0.19 cfs @ 2.18 fps)

-2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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### Pond 5P: BIORET FACILITY #1



Type III 24-hr 10-year Rainfall=5.06"

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## Summary for Pond 6P: BIORET FACILITY #2

Inflow Area	=	0.076 ac, 8	4.39% Impe	ervious,	Inflow Dept	th = 4	.37" for	10-ye	ear event
Inflow	=	0.36 cfs @	12.08 hrs,	Volume	= 0.	.028 af		-	
Outflow	=	0.22 cfs @	12.19 hrs,	Volume	= 0.	022 af	, Atten=	39%,	Lag= 6.2 min
Primary	=	0.22 cfs @	12.19 hrs,	Volume	= 0.	.022 af			-
Routed	to Reacl	h 11R : RĒA	CH 2.1						

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 382.26' @ 12.19 hrs Surf.Area= 600 sf Storage= 378 cf

Plug-Flow detention time= 138.0 min calculated for 0.022 af (81% of inflow) Center-of-Mass det. time= 64.1 min ( 837.3 - 773.2 )

Volume	Inv	ert Avail.Sto	rage Storag	ge Description
#1	381.	50' 5	32 cf Custor	m Stage Data (Prismatic) Listed below (Recalc)
Elevatio	n	Surf.Area	Inc.Store	Cum.Store
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)
381.5	0	404	0	0
381.7	5	465	109	109
382.0	0	529	124	233
382.5	0	667	299	532
Device	Routing	Invert	Outlet Devic	ces
#1	Primary	382.00'	4.0" Horiz. (	<b>Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	382.25'	<b>3.0' long (P</b> Head (feet) Coef. (Englis	Profile 6) Broad-Crested Rectangular Weir 0.49 0.98 1.48 ish) 3.12 3.41 3.59
Primary	OutFlow	Max=0.22 cfs (	@ 12.19 hrs H	HW=382.26' (Free Discharge)

-1=Orifice/Grate (Orifice Controls 0.21 cfs @ 2.44 fps)

-2=Broad-Crested Rectangular Weir (Weir Controls 0.00 cfs @ 0.24 fps)

Custom Stage Data

150

200

250

Storage (cubic-feet)

300

350

400

450

500

100

50

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### Pond 6P: BIORET FACILITY #2

Type III 24-hr 10-year Rainfall=5.06"

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## Summary for Link 7L: DESIGN POINT

Inflow Area	a =	2.580 ac,	7.64% Impervious,	Inflow Depth = 2.3	36" for 10-year event
Inflow	=	4.95 cfs @	12.23 hrs, Volume	= 0.508 af	-
Primary	=	4.95 cfs @	12.23 hrs, Volume	= 0.508 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs



## Link 7L: DESIGN POINT

Type III 24-hr 25-year Rainfall=6.36"

Tc=6.0 min CN=81 Runoff=0.49 cfs 0.035 af

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Time span=0.0	00-48.00 hrs, dt=0.02 hrs,	2401 points	thod
Runoff by SCS	TR-20 method, UH=SCS,	Weighted-CN	
Reach routing by Stor-Ind+	Trans method - Pond ro	uting by Stor-Ind me	
Subcatchment 1S: XDA-1 TO DESIGN	Runoff Area=112,337 s	f 5.70% Impervious	Runoff Depth=3.39"
	Flow Length=621' Tc=16	.3 min CN=73 Run	off=7.50 cfs 0.728 af
Subcatchment 2S: FDA-1 TO SW PRAC	<b>TICE</b> Runoff Area=4,333 sf	37.62% Impervious	Runoff Depth=4.21"

Subcatchment 3S: FDA-2 TO SW PRACTICE Runoff Area=3,300 sf 84.39% Impervious Runoff Depth=5.65" Tc=6.0 min CN=94 Runoff=0.46 cfs 0.036 af

