CSARCH

Bid Addendum No. 1

February 3, 2023
Clarkstown Central School District – Masonry Reconstruction & Capital Project Phase 5
CSArch Project No. 151-2201
SED Control No. Varies

Architect's Seal

This Bid Addendum No. 1 forms part of the Contract Documents and modifies the original bidding documents dated January 13, 2023. Bid Addendum No. 1 consists of (1) cover sheet page, (2) 30X42 drawing sheets, and (6) specification sections.

GENERAL INFORMATION

1. Bid Addendum No. 1 was issued to bidders on February 3, 2023.

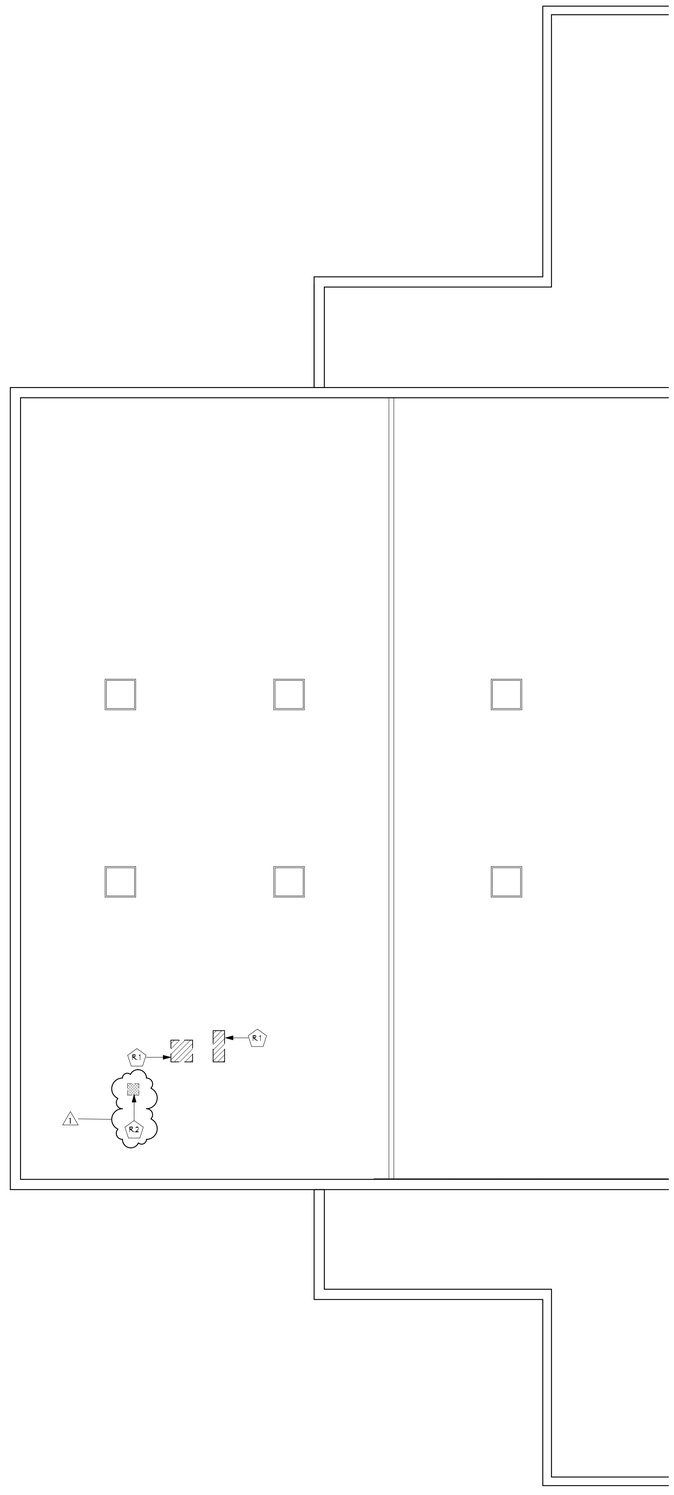
REVISIONS TO THE CONSTRUCTION DRAWINGS

1. **DELETE** original drawing sheet CSHS AD401 – Fitness Area – Roof Demolition Plan.
2. **DELETE** original drawing sheet CSHS A401 – Fitness Area – Roof New Work Plan and Details.
3. **ADD** attached revised drawing sheet CSHS AD401 – Fitness Area – Roof Demolition Plan.
4. **ADD** attached revised drawing sheet CSHS A401 – Fitness Area – Roof New Work Plan and Details.

REVISIONS TO THE PROJECT MANUAL

1. **DELETE** original specification section 000110 – Table of Contents.
2. **ADD** attached specification section 000000 – Project Manual Cover Appendix
3. **ADD** attached revised specification section 000110 – Table of Contents.
4. **ADD** attached specification section 014100.01 – State of Special Inspections for Clarkstown North High School.
5. **ADD** attached specification section 014100.02 – State of Special Inspections for Felix Festa Middle School.
6. **ADD** attached specification section 014100.03 – State of Special Inspections for Clarkstown South High School.
7. **ADD** attached specification section Appendix – Stormwater Pollution Prevention Plan 002113 – Instructions to Bidders.

END OF BID ADDENDUM NO. 1



1 FITNESS AREA - ROOF DEMOLITION PLAN
AD401 1/8" = 1'-0"

GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER TO ASBESTOS AND MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.

ROOF SYSTEMS

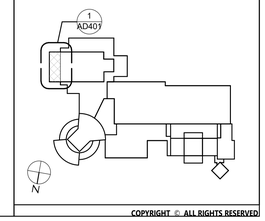
EXISTING ROOF SYSTEM:

1) EXISTING LIGHTWEIGHT CONCRETE ON METAL DECK
2) VAPOR RETARDER
3) RIGID INSULATION (FLAT - 5 1/2" THICKNESS)
4) RIDID INSULATION (TAPTED - THICKNESS VARIES)
5) EPDM ROOF MEMBRANE

DEMOLITION KEYNOTES

(X)	DESCRIPTION
R.1	SAW CUT AND REMOVE PORTION OF ROOF SYSTEM INCLUDING DECKING, INSULATION, AND MEMBRANE TO ACCOMMODATE NEW ROOF PENETRATION. COORDINATE PENETRATION LOCATION AND SIZE WITH MEP DRAWINGS.
R.2	EXISTING MECHANICAL UNIT TO BE REMOVED. EXISTING CURB TO REMAIN. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

KEY PLAN

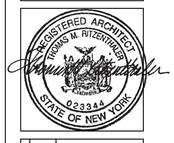


19 Front St. - Newburgh - New York 12550-7601
845 561 3179 www.csarchpc.com
CSARCH

Consultant

Project Title

CLARKSTOWN CENTRAL SCHOOL DISTRICT
CLARKSTOWN SOUTH HIGH SCHOOL
CAPITAL PROJECT PHASE 5



No.	DATE	DESCRIPTION
1	2/3/23	BID ADDENDUM #1

Drawn By:	CSA
Checked By:	CSA
Proj. #:	50-01-01-06-0-018-028
CSArch Proj. #:	151-2201
Construction Documents:	1/13/23

Sheet Title

FITNESS AREA - ROOF DEMOLITION PLAN

Sheet No.

CSHS AD401

CONSTRUCTION DOCUMENTS

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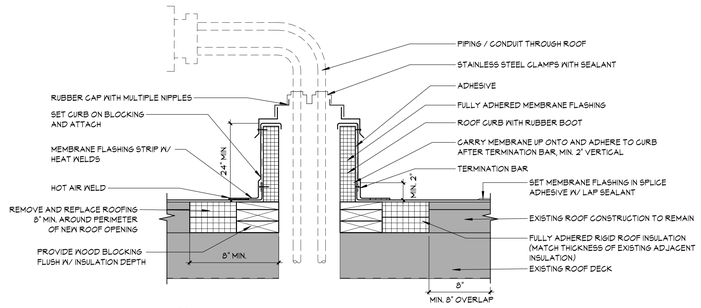
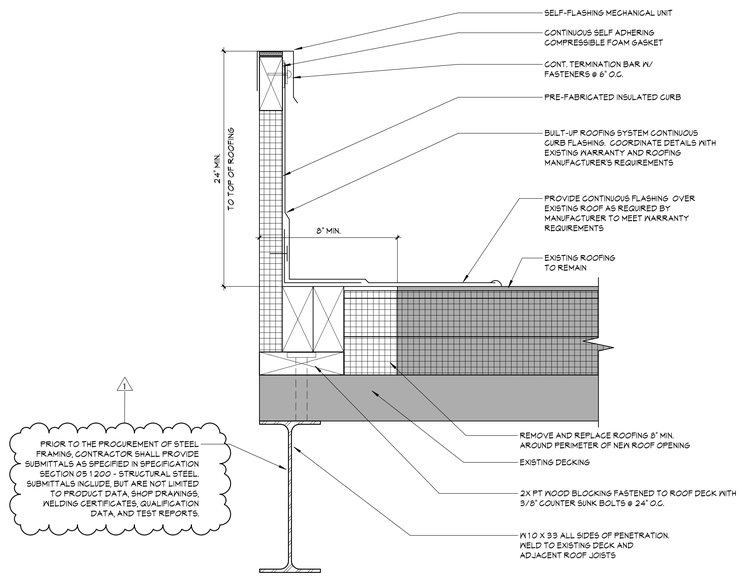
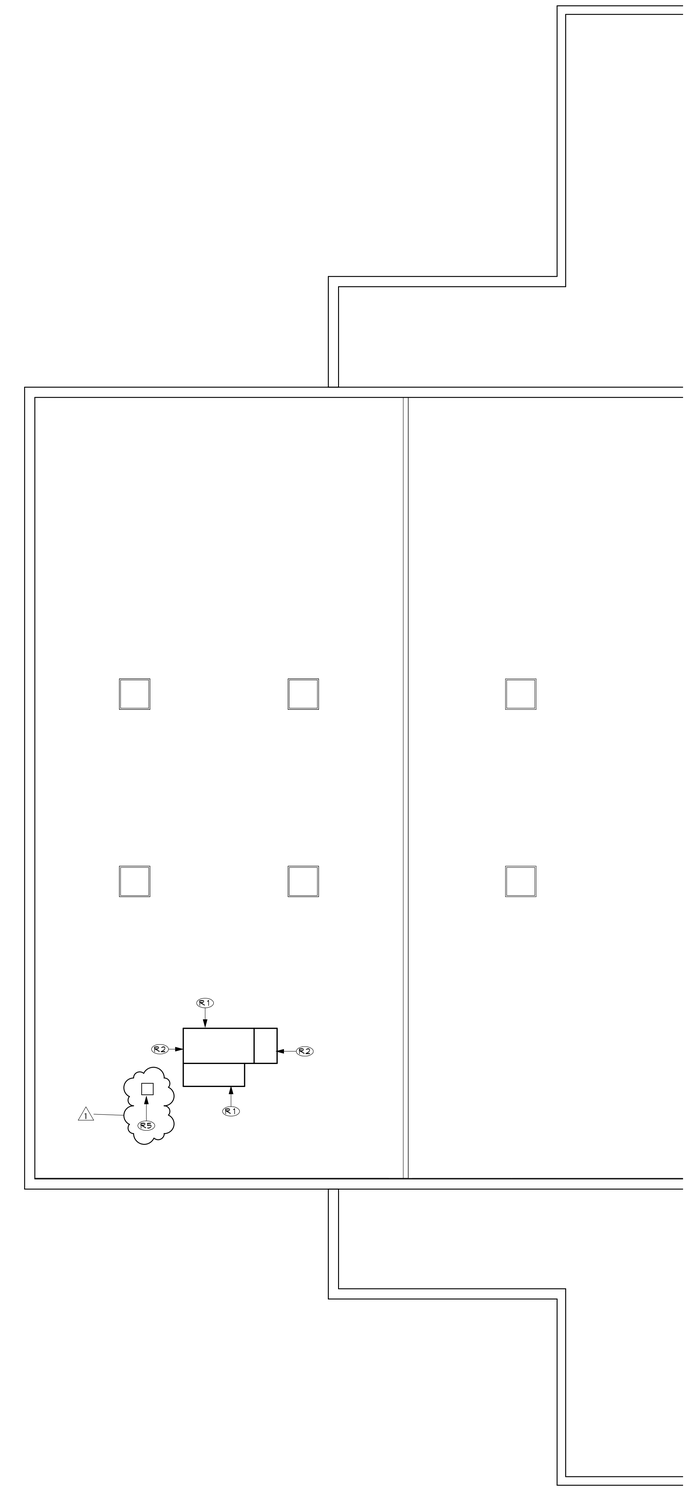


3 ROOF PIPE BOOT/CURB DETAIL
A401 1 1/2" = 1'-0"



2 ROOF EQUIPMENT CURB DETAIL
A401 3" = 1'-0"



1 FITNESS AREA - ROOF NEW WORK PLAN
A401 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A600 SERIES DRAWINGS FOR ADDITIONAL DIMENSIONS AND DETAILED INFORMATION OF CABINETRY.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. REFER TO SHEET A101 FOR PARTITION TYPES AND ADDITIONAL NOTES.

ROOF SYSTEMS

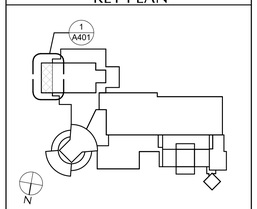
EXISTING ROOF SYSTEM:

1) EXISTING LIGHTWEIGHT CONCRETE ON METAL DECK
2) VAPOR RETARDER
3) RIGID INSULATION (FLAT - 5 1/2" THICKNESS)
4) RIDID INSULATION (TAPTED - THICKNESS VARIES)
5) EPDM ROOF MEMBRANE

NEW WORK KEYNOTES

(X)	DESCRIPTION
R1	INSTALL NEW ROOF CURB FOR ROOF TOP MECHANICAL EQUIPMENT. PROVIDE ROOF DECK SUPPORT STEEL AROUND ROOF OPENING. COORDINATE EQUIPMENT SIZE WITH MECHANICAL DRAWINGS.
R2	PROVIDE ROOF SYSTEM INFILL AND FLASHING AROUND ROOF CURB AS REQUIRED
R5	PROVIDE WEATHERTIGHT METAL CAP OVER EXISTING EQUIPMENT CURB SCHEDULED TO REMAIN.

KEY PLAN



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Consultant

CLARKSTOWN CENTRAL SCHOOL DISTRICT
CLARKSTOWN SOUTH HIGH SCHOOL
CAPITAL PROJECT PHASE 5

Project Title

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK

NO.	DATE	DESCRIPTION
1	2/2/23	BID ADDENDUM #1

Drawn By:	CSA
Checked By:	CSA
Proj. #:	50-01-01-06-0-018-028
CSArch Proj. #:	151-2201
Construction Documents:	1/13/23

Sheet Title

FITNESS AREA - ROOF NEW WORK PLAN AND DETAILS

Sheet No.

CSHS
A401

CONSTRUCTION DOCUMENTS

C:\Users\dmiller\Documents\151-2201_SOUTH HS_dmiller393.rvt

CONSTRUCTION DOCUMENTS: January 13, 2023

PROJECT MANUAL

APPENDIX

CLARKSTOWN CENTRAL SCHOOL DISTRICT

Masonry Reconstruction & Capital Project Phase 5

MASONRY RECONSTRUCTION:	
Birchwood Elementary School	SED #50-01-01-06-0-002-015
New City Elementary School	SED #50-01-01-06-0-003-016
Little Tor Elementary School	SED #50-01-01-06-0-004-017
West Nyack Elementary School	SED #50-01-01-06-0-006-020
Bardonia Elementary School	SED #50-01-01-06-0-007-022
Dina Link Elementary School	SED #50-01-01-06-0-013-016
Woodglen Elementary School	SED #50-01-01-06-0-016-016
Lakewood Elementary School	SED #50-01-01-06-0-017-013
Strawtown Elementary School	SED #50-01-01-06-0-019-018
CAPITAL PROJECT PHASE 5:	
Clarkstown North High School	SED #50-01-01-06-0-010-025
Felix V. Festa Middle School	SED #50-01-01-06-0-012-034
Clarkstown South High School	SED #50-01-01-06-0-018-028

CSArch Project No. 151-2101 & 151-2201

Architect's Seal

The design of this project conforms to applicable provisions of the New York State Uniform Fire Prevention and Building Code, the New York State Energy Conservation Construction Code, and the Manual of Planning Standards of the New York State Education Department

CSARCH

DOCUMENT 000110 - TABLE OF CONTENTS

VOLUME 01

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

Bidding Requirements

Procurement Forms and Supplements

Contracting Requirements and Supplements

Closeout Forms

1

DIVISION 02 – EXISTING CONDITIONS

DIVISION 03 – CONCRETE

DIVISION 04 – MASONRY

DIVISION 05 – METALS

DIVISION 06 – WOOD AND PLASTICS

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

DIVISION 21 – FIRE SUPPRESSION

Not Used

DIVISION 22 – PLUMBING

Not Used

DIVISION 23 – HEATING, VENTILATING AND AIR-CONDITIONING

DIVISION 26 – ELECTRICAL

DIVISION 27 – COMMUNICATIONS

Not Used

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

283100 Fire Detection and Alarm

DIVISION 31 – EARTHWORK

310000 Site Clearing
310100 Selective Tree Removal
312000 Excavation and Fill
312316 Rock Removal
312319 Dewatering
312513 Erosion and Sediment Controls

DIVISION 32 – EXTERIOR IMPROVEMENTS

321216 Asphalt Paving
321313 Concrete Paving
321723 Pavement Markings
323113 Chain Link Fence and Gate
323300 Exterior Lighting
329200 Topsoil and Seeding
329300 Plants

DIVISION 33 – UTILITIES

334100 Storm Utility Drainage Piping
334900 Storm Drainage Structures
335900 Sanitary Sewer Piping
335903 Sanitary Sewer Structures

DIVISION 34 – TRANSPORTATION

Not Used

APPENDIX 1

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REPORT FOR CLARKSTOWN NORTH HIGH SCHOOL

1

END OF DOCUMENT 000110

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NYS EDUCATION DEPARTMENT **Office of Facilities Planning** **89 Washington Avenue, Room 1060 EBA** **Albany, NY 12234**	**STATEMENT OF SPECIAL INSPECTIONS AND TESTS** As required by the Building Code of NYS (2020 BCNYS) *Note: The code listings below are not to be considered all inclusive.*

BCNYS § 1704.2.3 requires the NYS Licensed Design Professional (of record) to complete the Statement of Special Inspections and Tests. Completion of the Statement of Special Inspections & Tests, **and;** Submission to the Office of Facilities Planning with the Construction Permit Application is a condition for issuance of the Building Permit.

School District	Project Tiltle
Clarkstown Central School District	Site and Bus Loop Circulation Improvements and Locker Replacements
Building	
North High School	
SED Project #	Project Address
500101-06-0010-025	151 Congers Road, New City, NY 10956
Architect/Engineer:	

Sign and Stamp:

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 02334 STATE OF NEW YORK

A/E Firm (or Dba):	Phone	Date
Thomas Ritzenthaler	845-561-3179	9/30/2022

Comments:

INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**	**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**	**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
A. Steel Construction				**Ch. 22**		
1. Material verification of high-strength bolts, nuts and washers.		X	AISC 360	1705.2 2204	☐	
2. Inspection of high-strength bolting.	X	X	AISC 360 ACI 318	1705.2 2204.2	☐	
3. Material verification of **Structural Steel**. **Open Web Steel Joist and Girders.** Basic protection of steel members, **Seismic Resistance**			AISC 360 ASTM A6, A514, A29 SJ100, 200 AICS 341	1705.2 2203, 2205 1705.2 2207	☐ ☐ ☐	
4. Spray Applied Fire Resistant Materials & Specialized Finishes			ASTM E605, E736	1705.14 1705.15	☐	
5. **Cold Formed Steel Construction**- load bearing. **Seismic Resistance**			AISI S100, S220, S240 ANSI/SDI -NC1.0, RD1.0, SDI-C, ASCE 7, 8 AISI S400	1704.2.5 2210 2211	☐ ☐	
6. Material verification of weld filler materials.			AWS D1.1, D1.3	1705.2 2204.1	☐	
7. Inspection of welding:			ACI 318: 26.6.4	T 1705.3 2204	☐	
a. Structural steel	X	X	AWS D1.1, D1.3	1705.2	☐	
b. Reinforcing steel	X	X	AWS D1.1, D1.3	1705.3.1	☐	
c. Cold Formed Steel Deck			AISC S100, ASCE 7, 8	1705.2.2	☐	
8. Inspection of steel frame joint details.		X		1705.2	☐	

INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record.		CONTINUOUS	PERIODIC	REFERENCE STANDARD	BCNYS REFERENCE	CHECK IF REQUIRED	IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY
B.	**Concrete Construction**				**Ch. 19**		
1.	Inspection of reinforcing steel, including prestressing tendons, and verify placement.		X	Ch. 21, 22 ACI 318; Ch 20, 25.2, 25.3, 26.6.1, 26.6.3 AISC 360	T 1705.3 1901 1905	☑	
2.	Inspection of reinforcing steel bar welding.			ACI 318, AWS D1.4	T 1705.3	☑	
3.	Inspection of anchors to be installed in concrete prior to and during placement.	X		ACI 318: 17.8.2, 17.8.2.4	T 1705.3	☑	
4.	Verify use of required design mix.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4	T 1705.3 1904 1908	☑	
5.	Sampling fresh concrete: slump, air content, temperature, strength test specimens.	X		ASTM C172, C31 ACI 318: 26.5, 26.9, 26.10, 26.11	T 1705.3 1901 1905 1908	☑	
6.	Inspection of placement for proper application techniques.	X		ACI 318: 26.5	T 1705.3	☑	
7.	Inspection for maintenance of specified curing temperature and techniques.		X	ACI 318: 26.5	T 1705.3 1908 1909	☑	
8.	Inspection of prestressed concrete.	X		ACI 318: 26.10	T 1705.3	☐	
9.	Erection of precast concrete members.		X	ACI 318: 26.9	T 1705.3	☐	
10.	Verification of in-situ concrete strength prior to stressing of tendons and prior to removal of shores and forms from beams and slabs.		X	ACI 318: 26.11.2	T 1705.3	☑	
11	Inspection of formwork		X	ACI 318: 26.11.1.2 (b)	T 1705.3	☑	

C.	**Masonry Construction**							**Ch. 21**
INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**		**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**		**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
	L1 = Level 1 Inspection required for nonessential facilities. **L2 =** Level 2 Inspection required for essential facilities. * In general, schools are not considered essential facilities unless they are a designated emergency shelter.			ASTM E119 UL 263 ASTM C1364 ASTM C1670 ASTM A706 ASCE 7, 8	TMS 402, 403, 404, 504, 602	1705.4 2101 1604		
1.	Verify to ensure compliance:							
	a. Proportions of site prepared mortar and grout.		**X** **L1 & L2**			1705.4 2103.2	☐	
	b. Placement of masonry units and construction of mortar joints.		**X** **L1 & L2**			1705.4 T 1705.3	☐	
	c. Location and placement of reinforcement, connectors, tendons, anchorages.		**X** **L1 & L2**			1705.45 2103.4 T 1705.3	☐	
	d. Prestressing technique.		**X** **L1**			1705.4	☐	
	Grout space prior to grouting.	**X** **L2**				1705.4	☐	
	e. Grade and size of prestressing tendons and anchorages.		**X** **L1**			1705.4	☐	
	Placement of grout.	**X** **L2**				1705.4	☐	
	f. Grout specs prior to grouting.	**X** **L2**				1705.4	☐	
2.	Inspection program shall verify:							
	a. Size and location of structural elements.		**X** **L1 & L2**			1704.5 1705.4	☐	
	b. Type, size, and location of anchors.	**X** **L2**	**X** **L1**			1705.4 T 1705.3	☐	
	c. Specified size, grade, and type of reinforcement.		**X** **L1 & L2**			1704.5	☐	
	d. Welding of reinforcing bars.	**X** **L1 & L2**				1704.5	☐	
	e. Cold/hot weather protection of masonry construction.		**X** **L1 & L2**			1704.5, 2104.3, 2104.4	☐	
	f. Prestressing force measurement and application.	**X** **L2**	**X** **L1**			1704.5	☐	
3.	Verification accessory placement prior to grouting:	**X** **L2**	**X** **L1**			1704.5, 2105.2.2, 2105.3	☐	
4.	Grout placement.	**X** **L1**				1704.5	☐	
5.	Preparation of grout specimens, mortar specimens, and/or prisms.	**X** **L1 & L2**				1704.5, 2105.2.2, 2105.3	☐	
6.	Compliance with documents and submittals.		**X** **L1 & L2**			1704.5	☐	

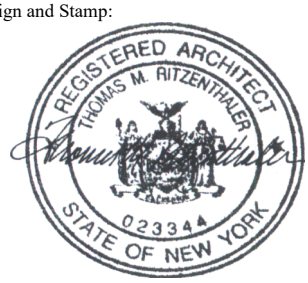
INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**	**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**	**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
D. Wood Construction				**Ch. 23**		
1. Fabrication process of prefabricated **Wood Structural Elements** and assemblies.		X	Ch. 16 AWC, APA, CPA, DOC PS1, PS2	1704.6, 1705.5 2302, 2303 2304	☐	
2. High-load diaphrams **Seismic Resistance**		X		1704, 1705, 1704.6 2304, 2305 2306, 2307, 2308	☐	
E. Soils				**Ch. 18**		
1. Geotechnical Investigations, Excavations, Grading, Fill Damp-proofing/ Water-Proofing		X	ASTM, NYS DOT OSHA Appendix J- BCNYS	1704, 1706 1803, 1804, 1805	☑	
2. **Flood & Stormwater Hazards** [per BCNYS 106]		X	Local Highway Authority Flood Plain Admin. Appendix G- BCNYS	1703 1610, 1611, 1612 1805.1.2.1	☐ ☐	
F. Specialized Foundations- Piers, Piles				**Ch. 16**		
1. Deep Foundation Elements: Driven Piles Cast in Place Helical Piles		X		T 1705.7 T 1705.8 1705.7 1705.8 1705.9	☐	
G. Exterior Wall Coverings				**Ch. 14**		
1. Exterior Insulation and Finish Systems (EIFS) MCM, HPL, Other Combustible Materials		X	ASTM E2568, E2273, E2570 E2393, E84 Ch. 16 NFPA 268, 275, 285, 286	1405, 1406, 1407, 1408 1704.2, 1705.12.5 1705.16	☐	
H. Misc.						
1. Access Floors and Storage Racks Other Architectural, MEP Components **Seismic Resitance**		X		1705.12	☐	
2. In-Situ Testing		X		1604.6, 1708	☑	
3. Pre-Construction Load Testing		X		1604.7, 1709	☐	
4. Fire Resistant Penitrations & Joints Fire Stops Testing for Smoke Control		X	Ch. 7 ASTM E119 UL 263	1705.17 1705.18	☐	
5. **Pre-Submission:** **Inventory of all Fire-Resistant-Rated Construction- Level 2 Alterations and greater** [per BCNYS 106]	X		verification required EBCNYS Ch. 3 C. of E. 155 Regulations.	**FCNYS 701.6** **BCNYS 703.7** **19CRR-NY XXXII**	☐	
6. **Pre-Submission:** **Hazardous Material Survey** **Water Quality Survey**	X X		verification required ACM Letter- Certificate C. of E. 155 Regulations.	US-EPA NYS-DOH	☐	
7. Other:					☐	

NYS EDUCATION DEPARTMENT Office of Facilities Planning 89 Washington Avenue, Room 1060 EBA Albany, NY 12234	STATEMENT OF SPECIAL INSPECTIONS AND TESTS As required by the Building Code of NYS (2020 BCNYS) *Note: The code listings below are not to be considered all inclusive.*

BCNYS § 1704.2.3 requires the NYS Licensed Design Professional (of record) to complete the Statement of Special Inspections and Tests. Completion of the Statement of Special Inspections & Tests, **and;** Submission to the Office of Facilities Planning with the Construction Permit Application is a condition for issuance of the Building Permit.