Subcatchment 4S: FDA-3 TO E	DESIGN	Runo Flow Le	off Area=10 ength=626'	4,744 s Tc=15	f 3.98% .8 min	% Imperv CN=73	vious Rur Runoff=7	off Dep .07 cfs	oth=3.39" 0.679 af
Reach 9R: REACH 1.1	n=0.050	Avg. Flo L=62.0'	ow Depth=0 S=0.0968	.03' M '/' Cap	ax Vel= acity=2.	0.96 fps 07 cfs	Inflow=0 Outflow=0	.35 cfs .35 cfs	0.029 af 0.029 af
Reach 10R: REACH 1.2	n=0.070 L	Avg. Flo _=330.0'	ow Depth=0 S=0.0091	.19' M '/' Cap	ax Vel= acity=1.	0.59 fps 52 cfs	Inflow=0 Outflow=0	.35 cfs .27 cfs	0.029 af 0.029 af
Reach 11R: REACH 2.1	n=0.050	Avg. Flo L=89.0'	ow Depth=0 S=0.0618	.04' M '/' Cap	ax Vel= acity=1.	0.83 fps 65 cfs	Inflow=0 Outflow=0	.35 cfs .34 cfs	0.030 af 0.030 af
Reach 12R: REACH 2.2	n=0.070 L	Avg. Flo _=147.0'	ow Depth=0 S=0.0034	.27' M '/' Cap	ax Vel= acity=0.	0.44 fps 93 cfs	Inflow=0 Outflow=0	.34 cfs .30 cfs	0.030 af 0.030 af
Pond 5P: BIORET FACILITY #1	I	F	Peak Elev=3	86.81'	Storage	e=433 cf	Inflow=0 Outflow=0	.49 cfs .35 cfs	0.035 af 0.029 af
Pond 6P: BIORET FACILITY #2	2	F	Peak Elev=3	82.30'	Storage	e=407 cf	Inflow=0 Outflow=0	.46 cfs .35 cfs	0.036 af 0.030 af
Link 7L: DESIGN POINT							Inflow=7 Primary=7	.32 cfs .32 cfs	0.739 af 0.739 af

Total Runoff Area = 5.159 acRunoff Volume = 1.478 afAverage Runoff Depth = 3.44"93.33% Pervious = 4.815 ac6.67% Impervious = 0.344 ac

Type III 24-hr 25-year Rainfall=6.36"

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## Summary for Subcatchment 1S: XDA-1 TO DESIGN POINT

[47] Hint: Peak is 502% of capacity of segment #3

Runoff = 7.50 cfs @ 12.22 hrs, Volume= 0.728 af, Depth= 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-year Rainfall=6.36"

Ar	rea (sf)	CN	Description					
	6,406	98	Roofs, HSG	ЭC				
	1,298	89	Gravel road	ls, HSG C				
	74,751	70	Woods, Go	od, HSG C				
	22,542	77	Woods, Go	od, HSG D				
	7,340	74	>75% Gras	s cover, Go	bod, HSG C			
1	12,337	73	Weighted A	verage				
1	05,931		94.30% Pei	rvious Area				
	6,406		5.70% Impervious Area					
Tc	Length	Slope	Velocity	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
7.9	84	0.1607	0.18		Sheet Flow, A-B			
					Woods: Light underbrush n= 0.400 P2= 3.39"			
1.7	137	0.0766	1.38		Shallow Concentrated Flow, B-C			
					Woodland Kv= 5.0 fps			
6.7	400	0.0088	1.00	1.50	Trap/Vee/Rect Channel Flow, C-D			
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'			
					n= 0.070 Sluggish weedy reaches w/pools			
16.3	621	Total						

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### Subcatchment 1S: XDA-1 TO DESIGN POINT

Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Subcatchment 2S: FDA-1 TO SW PRACTICE #1

Runoff = 0.49 cfs @ 12.09 hrs, Volume= Routed to Pond 5P : BIORET FACILITY #1 0.035 af, Depth= 4.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-year Rainfall=6.36"

	Area (sf)	CN	Description						
*	1,435	98	Pool & Poo	Pool & Pool Patio, HSG C					
*	748	74	Bioretentior	Bioretention, Use >75% Grass cover, Good, HSG C					
*	195	98	Canopy ove	Canopy over Deck, HSG B					
	1,955	70	Woods, Go	Voods, Good, HSG C					
	4,333	81	Weighted A	Neighted Average					
	2,703		62.38% Pe	62.38% Pervious Area					
	1,630		37.62% Imp	pervious Are	ea				
Т	c Length	Slop	e Velocity	Capacity	Description				
(mir	n) (feet)	(ft/f	t) (ft/sec)	(cfs)					
6.	0				Direct Entry,				