School District	Project Title
Clarkstown Central School District	Curb and Sidewalk Improvements
Building	
Felix Festa Middle School	
SED Project #	Project Address
500101-06-0012-034	30 Parrott Road, West Nyack, NY 10994
Architect/Engineer:	

Sign and Stamp:



A/E Firm (or Dba):	Phone	Date
Thomas Ritzenthaler	845-561-3179	9/30/2022

Comments:

INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record.	CONTINUOUS	PERIODIC	REFERENCE STANDARD	BCNYS REFERENCE	CHECK IF REQUIRED	IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY
A. Steel Construction				**Ch. 22**		
1. Material verification of high-strength bolts, nuts and washers.		X	AISC 360	1705.2 2204	☐	
2. Inspection of high-strength bolting.	X	X	AISC 360 ACI 318	1705.2 2204.2	☐	
3. Material verification of **Structural Steel**. **Open Web Steel Joist and Girders.** Basic protection of steel members, **Seismic Resistance**			AISC 360 ASTM A6, A514, A29 SJ100, 200 AICS 341	1705.2 2203, 2205 1705.2 2207	☐ ☐ ☐	
4. Spray Applied Fire Resistant Materials & Specialized Finishes			ASTM E605, E736	1705.14 1705.15	☐	
5. **Cold Formed Steel Construction**- load bearing. **Seismic Resistance**			AISI S100, S220, S240 ANSI/SDI -NC1.0, RD1.0, SDI-C, ASCE 7, 8 AISI S400	1704.2.5 2210 2211	☐ ☐	
6. Material verification of weld filler materials.			AWS D1.1, D1.3	1705.2 2204.1	☐	
7. Inspection of welding:			ACI 318: 26.6.4	T 1705.3 2204	☐	
a. Structural steel	X	X	AWS D1.1, D1.3	1705.2	☐	
b. Reinforcing steel	X	X	AWS D1.1, D1.3	1705.3.1	☐	
c. Cold Formed Steel Deck			AISC S100, ASCE 7, 8	1705.2.2	☐	
8. Inspection of steel frame joint details.		X		1705.2	☐	

INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record.		CONTINUOUS	PERIODIC	REFERENCE STANDARD	BCNYS REFERENCE	CHECK IF REQUIRED	IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY
B.	**Concrete Construction**				**Ch. 19**		
1.	Inspection of reinforcing steel, including prestressing tendons, and verify placement.		X	Ch. 21, 22 ACI 318; Ch 20, 25.2, 25.3, 26.6.1, 26.6.3 AISC 360	T 1705.3 1901 1905	☑	
2.	Inspection of reinforcing steel bar welding.			ACI 318, AWS D1.4	T 1705.3	☑	
3.	Inspection of anchors to be installed in concrete prior to and during placement.	X		ACI 318: 17.8.2, 17.8.2.4	T 1705.3	☑	
4.	Verify use of required design mix.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4	T 1705.3 1904 1908	☑	
5.	Sampling fresh concrete: slump, air content, temperature, strength test specimens.	X		ASTM C172, C31 ACI 318: 26.5, 26.9, 26.10, 26.11	T 1705.3 1901 1905 1908	☑	
6.	Inspection of placement for proper application techniques.	X		ACI 318: 26.5	T 1705.3	☑	
7.	Inspection for maintenance of specified curing temperature and techniques.		X	ACI 318: 26.5	T 1705.3 1908 1909	☑	
8.	Inspection of prestressed concrete.	X		ACI 318: 26.10	T 1705.3	☐	
9.	Erection of precast concrete members.		X	ACI 318: 26.9	T 1705.3	☑	
10.	Verification of in-situ concrete strength prior to stressing of tendons and prior to removal of shores and forms from beams and slabs.		X	ACI 318: 26.11.2	T 1705.3	☐	
11	Inspection of formwork		X	ACI 318: 26.11.1.2 (b)	T 1705.3	☑	

C.	**Masonry Construction**							**Ch. 21**
INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**		**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**		**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
	L1 = Level 1 Inspection required for nonessential facilities. **L2 =** Level 2 Inspection required for essential facilities. * In general, schools are not considered essential facilities unless they are a designated emergency shelter.			ASTM E119 UL 263 ASTM C1364 ASTM C1670 ASTM A706 ASCE 7, 8	TMS 402, 403, 404, 504, 602	1705.4 2101 1604		
1.	Verify to ensure compliance:							
	a. Proportions of site prepared mortar and grout.		**X** **L1 & L2**			1705.4 2103.2	☐	
	b. Placement of masonry units and construction of mortar joints.		**X** **L1 & L2**			1705.4 T 1705.3	☐	
	c. Location and placement of reinforcement, connectors, tendons, anchorages.		**X** **L1 & L2**			1705.45 2103.4 T 1705.3	☐	
	d. Prestressing technique.		**X** **L1**			1705.4	☐	
	Grout space prior to grouting.	**X** **L2**				1705.4	☐	
	e. Grade and size of prestressing tendons and anchorages.		**X** **L1**			1705.4	☐	
	Placement of grout.	**X** **L2**				1705.4	☐	
	f. Grout specs prior to grouting.	**X** **L2**				1705.4	☐	
2.	Inspection program shall verify:							
	a. Size and location of structural elements.		**X** **L1 & L2**			1704.5 1705.4	☐	
	b. Type, size, and location of anchors.	**X** **L2**	**X** **L1**			1705.4 T 1705.3	☐	
	c. Specified size, grade, and type of reinforcement.		**X** **L1 & L2**			1704.5	☐	
	d. Welding of reinforcing bars.	**X** **L1 & L2**				1704.5	☐	
	e. Cold/hot weather protection of masonry construction.		**X** **L1 & L2**			1704.5, 2104.3, 2104.4	☐	
	f. Prestressing force measurement and application.	**X** **L2**	**X** **L1**			1704.5	☐	
3.	Verification accessory placement prior to grouting:	**X** **L2**	**X** **L1**			1704.5, 2105.2.2, 2105.3	☐	
4.	Grout placement.	**X** **L1**				1704.5	☐	
5.	Preparation of grout specimens, mortar specimens, and/or prisms.	**X** **L1 & L2**				1704.5, 2105.2.2, 2105.3	☐	
6.	Compliance with documents and submittals.		**X** **L1 & L2**			1704.5	☐	

INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**	**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**	**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
D. Wood Construction				**Ch. 23**		
1. Fabrication process of prefabricated **Wood Structural Elements** and assemblies.		X	Ch. 16 AWC, APA, CPA, DOC PS1, PS2	1704.6, 1705.5 2302, 2303 2304	☐	
2. High-load diaphrams **Seismic Resistance**		X		1704, 1705, 1704.6 2304, 2305 2306, 2307, 2308	☐	
E. Soils				**Ch. 18**		
1. Geotechnical Investigations, Excavations, Grading, Fill Damp-proofing/ Water-Proofing		X	ASTM, NYS DOT OSHA Appendix J- BCNYS	1704, 1706 1803, 1804, 1805	☑	
2. **Flood & Stormwater Hazards** [per BCNYS 106]		X	Local Highway Authority Flood Plain Admin. Appendix G- BCNYS	1703 1610, 1611, 1612 1805.1.2.1	☐ ☐	
F. Specialized Foundations- Piers, Piles				**Ch. 16**		
1. Deep Foundation Elements: Driven Piles Cast in Place Helical Piles		X		T 1705.7 T 1705.8 1705.7 1705.8 1705.9	☐	
G. Exterior Wall Coverings				**Ch. 14**		
1. Exterior Insulation and Finish Systems (EIFS) MCM, HPL, Other Combustible Materials		X	ASTM E2568, E2273, E2570 E2393, E84 Ch. 16 NFPA 268, 275, 285, 286	1405, 1406, 1407, 1408 1704.2, 1705.12.5 1705.16	☐	
H. Misc.						
1. Access Floors and Storage Racks Other Architectural, MEP Components **Seismic Resitance**		X		1705.12	☐	
2. In-Situ Testing		X		1604.6, 1708	☑	
3. Pre-Construction Load Testing		X		1604.7, 1709	☐	
4. Fire Resistant Penitrations & Joints Fire Stops Testing for Smoke Control		X	Ch. 7 ASTM E119 UL 263	1705.17 1705.18	☐	
5. **Pre-Submission:** **Inventory of all Fire-Resistant-Rated Construction- Level 2 Alterations and greater** [per BCNYS 106]	X		verification required EBCNYS Ch. 3 C. of E. 155 Regulations.	**FCNYS 701.6** **BCNYS 703.7** **19CRR-NY XXXII**	☐	
6. **Pre-Submission:** **Hazardous Material Survey** **Water Quality Survey**	X X		verification required ACM Letter- Certificate C. of E. 155 Regulations.	US-EPA NYS-DOH	☐	
7. Other:					☐	

NYS EDUCATION DEPARTMENT **Office of Facilities Planning** **89 Washington Avenue, Room 1060 EBA** **Albany, NY 12234**	**STATEMENT OF SPECIAL INSPECTIONS AND TESTS** As required by the Building Code of NYS (2020 BCNYS) *Note: The code listings below are not to be considered all inclusive.*

BCNYS § 1704.2.3 requires the NYS Licensed Design Professional (of record) to complete the Statement of Special Inspections and Tests. Completion of the Statement of Special Inspections & Tests, **and;** Submission to the Office of Facilities Planning with the Construction Permit Application is a condition for issuance of the Building Permit.

School District	Project Tiltle
Clarkstown Central School District	LED Site Signage and Fitness Area HVAC Improvements
Building	
South High School	
SED Project #	Project Address
500101-06-0018-028	31 Demarest Mill Road, West Nyack, NY 10994
Architect/Engineer:	

Sign and Stamp:

A/E Firm (or Dba):	Phone	Date
Thomas Ritzenthaler	845-561-3179	9/30/2022

Comments:

INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**	**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**	**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
A. Steel Construction				**Ch. 22**		
1. Material verification of high-strength bolts, nuts and washers.		X	AISC 360	1705.2 2204	☐	
2. Inspection of high-strength bolting.	X	X	AISC 360 ACI 318	1705.2 2204.2	☐	
3. Material verification of **Structural Steel**. **Open Web Steel Joist and Girders.** Basic protection of steel members, **Seismic Resistance**			AISC 360 ASTM A6, A514, A29 SJ100, 200 AICS 341	1705.2 2203, 2205 1705.2 2207	☐ ☐ ☐	
4. Spray Applied Fire Resistant Materials & Specialized Finishes			ASTM E605, E736	1705.14 1705.15	☐	
5. **Cold Formed Steel Construction**- load bearing. **Seismic Resistance**			AISI S100, S220, S240 ANSI/SDI -NC1.0, RD1.0, SDI-C, ASCE 7, 8 AISI S400	1704.2.5 2210 2211	☐ ☐	
6. Material verification of weld filler materials.			AWS D1.1, D1.3	1705.2 2204.1	☐	
7. Inspection of welding:			ACI 318: 26.6.4	T 1705.3 2204	☐	
a. Structural steel	X	X	AWS D1.1, D1.3	1705.2	☐	
b. Reinforcing steel	X	X	AWS D1.1, D1.3	1705.3.1	☐	
c. Cold Formed Steel Deck			AISC S100, ASCE 7, 8	1705.2.2	☐	
8. Inspection of steel frame joint details.		X		1705.2	☐	

INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record.		CONTINUOUS	PERIODIC	REFERENCE STANDARD	BCNYS REFERENCE	CHECK IF REQUIRED	IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY
B.	**Concrete Construction**				**Ch. 19**		
1.	Inspection of reinforcing steel, including prestressing tendons, and verify placement.		X	Ch. 21, 22 ACI 318; Ch 20, 25.2, 25.3, 26.6.1, 26.6.3 AISC 360	T 1705.3 1901 1905	☑	
2.	Inspection of reinforcing steel bar welding.			ACI 318, AWS D1.4	T 1705.3	☑	
3.	Inspection of anchors to be installed in concrete prior to and during placement.	X		ACI 318: 17.8.2, 17.8.2.4	T 1705.3	☑	
4.	Verify use of required design mix.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4	T 1705.3 1904 1908	☑	
5.	Sampling fresh concrete: slump, air content, temperature, strength test specimens.	X		ASTM C172, C31 ACI 318: 26.5, 26.9, 26.10, 26.11	T 1705.3 1901 1905 1908	☑	
6.	Inspection of placement for proper application techniques.	X		ACI 318: 26.5	T 1705.3	☑	
7.	Inspection for maintenance of specified curing temperature and techniques.		X	ACI 318: 26.5	T 1705.3 1908 1909	☑	
8.	Inspection of prestressed concrete.	X		ACI 318: 26.10	T 1705.3	☐	
9.	Erection of precast concrete members.		X	ACI 318: 26.9	T 1705.3	☐	
10.	Verification of in-situ concrete strength prior to stressing of tendons and prior to removal of shores and forms from beams and slabs.		X	ACI 318: 26.11.2	T 1705.3	☑	
11	Inspection of formwork		X	ACI 318: 26.11.1.2 (b)	T 1705.3	☑	

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INSPECTION AND TESTING **Continuous & Periodic is as Defined by the BCNYS-CHAPTER 17** **All reports to be submitted to the owners representative for use, approval and record.**		**CONTINUOUS**	**PERIODIC**	**REFERENCE STANDARD**		**BCNYS REFERENCE**	**CHECK IF REQUIRED**	**IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY**
	L1 = Level 1 Inspection required for nonessential facilities. **L2 =** Level 2 Inspection required for essential facilities. * In general, schools are not considered essential facilities unless they are a designated emergency shelter.			ASTM E119 UL 263 ASTM C1364 ASTM C1670 ASTM A706 ASCE 7, 8	TMS 402, 403, 404, 504, 602	1705.4 2101 1604		
1.	Verify to ensure compliance:							
	a. Proportions of site prepared mortar and grout.		**X** **L1 & L2**			1705.4 2103.2	☐	
	b. Placement of masonry units and construction of mortar joints.		**X** **L1 & L2**			1705.4 T 1705.3	☐	
	c. Location and placement of reinforcement, connectors, tendons, anchorages.		**X** **L1 & L2**			1705.45 2103.4 T 1705.3	☐	
	d. Prestressing technique.		**X** **L1**			1705.4	☐	
	Grout space prior to grouting.	**X** **L2**				1705.4	☐	
	e. Grade and size of prestressing tendons and anchorages.		**X** **L1**			1705.4	☐	
	Placement of grout.	**X** **L2**				1705.4	☐	
	f. Grout specs prior to grouting.	**X** **L2**				1705.4	☐	
2.	Inspection program shall verify:							
	a. Size and location of structural elements.		**X** **L1 & L2**			1704.5 1705.4	☐	
	b. Type, size, and location of anchors.	**X** **L2**	**X** **L1**			1705.4 T 1705.3	☐	
	c. Specified size, grade, and type of reinforcement.		**X** **L1 & L2**			1704.5	☐	
	d. Welding of reinforcing bars.	**X** **L1 & L2**				1704.5	☐	
	e. Cold/hot weather protection of masonry construction.		**X** **L1 & L2**			1704.5, 2104.3, 2104.4	☐	
	f. Prestressing force measurement and application.	**X** **L2**	**X** **L1**			1704.5	☐	
3.	Verification accessory placement prior to grouting:	**X** **L2**	**X** **L1**			1704.5, 2105.2.2, 2105.3	☐	
4.	Grout placement.	**X** **L1**				1704.5	☐	
5.	Preparation of grout specimens, mortar specimens, and/or prisms.	**X** **L1 & L2**				1704.5, 2105.2.2, 2105.3	☐	
6.	Compliance with documents and submittals.		**X** **L1 & L2**			1704.5	☐	

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1. Fabrication process of prefabricated **Wood Structural Elements** and assemblies.		X	Ch. 16 AWC, APA, CPA, DOC PS1, PS2	1704.6, 1705.5 2302, 2303 2304	☐	
2. High-load diaphrams **Seismic Resistance**		X		1704, 1705, 1704.6 2304, 2305 2306, 2307, 2308	☐	
E. Soils				**Ch. 18**		
1. Geotechnical Investigations, Excavations, Grading, Fill Damp-proofing/ Water-Proofing		X	ASTM, NYS DOT OSHA Appendix J- BCNYS	1704, 1706 1803, 1804, 1805	☑	
2. **Flood & Stormwater Hazards** [per BCNYS 106]		X	Local Highway Authority Flood Plain Admin. Appendix G- BCNYS	1703 1610, 1611, 1612 1805.1.2.1	☐ ☐	
F. Specialized Foundations- Piers, Piles				**Ch. 16**		
1. Deep Foundation Elements: Driven Piles Cast in Place Helical Piles		X		T 1705.7 T 1705.8 1705.7 1705.8 1705.9	☐	
G. Exterior Wall Coverings				**Ch. 14**		
1. Exterior Insulation and Finish Systems (EIFS) MCM, HPL, Other Combustible Materials		X	ASTM E2568, E2273, E2570 E2393, E84 Ch. 16 NFPA 268, 275, 285, 286	1405, 1406, 1407, 1408 1704.2, 1705.12.5 1705.16	☐	
H. Misc.						
1. Access Floors and Storage Racks Other Architectural, MEP Components **Seismic Resitance**		X		1705.12	☐	
2. In-Situ Testing		X		1604.6, 1708	☑	
3. Pre-Construction Load Testing		X		1604.7, 1709	☐	
4. Fire Resistant Penitrations & Joints Fire Stops Testing for Smoke Control		X	Ch. 7 ASTM E119 UL 263	1705.17 1705.18	☐	
5. **Pre-Submission:** **Inventory of all Fire-Resistant-Rated Construction- Level 2 Alterations and greater** [per BCNYS 106]	X		verification required EBCNYS Ch. 3 C. of E. 155 Regulations.	**FCNYS 701.6** **BCNYS 703.7** **19CRR-NY XXXII**	☐	
6. **Pre-Submission:** **Hazardous Material Survey** **Water Quality Survey**	X X		verification required ACM Letter- Certificate C. of E. 155 Regulations.	US-EPA NYS-DOH	☐	
7. Other:					☐	

STORMWATER POLLUTION PREVENTION PLAN

for

CLARKSTOWN NORTH HIGH SCHOOL

151 Crongers Rd, New City, NY 10956
Town of New City
Clarkstown Central School District
Rockland County, New York

January 2023

Prepared for:
Clarkstown Central School District
62 Old Middletown Rd
New City, NY 10956-2737

Prepared by:
Passero Associates
19 Front Street
Newburgh, NY 12550
845.328.1808

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APPENDIX E: CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG SHEETS

APPENDIX F: E-NOTICE OF INTENT & ACKNOWLEDGEMENT LETTER

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APPENDIX H: NYSDEC ENGINEER CERTIFICATION

APPENDIX I: NOTICE OF TERMINATION

APPENDIX J: SHPO FLOW CHART AND RESPONSE LETTER

1.0 SUMMARY

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity" General Permit Number GP-0-15-001. The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of improvements at the Clarkstown North High School. Improvements expected to start construction in 2023.

The proposed improvements are expected to disturb a total of 4.11 acres. The project will redevelop 2.81 acres of impervious surface and create approximately 0.65 acres of new impervious surface. Therefore, the project will include post construction treatment practice water quality volume (WQv) for 25% runoff of the existing impervious surfaces and 100% runoff WQv treatment for additional, new impervious surface area. The project will also include runoff reduction for new impervious areas.

The project is divided into two drainage points. Both drainage points discharge to the same unnamed stream, located on the Easterly side of the property. DP1 includes the area of disturbance located in the parking lot and student drop off area. DP2 includes the basketball courts that are being resurfaced.

The drainage area for DP1 utilizes an existing 16-inch discharge pipe that appears to be located under the school building and then conveys runoff to an unnamed stream behind the school building. Although this project is not replacing the discharge pipe, it is recommended that the 16-inch pipe be evaluated. Based upon the hydraulic modeling the existing drainage area may experience short term stormwater runoff ponding. Excessive ponding is relieved by runoff that overflows towards the driveway that is adjacent to the tennis courts. The runoff has been calculated to be less than a few inches in elevation during the most extreme storm events that were analyzed. The proposed improvements will reduce these impacts, but does not eliminate temporary ponding in the parking lot area, if they currently exist. Again, based upon the calculations, the temporary ponding will only occur during the most significant portion of a storm event and will recede in a short very short time period after the peak of the event. The temporary ponding will be limited to the low areas of pavement areas with curbing.

The drainage for DP2 is limited to the 15,000 sf of tennis court area. Since there are no changes to DP2, other than resurfacing, this SWPPP will only be focused on DP1, where there is an increase in new impervious surface.

2.0 PROJECT DESCRIPTION

The project includes redevelopment of existing parking lots, driveways, walkways, and student drop off and pick up areas. The project also includes the relocation of parking spaces adjacent to the driveway to account for needed parking.

A location map of the site has been provided in Appendix.

This SWPPP includes post-construction stormwater management practices, as well as erosion and sediment controls.

As a school district, this project is located within a regulated, non-traditional land use control Municipal Separate Stormwater Sewer System (MS4). However, an MS4 SWPPP Acceptance Form is not required to accompany the NOI submitted to the NYSDEC because the New York State Education Department has clarified with the NYSDEC that school districts will not require that form.

Although schools are often located in Towns, Villages, and Cities, again, the District is NOT required to have the Town, Village or City to review and/or authorize an MS4 acceptance form, as they are not the MS4 of jurisdiction.

Runoff from the project site will discharge to unnamed stream that is tributary (regulated by 865-113, C-Standard, C classification) that then discharges to Lake de Forest. The site does not discharge to a Section 303(d) water body.

Project construction activities will consist primarily of replacement of subdrainage, replacement of pavement, replacement of sideways, reconfiguration of bus and parent/student drop off and pick up areas. The project will relocate a limited number of parking spaces to better configure the drop off areas. Pollutants to mitigate could include sediments and construction vehicle fuels and lubricants.

Mitigation measures includes erosion and sediment control methods and post construction measures.

2.1 SWPPP Contacts

1. Owner's/Operator's Engineer:

   George Cronk, P.E.
   Passero Associates
   17 Front Street
   Newburgh, NY 12550
   Phone: 845.667.9950

2. Owner/Operator:

   Dr. Marc P. Baiocco
   Superintendent
   Clarkstown Central School District
   62 Old Middletown Road
   New City, NY 10956
   Phone: 845.639.6300

3.0 SITE CHARACTERISTICS

3.1 Land Use and Topography

The overall site is relatively flat. The site is comprised of mostly Urban land and Udorthents, smoothed. A small portion of the area includes Watchaug fine sandy loam and Yalesvill sandy loam. All soils are well draining soils. Soil mapping is included in Appendix. Data was provided through the USDA Web Soil Survey.

Soils and Groundwater

The United States Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) was used to obtain surficial soil conditions for the study area.

Rainfall Data

Rainfall data utilized in the modeling and analysis was obtained from NOAA. Rainfall data specific to the portion of Orange County under consideration, for various 24-hour storm events, is presented in the following Table:

Table 1: Rainfall Data

Storm Event Return Period	24-Hour Rainfall (inches)
1-year	3.38
10-year	5.05
100-year	9.00

These values were used to evaluate the pre- and post-development stormwater runoff characteristics.

3.2 Wetlands/Tributary

The site was reviewed for the existence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) using an online U.S. Fish and Wildlife website search. State regulated wetlands were researched using the NYSDEC's online Environmental Resource Mapper website.

The NYSDEC Mapper did not identify any wetlands, rare plants, rare species or any other significant cultural occurrences. Therefor, the project will not impact any of the mentioned resources. See Appendix of Map.

3.3 Floodplain

Floodplains were researched using the online Firmette tools found at FEMA Map Service Center. Review of the floodplain mapping indicates there are not floodplains located in the vicinity of the proposed project.

3.4 NYSDEC Environmental Resources

The NYSDEC has an Environmental Resource Mapper on its website. The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

3.5 State Historic Preservation Office Review

The site was reviewed for the presence of an archeological sensitive area within the property boundary. The archeo-sensitive areas were located using online GIS tools found at the NYS Historic Preservation Office (SHPO).

It was determined that site work is not within archeological-sensitive area.

4.0 STORMWATER WATER QUALITY

4.1 Determine Water Quality Treatment Volume (WQv)

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of receiving water bodies. Therefore, treatment of stormwater runoff is important since most runoff related water quality contaminants are transported from land, particularly the impervious surfaces, during the initial stages of storm events.

For the Clarkstown HS project, the project site was divided into three sub catchments. The project proposes an infiltration system that will treat 100% of the new impervious area as well as 25% of the existing impervious area. We are proposing to redirect Areas 2 and 3 will be treated with infiltration to achieve the WQv treatment requirements.

4.1.1 NYSDEC Requirements for New Development

The Design Manual requires that water quality treatment be provided for the initial flush of runoff from every storm. The NYSDEC refers to the amount of runoff to be treated as the "Water Quality Volume" (WQv). Section 4.2 of the Design Manual defines the Water Quality Volume as follows:

$$WQv = \frac{[(P)(R_V)(A)]}{12}$$

Where: P = 90% Rainfall Event Number
R_v = 0.05 + 0.009 (I), minimum R_v = 0.2
I = Impervious Cover (Percent)
A = Contributing Area in Acres

This definition ensures that, all other things being equal, the Water Quality Volume will increase along with the impervious cover percentage.

%WQv treatment as follows:

%WQv Treatment: 100% WQv New Impervious + 25% WQv Existing Impervious

	Total Area *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**25% WQv** *(ft^3)*	**75% WQv** *(ft^3)*
NEW IMPERVIOUS	0.26	0.26	100%	0.95	**1,345**		
Ex. AREA 1 - Redeveloped	2.09	1.46	70%	0.68	7,744	1,936	
Ex. AREA 2 & 3 Redevelopment	1.41	1.0	70%	0.68	5,264	1,316	
BB Court REdevelopment	0.34	0.34	100%	0.95	1,781	445	

Table 2: Required WQv Treatment

Total required WQv treatment is 1,345cf + 1,936 cf + 1,316 cf + 445 cf= 5,042cf

The project proposed to use infiltration practice to meet the entire stormwater treatment volumes required. The proposed treatment system utilizes underground infiltrators. Since the treatment practice only receives runoff from a limited portion of the site, we need to confirm that the area is sufficiently large enough to account for all of the new impervious WQv and 25%WQv of the redeveloped areas. The project proposes to treat all of Area 2 & 3 to meet the WQv requirements.

Table 3a: Tributary Area WQv

	Total Area *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*
EXISTING AREA 2 & 3	1.41	1.0	70%	0.68	5,264

Table 2a shows that the maximum WQv for these areas is 5,264 cf, which exceeds the project requirement of 5,042 cf. We have confirmed that the treatment practice tributary area will meet the minimum WQv for the entire project.

4.1.1.1 Underground Infiltration System

Most proprietary underground infiltration systems operate similarly to traditional infiltration basins (NYSDEC design variant I-2). These practices reduce runoff volume, remove fine sediment and associated pollutants, recharge groundwater, and provide partial attenuation of peak flows for storm events equal to

or less than the design storm. Infiltration practices are appropriate for small drainage areas, but can also be used for larger multiple lot applications, in contrast to rain gardens and dry wells, which are primarily intended for single lots.

Underground infiltration systems are designed to capture and infiltrate the water quality volume, but do not retain a permanent pool. These systems are typically designed to infiltrate the water quality volume as well as to provide detention above the infiltration zone to attenuate peak volumes of larger storm events to meet flood control requirements.

In addition to providing adequate WQv, nn infiltration system requires 25% of the WQv be included for pre-treatment. The system includes a pre-treatment row as well as additional rows of chambers and crushed stone located around the practice. The proposed system includes 3 rows of chambers, 31 chambers per row 6-inch stone subbase, 12-inch stone at sides, ends, and top. Table 2b shows the volumes required as well as the practice volumes provided.

The required pre-treatment (25%) WQv = 25% (5,042) = 1,261 cf

Table 4b: Provided WQv Treatment

	Pre-Treatment Volume Required *(cf)*	**Pre-Treatment Volume Provided** *(cf)*	**WQv Treatment Volume Required** *(cf)*	**WQv Treatment Volume Provided** *(cf)*
Infiltrators	1,261	1,295	5,042	8,269

Both the pretreatment volume and practice volume provided exceed the required volumes.

4.1.2 RRv Performance Summary

According to Section 3.6 of the Design Manual, "If the RRv calculated in this step is greater than or equal to the WQv calculated in Step 2, the designer has met the RRv requirement and may proceed to Step 6." The runoff volume required is only needed for new impervious area. A summary of the RRv provided is presented in the following table:

Table 5: Summary of RRv Provided

RRv Required = WQv Required (CF)	RRv Provided (CF)	% RRv Provided
1,345	8,269	615%

The runoff volume provided exceeds the required runoff volume.

4.2 Volume and Peak Rate Control

This report presents the pre-development and post-development features and conditions associated with the rate of surface water runoff within the study area. For both cases, the drainage patterns, drainage structures, soil types, and ground cover types are considered in this study.

4.2.1 NYSDEC Requirements for New Development

Chapter 4 of the Design Manual requires that projects meet three separate stormwater quantity criteria:

1. The Channel Protection (CPv) requirement is designed to protect stream channels from erosion. This is accomplished by providing 24 hours of extended detention for the 1-year, 24-hour storm event. The Manual defines the CPv detention time as the center of mass detention time through each stormwater management practice.

2. The Overbank Flood Control (Qp) requirement is designed to prevent an increase in the frequency and magnitude of flow events that exceed the bank-full capacity of a channel, and therefore must spill over into the floodplain. This is accomplished by providing detention storage to ensure that, at each design point, the post-development 10-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

3. The Extreme Flood Control (Qf) requirement is designed to prevent the increased risk of flood damage from large storm events, to maintain the boundaries of the pre-development 100-year floodplain, and to protect the physical integrity of stormwater management practices. This is accomplished by providing detention storage to ensure that, at each design point, the post-development 100-year 24-hour peak discharge rate does not exceed the corresponding pre-development rate.

4.2.2 Methodology

In order to demonstrate that the NYSDEC detention requirements are being met, the Design Manual requires that a hydrologic and hydraulic analysis of the pre- and post-development conditions be performed using the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD, developed by HydroCAD Software Solutions LLC of Tamworth, New

Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. HydroCAD uses the TR-20 algorithms and TR-55 methods to create and route runoff hydrographs.

HydroCAD has the capability of computing hydrographs (which represent discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. HydroCAD can also calculate the center of mass detention time for various hydraulic features. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

For this analysis, the watershed and drainage system was broken down into a network consisting of Choose an item. types of components as described below:

Note: Identify only the components used in the analysis – if a reach, pond, or link is not used delete its reference.

1. Subcatchment: A relatively homogeneous area of land, which produces a volume and rate of runoff unique to that area.
2. Pond: Natural or man-made impoundment, which temporarily stores stormwater runoff and empties in a manner determined by its geometry and the hydraulic structure located at its outlets.

Subcatchments and ponds are represented by hexagons and triangles on the watershed routing diagrams provided with the computations included in Appendix I and Appendix J.

The analysis of hydrologic and hydraulic conditions and proposed stormwater management facilities, servicing the study area, was performed by dividing the tributary watershed into relatively homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps.

Proposed stormwater management facilities were designed and evaluated in accordance with the Design Manual.

Table 6: Design Events

Facility	24-hour Storm Event
Storm Sewer	25-year
Infiltrators)	1-year
	10-year
	100-year
Flood Conditions	100-year

4.2.3 Description of Design Points

Design Point 1: Includes Area 1,2, and 3. Area 1 represents the main parking lot and driveway area. Area 2 represents the bus/student drop off area. Area 3 represents the driveway with additional parking added.

Most of the area is existing pavement with grass/lawn areas. The areas primary discharge is an existing 16-inch pipe that conveys runoff under the school and then to the rear of the parcel that discharges to an unnamed stream that eventually flows to the Lake de Forest. Excessive runoff can overflow in Area 3 and overland flow to the rear of the facility and discharge to the unnamed stream.

4.2.4 Performance Summary

A comparison of the pre- and post-development watershed conditions was performed for all design points and storm events evaluated herein. For all design points and design storms, this comparison demonstrates that the peak rate of runoff will not be increased. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties or receiving water courses.

Runoff from the Area 3 portion of the site is diverted to an infiltrator system. The infiltrators provide WQv treatment as well as attenuation and runoff reduction.

The results of the computer modeling used to analyze the pre- and post-development watersheds are presented in the appendices. The following Table summarizes the peak flow rates of this analysis.

Table 7: Summary of Pre- and Post-Development Peak Discharge Rates

Pre- vs. Post-Development Discharge Rate (cfs)				
Design Point (DP)	**10-year 24-hour storm event**		**100-year 24-hour storm event**	
	Pre	**Post**	**Pre**	**Post**
1	18..05	13.82	33.89	28.34

As shown in the table above. All of the design points post construction peak flow rates are less than pre-construction peak flow rates.

5.0 CONSTRUCTION EROSION CONTROL PRACTICES AND INSPECTIONS

The Owner is responsible for having monthly inspections of the storm water management facility completed. The inspections shall review and document the following at a minimum: visual inspection of the outlet structure, check of the outlets for excessive sediment accumulation, burrowing, vegetation degradation, or any other issues of concern. The owner is also responsible for having SWPPP inspections once per week once disturbance of the site starts.

Several erosion control practices will be utilized during construction by the contractor under direct supervision by the owner and a qualified SWPPP inspector (S.W.T.).

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access(es) will be installed, per accompanying plans, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access(es). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

The access(es) shall be maintained in a condition, which will control tracking of sediment onto public rights-of-way or streets. When necessary, additional aggregate will be placed atop the filter fabric to assure the minimum thickness is maintained. All sediment and/or soil spilled, dropped, or washed onto public rights-of-way must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

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

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after

significant storm events will be performed by the Contractor(s). Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

For areas undergoing clearing, grading, and disturbance as part of construction activities, where work has temporarily ceased, temporary soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has temporarily ceased.

5.1.1 Manufactured Insert Inlet Protection

Install insert inlet protection beneath the grate of all catch basins, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace insert as necessary to ensure proper function.

5.1.2 Filter Fabric Drop Inlet Protection

Install filter fabric or silt fence with wooden stakes at the perimeter of existing or proposed catch basins located in lawn areas, to prevent sediment from entering the catch basins and storm sewer system. Remove sediment accumulation and repair or replace fabric as necessary to ensure proper function.

5.1.3 Stone Check Dams

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

Sediment accumulated behind the stone check dam will be removed as needed to maintain flow through the stone check dam and prevent large flows from carrying sediment over or around the dam. Stones shall be replaced as needed to maintain the design cross section of the structures.

5.1.4 Temporary Sediment Trap

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

Accumulated sediment shall be removed from the trap when it reaches no greater than 50 percent of the design capacity. Sediment shall not be placed downstream from the embankment, adjacent to a stream, or floodplain.

Temporary sediment traps depicted on the accompanying plans have been designed to provide 3,600 CF of storage per acre of tributary watershed.

5.1.5 Dewatering Operations

Dewatering will be used to intercept sediment-laden stormwater or pumped groundwater and allow it to settle out of the pumped discharge prior to being discharged from the site. Water from dewatering operations shall be treated to eliminate the discharge of sediment and other pollutants. Water resulting from dewatering operations shall be directed to temporary sediment traps or dewatering devices. Temporary sediment traps and dewatering bags will be provided, installed, and maintained at downgradient locations to control sediment deposits to downstream surfaces.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed. Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased.

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

5.3 Other Pollutant Controls

Other necessary pollutant controls are listed below:

5.3.1 Solid and Liquid Waste Disposal

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

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

5.3.2 Sanitary Facilities

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

5.3.3 Water Source

Non-stormwater components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site; such water can be retained in temporary ponds/sediment traps until it infiltrates and/or evaporates.

5.4 Construction Housekeeping Practices

During the construction phase, the Contractor(s) will implement the following measures:

5.4.1 Material Stockpiles

Material resulting from clearing and grubbing operations that will be stockpiled on-site, must be adequately protected with downgradient erosion and sediment controls.

5.4.2 Equipment Cleaning and Maintenance

The Contractor(s) will designate areas for equipment cleaning, maintenance, and repair. The Contractor(s) and subcontractor(s) will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.4.3 Detergents

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

5.4.4 Spill Prevention and Response

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

The plan shall include Safety Data Sheets (SDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.4.5 Concrete Wash Areas

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site, but only in specifically designated diked and impervious washout areas, which have been prepared to prevent contact between the concrete wash and stormwater. Waste generated from concrete wash water shall not be allowed to flow into drainage ways, inlets, receiving waters, or highway right of ways, or any location other than the designated concrete wash areas. Proper signage designating the “Concrete Wash Areas” shall be placed near the facility. Concrete wash areas shall be located at minimum 100 linear feet from drainage ways, inlets, and surface waters.

The hardened residue from the concrete wash areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the wash area is to include removal of hardened concrete. Facility shall have sufficient volume to contain all the concrete waste resulting from washout and a minimum freeboard of 12 inches. Facility shall not be filled beyond 95% capacity and shall be cleaned out once 75% full unless a new facility is constructed. The Contractor will be responsible for seeing that these procedures are followed.

Sawcut Portland Cement Concrete (PCC) slurry shall not be allowed to enter drainage ways, inlets, and/or surface waters. Sawcut residue should not be left on the surface of pavement or be allowed to flow over and off pavement.

The Project may require the use of multiple concrete wash areas. All concrete wash areas will be located in an area where the likelihood of the area contributing to stormwater discharges is negligible. If required,

additional BMPs must be implemented to prevent concrete wastes from contributing to stormwater discharges.

5.4.6 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that prevents negative impacts of construction materials on stormwater quality.

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

Additional measures may be required during construction at the guidance of the owner or certified SWPPP Inspector. The contractor shall begin to make all adjustments to the erosion control within 24 hours of receipt of any deficiencies. The owner will be responsible for providing twice-weekly reports by a qualified inspector in accordance with the GP-0-20-001, during construction to the Town.

Any modifications to the SWPPP will be reported and approved by the NYSDEC in writing prior to implementation. The owner is responsible for having a qualified operator on site at all times who has at least 4 hours of erosion control training in accordance with the GP-0-20-001. Once the site has achieved 80% stabilization and ground cover, the Town may sign off on the Notice of Termination prior to submission to the NYSDEC. Removal of all temporary erosion and sediment control practices is required prior to demobilization.

6.0 POST CONSTRUCTION

The owner of the subject project will be responsible for all post construction practices. The contact information for the owner is illustrated on the cover of this plan as well as the design plans for the project. The post construction practices include performing annual inspections of the SMAs to ensure proper working conditions and ensure continual stabilized cover of all project areas to 80% cover, minimum. All applicable inspection and maintenance activities shall continue until the 80% cover is met. Any silt removal will be disposed either off site or on site and immediately stabilized in accordance with the practices of this plan.

Additionally, annual monitoring of the storm sewer structures will be provided by the owner to ensure that they are functioning properly. All documentation related to this SWPPP and post construction monitoring reports, shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer.

7.0 SUMMARY

The proposed project requires stormwater management practices which conform to NYSDEC regulations. The proposed standard stormwater management practices will also result in a net decrease in peak runoff from the site while meeting the NYSDEC requirements for Runoff Reduction, Water Quality and Channel Protection. Continued monitoring of the practices included in this plan will be provided by the owner and a designated SWPPP Inspector.

APPENDIX A: SOILS MAPPING AND FIELD DATA

United States Department of Agriculture

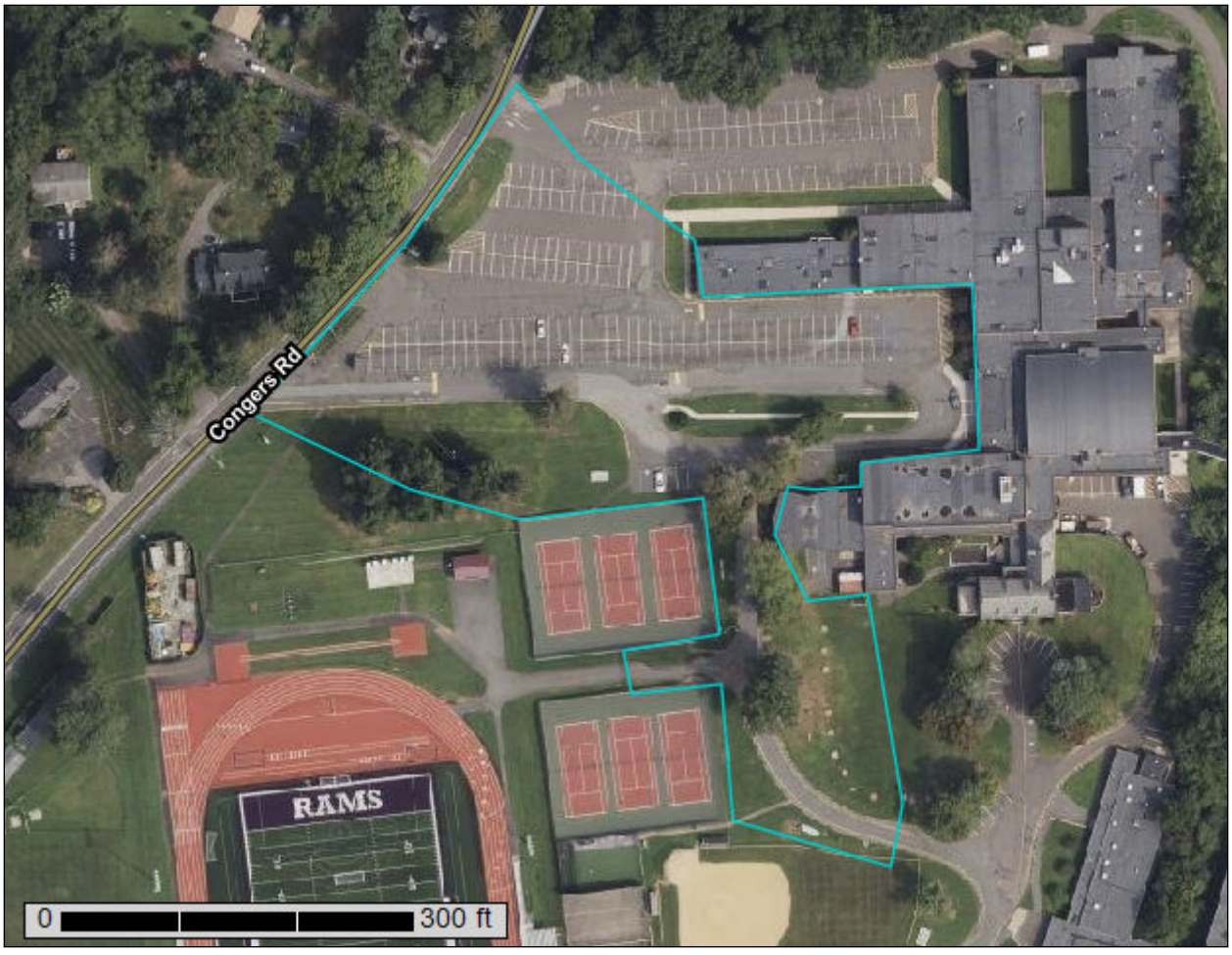
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rockland County, New York

Clarkstown North HS



January 15, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

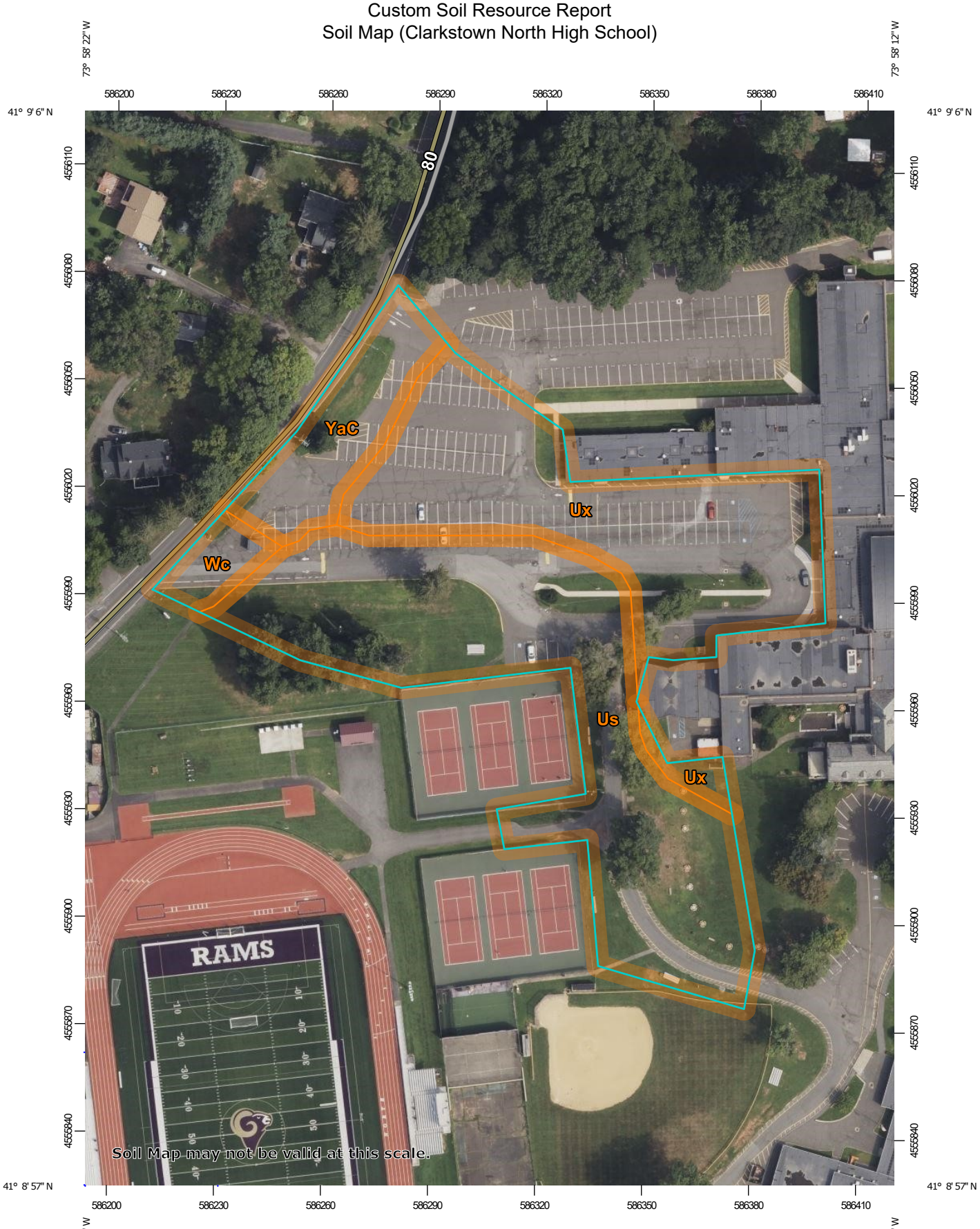
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Clarkstown North High School)



Map Scale: 1:1,460 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Rockland County, New York
Survey Area Data: Version 20, Sep 10, 2022

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

Date(s) aerial images were photographed: Apr 13, 2021—Sep 14, 2021

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

Map Unit Legend (Clarkstown North High School)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Us	Udorthents, smoothed	1.8	48.8%
Ux	Urban land	1.4	36.9%
Wc	Watchaug fine sandy loam	0.1	3.3%
YaC	Yalesville sandy loam, 8 to 15 percent slopes	0.4	11.0%
Totals for Area of Interest		**3.7**	**100.0%**

Map Unit Descriptions (Clarkstown North High School)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rockland County, New York

Us—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9v5d
Elevation: 0 to 890 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, smoothed, and similar soils: 80 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Smoothed

Typical profile

H1 - 0 to 20 inches: channery loam
H2 - 20 to 70 inches: very gravelly loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Alden

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Ux—Urban land

Map Unit Setting

National map unit symbol: 9v5g
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Wc—Watchaug fine sandy loam

Map Unit Setting

National map unit symbol: 9v5j
Elevation: 50 to 750 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Watchaug and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Watchaug

Setting

Landform: Till plains, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave

Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
H1 - 2 to 7 inches: fine sandy loam
H2 - 7 to 23 inches: gravelly fine sandy loam
H3 - 23 to 64 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

YaC—Yalesville sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9v5v
Elevation: 20 to 710 feet
Mean annual precipitation: 47 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Yalesville and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yalesville

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 27 inches: gravelly loam
H3 - 27 to 30 inches: extremely channery loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F145XY013CT - Well Drained Till Uplands
Hydric soil rating: No

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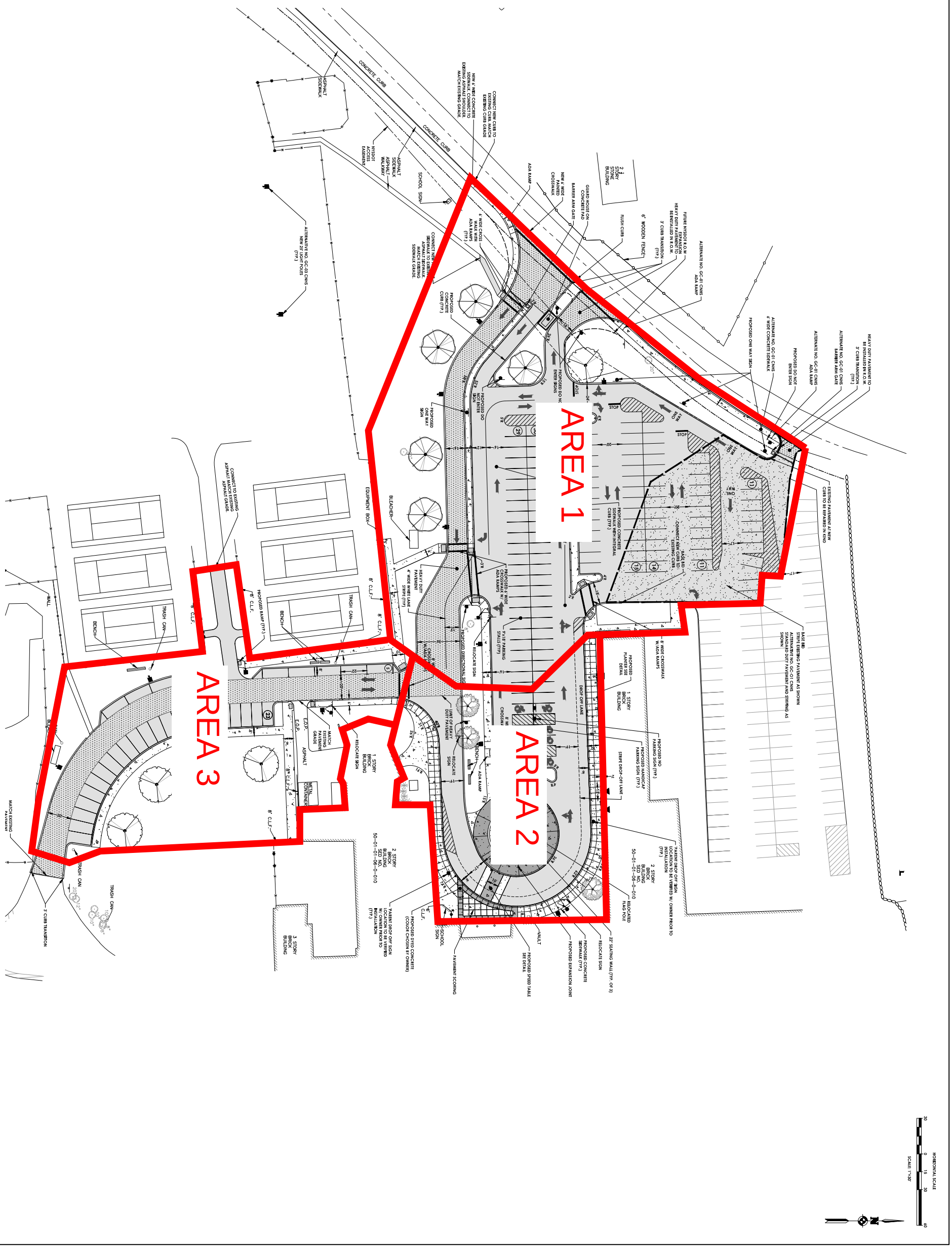
APPENDIX B: TRIBUTARY AREA PRE/POST MAPPING AND SCHEDULE

EXISTING			
SECTION	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	Tc (MIN)
Area-1	90,875	64,125	6
Area 2	40,100	30,080	6
Area 3	33,000	13,075	6
BB Courts	15,000	15,000	6
TOTAL	178,975	**122,280**	
	4.11	**2.81**	
	NEW DEVELOPMENT	11,315	
PROPOSED			
SECTION	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	Tc (MIN)
Area 1	90,875	63,785	6
Area 2	40,100	33,594	6
Area 3	33,000	21,216	6
BB Courts	15,000	15,000	6
TOTAL	**178,975**	**133,595**	



CONSTRUCTION DOCUMENTS

Sheet No. A-2

Sheet Title: POST AREA MAP

Drawn By:	BM
Checked By:	SGM
Proj. #:	20-01-01-08-0-010-20
CSArch Proj. #:	19-20011
Construction Documents:	1/13/23

#	DATE	DESCRIPTION
A		

Project Title

CLARKSTOWN CENTRAL SCHOOL DISTRICT
CLARKSTOWN NORTH HIGH SCHOOL
CAPITAL PROJECT PHASE 5

Consultant

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845 · 561 · 3179 www.csarchpc.com
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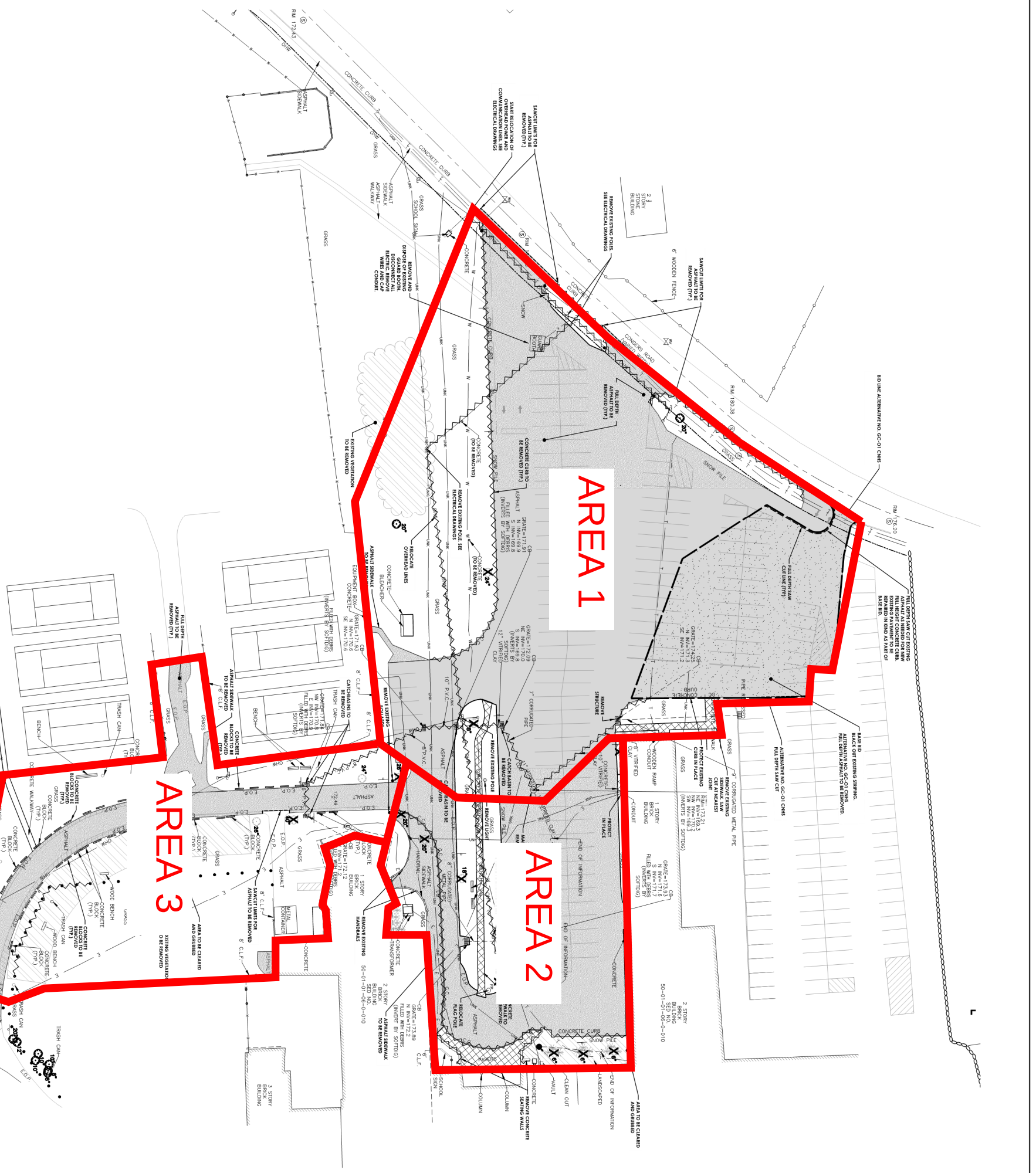

CONSTRUCTION DOCUMENTS

Sheet No. A-1

Sheet Title: PRE AREA MAP

Drawn By:	BM
Checked By:	SGM
Proj. #:	50-01-01-06-0-010-025
CSArch Proj. #:	151-2201
Construction Documents:	1/13/23

NO.	DATE	DESCRIPTION

STATE OF NEW YORK · SHAUNCY G. MAY · 100239 · LICENSED PROFESSIONAL ENGINEER

Project Title

CLARKSTOWN CENTRAL SCHOOL DISTRICT
CLARKSTOWN NORTH HIGH SCHOOL
CAPITAL PROJECT PHASE 5

Consultant

19 Front St. · Newburgh · New York 12550-7601
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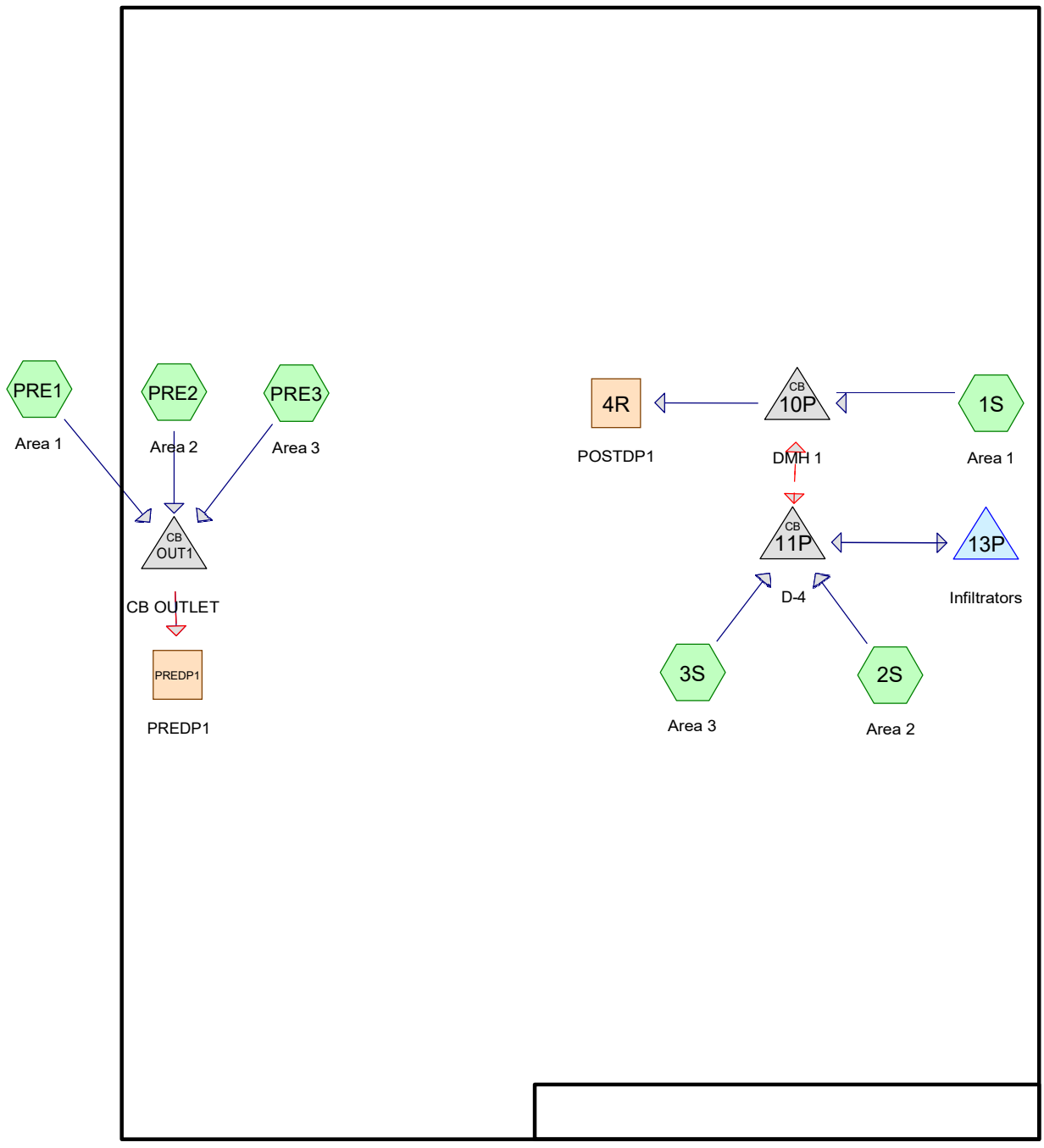
APPENDIX C: HYDROCAD REPORT



Subcat Reach Pond Link

Routing Diagram for 2023-01-24 Clasrkstown HS

Prepared by HydroCAD SAMPLER 1-800-927-7246 www.hydrocad.net, Printed 1/24/2023

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 7096 NY Rockland

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NRCC 24-hr	C	Default	24.00	1	3.38	2
2	10-Year	NRCC 24-hr	C	Default	24.00	1	5.05	2
3	100-Year	NRCC 24-hr	C	Default	24.00	1	9.00	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.343	79	50-75% Grass cover, Fair, HSG C (1S, 2S, 3S, PRE1, PRE2, PRE3)
5.185	98	Paved parking, HSG C (1S, 2S, 3S, PRE1, PRE2, PRE3)
7.529	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
7.529	HSG C	1S, 2S, 3S, PRE1, PRE2, PRE3
0.000	HSG D	
0.000	Other	
7.529		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	2.343	0.000	0.000	2.343	50-75% Grass cover, Fair	1S, 2S, 3S, PRE1, PRE2, PRE3
0.000	0.000	5.185	0.000	0.000	5.185	Paved parking	1S, 2S, 3S, PRE1, PRE2, PRE3
0.000	**0.000**	**7.529**	**0.000**	**0.000**	**7.529**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	10P	169.30	165.30	100.0	0.0400	0.013	0.0	16.0	0.0
2	10P	169.30	169.80	100.0	-0.0050	0.013	0.0	12.0	0.0
3	11P	169.50	169.20	75.0	0.0040	0.013	0.0	12.0	0.0
4	11P	169.80	169.30	100.0	0.0050	0.013	0.0	15.0	0.0
5	13P	169.50	169.00	5.0	0.1000	0.013	0.0	15.0	0.0
6	13P	170.50	170.00	50.0	0.0100	0.013	0.0	12.0	0.0
7	OUT1	169.30	165.30	100.0	0.0400	0.013	0.0	16.0	0.0

Time span=0.01-24.00 hrs, dt=0.01 hrs, 2400 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment1S: Area 1 Runoff Area=90,875 sf 70.19% Impervious Runoff Depth>2.52"
Tc=6.0 min CN=92 Runoff=6.38 cfs 0.438 af

Subcatchment2S: Area 2 Runoff Area=40,100 sf 83.78% Impervious Runoff Depth>2.82"
Tc=6.0 min CN=95 Runoff=3.03 cfs 0.216 af

Subcatchment3S: Area 3 Runoff Area=33,000 sf 64.29% Impervious Runoff Depth>2.42"
Tc=6.0 min CN=91 Runoff=2.25 cfs 0.153 af

SubcatchmentPRE1: Area 1 Runoff Area=90,875 sf 70.56% Impervious Runoff Depth>2.52"
Tc=6.0 min CN=92 Runoff=6.38 cfs 0.438 af

SubcatchmentPRE2: Area 2 Runoff Area=40,100 sf 75.01% Impervious Runoff Depth>2.62"
Tc=6.0 min CN=93 Runoff=2.89 cfs 0.201 af

SubcatchmentPRE3: Area 3 Runoff Area=33,000 sf 39.62% Impervious Runoff Depth>2.07"
Tc=6.0 min CN=87 Runoff=1.97 cfs 0.131 af

Reach 4R: POSTDP1 Inflow=8.54 cfs 0.513 af
Outflow=8.54 cfs 0.513 af

Reach PREDP1: PREDP1 Inflow=11.24 cfs 0.769 af
Outflow=11.24 cfs 0.769 af

Pond 10P: DMH 1 Peak Elev=171.58' Inflow=8.73 cfs 0.516 af
Primary=8.54 cfs 0.513 af Secondary=0.74 cfs 0.003 af Outflow=8.73 cfs 0.516 af

Pond 11P: D-4 Peak Elev=171.63' Inflow=5.99 cfs 0.372 af
Primary=3.84 cfs 0.294 af Secondary=2.38 cfs 0.079 af Outflow=5.99 cfs 0.372 af

Pond 13P: Infiltrators Peak Elev=170.31' Storage=3,597 cf Inflow=3.84 cfs 0.294 af
Discarded=0.46 cfs 0.381 af Primary=0.00 cfs 0.000 af Outflow=0.46 cfs 0.381 af

Pond OUT1: CB OUTLET Peak Elev=172.76' Inflow=11.24 cfs 0.769 af
Primary=11.24 cfs 0.769 af Secondary=0.00 cfs 0.000 af Outflow=11.24 cfs 0.769 af

Total Runoff Area = 7.529 ac Runoff Volume = 1.577 af Average Runoff Depth = 2.51"
31.13% Pervious = 2.343 ac 68.87% Impervious = 5.185 ac