## Subcatchment 2S: FDA-1 TO SW PRACTICE #1



Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Subcatchment 3S: FDA-2 TO SW PRACTICE #2

Runoff = 0.46 cfs @ 12.08 hrs, Volume= Routed to Pond 6P : BIORET FACILITY #2 0.036 af, Depth= 5.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-year Rainfall=6.36"

A	rea (sf)	CN	Description						
	511	98	Roofs, HSC	Roofs, HSG C					
	2,274	98	Paved park	Paved parking, HSG C					
	515	74	>75% Gras	75% Grass cover, Good, HSG C					
	3,300	94	Weighted A	verage					
	515		15.61% Pervious Area						
	2,785		84.39% Impervious Area						
Тс	Length	Slop	e Velocity	Capacity	Description				
(min)	(feet)	(ft/f	t) (ft/sec)	(cfs)					
6.0					Direct Entry,				

### Subcatchment 3S: FDA-2 TO SW PRACTICE #2



Type III 24-hr 25-year Rainfall=6.36"

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# Summary for Subcatchment 4S: FDA-3 TO DESIGN POINT

[47] Hint: Peak is 473% of capacity of segment #3

Runoff	=	7.07 cfs @	12.22 hrs,	Volume=	0.679 af,	Depth=	3.39"
Routed	l to Li	ink 7L : DESIGN	POINT			•	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-year Rainfall=6.36"

	Area (sf)	CN	Description						
	4,172	98	Roofs, HSC	ЭС					
*	1,042	96	Deck (use	Gravel surfa	ace), HSG C				
	69,199	70	Woods, Go	od, HSG C					
	22,542	77	Woods, Go	od, HSG D					
	7,789	74	>75% Gras	s cover, Go	bod, HSG C				
	104,744	73	Weighted A	verage					
	100,572		96.02% Pe	rvious Area					
	4,172		3.98% Impervious Area						
Т	c Length	Slope	e Velocity	Capacity	Description				
(mir	n) (feet)	(ft/ft	) (ft/sec)	(cfs)					
7.	.2 79	0.1772	2 0.18		Sheet Flow, A-B				
					Woods: Light underbrush n= 0.400 P2= 3.39"				
1.	.9 147	0.068	0 1.30		Shallow Concentrated Flow, B-C				
					Woodland Kv= 5.0 fps				
6.	.7 400	0.008	8 1.00	1.50	Trap/Vee/Rect Channel Flow, C-D				
					Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'				
					n= 0.070				
15.	.8 626	Total							

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### Subcatchment 4S: FDA-3 TO DESIGN POINT

Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Reach 9R: REACH 1.1

 Inflow Area =
 0.099 ac, 37.62% Impervious, Inflow Depth =
 3.54"
 for 25-year event

 Inflow =
 0.35 cfs @
 12.17 hrs, Volume=
 0.029 af

 Outflow =
 0.35 cfs @
 12.20 hrs, Volume=
 0.029 af, Atten= 1%, Lag= 1.9 min

 Routed to Reach 10R : REACH 1.2
 12.20 hrs, Volume=
 0.029 af, Atten= 1%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.96 fps, Min. Travel Time= 1.1 min Avg. Velocity = 0.26 fps, Avg. Travel Time= 3.9 min

Peak Storage= 22 cf @ 12.18 hrs Average Depth at Peak Storage= 0.03', Surface Width= 10.70' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 2.07 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 62.0' Slope= 0.0968 '/' Inlet Invert= 381.00', Outlet Invert= 375.00'





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Reach 9R: REACH 1.1

Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Reach 10R: REACH 1.2

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.16' @ 12.32 hrs

 Inflow Area =
 0.099 ac, 37.62% Impervious, Inflow Depth =
 3.54"
 for 25-year event

 Inflow =
 0.35 cfs @
 12.20 hrs, Volume=
 0.029 af

 Outflow =
 0.27 cfs @
 12.46 hrs, Volume=
 0.029 af, Atten= 23%, Lag= 15.9 min

 Routed to Link 7L : DESIGN POINT
 0.029 af
 0.029 af

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.59 fps, Min. Travel Time= 9.3 min Avg. Velocity = 0.16 fps, Avg. Travel Time= 35.2 min