Summary for Subcatchment 1S: Area 1

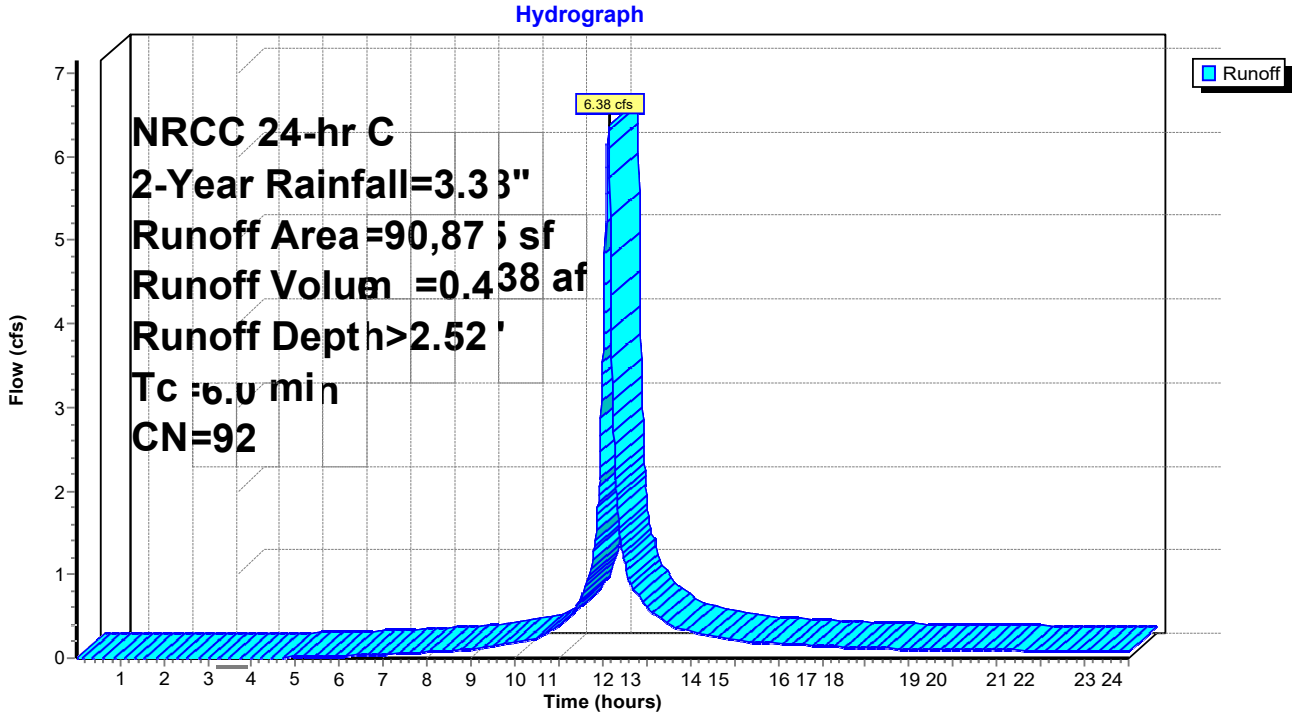
Runoff = 6.38 cfs @ 12.13 hrs, Volume= 0.438 af, Depth> 2.52"
Routed to Pond 10P : DMH 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
63,785	98	Paved parking, HSG C
27,090	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
27,090		29.81% Pervious Area
63,785		70.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 1S: Area 1



Summary for Subcatchment 2S: Area 2

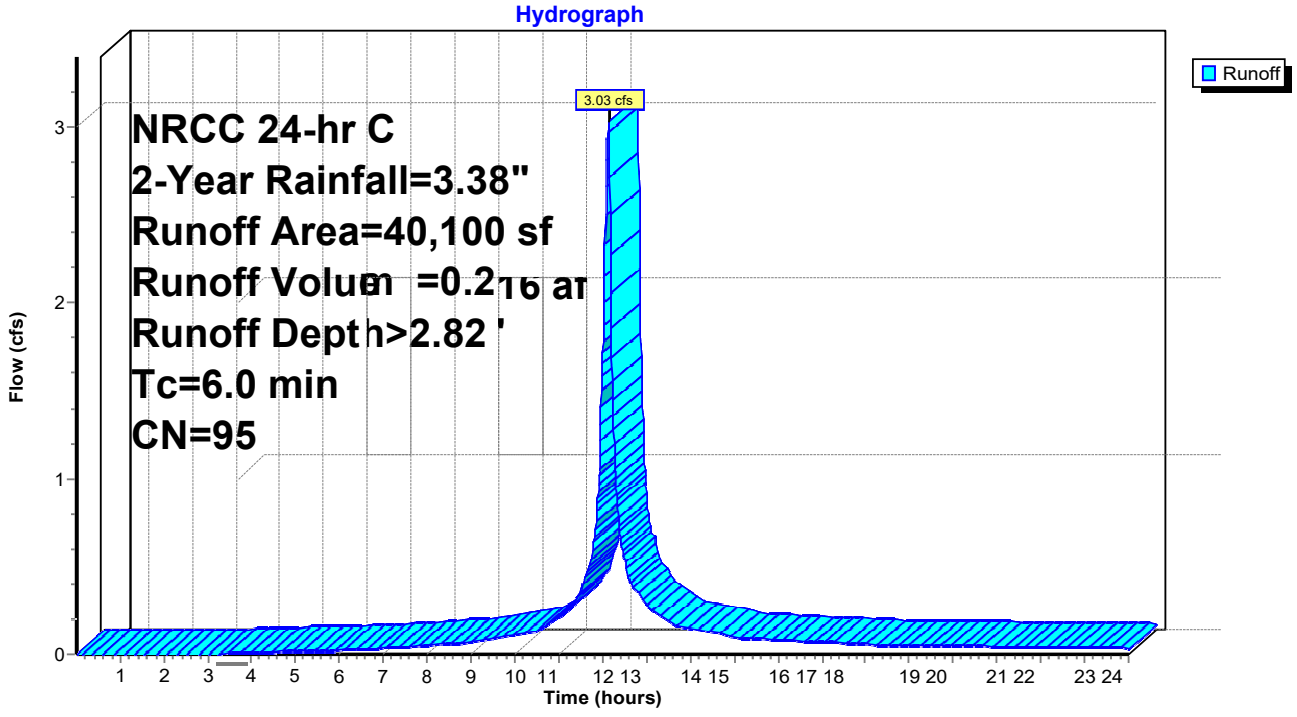
Runoff = 3.03 cfs @ 12.13 hrs, Volume= 0.216 af, Depth> 2.82"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
33,594	98	Paved parking, HSG C
6,506	79	50-75% Grass cover, Fair, HSG C
40,100	95	Weighted Average
6,506		16.22% Pervious Area
33,594		83.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 2S: Area 2



Summary for Subcatchment 3S: Area 3

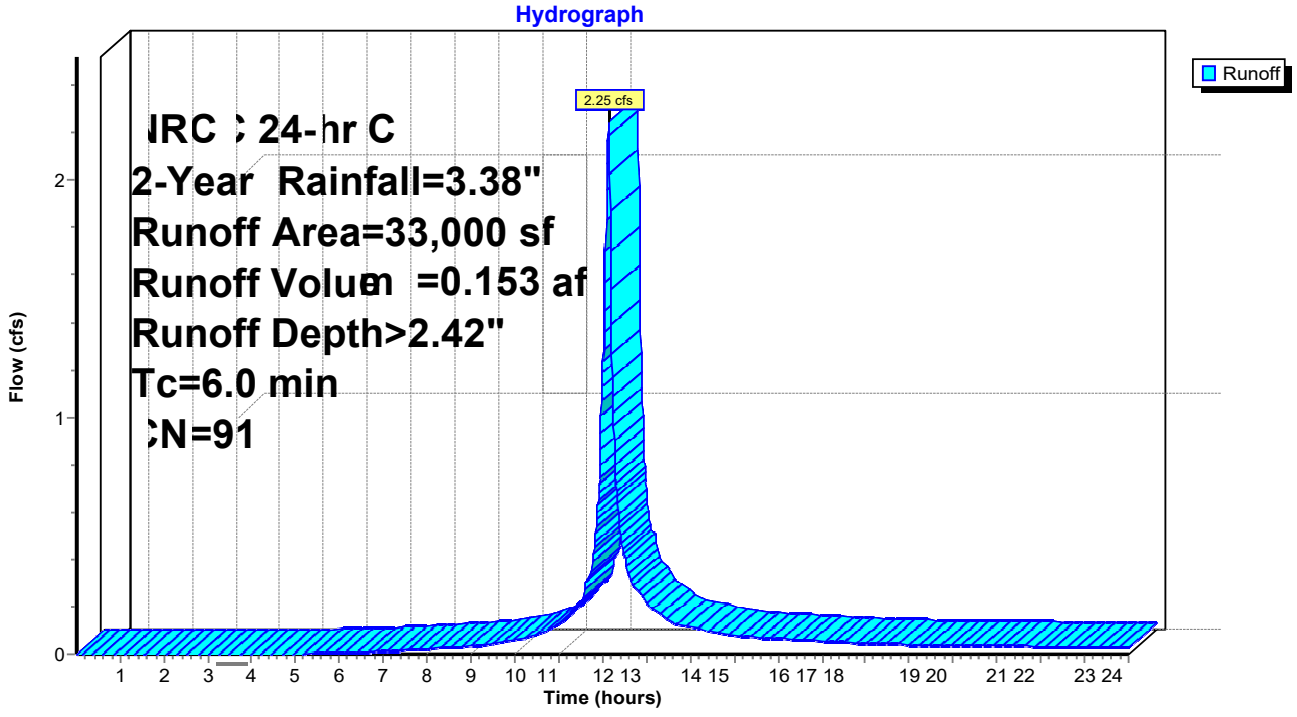
Runoff = 2.25 cfs @ 12.13 hrs, Volume= 0.153 af, Depth> 2.42"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
21,216	98	Paved parking, HSG C
11,784	79	50-75% Grass cover, Fair, HSG C
33,000	91	Weighted Average
11,784		35.71% Pervious Area
21,216		64.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 3S: Area 3



Summary for Subcatchment PRE1: Area 1

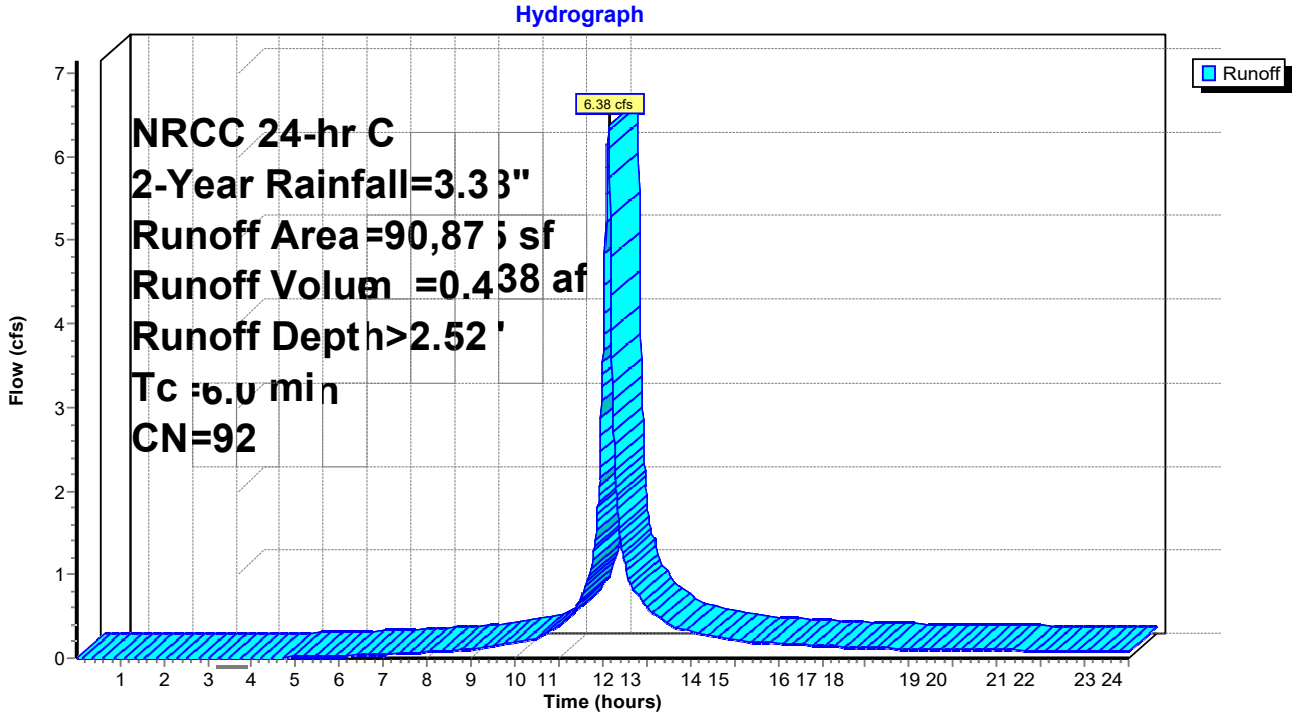
Runoff = 6.38 cfs @ 12.13 hrs, Volume= 0.438 af, Depth> 2.52"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
64,125	98	Paved parking, HSG C
26,750	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
26,750		29.44% Pervious Area
64,125		70.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE1: Area 1



Summary for Subcatchment PRE2: Area 2

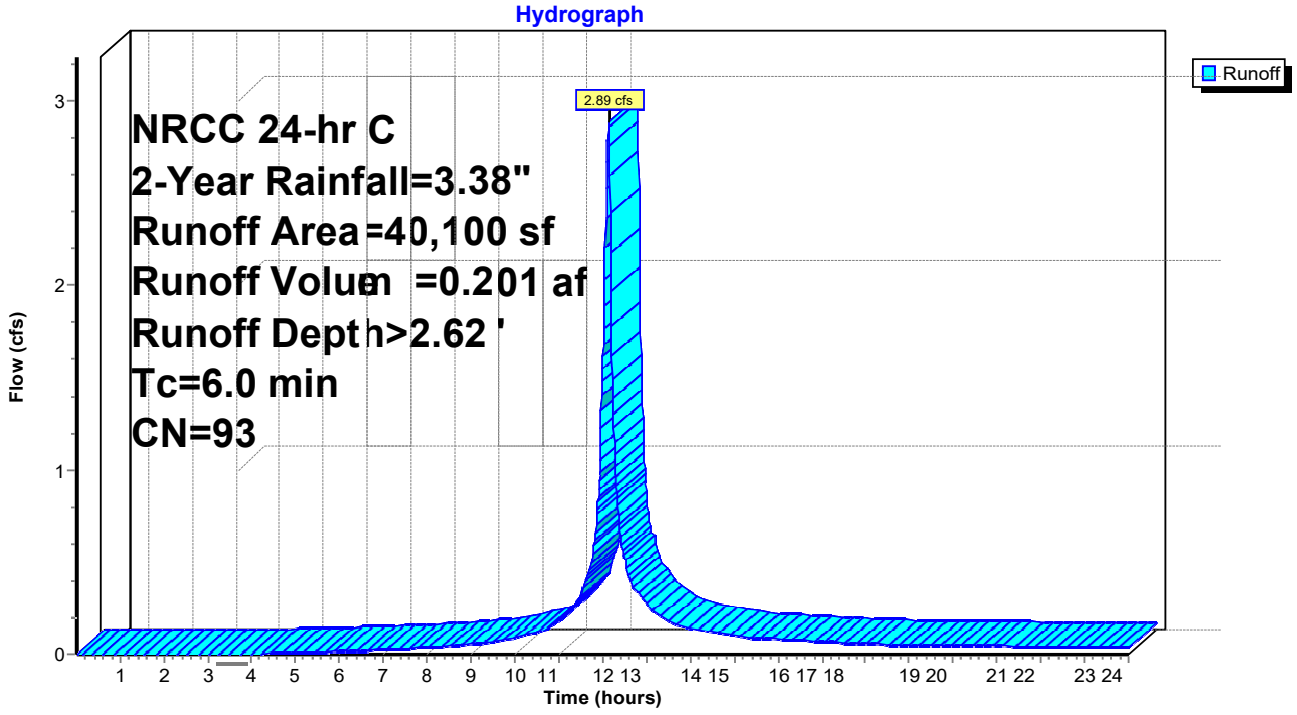
Runoff = 2.89 cfs @ 12.13 hrs, Volume= 0.201 af, Depth> 2.62"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
30,080	98	Paved parking, HSG C
10,020	79	50-75% Grass cover, Fair, HSG C
40,100	93	Weighted Average
10,020		24.99% Pervious Area
30,080		75.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE2: Area 2



Summary for Subcatchment PRE3: Area 3

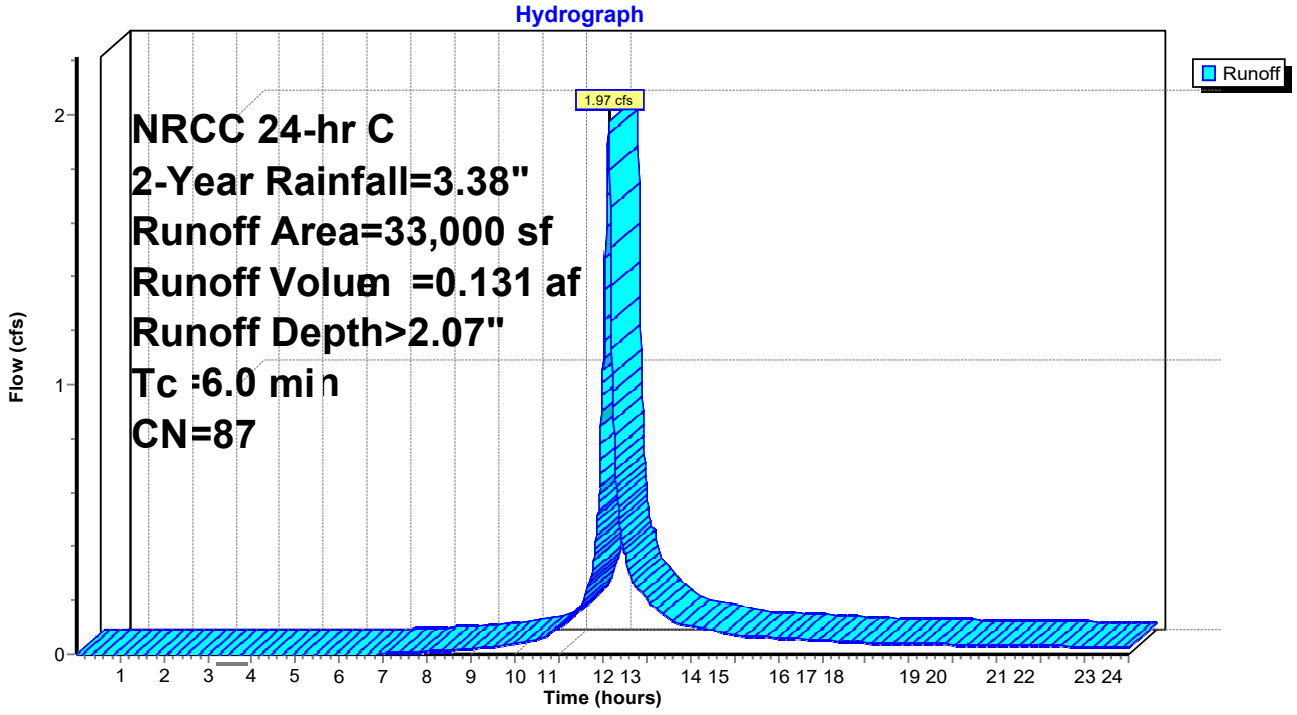
Runoff = 1.97 cfs @ 12.13 hrs, Volume= 0.131 af, Depth> 2.07"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 2-Year Rainfall=3.38"

Area (sf)	CN	Description
13,075	98	Paved parking, HSG C
19,925	79	50-75% Grass cover, Fair, HSG C
33,000	87	Weighted Average
19,925		60.38% Pervious Area
13,075		39.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE3: Area 3



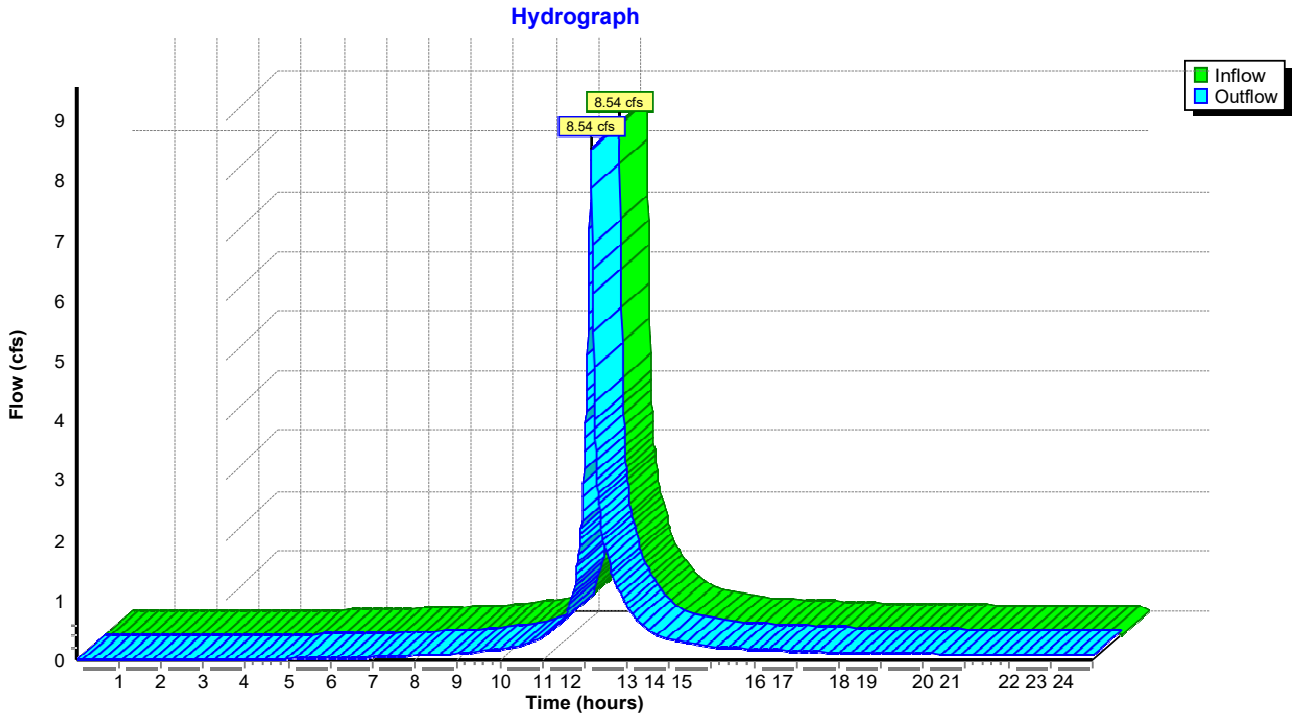
Summary for Reach 4R: POSTDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	8.54 cfs @ 12.15 hrs, Volume=	0.513 af
Outflow	=	8.54 cfs @ 12.16 hrs, Volume=	0.513 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach 4R: POSTDP1



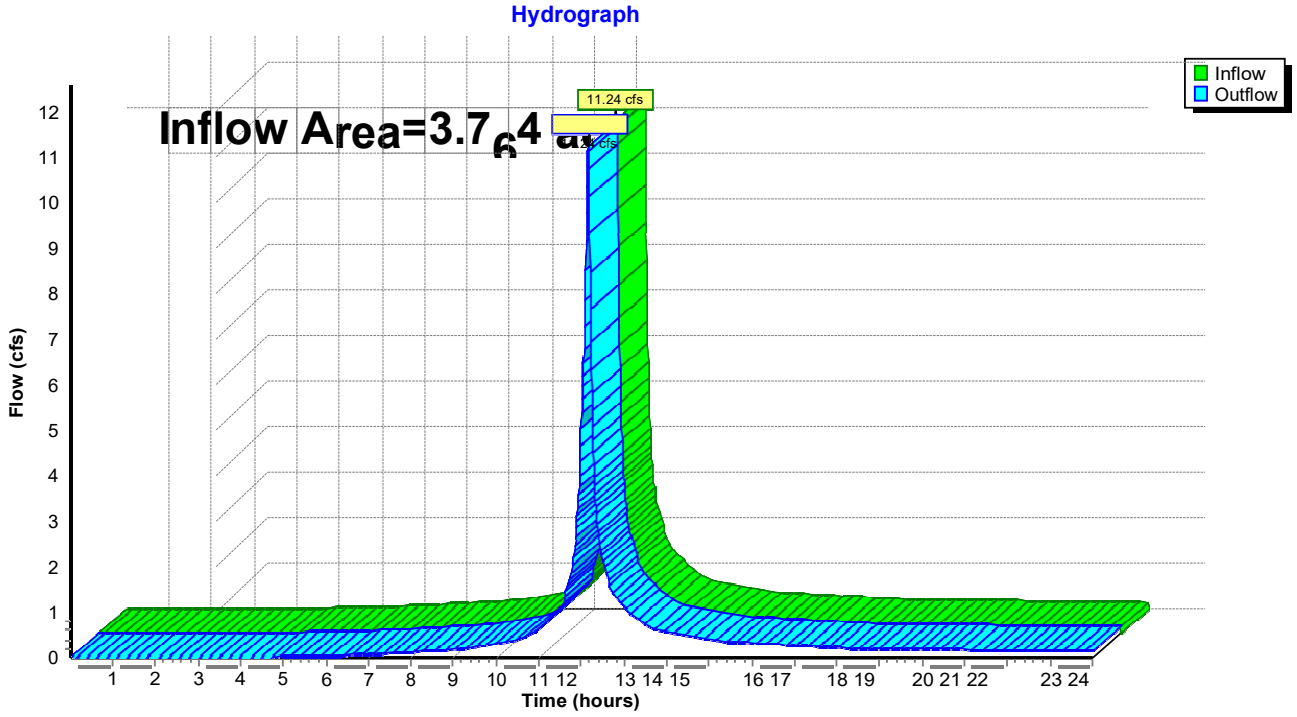
Summary for Reach PREDP1: PREDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 2.45" for 2-Year event
Inflow = 11.24 cfs @ 12.14 hrs, Volume= 0.769 af
Outflow = 11.24 cfs @ 12.15 hrs, Volume= 0.769 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach PREDP1: PREDP1



Summary for Pond 10P: DMH 1

[57] Hint: Peaked at 171.58' (Flood elevation advised)

Inflow	=	8.73 cfs @ 12.13 hrs,	Volume=	0.516 af
Outflow	=	8.73 cfs @ 12.14 hrs,	Volume=	0.516 af, Atten= 0%, Lag= 0.6 min
Primary	=	8.54 cfs @ 12.15 hrs,	Volume=	0.513 af
Routed to Reach 4R : POSTDP1				
Secondary	=	0.74 cfs @ 12.12 hrs,	Volume=	0.003 af
Routed to Pond 11P : D-4				

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 171.58' @ 12.15 hrs

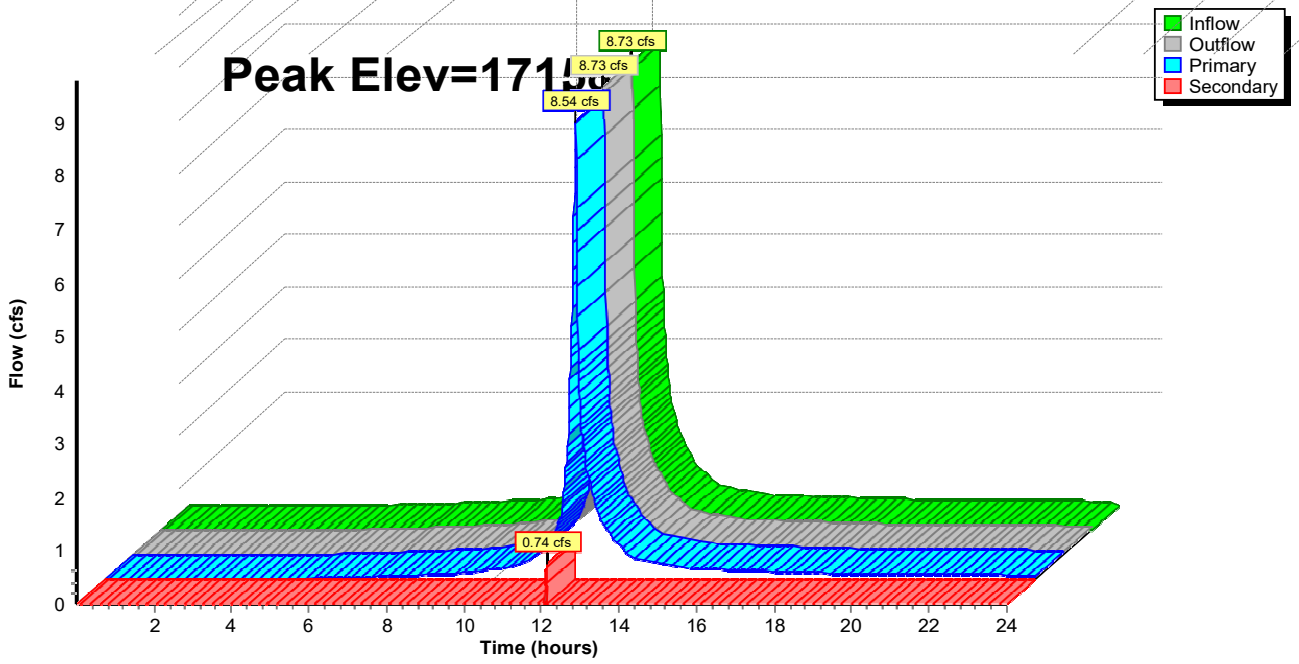
Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Primary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Secondary	169.80'	**12.0" Round backwater** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 169.30' / 169.80' S= -0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=8.45 cfs @ 12.15 hrs HW=171.55' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 8.45 cfs @ 6.06 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 12.12 hrs HW=171.25' TW=171.31' (Dynamic Tailwater)
└─**3=backwater** (Controls 0.00 cfs)

Pond 10P: DMH 1

Hydrograph



Summary for Pond 11P: D-4

[57] Hint: Peaked at 171.63' (Flood elevation advised)

Inflow	=	5.99 cfs @ 12.12 hrs, Volume=	0.372 af
Outflow	=	5.99 cfs @ 12.13 hrs, Volume=	0.372 af, Atten= 0%, Lag= 0.6 min
Primary	=	3.84 cfs @ 12.15 hrs, Volume=	0.294 af
Routed to Pond 13P : Infiltrators			
Secondary	=	2.38 cfs @ 12.12 hrs, Volume=	0.079 af
Routed to Pond 10P : DMH 1			

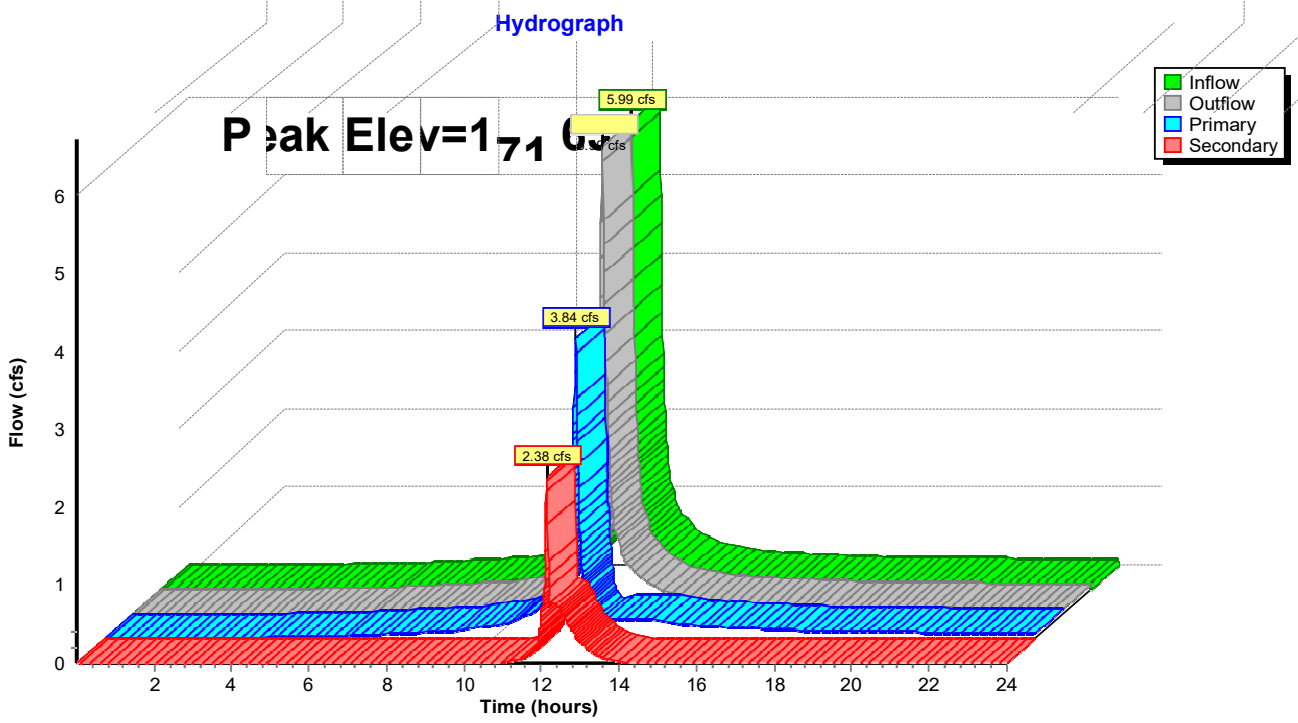
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 171.63' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.50'	**12.0" Round to Infiltration** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.20' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	169.80'	**15.0" Round To DMH1** L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.80' / 169.30' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.83 cfs @ 12.15 hrs HW=171.63' TW=169.74' (Dynamic Tailwater)
1=to Infiltration (Barrel Controls 3.83 cfs @ 4.88 fps)

Secondary OutFlow Max=1.34 cfs @ 12.12 hrs HW=171.36' TW=171.29' (Dynamic Tailwater)
2=To DMH1 (Outlet Controls 1.34 cfs @ 1.12 fps)

Pond 11P: D-4


Hydrograph
Peak Elev=1
5.99 cfs
3.84 cfs
2.38 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
2
4
6
8
10
12
14
16
18
20
22
24

Summary for Pond 13P: Infiltrators

[86] Warning: Oscillations may require smaller dt (severity=698)

Inflow	=	3.84 cfs @ 12.15 hrs, Volume=	0.294 af
Outflow	=	0.46 cfs @ 12.40 hrs, Volume=	0.381 af, Atten= 88%, Lag= 14.9 min
Discarded	=	0.46 cfs @ 12.40 hrs, Volume=	0.381 af
Primary	=	0.00 cfs @ 0.01 hrs, Volume=	0.000 af

Routed to Pond 11P : D-4

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 170.31' @ 12.40 hrs Surf.Area= 2,391 sf Storage= 3,597 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.4 min (810.7 - 805.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	168.20'	6,575 cf	**18.00'W x 132.83'L x 8.50'H Field A** 20,323 cf Overall - 3,886 cf Embedded = 16,437 cf x 40.0% Voids
#2A	168.70'	3,886 cf	**Cultec R-360HD** x 105 Inside #1 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap 105 Chambers in 3 Rows Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf
		10,461 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	168.20'	**5.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 165.00'
#2	Primary	169.50'	**15.0" Round Culvert** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.00' S= 0.1000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	170.50'	**12.0" Round backwater** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.46 cfs @ 12.40 hrs HW=170.31' (Free Discharge)
└**1=Exfiltration** (Controls 0.46 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=168.20' TW=169.50' (Dynamic Tailwater)
├**2=Culvert** (Controls 0.00 cfs)
└**3=backwater** (Controls 0.00 cfs)

Pond 13P: Infiltrators - Chamber Wizard Field A

Chamber Model = Cultec R-360HD (Cultec Recharger® 360HD)
Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf
Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap
Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf

60.0" Wide + 6.0" Spacing = 66.0" C-C Row Spacing

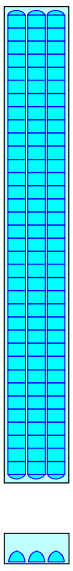
35 Chambers/Row x 3.67' Long +1.25' Cap Length x 2 = 130.83' Row Length +12.0" End Stone x 2 = 132.83' Base Length
3 Rows x 60.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 18.00' Base Width
6.0" Stone Base + 36.0" Chamber Height + 60.0" Stone Cover = 8.50' Field Height

105 Chambers x 36.6 cf + 6.5 cf Cap Volume x 2 x 3 Rows = 3,886.5 cf Chamber Storage

20,323.5 cf Field - 3,886.5 cf Chambers = 16,437.0 cf Stone x 40.0% Voids = 6,574.8 cf Stone Storage

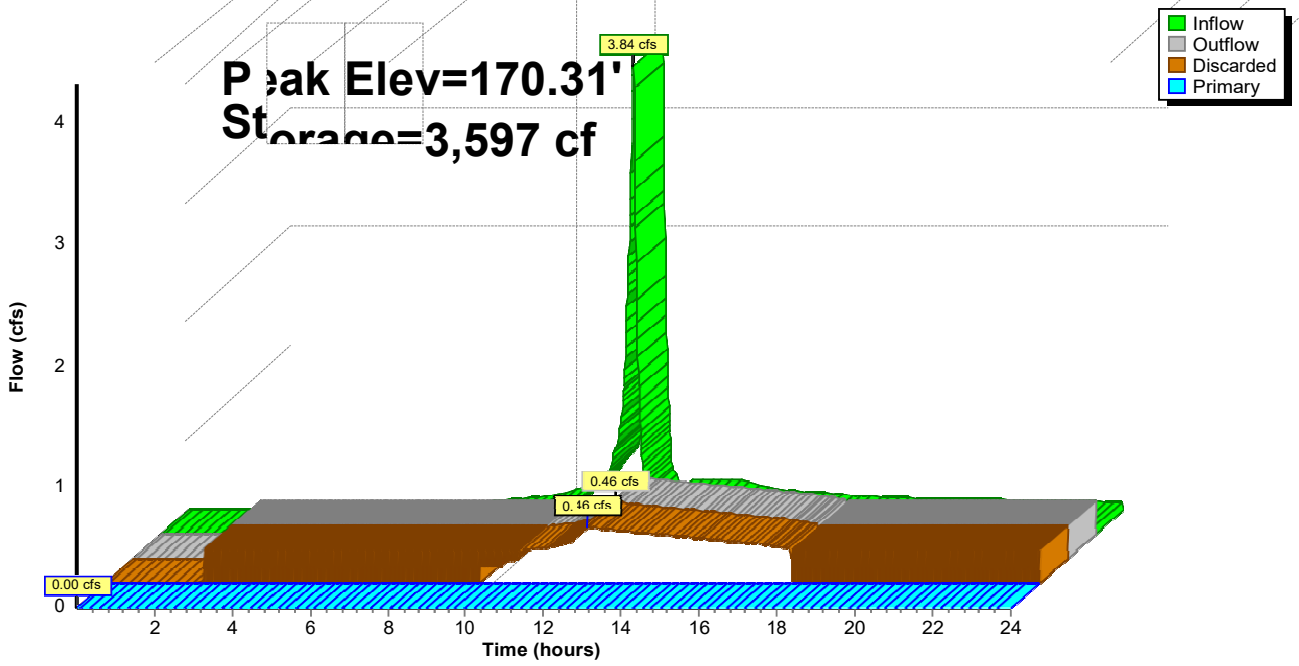
Chamber Storage + Stone Storage = 10,461.3 cf = 0.240 af
Overall Storage Efficiency = 51.5%
Overall System Size = 132.83' x 18.00' x 8.50'

105 Chambers
752.7 cy Field
608.8 cy Stone



Pond 13P: Infiltrators

Hydrograph



Summary for Pond OUT1: CB OUTLET

[57] Hint: Peaked at 172.76' (Flood elevation advised)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 2.45" for 2-Year event
Inflow = 11.24 cfs @ 12.13 hrs, Volume= 0.769 af
Outflow = 11.24 cfs @ 12.14 hrs, Volume= 0.769 af, Atten= 0%, Lag= 0.6 min
Primary = 11.24 cfs @ 12.14 hrs, Volume= 0.769 af
Routed to Reach PREDP1 : PREDP1
Secondary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af
Routed to Reach PREDP1 : PREDP1

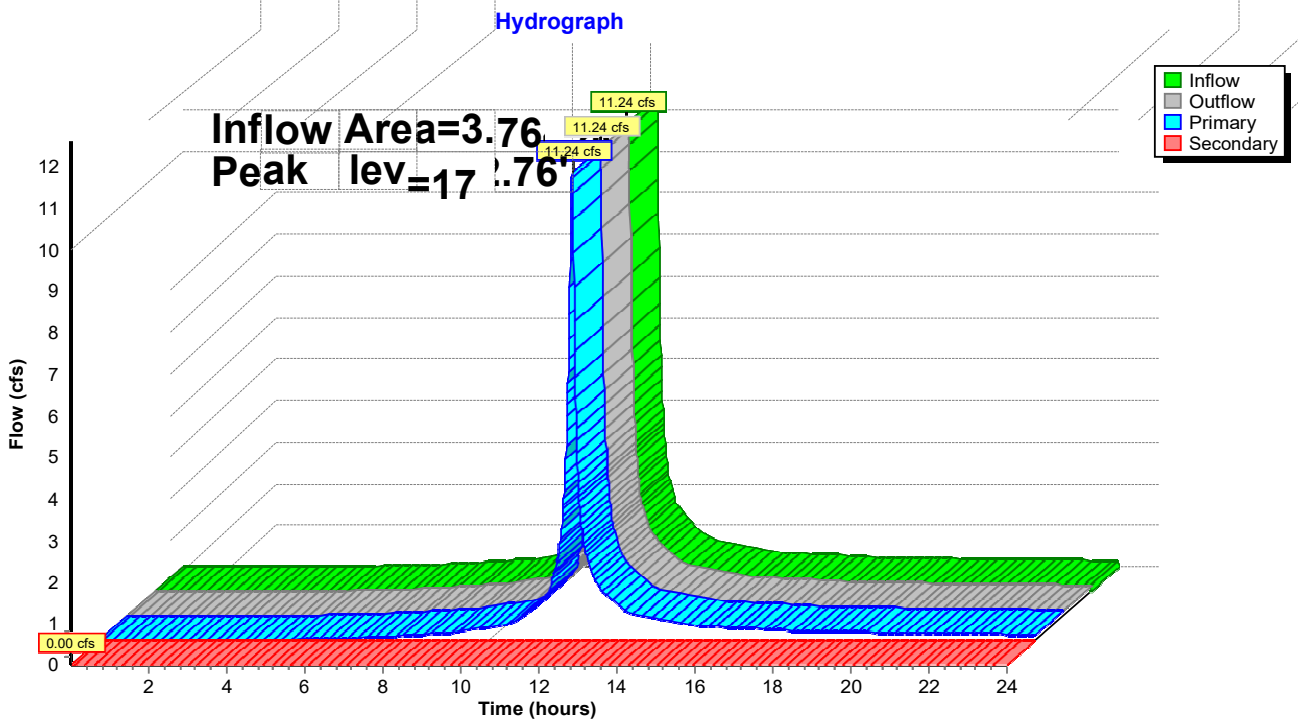
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 172.76' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Secondary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.24 cfs @ 12.14 hrs HW=172.76' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 11.24 cfs @ 8.05 fps)

Secondary OutFlow Max=0.00 cfs @ 0.01 hrs HW=169.30' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond OUT1: CB OUTLET



Time span=0.01-24.00 hrs, dt=0.01 hrs, 2400 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment1S: Area 1 Runoff Area=90,875 sf 70.19% Impervious Runoff Depth>4.13"
Tc=6.0 min CN=92 Runoff=10.15 cfs 0.719 af

Subcatchment2S: Area 2 Runoff Area=40,100 sf 83.78% Impervious Runoff Depth>4.46"
Tc=6.0 min CN=95 Runoff=4.66 cfs 0.342 af

Subcatchment3S: Area 3 Runoff Area=33,000 sf 64.29% Impervious Runoff Depth>4.03"
Tc=6.0 min CN=91 Runoff=3.63 cfs 0.254 af

SubcatchmentPRE1: Area 1 Runoff Area=90,875 sf 70.56% Impervious Runoff Depth>4.13"
Tc=6.0 min CN=92 Runoff=10.15 cfs 0.719 af

SubcatchmentPRE2: Area 2 Runoff Area=40,100 sf 75.01% Impervious Runoff Depth>4.24"
Tc=6.0 min CN=93 Runoff=4.55 cfs 0.325 af

SubcatchmentPRE3: Area 3 Runoff Area=33,000 sf 39.62% Impervious Runoff Depth>3.61"
Tc=6.0 min CN=87 Runoff=3.35 cfs 0.228 af

Reach 4R: POSTDP1 Inflow=13.82 cfs 0.923 af
Outflow=13.82 cfs 0.923 af

Reach PREDP1: PREDP1 Inflow=18.05 cfs 1.272 af
Outflow=18.05 cfs 1.272 af

Pond 10P: DMH 1 Peak Elev=172.96' Inflow=13.82 cfs 0.930 af
Primary=13.82 cfs 0.923 af Secondary=1.41 cfs 0.008 af Outflow=13.82 cfs 0.930 af

Pond 11P: D-4 Peak Elev=173.47' Inflow=9.35 cfs 0.644 af
Primary=5.54 cfs 0.432 af Secondary=5.60 cfs 0.212 af Outflow=9.35 cfs 0.644 af

Pond 13P: Infiltrators Peak Elev=171.65' Storage=5,625 cf Inflow=5.54 cfs 0.432 af
Discarded=0.57 cfs 0.446 af Primary=6.13 cfs 0.039 af Outflow=6.66 cfs 0.485 af

Pond OUT1: CB OUTLET Peak Elev=173.03' Inflow=18.05 cfs 1.272 af
Primary=11.77 cfs 1.226 af Secondary=6.28 cfs 0.046 af Outflow=18.05 cfs 1.272 af

Total Runoff Area = 7.529 ac Runoff Volume = 2.587 af Average Runoff Depth = 4.12"
31.13% Pervious = 2.343 ac 68.87% Impervious = 5.185 ac

Summary for Subcatchment 1S: Area 1

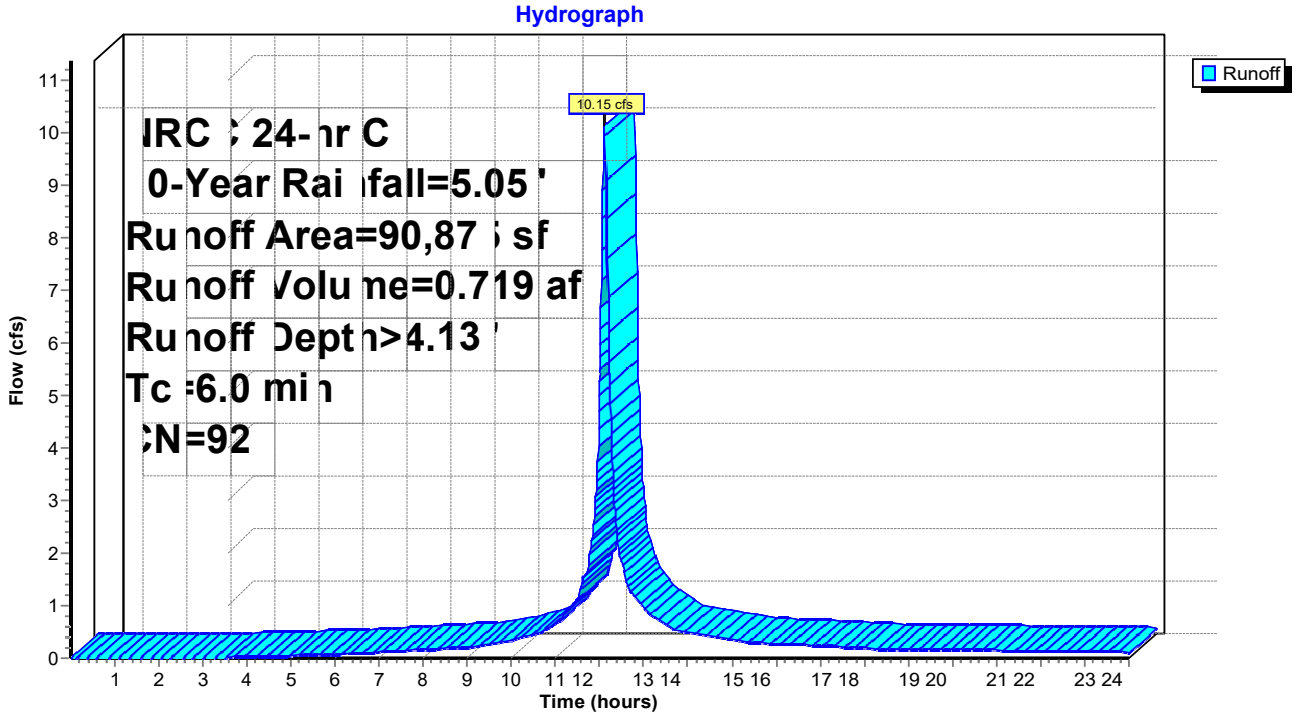
Runoff = 10.15 cfs @ 12.13 hrs, Volume= 0.719 af, Depth> 4.13"
Routed to Pond 10P : DMH 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
63,785	98	Paved parking, HSG C
27,090	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
27,090		29.81% Pervious Area
63,785		70.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 1S: Area 1



Summary for Subcatchment 2S: Area 2

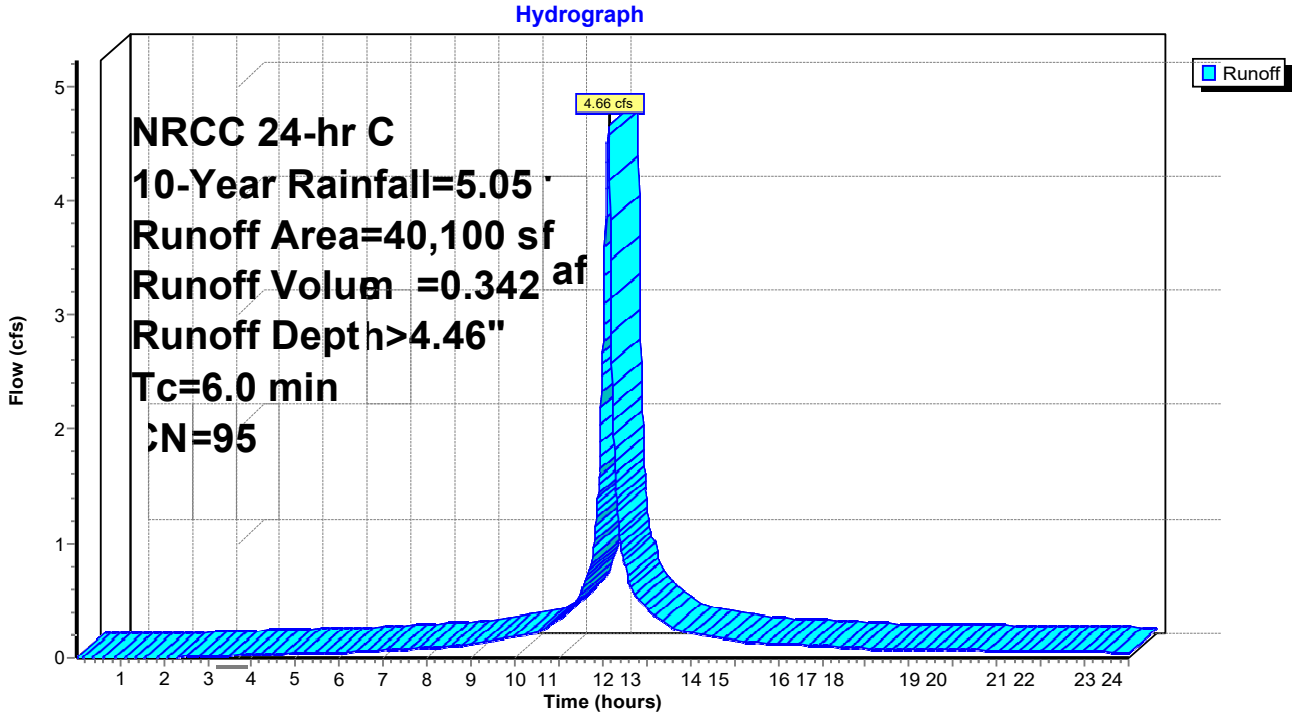
Runoff = 4.66 cfs @ 12.13 hrs, Volume= 0.342 af, Depth> 4.46"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
33,594	98	Paved parking, HSG C
6,506	79	50-75% Grass cover, Fair, HSG C
40,100	95	Weighted Average
6,506		16.22% Pervious Area
33,594		83.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 2S: Area 2



Summary for Subcatchment 3S: Area 3

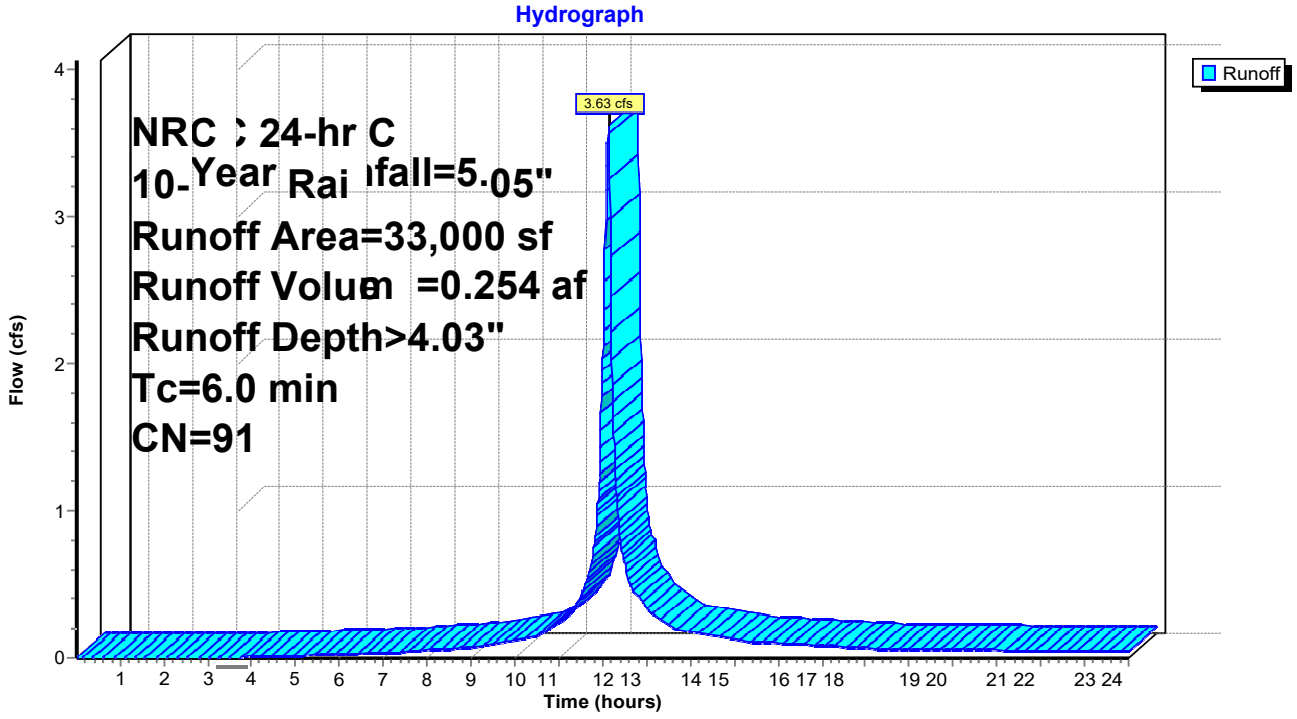
Runoff = 3.63 cfs @ 12.13 hrs, Volume= 0.254 af, Depth> 4.03"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
21,216	98	Paved parking, HSG C
11,784	79	50-75% Grass cover, Fair, HSG C
33,000	91	Weighted Average
11,784		35.71% Pervious Area
21,216		64.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 3S: Area 3



Summary for Subcatchment PRE1: Area 1

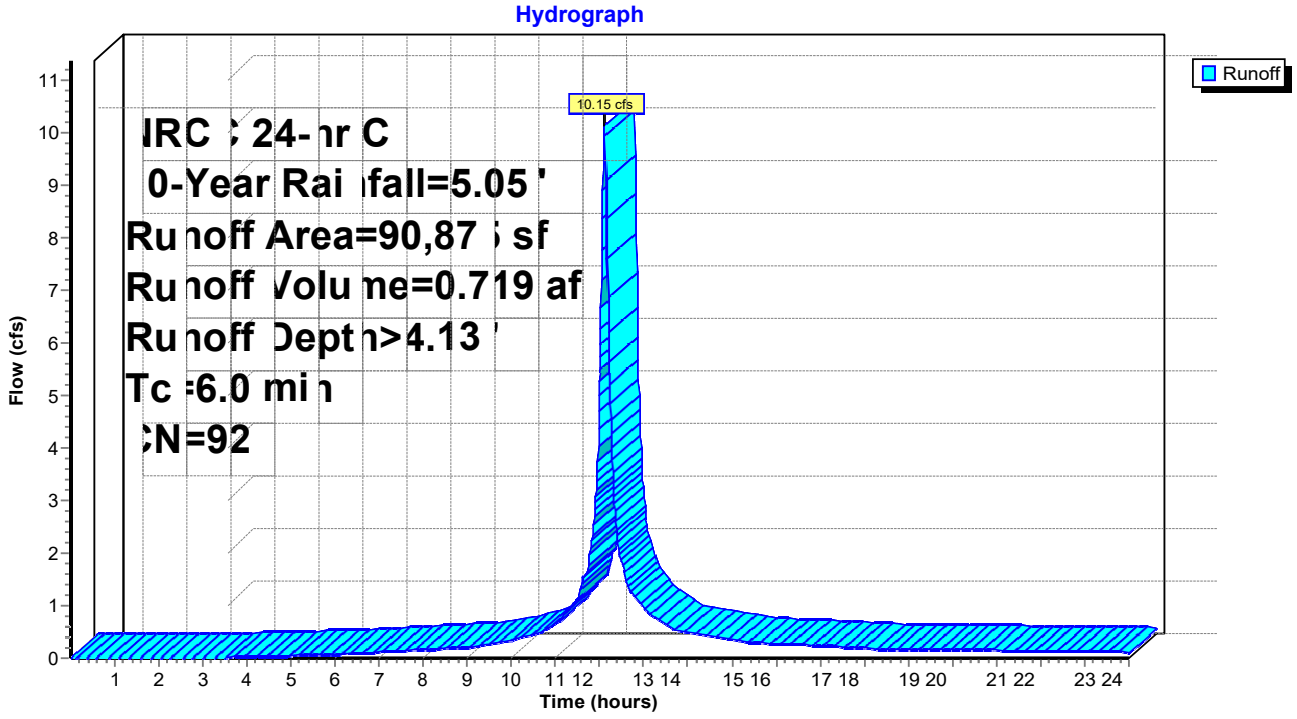
Runoff = 10.15 cfs @ 12.13 hrs, Volume= 0.719 af, Depth> 4.13"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
64,125	98	Paved parking, HSG C
26,750	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
26,750		29.44% Pervious Area
64,125		70.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE1: Area 1



Summary for Subcatchment PRE2: Area 2

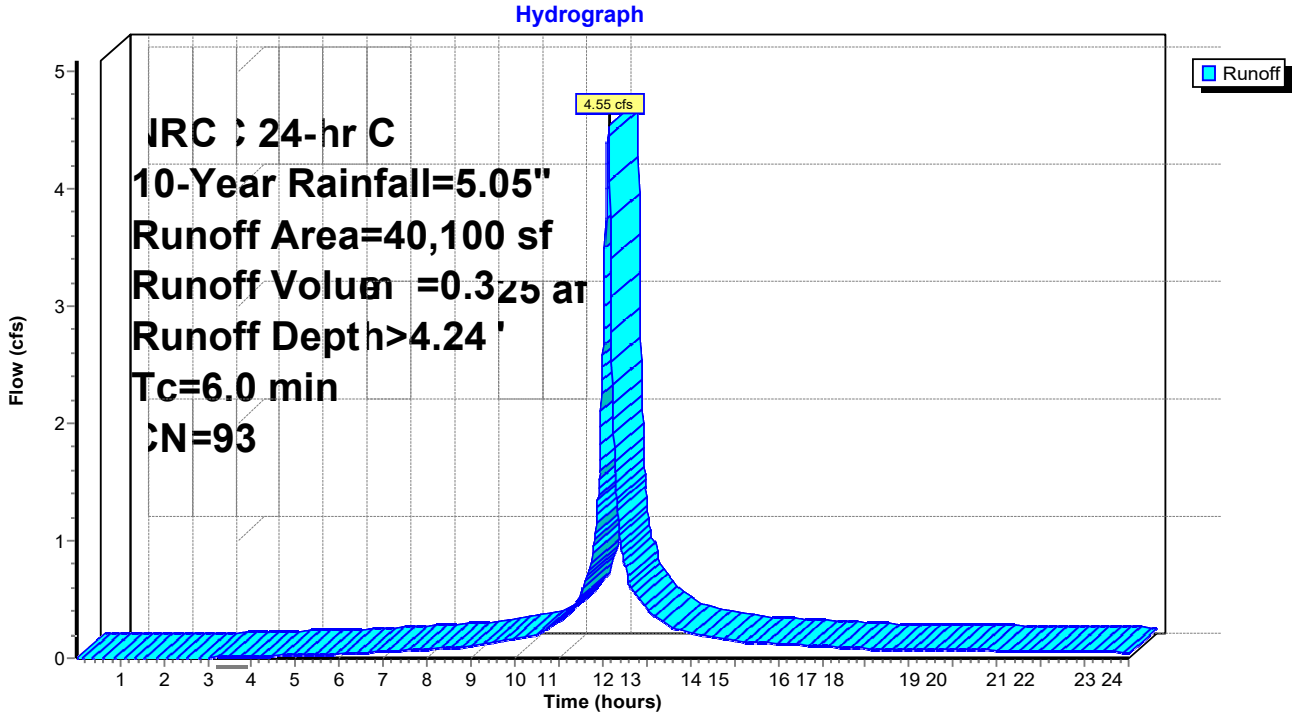
Runoff = 4.55 cfs @ 12.13 hrs, Volume= 0.325 af, Depth> 4.24"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
30,080	98	Paved parking, HSG C
10,020	79	50-75% Grass cover, Fair, HSG C
40,100	93	Weighted Average
10,020		24.99% Pervious Area
30,080		75.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE2: Area 2



Summary for Subcatchment PRE3: Area 3

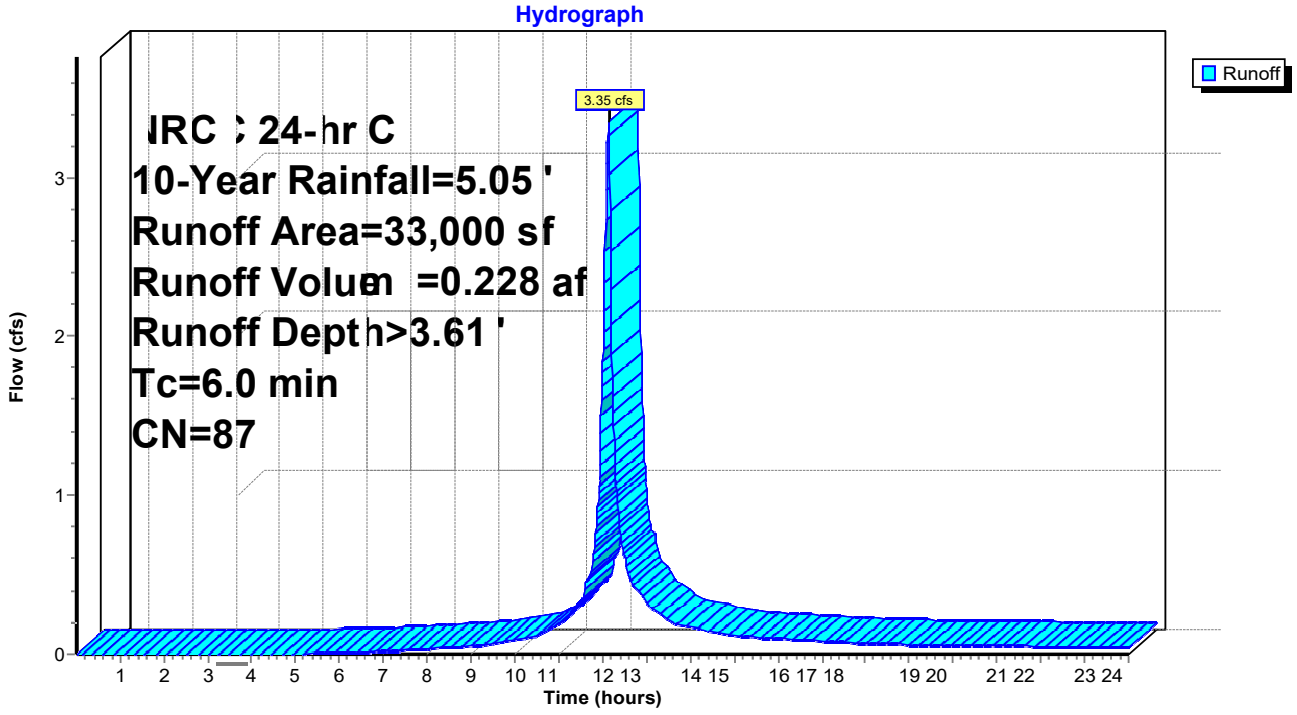
Runoff = 3.35 cfs @ 12.13 hrs, Volume= 0.228 af, Depth> 3.61"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=5.05"