Peak Storage= 149 cf @ 12.31 hrs Average Depth at Peak Storage= 0.19', Surface Width= 2.76' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 1.52 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 330.0' Slope= 0.0091 '/' Inlet Invert= 375.00', Outlet Invert= 372.00'

‡

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Reach 10R: REACH 1.2

Reach 10R: REACH 1.2



Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Reach 11R: REACH 2.1

 Inflow Area =
 0.076 ac, 84.39% Impervious, Inflow Depth =
 4.81"
 for 25-year event

 Inflow =
 0.35 cfs @
 12.15 hrs, Volume=
 0.030 af

 Outflow =
 0.34 cfs @
 12.20 hrs, Volume=
 0.030 af, Atten= 3%, Lag= 3.2 min

 Routed to Reach 12R : REACH 2.2
 Reach 2.2
 Reach 2.2
 Reach 2.2

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.83 fps, Min. Travel Time= 1.8 min Avg. Velocity = 0.22 fps, Avg. Travel Time= 6.7 min

Peak Storage= 37 cf @ 12.17 hrs Average Depth at Peak Storage= 0.04', Surface Width= 10.79' Bank-Full Depth= 0.10' Flow Area= 1.1 sf, Capacity= 1.65 cfs

10.00' x 0.10' deep channel, n= 0.050 Scattered brush, heavy weeds Side Slope Z-value= 10.0 '/' Top Width= 12.00' Length= 89.0' Slope= 0.0618 '/' Inlet Invert= 378.00', Outlet Invert= 372.50'



Reach 11R: REACH 2.1

Hydrograph Inflow Outflow 0.35 0.38 Inflow Area=0.076 ac 0.36 0.34 Avg. Flow Depth=0.04' 0.32 0.3 Max Vel=0.83 fps 0.28 0.26 n=0.050 0.24 (cfs) 0.22 L=89.0' 0.2 0.18 S=0.0618 '/' 0.16 Capacity=1.65 cfs 0.14 0.12 0.1 0.08 0.06 0.04 0.02 0-Ó ż 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 Time (hours)

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## Reach 11R: REACH 2.1

Type III 24-hr 25-year Rainfall=6.36"

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### Summary for Reach 12R: REACH 2.2

[62] Hint: Exceeded Reach 11R OUTLET depth by 0.23' @ 12.28 hrs

Inflow Area = 0.076 ac, 84.39% Impervious, Inflow Depth = 4.81" for 25-year event Inflow = 0.34 cfs @ 12.20 hrs, Volume= 0.030 af Outflow = 0.30 cfs @ 12.36 hrs, Volume= 0.030 af, Atten= 13%, Lag= 9.2 min Routed to Link 7L : DESIGN POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Max. Velocity= 0.44 fps, Min. Travel Time= 5.6 min Avg. Velocity = 0.12 fps, Avg. Travel Time= 21.0 min

Peak Storage= 100 cf @ 12.26 hrs Average Depth at Peak Storage= 0.27' , Surface Width= 3.07' Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 0.93 cfs

2.00' x 0.50' deep channel, n= 0.070 Side Slope Z-value= 2.0 '/' Top Width= 4.00' Length= 147.0' Slope= 0.0034 '/' Inlet Invert= 372.50', Outlet Invert= 372.00'

‡

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### Reach 12R: REACH 2.2

Reach 12R: REACH 2.2



Type III 24-hr 25-year Rainfall=6.36"

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## Summary for Pond 5P: BIORET FACILITY #1

Inflow Area	=	0.099 ac, 3	37.62% Impe	ervious,	Inflow Depth	= 4.2	21" for	· 25-ye	ear event	
Inflow	=	0.49 cfs @	12.09 hrs,	Volume	= 0.03	35 af		-		
Outflow	=	0.35 cfs @	12.17 hrs,	Volume	= 0.02	29 af,	Atten=	28%,	Lag= 4.7 mil	n
Primary	=	0.35 cfs @	12.17 hrs,	Volume	= 0.02	29 af			-	
Routed	to Reacl	h 9R : REĀC	CH 1.1							

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 386.81' @ 12.17 hrs Surf.Area= 678 sf Storage= 433 cf