Area (sf)	CN	Description
13,075	98	Paved parking, HSG C
19,925	79	50-75% Grass cover, Fair, HSG C
33,000	87	Weighted Average
19,925		60.38% Pervious Area
13,075		39.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE3: Area 3



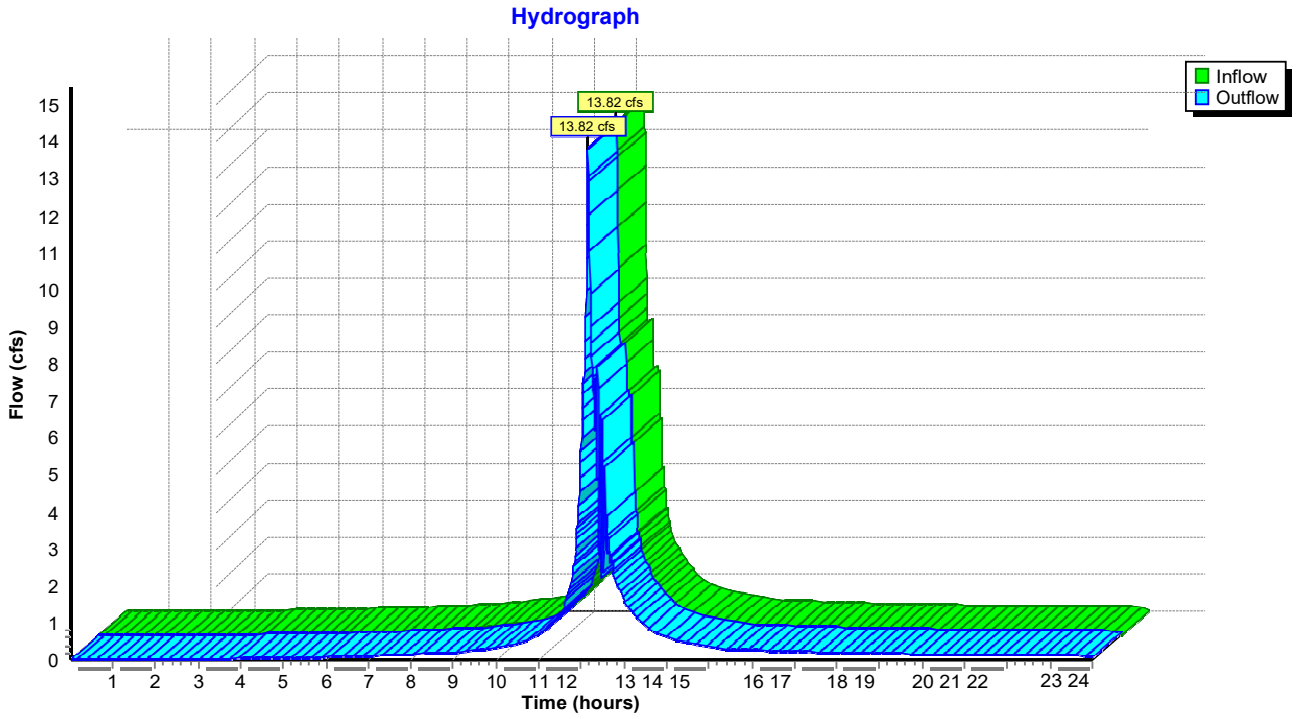
Summary for Reach 4R: POSTDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	13.82 cfs @ 12.13 hrs, Volume=	0.923 af
Outflow	=	13.82 cfs @ 12.14 hrs, Volume=	0.923 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach 4R: POSTDP1



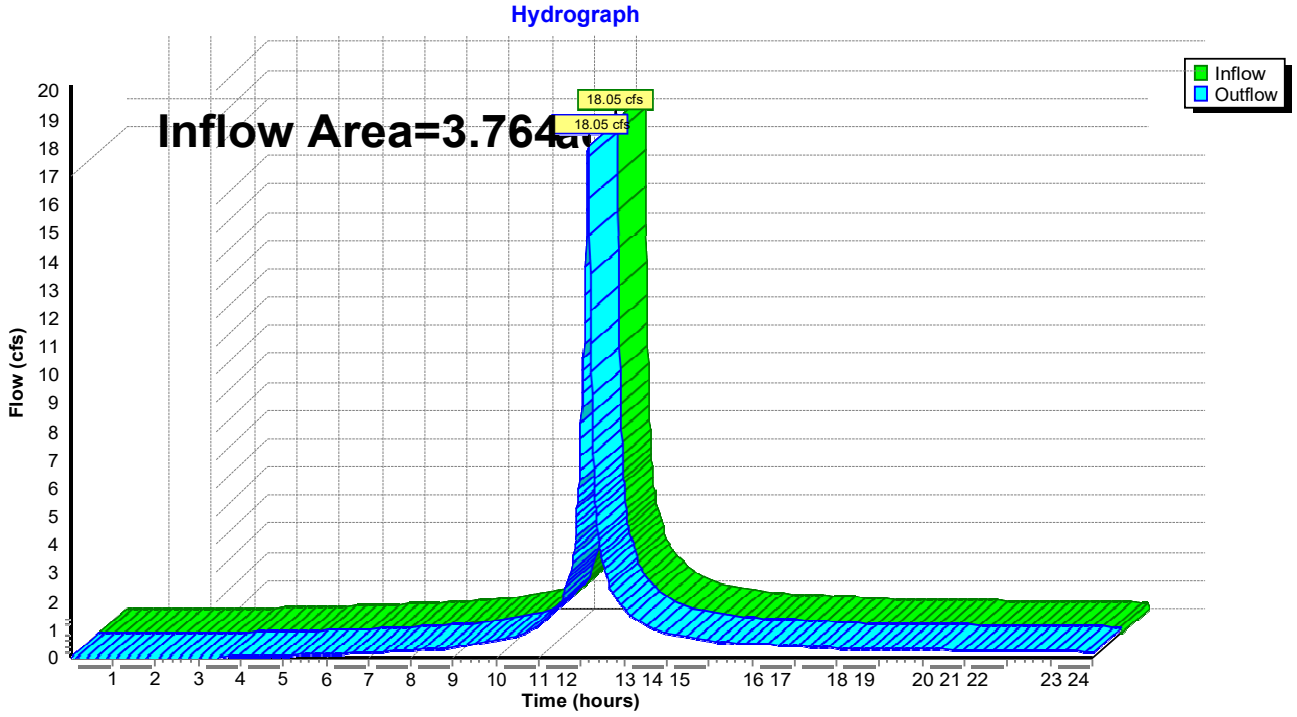
Summary for Reach PREDP1: PREDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 4.05" for 10-Year event
Inflow = 18.05 cfs @ 12.14 hrs, Volume= 1.272 af
Outflow = 18.05 cfs @ 12.15 hrs, Volume= 1.272 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach PREDP1: PREDP1



Summary for Pond 10P: DMH 1

[57] Hint: Peaked at 172.96' (Flood elevation advised)

Inflow	=	13.82 cfs @ 12.12 hrs,	Volume=	0.930 af
Outflow	=	13.82 cfs @ 12.13 hrs,	Volume=	0.930 af, Atten= 0%, Lag= 0.6 min
Primary	=	13.82 cfs @ 12.13 hrs,	Volume=	0.923 af
Routed to Reach 4R : POSTDP1				
Secondary	=	1.41 cfs @ 12.10 hrs,	Volume=	0.008 af
Routed to Pond 11P : D-4				

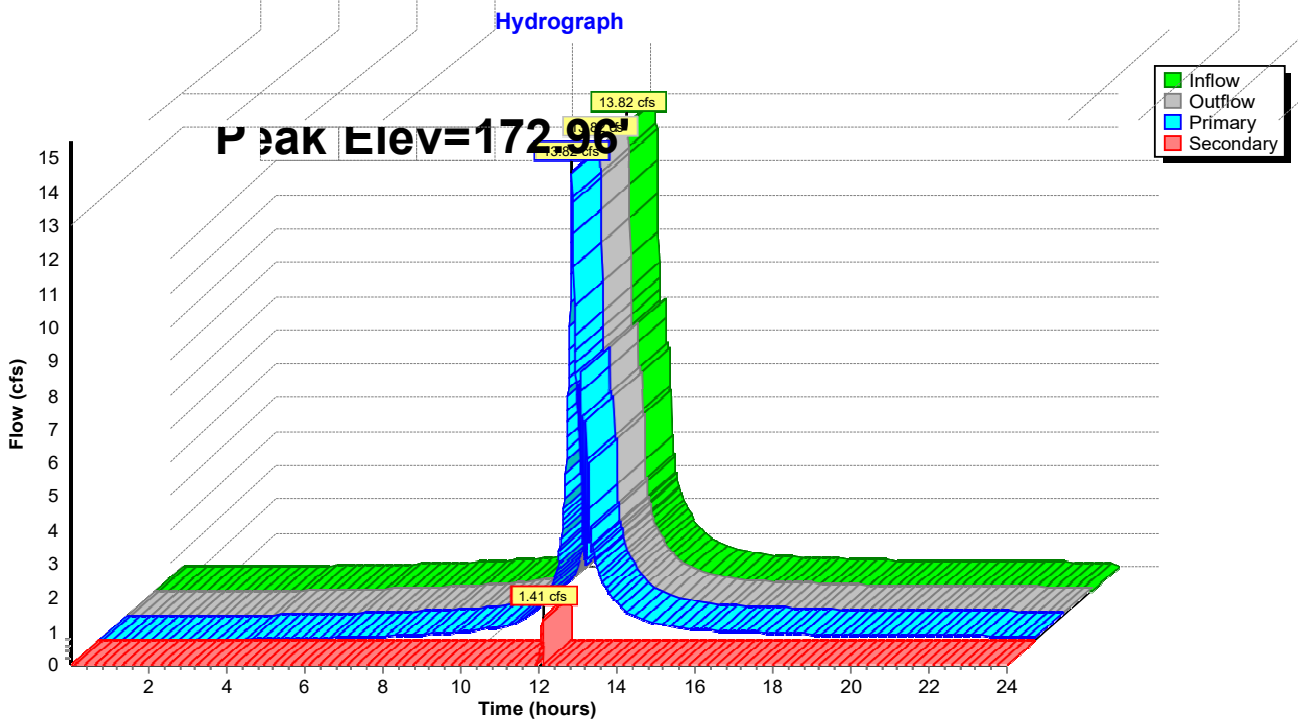
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 172.96' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Primary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Secondary	169.80'	**12.0" Round backwater** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 169.30' / 169.80' S= -0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=13.73 cfs @ 12.13 hrs HW=172.96' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 11.64 cfs @ 8.33 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 2.10 cfs @ 0.67 fps)

Secondary OutFlow Max=0.00 cfs @ 12.10 hrs HW=172.52' TW=172.66' (Dynamic Tailwater)
3=backwater (Controls 0.00 cfs)

Pond 10P: DMH 1



Summary for Pond 11P: D-4

[57] Hint: Peaked at 173.47' (Flood elevation advised)

Inflow	=	9.35 cfs @ 12.11 hrs,	Volume=	0.644 af
Outflow	=	9.35 cfs @ 12.12 hrs,	Volume=	0.644 af, Atten= 0%, Lag= 0.6 min
Primary	=	5.54 cfs @ 12.12 hrs,	Volume=	0.432 af
Routed to Pond 13P : Infiltrators				
Secondary	=	5.60 cfs @ 12.36 hrs,	Volume=	0.212 af
Routed to Pond 10P : DMH 1				

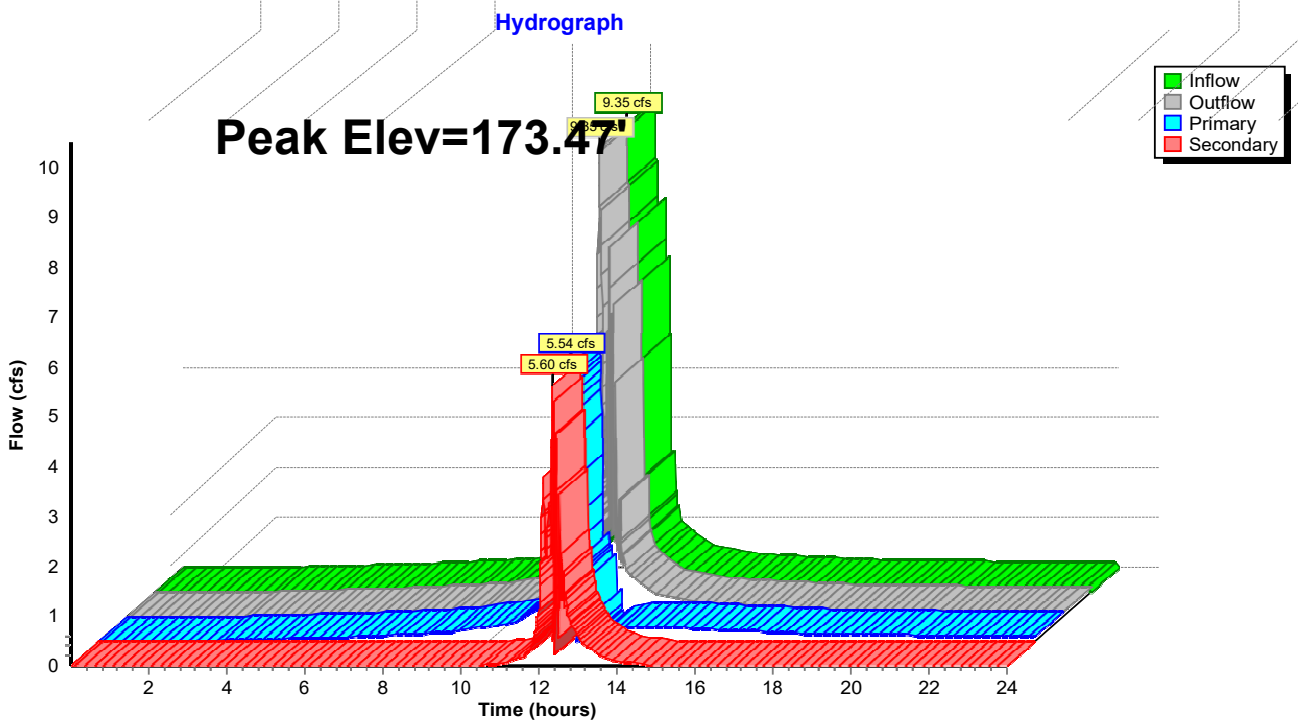
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 173.47' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.50'	**12.0" Round to Infiltration** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.20' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	169.80'	**15.0" Round To DMH1** L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.80' / 169.30' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.44 cfs @ 12.12 hrs HW=173.46' TW=170.59' (Dynamic Tailwater)
1=to Infiltration (Outlet Controls 5.44 cfs @ 6.92 fps)

Secondary OutFlow Max=4.68 cfs @ 12.36 hrs HW=171.68' TW=170.81' (Dynamic Tailwater)
2=To DMH1 (Outlet Controls 4.68 cfs @ 3.81 fps)

Pond 11P: D-4


Hydrograph
Peak Elev=173.47'
9.35 cfs
5.54 cfs
5.60 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
8
9
10
2
4
6
8
10
12
14
16
18
20
22
24

Summary for Pond 13P: Infiltrators

[89] Warning: Qout>Qin may require smaller dt
[86] Warning: Oscillations may require smaller dt (severity=595)

Inflow	=	5.54 cfs @ 12.12 hrs, Volume=	0.432 af
Outflow	=	6.66 cfs @ 12.41 hrs, Volume=	0.485 af, Atten= 0%, Lag= 17.6 min
Discarded	=	0.57 cfs @ 12.25 hrs, Volume=	0.446 af
Primary	=	6.13 cfs @ 12.41 hrs, Volume=	0.039 af

Routed to Pond 11P : D-4

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 171.65' @ 12.25 hrs Surf.Area= 2,391 sf Storage= 5,625 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 7.5 min (798.9 - 791.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	168.20'	6,575 cf	**18.00'W x 132.83'L x 8.50'H Field A** 20,323 cf Overall - 3,886 cf Embedded = 16,437 cf x 40.0% Voids
#2A	168.70'	3,886 cf	**Cultec R-360HD** x 105 Inside #1 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap 105 Chambers in 3 Rows Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf
		10,461 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	168.20'	**5.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 165.00'
#2	Primary	169.50'	**15.0" Round Culvert** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.00' S= 0.1000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	170.50'	**12.0" Round backwater** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.57 cfs @ 12.25 hrs HW=171.64' (Free Discharge)
└**1=Exfiltration** (Controls 0.57 cfs)

Primary OutFlow Max=3.18 cfs @ 12.41 hrs HW=171.15' TW=170.97' (Dynamic Tailwater)
├**2=Culvert** (Inlet Controls 2.46 cfs @ 2.01 fps)
└**3=backwater** (Outlet Controls 0.72 cfs @ 1.90 fps)

Pond 13P: Infiltrators - Chamber Wizard Field A

Chamber Model = Cultec R-360HD (Cultec Recharger® 360HD)
Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf
Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap
Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf

60.0" Wide + 6.0" Spacing = 66.0" C-C Row Spacing

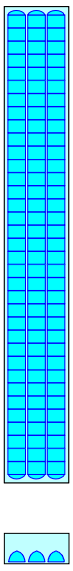
35 Chambers/Row x 3.67' Long +1.25' Cap Length x 2 = 130.83' Row Length +12.0" End Stone x 2 = 132.83' Base Length
3 Rows x 60.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 18.00' Base Width
6.0" Stone Base + 36.0" Chamber Height + 60.0" Stone Cover = 8.50' Field Height

105 Chambers x 36.6 cf + 6.5 cf Cap Volume x 2 x 3 Rows = 3,886.5 cf Chamber Storage

20,323.5 cf Field - 3,886.5 cf Chambers = 16,437.0 cf Stone x 40.0% Voids = 6,574.8 cf Stone Storage

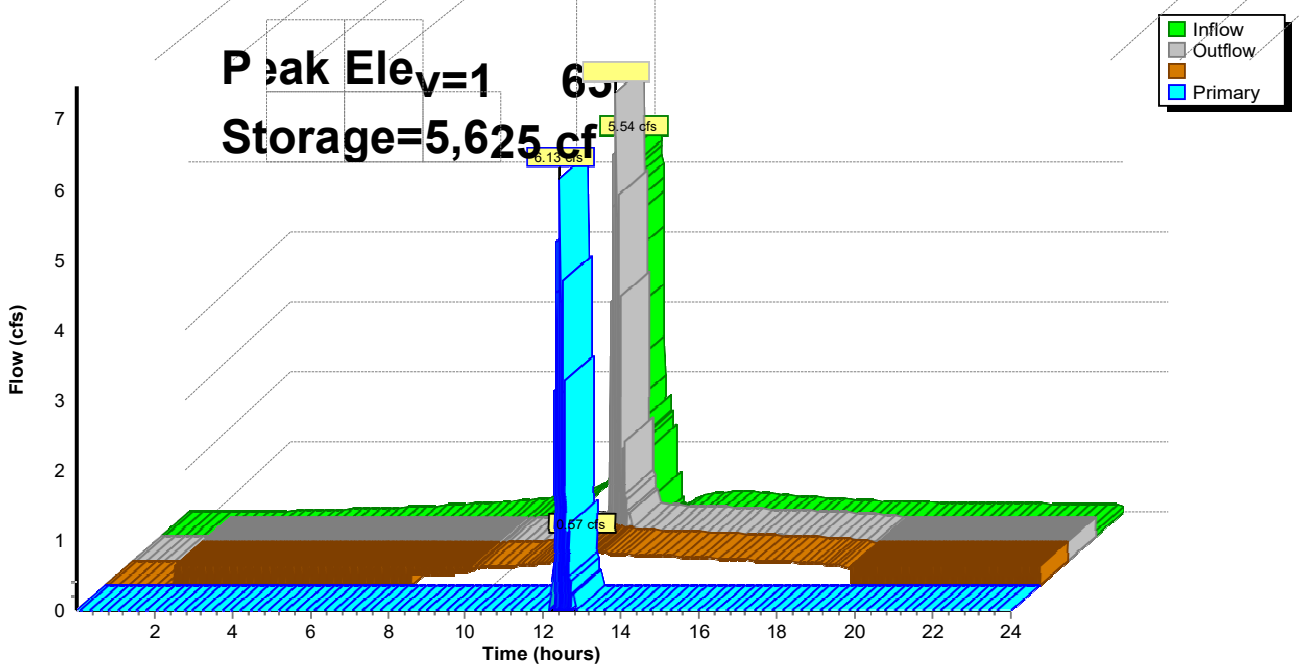
Chamber Storage + Stone Storage = 10,461.3 cf = 0.240 af
Overall Storage Efficiency = 51.5%
Overall System Size = 132.83' x 18.00' x 8.50'

105 Chambers
752.7 cy Field
608.8 cy Stone



Pond 13P: Infiltrators

Hydrograph



Summary for Pond OUT1: CB OUTLET

[57] Hint: Peaked at 173.03' (Flood elevation advised)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 4.05" for 10-Year event
Inflow = 18.05 cfs @ 12.13 hrs, Volume= 1.272 af
Outflow = 18.05 cfs @ 12.14 hrs, Volume= 1.272 af, Atten= 0%, Lag= 0.6 min
Primary = 11.77 cfs @ 12.14 hrs, Volume= 1.226 af
Routed to Reach PREDP1 : PREDP1
Secondary = 6.28 cfs @ 12.14 hrs, Volume= 0.046 af
Routed to Reach PREDP1 : PREDP1

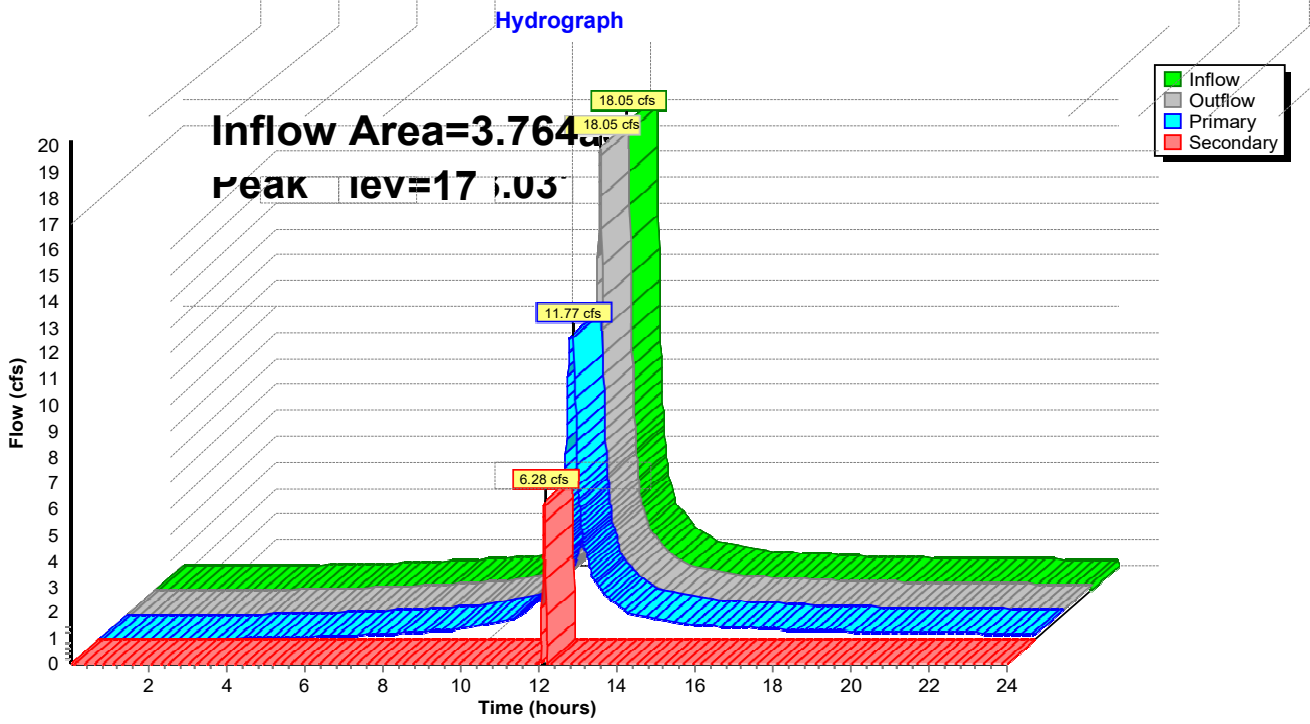
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 173.03' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Secondary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.77 cfs @ 12.14 hrs HW=173.03' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 11.77 cfs @ 8.43 fps)

Secondary OutFlow Max=6.27 cfs @ 12.14 hrs HW=173.03' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 6.27 cfs @ 0.97 fps)

Pond OUT1: CB OUTLET



Time span=0.01-24.00 hrs, dt=0.01 hrs, 2400 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment1S: Area 1 Runoff Area=90,875 sf 70.19% Impervious Runoff Depth>8.03"
Tc=6.0 min CN=92 Runoff=18.90 cfs 1.395 af

Subcatchment2S: Area 2 Runoff Area=40,100 sf 83.78% Impervious Runoff Depth>8.39"
Tc=6.0 min CN=95 Runoff=8.47 cfs 0.644 af

Subcatchment3S: Area 3 Runoff Area=33,000 sf 64.29% Impervious Runoff Depth>7.90"
Tc=6.0 min CN=91 Runoff=6.82 cfs 0.499 af

SubcatchmentPRE1: Area 1 Runoff Area=90,875 sf 70.56% Impervious Runoff Depth>8.03"
Tc=6.0 min CN=92 Runoff=18.90 cfs 1.395 af

SubcatchmentPRE2: Area 2 Runoff Area=40,100 sf 75.01% Impervious Runoff Depth>8.15"
Tc=6.0 min CN=93 Runoff=8.39 cfs 0.625 af

SubcatchmentPRE3: Area 3 Runoff Area=33,000 sf 39.62% Impervious Runoff Depth>7.42"
Tc=6.0 min CN=87 Runoff=6.59 cfs 0.468 af

Reach 4R: POSTDP1 Inflow=28.34 cfs 1.957 af
Outflow=28.34 cfs 1.957 af

Reach PREDP1: PREDP1 Inflow=33.89 cfs 2.488 af
Outflow=33.89 cfs 2.488 af

Pond 10P: DMH 1 Peak Elev=173.15' Inflow=28.34 cfs 1.959 af
Primary=28.34 cfs 1.957 af Secondary=1.20 cfs 0.002 af Outflow=28.34 cfs 1.959 af

Pond 11P: D-4 Peak Elev=176.78' Inflow=15.46 cfs 1.284 af
Primary=5.76 cfs 0.720 af Secondary=10.61 cfs 0.564 af Outflow=15.46 cfs 1.284 af

Pond 13P: Infiltrators Peak Elev=174.83' Storage=8,671 cf Inflow=5.76 cfs 0.720 af
Discarded=0.85 cfs 0.605 af Primary=12.60 cfs 0.139 af Outflow=13.30 cfs 0.744 af

Pond OUT1: CB OUTLET Peak Elev=173.20' Inflow=33.89 cfs 2.488 af
Primary=12.08 cfs 2.205 af Secondary=21.80 cfs 0.284 af Outflow=33.89 cfs 2.488 af

Total Runoff Area = 7.529 ac Runoff Volume = 5.026 af Average Runoff Depth = 8.01"
31.13% Pervious = 2.343 ac 68.87% Impervious = 5.185 ac

Summary for Subcatchment 1S: Area 1

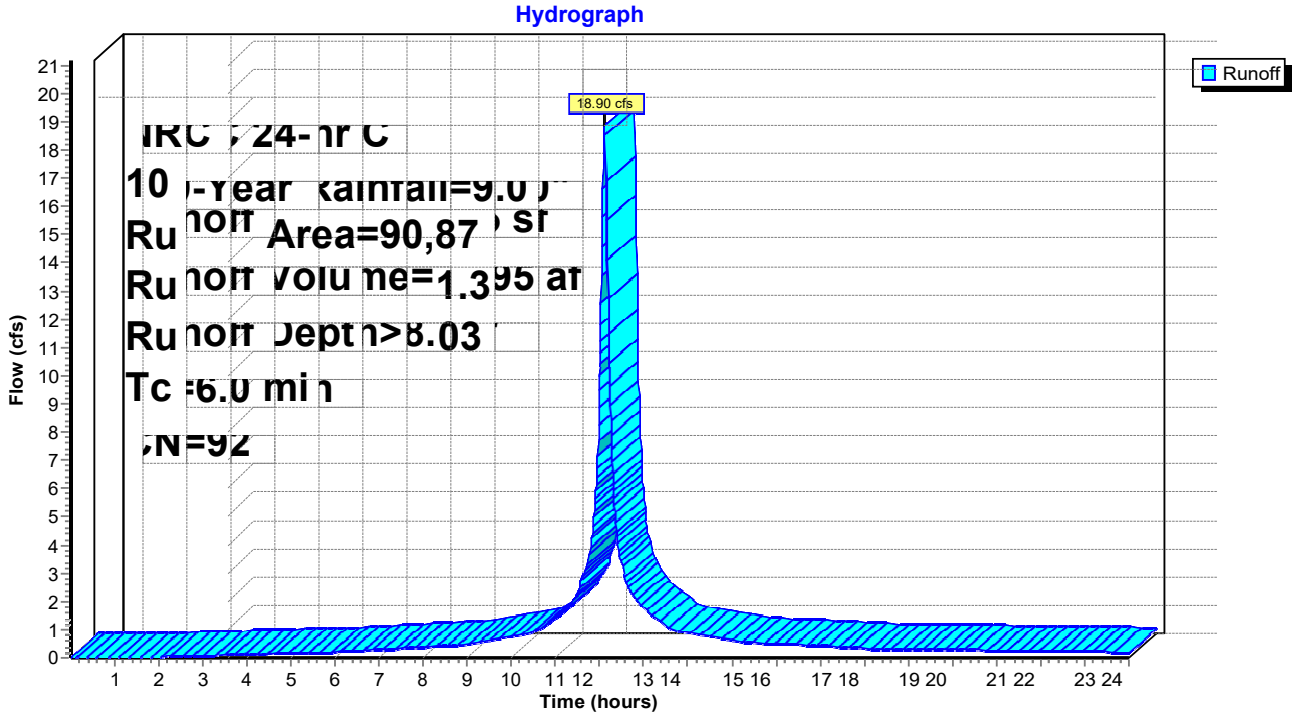
Runoff = 18.90 cfs @ 12.13 hrs, Volume= 1.395 af, Depth> 8.03"
Routed to Pond 10P : DMH 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
63,785	98	Paved parking, HSG C
27,090	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
27,090		29.81% Pervious Area
63,785		70.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 1S: Area 1



Summary for Subcatchment 2S: Area 2

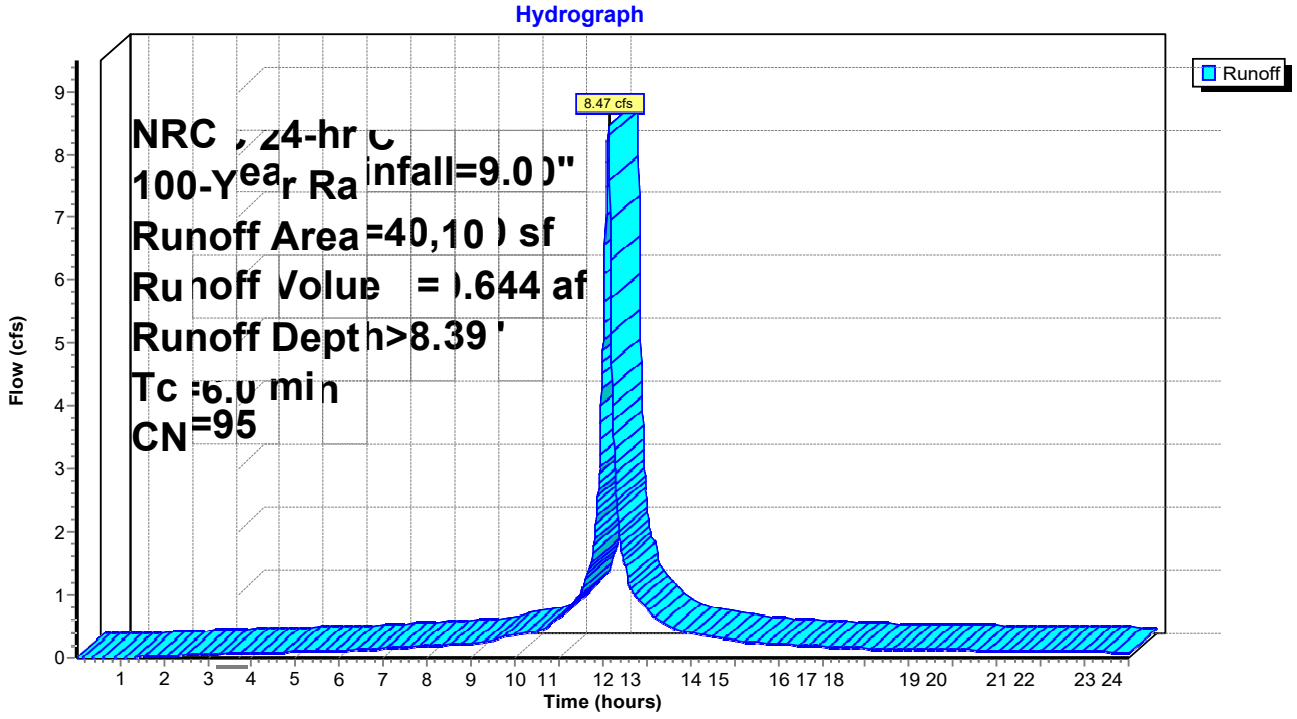
Runoff = 8.47 cfs @ 12.13 hrs, Volume= 0.644 af, Depth> 8.39"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
33,594	98	Paved parking, HSG C
6,506	79	50-75% Grass cover, Fair, HSG C
40,100	95	Weighted Average
6,506		16.22% Pervious Area
33,594		83.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 2S: Area 2



Summary for Subcatchment 3S: Area 3

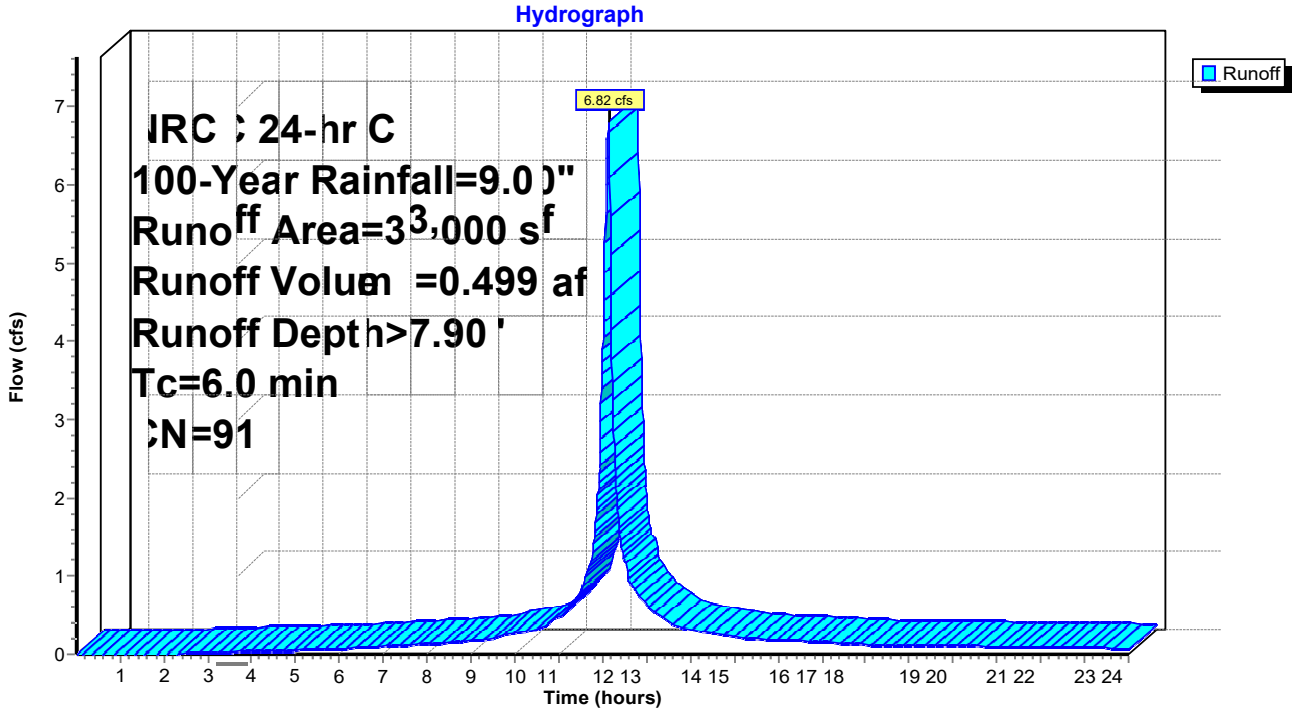
Runoff = 6.82 cfs @ 12.13 hrs, Volume= 0.499 af, Depth> 7.90"
Routed to Pond 11P : D-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
21,216	98	Paved parking, HSG C
11,784	79	50-75% Grass cover, Fair, HSG C
33,000	91	Weighted Average
11,784		35.71% Pervious Area
21,216		64.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment 3S: Area 3



Summary for Subcatchment PRE1: Area 1

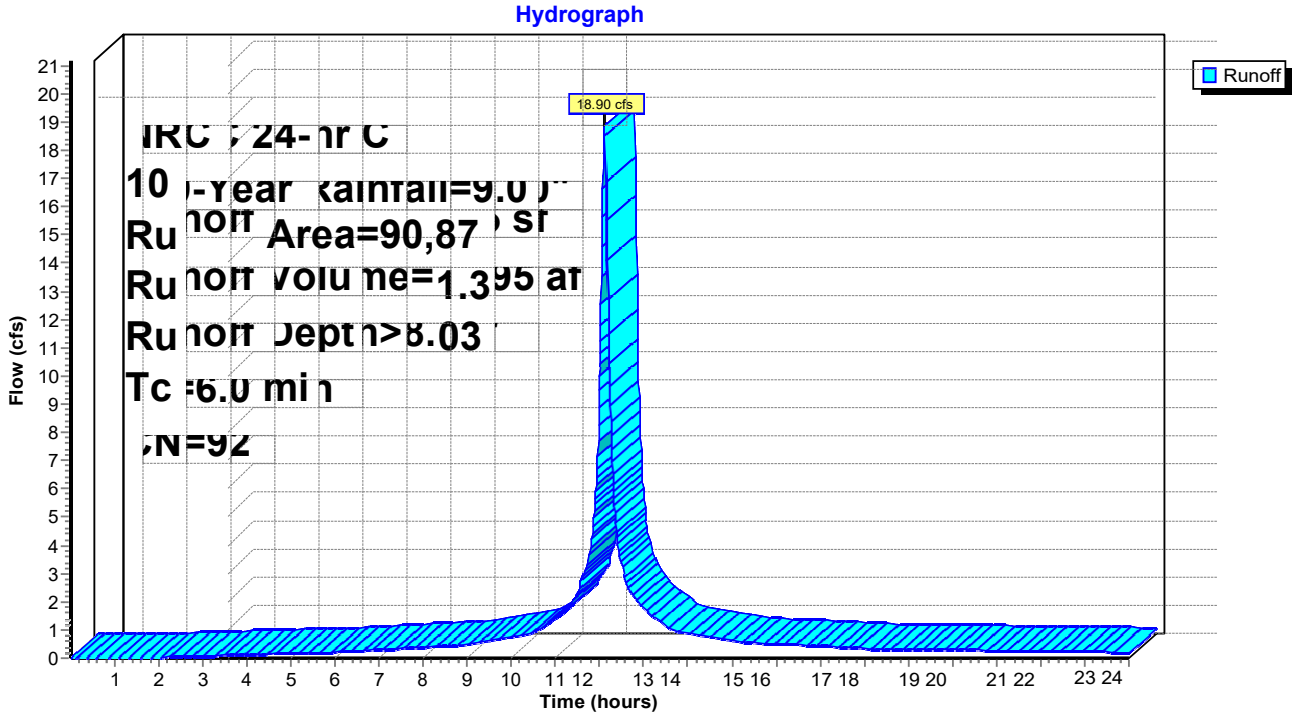
Runoff = 18.90 cfs @ 12.13 hrs, Volume= 1.395 af, Depth> 8.03"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
64,125	98	Paved parking, HSG C
26,750	79	50-75% Grass cover, Fair, HSG C
90,875	92	Weighted Average
26,750		29.44% Pervious Area
64,125		70.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE1: Area 1



Summary for Subcatchment PRE2: Area 2

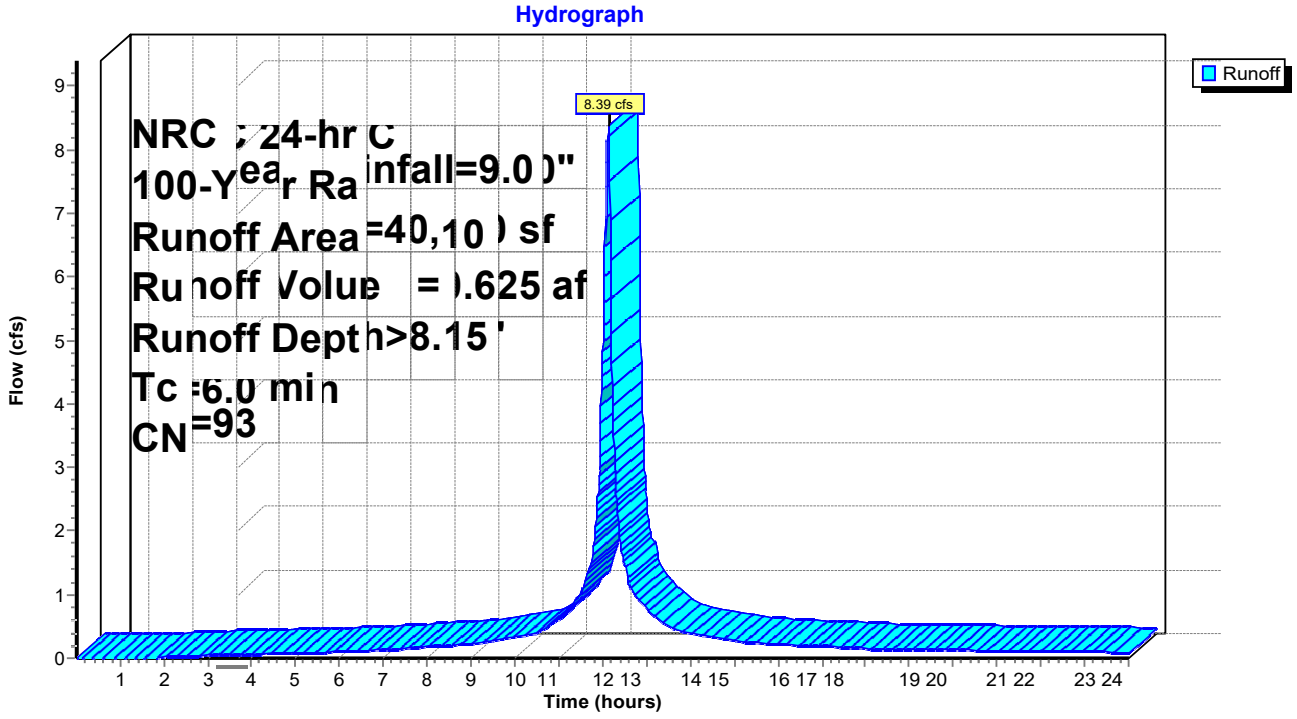
Runoff = 8.39 cfs @ 12.13 hrs, Volume= 0.625 af, Depth> 8.15"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
30,080	98	Paved parking, HSG C
10,020	79	50-75% Grass cover, Fair, HSG C
40,100	93	Weighted Average
10,020		24.99% Pervious Area
30,080		75.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE2: Area 2



Summary for Subcatchment PRE3: Area 3

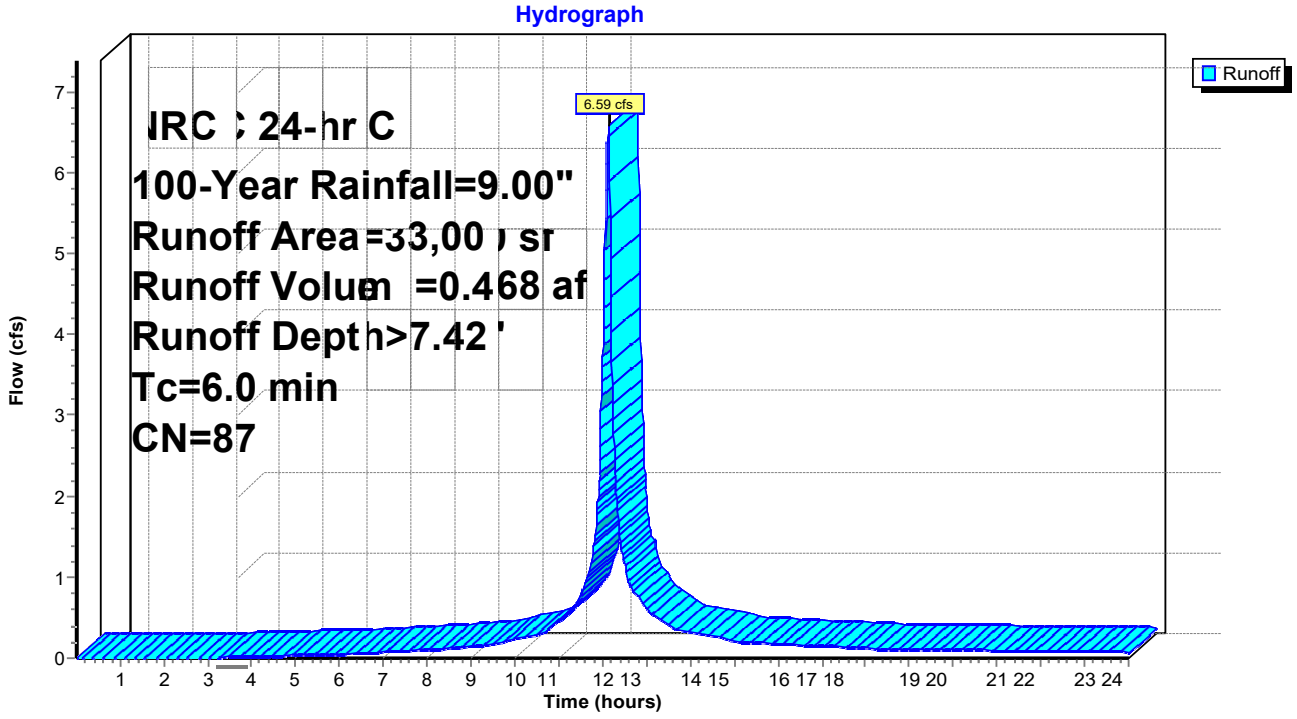
Runoff = 6.59 cfs @ 12.13 hrs, Volume= 0.468 af, Depth> 7.42"
Routed to Pond OUT1 : CB OUTLET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=9.00"

Area (sf)	CN	Description
13,075	98	Paved parking, HSG C
19,925	79	50-75% Grass cover, Fair, HSG C
33,000	87	Weighted Average
19,925		60.38% Pervious Area
13,075		39.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Pavement**

Subcatchment PRE3: Area 3



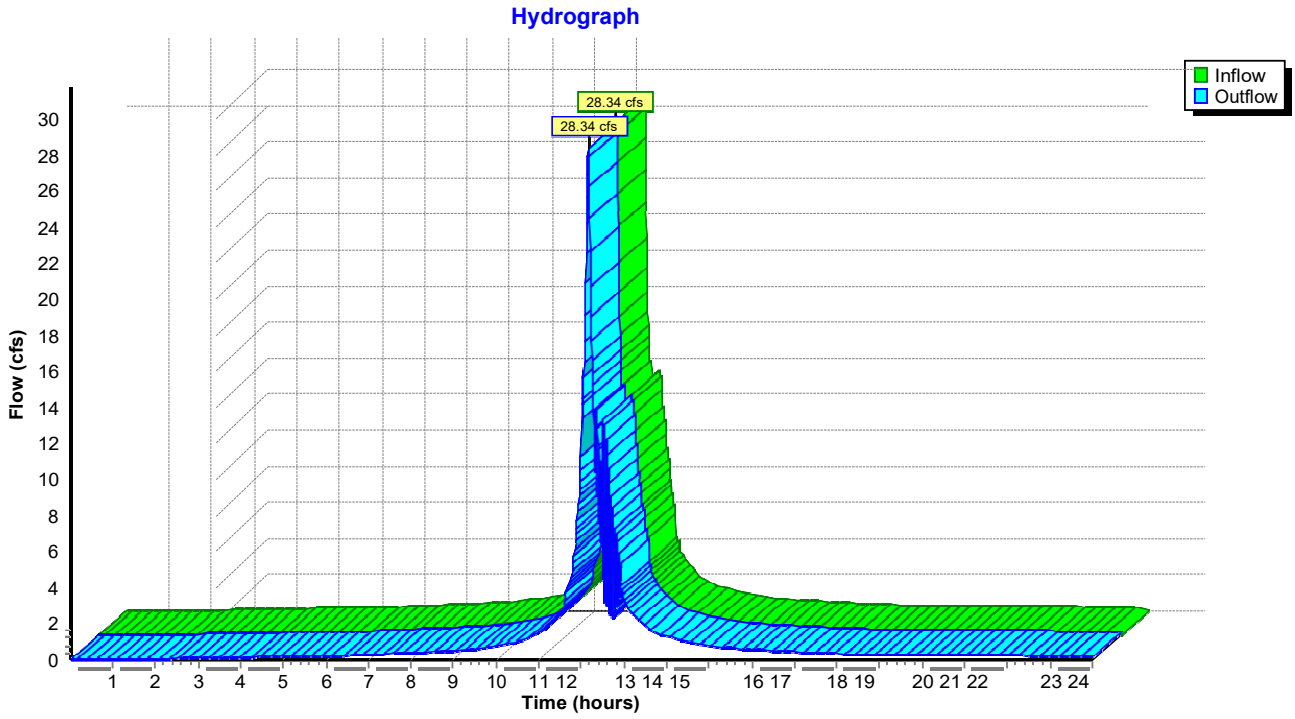
Summary for Reach 4R: POSTDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow	=	28.34 cfs @ 12.14 hrs, Volume=	1.957 af
Outflow	=	28.34 cfs @ 12.15 hrs, Volume=	1.957 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach 4R: POSTDP1



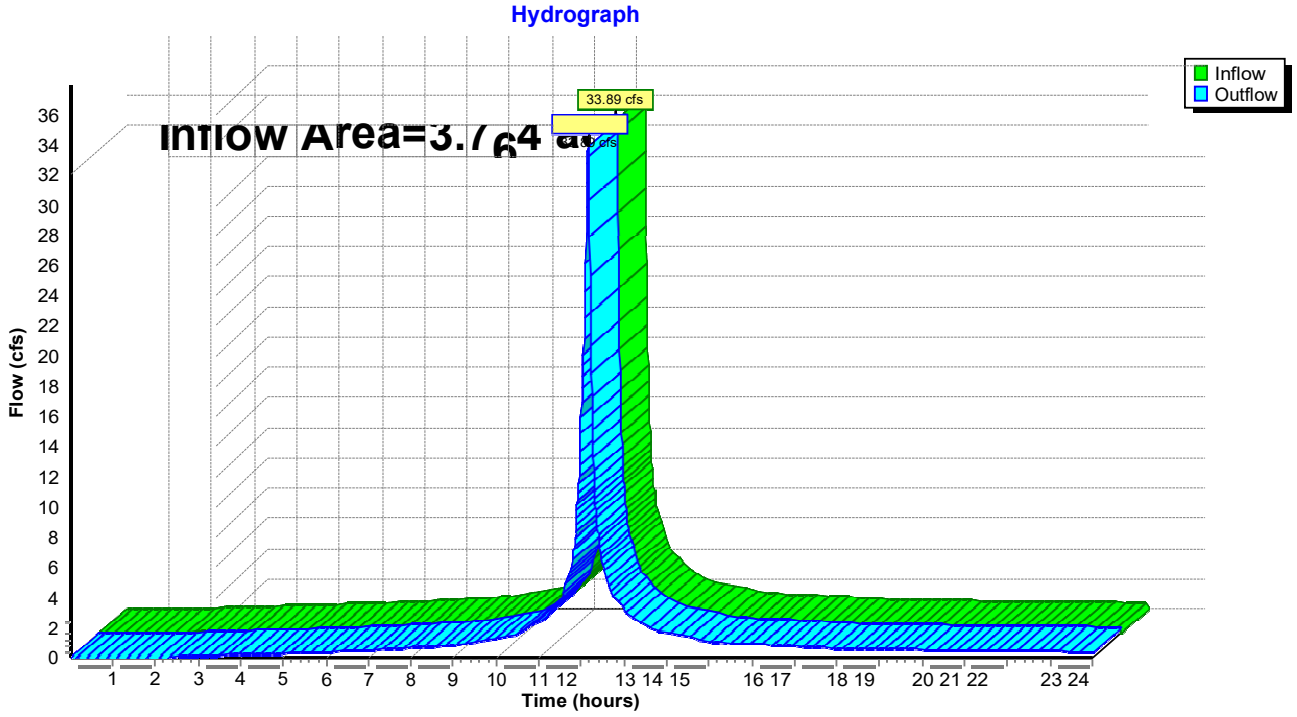
Summary for Reach PREDP1: PREDP1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 7.93" for 100-Year event
Inflow = 33.89 cfs @ 12.14 hrs, Volume= 2.488 af
Outflow = 33.89 cfs @ 12.15 hrs, Volume= 2.488 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs

Reach PREDP1: PREDP1



Summary for Pond 10P: DMH 1

[57] Hint: Peaked at 173.15' (Flood elevation advised)

Inflow	=	28.34 cfs @ 12.13 hrs,	Volume=	1.959 af
Outflow	=	28.34 cfs @ 12.14 hrs,	Volume=	1.959 af, Atten= 0%, Lag= 0.6 min
Primary	=	28.34 cfs @ 12.14 hrs,	Volume=	1.957 af
Routed to Reach 4R : POSTDP1				
Secondary	=	1.20 cfs @ 11.99 hrs,	Volume=	0.002 af
Routed to Pond 11P : D-4				

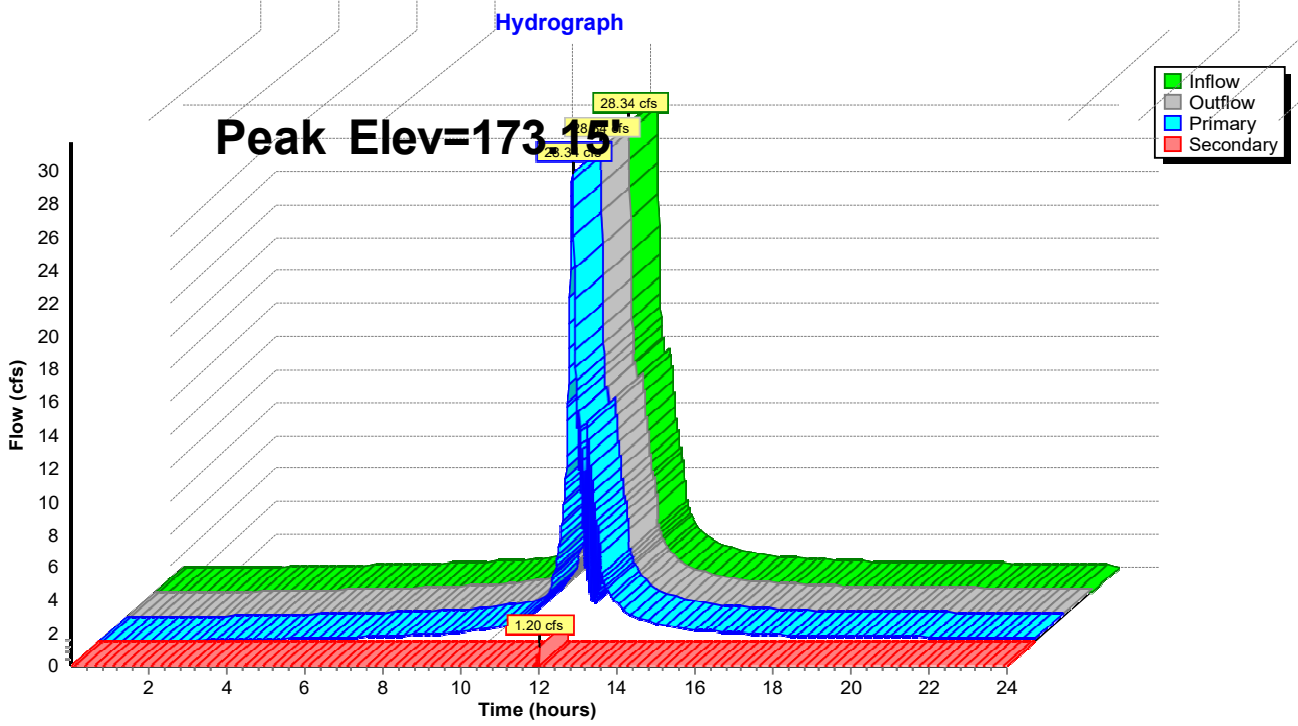
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 173.15' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Primary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Secondary	169.80'	**12.0" Round backwater** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 169.30' / 169.80' S= -0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=28.28 cfs @ 12.14 hrs HW=173.15' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 11.99 cfs @ 8.58 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 16.29 cfs @ 1.33 fps)

Secondary OutFlow Max=0.00 cfs @ 11.99 hrs HW=172.66' TW=172.90' (Dynamic Tailwater)
└─**3=backwater** (Controls 0.00 cfs)

Pond 10P: DMH 1



Summary for Pond 11P: D-4

[57] Hint: Peaked at 176.78' (Flood elevation advised)

Inflow	=	15.46 cfs @ 12.45 hrs,	Volume=	1.284 af
Outflow	=	15.46 cfs @ 12.46 hrs,	Volume=	1.284 af, Atten= 0%, Lag= 0.6 min
Primary	=	5.76 cfs @ 12.13 hrs,	Volume=	0.720 af
Routed to Pond 13P : Infiltrators				
Secondary	=	10.61 cfs @ 12.46 hrs,	Volume=	0.564 af
Routed to Pond 10P : DMH 1				

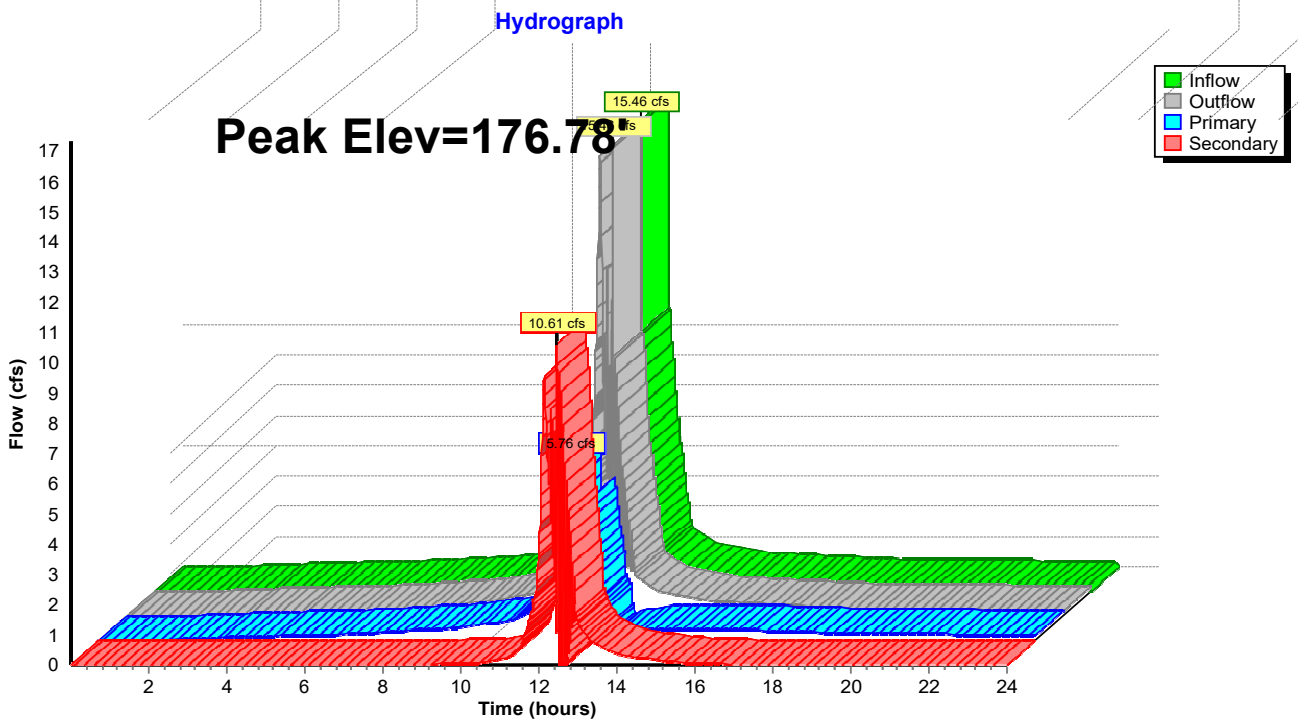
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 176.78' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.50'	**12.0" Round to Infiltration** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.20' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	169.80'	**15.0" Round To DMH1** L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.80' / 169.30' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.59 cfs @ 12.13 hrs HW=176.63' TW=173.60' (Dynamic Tailwater)
1=to Infiltration (Outlet Controls 5.59 cfs @ 7.12 fps)

Secondary OutFlow Max=10.64 cfs @ 12.46 hrs HW=175.36' TW=170.89' (Dynamic Tailwater)
2=To DMH1 (Outlet Controls 10.64 cfs @ 8.67 fps)

Pond 11P: D-4


Hydrograph
Peak Elev=176.78
15.46 cfs
10.61 cfs
5.76 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
2
4
6
8
10
12
14
16
18
20
22
24