Plug-Flow detention time= 112.4 min calculated for 0.029 af (84% of inflow) Center-of-Mass det. time= 45.6 min ( 854.9 - 809.3 )

Volume	Inv	ert Avail.Sto	rage Sto	age Description	
#1	386.	00' 5	71 cf <b>Cu</b> s	tom Stage Data (Pris	smatic) Listed below (Recalc)
Elevatio	n t)	Surf.Area	Inc.Stor	e Cum.Store	
(tee	t)	(sq-tt)	(cubic-fee	t) (CUDIC-Teet)	
386.0	0	403		0 0	
386.2	25	484	11	1 111	
386.5	50	568	13	2 242	
387.0	0	748	32	9 571	
Device	Routing	Invert	Outlet De	evices	
#1	Primary	386.50'	4.0" Hori	z. Orifice/Grate C=	0.600 Limited to weir flow at low heads
#2	Primary	386.75'	3.0' long Head (fe	(Profile 7) Broad-Creet) 0.49 0.98 1.48	ested Rectangular Weir
				igiisii) 2.99 5.41 5.0	2
Primary	OutFlow	Max=0.35 cfs	@ 12.17 hr	s HW=386.81' (Free	e Discharge)

-1=Orifice/Grate (Orifice Controls 0.23 cfs @ 2.66 fps)

-2=Broad-Crested Rectangular Weir (Weir Controls 0.12 cfs @ 0.70 fps)

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### Pond 5P: BIORET FACILITY #1

Type III 24-hr 25-year Rainfall=6.36"

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# Summary for Pond 6P: BIORET FACILITY #2

Inflow Area	=	0.076 ac, 8	4.39% Impe	ervious,	Inflow Depth	= 5.6	65" for	25-ye	ear event
Inflow	=	0.46 cfs @	12.08 hrs,	Volume	= 0.0	)36 af		-	
Outflow	=	0.35 cfs @	12.15 hrs,	Volume	= 0.0	)30 af,	Atten=	23%,	Lag= 4.0 min
Primary	=	0.35 cfs @	12.15 hrs,	Volume	= 0.0	)30 af			-
Routed	to Reacl	h 11R : RĒA	CH 2.1						

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 382.30' @ 12.15 hrs Surf.Area= 613 sf Storage= 407 cf

Plug-Flow detention time= 121.6 min calculated for 0.030 af (85% of inflow) Center-of-Mass det. time= 57.9 min ( 824.9 - 767.0 )

Volume	Inv	ert Avail.Sto	orage Stor	age Description		
#1	381.	50' 5	32 cf Cus	tom Stage Data	(Prismatic)	Listed below (Recalc)
Elevatio	n	Surf.Area	Inc.Stor	e Cum.Sto	re	
(tee	t)	(sq-ft)	(cubic-feet	t) (cubic-fee	<u>et)</u>	
381.5	0	404		0	0	
381.7	5	465	10	9 10	)9	
382.0	0	529	12	4 23	33	
382.5	0	667	29	9 53	32	
Device	Routing	Invert	Outlet De	vices		
#1	Primary	382.00'	4.0" Horiz	z. Orifice/Grate	C= 0.600	Limited to weir flow at low heads
#2	Primary	382.25'	<b>3.0' long</b> Head (fee	(Profile 6) Broad et) 0.49 0.98 1.4	<b>d-Crested  </b> 18 3 59	Rectangular Weir
			COEL (EII	yiisii) 5.12 5.41	5.58	
Primary	OutFlow	Max=0.35 cfs	@ 12.15 hrs	s HW=382.30' (	Free Disch	narge)

-1=Orifice/Grate (Orifice Controls 0.23 cfs @ 2.66 fps)

-2=Broad-Crested Rectangular Weir (Weir Controls 0.12 cfs @ 0.73 fps)

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## Pond 6P: BIORET FACILITY #2



Type III 24-hr 25-year Rainfall=6.36"

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## Summary for Link 7L: DESIGN POINT

Inflow A	Area	=	2.580 ac,	7.64% Impervious,	Inflow Depth = 3	.44" for 25-year event
Inflow	:	=	7.32 cfs @	12.22 hrs, Volume	= 0.739 af	
Primary	/ :	=	7.32 cfs @	12.22 hrs, Volume	= 0.739 af	, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs



## Link 7L: DESIGN POINT