Summary for Pond 13P: Infiltrators

[89] Warning: Qout>Qin may require smaller dt
[86] Warning: Oscillations may require smaller dt (severity=268)

Inflow	=	5.76 cfs @	12.13 hrs, Volume=	0.720 af
Outflow	=	13.30 cfs @	12.45 hrs, Volume=	0.744 af, Atten= 0%, Lag= 19.2 min
Discarded	=	0.85 cfs @	12.24 hrs, Volume=	0.605 af
Primary	=	12.60 cfs @	12.45 hrs, Volume=	0.139 af

Routed to Pond 11P : D-4

Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 174.83' @ 12.24 hrs Surf.Area= 2,391 sf Storage= 8,671 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.3 min (809.6 - 771.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	168.20'	6,575 cf	**18.00'W x 132.83'L x 8.50'H Field A** 20,323 cf Overall - 3,886 cf Embedded = 16,437 cf x 40.0% Voids
#2A	168.70'	3,886 cf	**Cultec R-360HD** x 105 Inside #1 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap 105 Chambers in 3 Rows Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf
		10,461 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	168.20'	**5.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 165.00'
#2	Primary	169.50'	**15.0" Round Culvert** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.00' S= 0.1000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	170.50'	**12.0" Round backwater** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.85 cfs @ 12.24 hrs HW=174.83' (Free Discharge)
└**1=Exfiltration** (Controls 0.85 cfs)

Primary OutFlow Max=3.31 cfs @ 12.45 hrs HW=173.09' TW=172.97' (Dynamic Tailwater)
├**2=Culvert** (Inlet Controls 2.06 cfs @ 1.67 fps)
└**3=backwater** (Outlet Controls 1.25 cfs @ 1.59 fps)

Pond 13P: Infiltrators - Chamber Wizard Field A

Chamber Model = Cultec R-360HD (Cultec Recharger® 360HD)
Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf
Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap
Cap Storage= 6.5 cf x 2 x 3 rows = 38.8 cf

60.0" Wide + 6.0" Spacing = 66.0" C-C Row Spacing

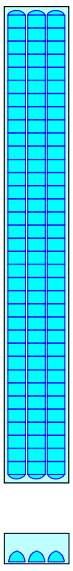
35 Chambers/Row x 3.67' Long +1.25' Cap Length x 2 = 130.83' Row Length +12.0" End Stone x 2 = 132.83' Base Length
3 Rows x 60.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 18.00' Base Width
6.0" Stone Base + 36.0" Chamber Height + 60.0" Stone Cover = 8.50' Field Height

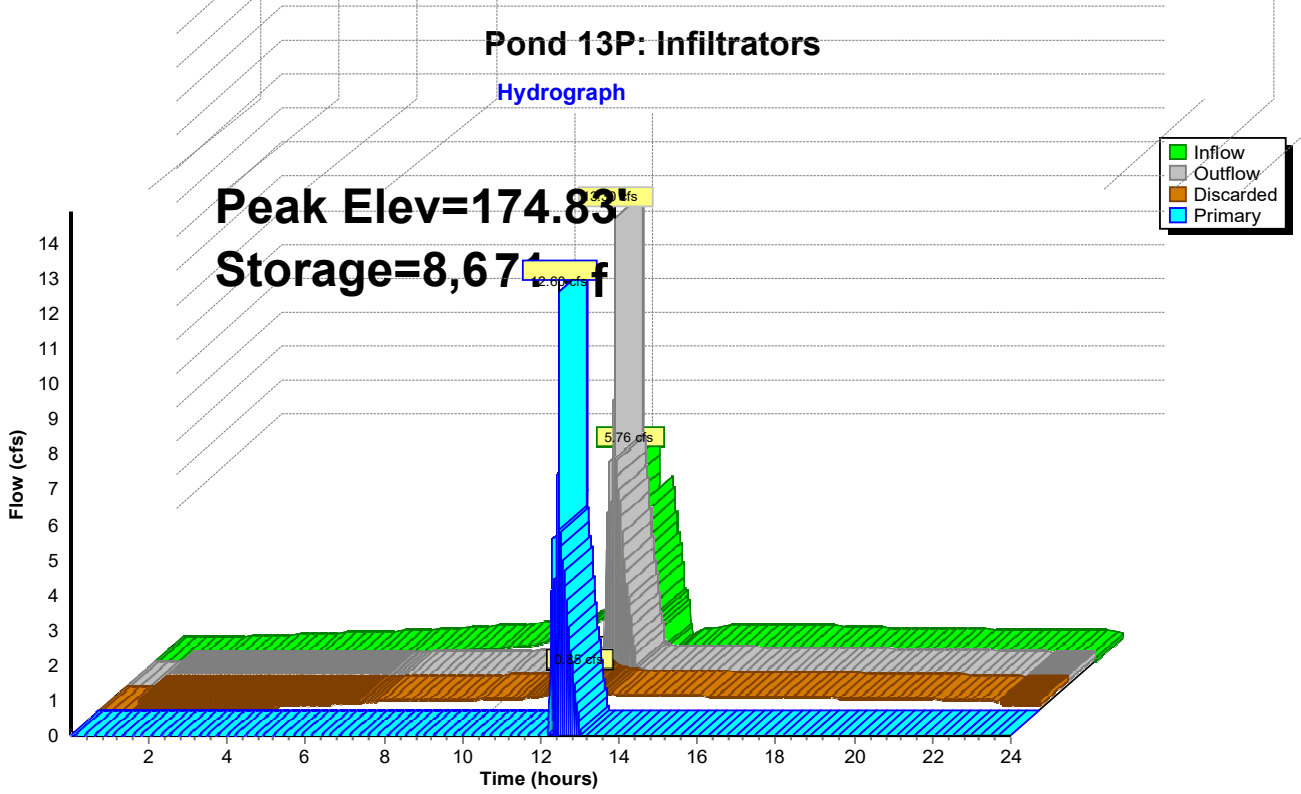
105 Chambers x 36.6 cf + 6.5 cf Cap Volume x 2 x 3 Rows = 3,886.5 cf Chamber Storage

20,323.5 cf Field - 3,886.5 cf Chambers = 16,437.0 cf Stone x 40.0% Voids = 6,574.8 cf Stone Storage

Chamber Storage + Stone Storage = 10,461.3 cf = 0.240 af
Overall Storage Efficiency = 51.5%
Overall System Size = 132.83' x 18.00' x 8.50'

105 Chambers
752.7 cy Field
608.8 cy Stone




Pond 13P: Infiltrators
Hydrograph
Peak Elev=174.83'
Storage=8,671 cf
Inflow
Outflow
Discarded
Primary
12.00 cfs
5.76 cfs
0.85 cfs
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
2
4
6
8
10
12
14
16
18
20
22
24

Summary for Pond OUT1: CB OUTLET

[57] Hint: Peaked at 173.20' (Flood elevation advised)

Inflow Area = 3.764 ac, 65.42% Impervious, Inflow Depth > 7.93" for 100-Year event
Inflow = 33.89 cfs @ 12.13 hrs, Volume= 2.488 af
Outflow = 33.89 cfs @ 12.14 hrs, Volume= 2.488 af, Atten= 0%, Lag= 0.6 min
Primary = 12.08 cfs @ 12.14 hrs, Volume= 2.205 af
Routed to Reach PREDP1 : PREDP1
Secondary = 21.80 cfs @ 12.14 hrs, Volume= 0.284 af
Routed to Reach PREDP1 : PREDP1

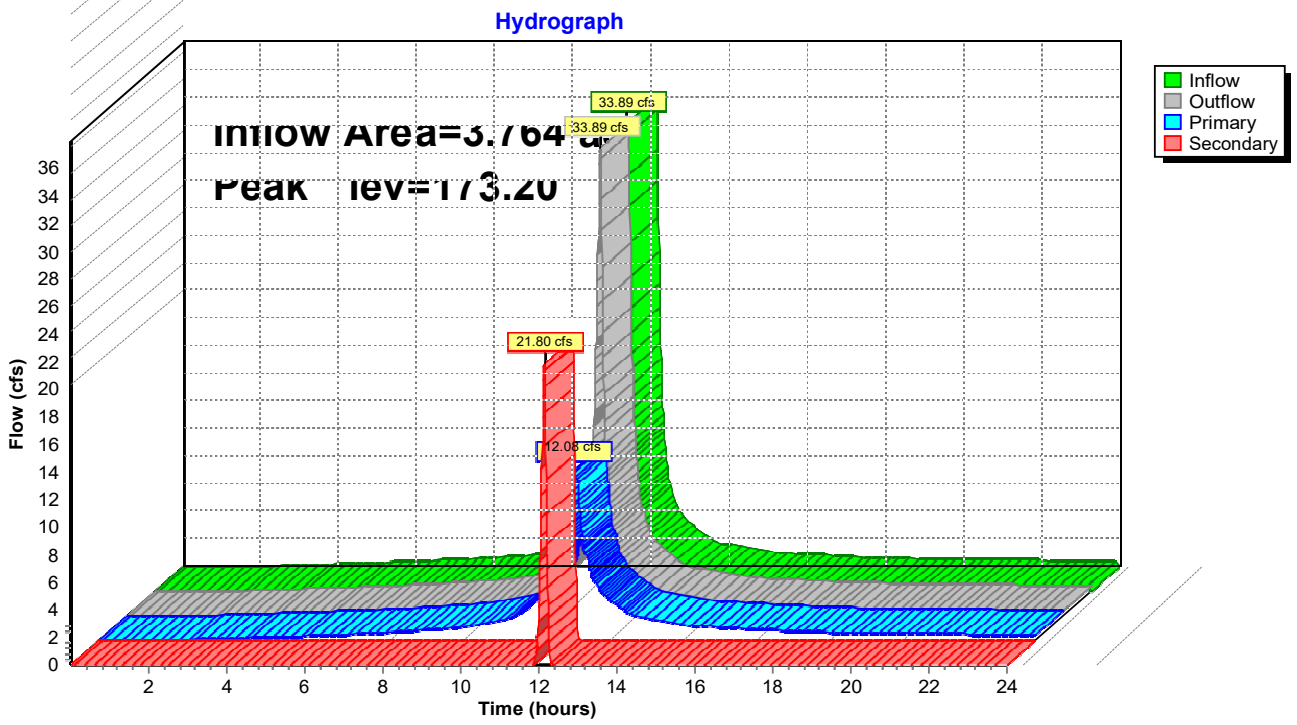
Routing by Sim-Route method, Time Span= 0.01-24.00 hrs, dt= 0.01 hrs
Peak Elev= 173.20' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	169.30'	**16.0" Round Culvert** L= 100.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 169.30' / 165.30' S= 0.0400 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 1.40 sf
#2	Secondary	172.90'	**50.0' long x 30.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=12.08 cfs @ 12.14 hrs HW=173.20' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 12.08 cfs @ 8.65 fps)

Secondary OutFlow Max=21.77 cfs @ 12.14 hrs HW=173.20' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 21.77 cfs @ 1.47 fps)

Pond OUT1: CB OUTLET



APPENDIX D: NYSDEC SPEDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY (PERMIT NO. GP-0-20-001)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

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

PREFACE

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

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

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

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

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

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

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

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

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

B. Effluent Limitations Applicable to Discharges from Construction Activities

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

e. **Prohibited *Discharges*.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

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

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

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

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

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

C. Post-construction Stormwater Management Practice Requirements

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

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

a. Sizing Criteria for New Development

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

c. Sizing Criteria for Redevelopment Activity

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

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

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

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

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

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

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

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

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

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

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

D. Maintaining Water Quality

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

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

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

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

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

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

E. Eligibility Under This General Permit

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

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

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

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

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

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

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

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

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

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

B. Notice of Intent (NOI) Submittal

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

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

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

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

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

C. Permit Authorization

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

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

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

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

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

c. the final SWPPP has been prepared, and

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

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

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

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

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

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

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

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

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

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

D. General Requirements For Owners or Operators With Permit Coverage

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

F. Change of Owner or Operator

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

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

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

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

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

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

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

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

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

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

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

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

d. to document the final construction conditions.

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

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

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

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

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

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

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

B. Required SWPPP Contents

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

e. Infiltration test results, when required; and

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

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

C. Required SWPPP Components by Project Type

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

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

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

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

B. Contractor Maintenance Inspection Requirements

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

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

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

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

C. Qualified Inspector Inspection Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

a. Date and time of inspection;

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

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

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

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

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

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

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

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

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

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

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

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

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

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

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

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

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

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

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

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

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

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

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

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

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

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

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

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

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

B. Addresses

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

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

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

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

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

B. Continuation of the Expired General Permit

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

C. Enforcement

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

D. Need to Halt or Reduce Activity Not a Defense

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

E. Duty to Mitigate

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

F. Duty to Provide Information

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

G. Other Information

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

H. Signatory Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

I. Property Rights

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

J. Severability

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

K. Requirement to Obtain Coverage Under an Alternative Permit

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

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

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

L. Proper Operation and Maintenance

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

M. Inspection and Entry

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

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

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

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

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

N. Permit Actions

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

O. Definitions

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

P. Re-Opener Clause

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

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

Q. Penalties for Falsification of Forms and Reports

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

R. Other Permits

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

APPENDIX A – Acronyms and Definitions

Acronyms

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

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX B – Required SWPPP Components by Project Type

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

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

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

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

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

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

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

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

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

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

Table 2

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

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

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

Table 2 (Continued)

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

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

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

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

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

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

Figure 1 - New York City Watershed East of the Hudson

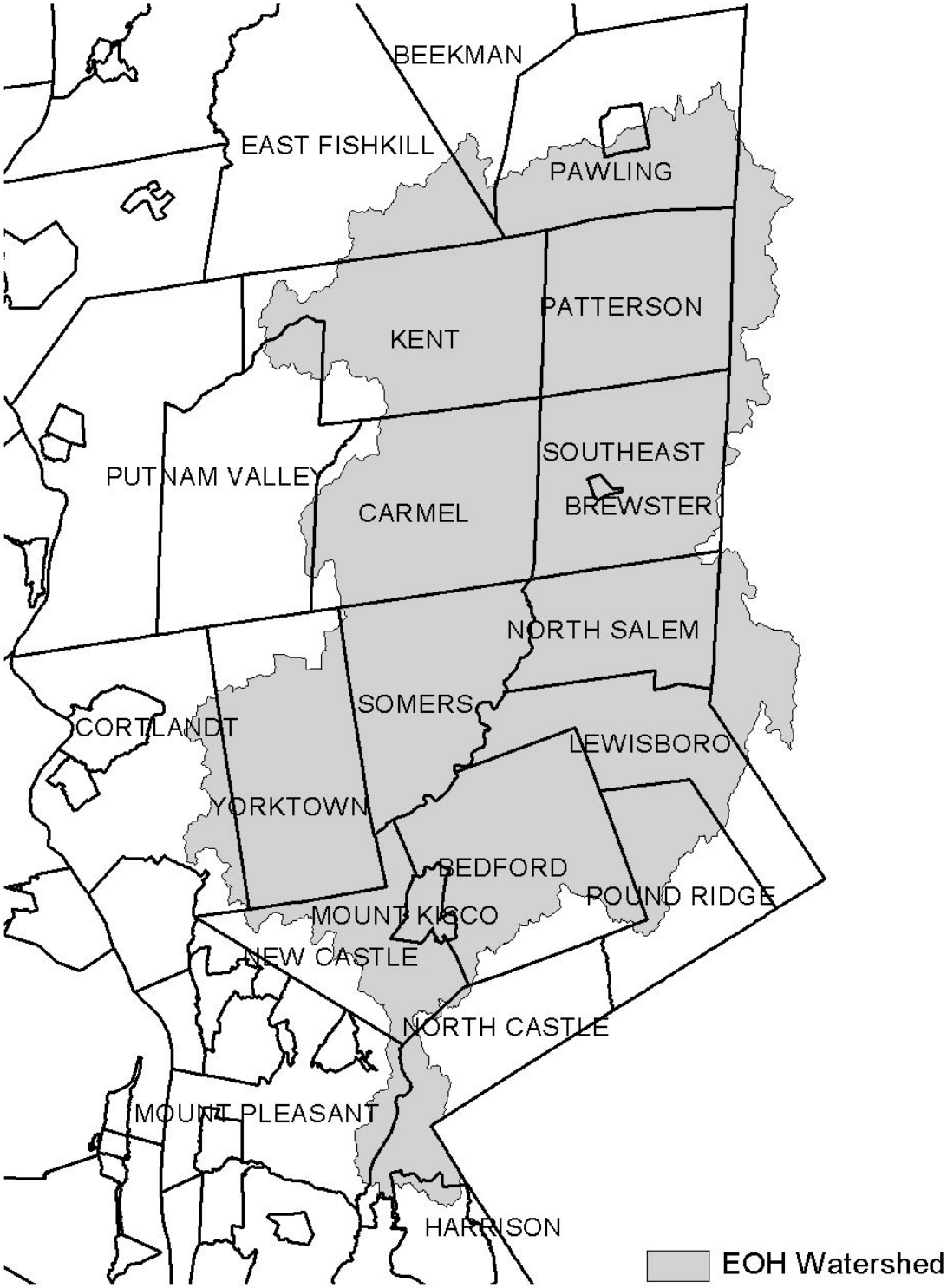


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

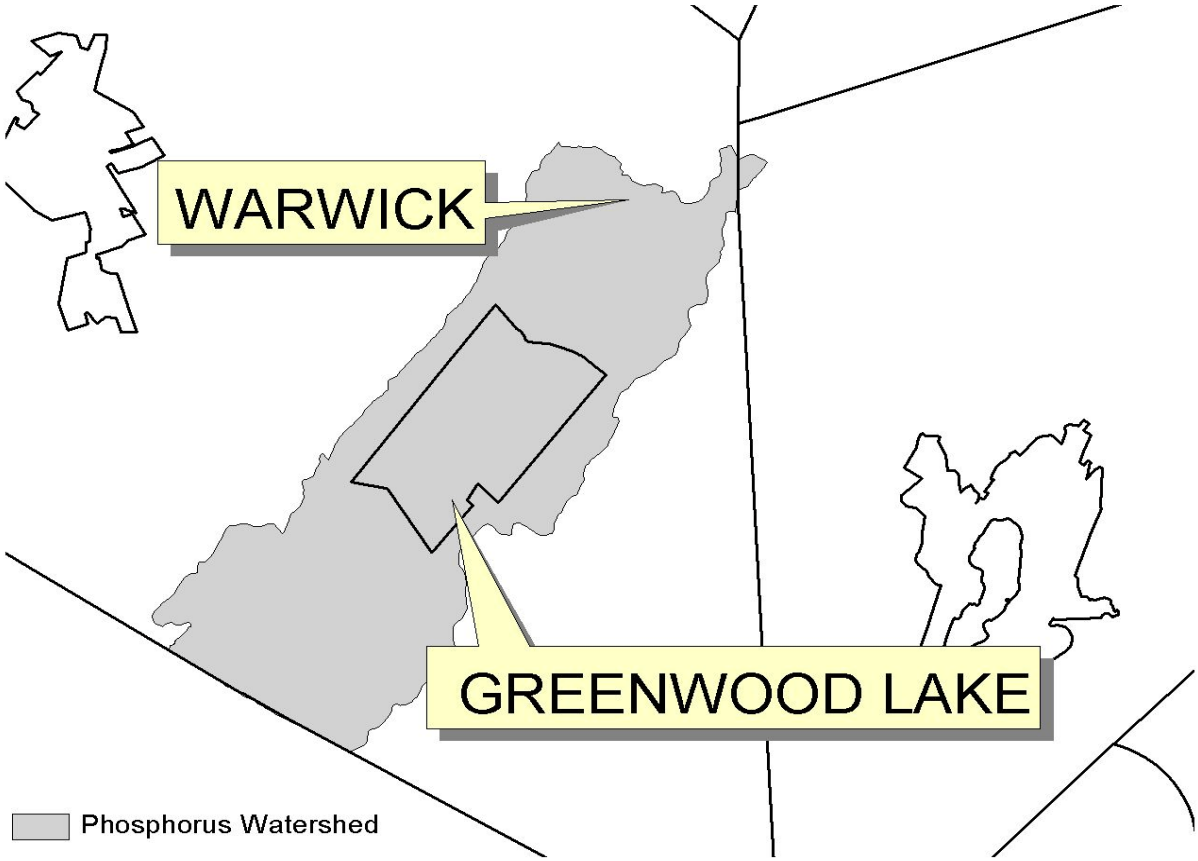


Figure 4 - Oscawana Lake Watershed

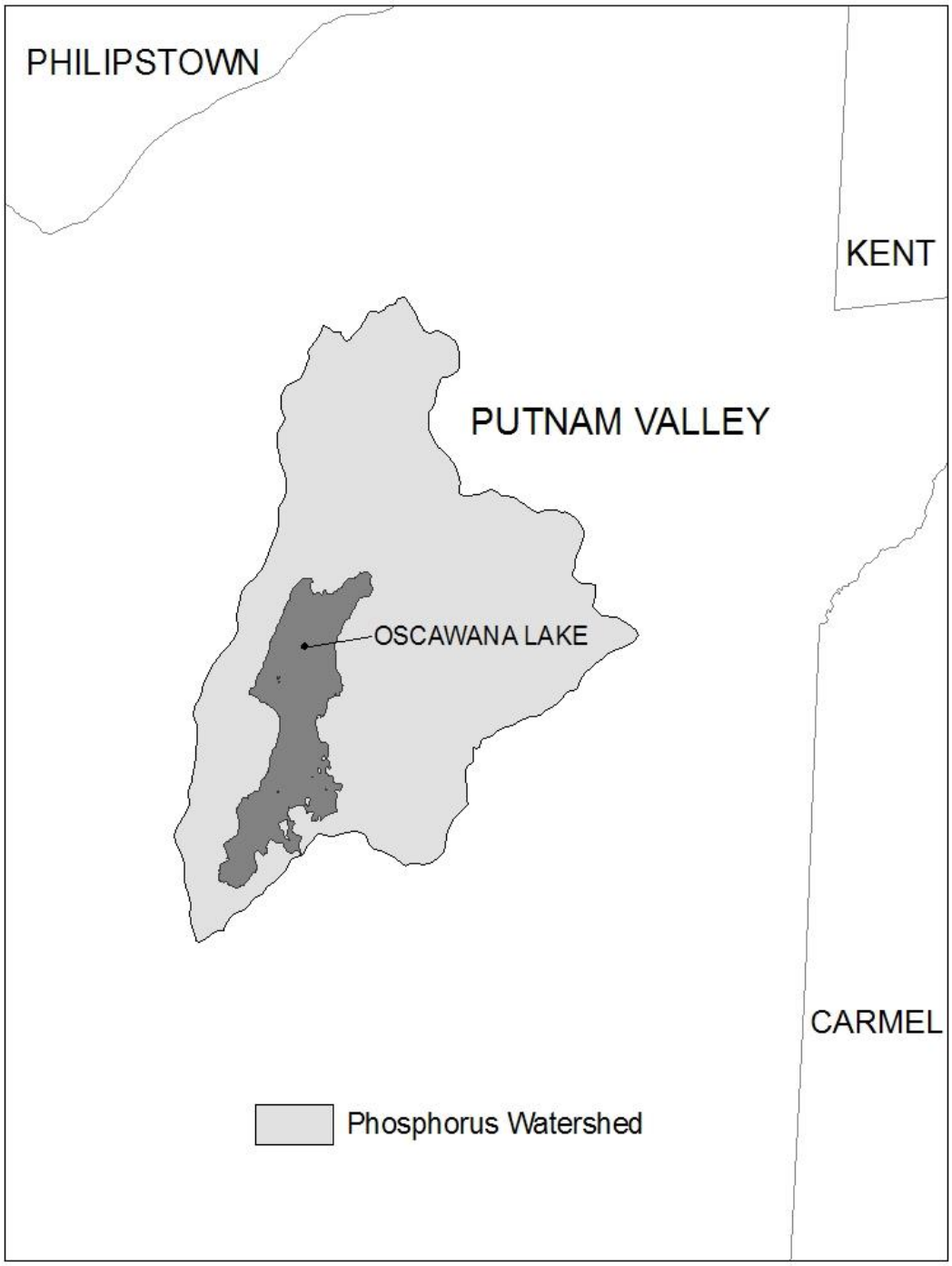
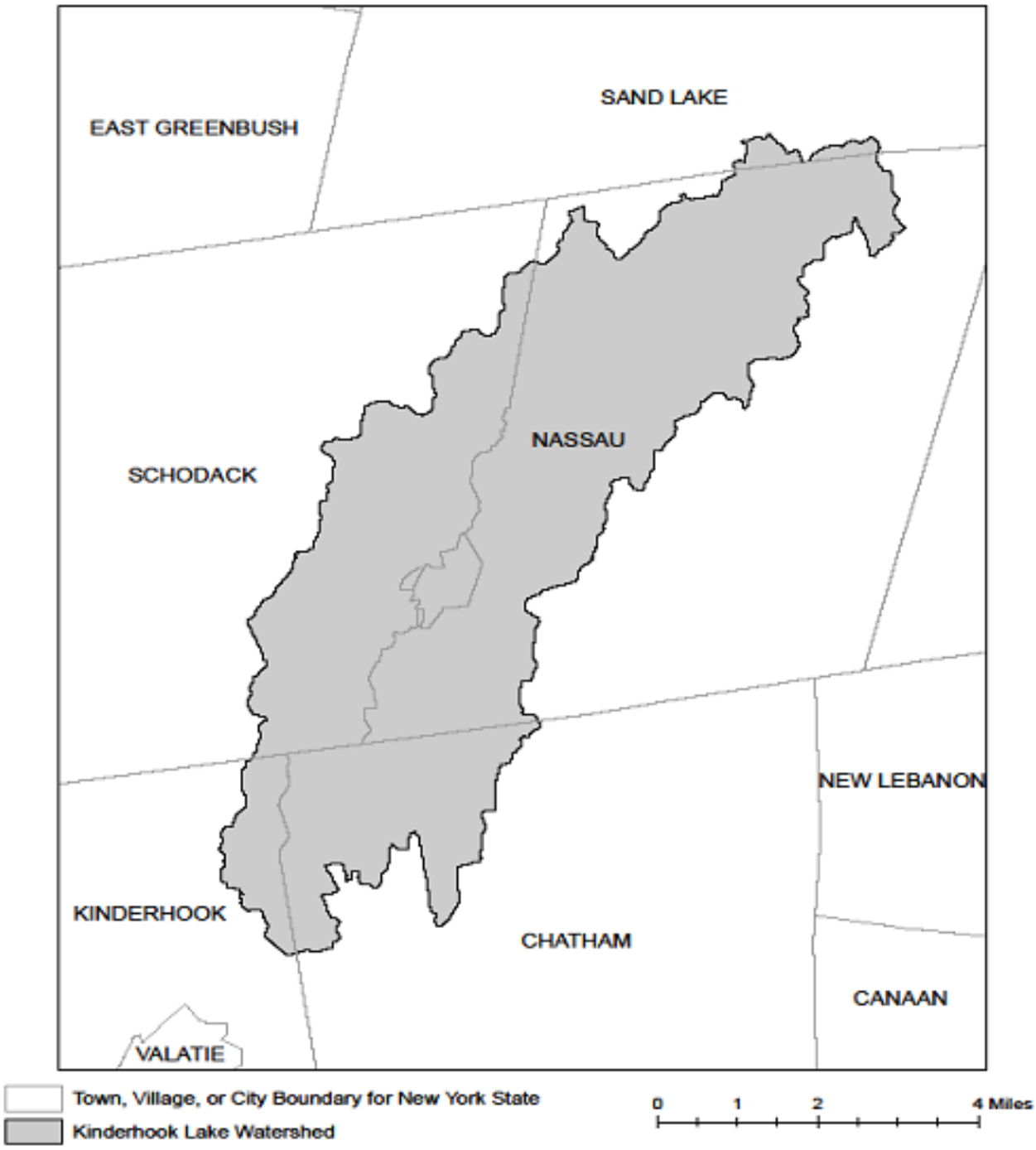


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX F – List of NYS DEC Regional Offices

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

APPENDIX E: CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG SHEETS

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

Standardized Qualified Inspector Form

Project Name and Location of Project: _____ _____ _____ Municipality:_____ County: _____ Qualified Inspector: _____ Qualified Inspector Title:_____	Date:	Weather:
	Permit #: **NYR10**	
	Entry Time:	Exit Time:
5 Acre Waiver: □ Yes □ No Name of SPDES Permittee:_____ Phone: _____Fax:_____ Name of Representative on Site: _____		

Qualified Inspector's Credentials & Certification

Qualified Inspector (QI) means a person that is knowledgeable in the principles and practices of erosion and sediment control (ESC). A person is considered qualified under the following conditions:

1. A licensed Professional Engineer; licensed Landscape Architect with documented training and education in the principles and practices of ESC;
2. An individual certified in ESC by CPESC, Incorporated or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources;
3. An individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect with documented training and education in the principles and practices of ESC **and has** completed the four (4) hour training program in the principles and practices of erosion and sediment control from either a Soil and Water Conservation District, CPESC or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources. This initial training must be completed no later than May 1, 2010. After receiving the initial training, an individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect must complete four (4) hours of training every three (3) years.
4. Any other individual endorsed by the NYS Department of Environmental Conservation by written documentation.
5. 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.1

Part I. CONSTRUCTION DURATION INSPECTIONS **Page 2 of _____**

a. SITE PLAN/SKETCH OF AREAS DISTURBED AT TIME OF INSPECTION AND AREAS THAT HAVE BEEN STABILIZED (TEMPORARY OR FINAL) SINCE LAST INSPECTION:

b. Other Permit Required Reporting

Maintaining Water Quality - *Attach Color Photographs of the site documenting discharge points and site conditions.*
Describe the condition of runoff at all points of discharge.
Is there an increase in turbidity causing a substantial visible contrast to natural conditions? _____
Is there residue from oil and floating substances, visible oil film, or globules or grease? _____
Is there evidence of silt deposition from project in a stream, wetland, or other water body? _____
If yes, where? _____remedial measure needed? _____
Provide a description of the conditions of all natural water bodies within or immediately adjacent to the project. _____

Area of Disturbance
Total area of disturbance (as shown on sketch plan and not including areas that have temporary or permanent stabilization measures applied) _____
Are all disturbances within the limits of the SWPPP? _____

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

General Housekeeping
Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?_____
Is construction impacting the adjacent property? _____
Is dust adequately controlled?_____
Describe corrective action(s): _____
Date correction needed: _____

c. Runoff Controls *Direct runoff away from exposed soil surfaces and control water that falls onto the site*

Runoff conveyance systems ☐ N A
Are all runoff conveyance systems called for in the SWPPP installed, stabilized and working? _____
If not, what specific areas need detailing?_____
With minimum side slopes 2H:1V or flatter? _____ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring? _____Sediment-laden runoff directed to sediment trapping structure? _____
Describe corrective action(s): _____
Date correction needed: _____

Runoff Control Structures ☐ N A
Have all required runoff control structures (rock outlets and aprons) been installed and constructed per plan and according to the Blue Book?_____ Installed concurrently with pipe installation? _____
Describe corrective action(s): _____
Date correction needed: _____

Temporary Stream or Channel Crossing □ N A
Have construction crossings at concentrated flow areas been culverted?_____
Describe corrective action(s): _____
Date correction needed: _____

Stone Check Dam □ N A
Installed per standards? _____ channel stable (flow is not eroding soil underneath or around the structure). _____does sediment need to be removed? _____
Describe corrective action(s): _____
Date correction needed: _____

Excavation Dewatering □ N A
1. Flowing water □ N A – Upstream berm (sandbags, inflatable dams, etc. with one-foot minimum freeboard) and downstream berms are installed per plan? _____and functioning? (clean water from upstream pool is being pumped to the downstream pool)?
_____
2. Sediment laden water from work area □ N A - Is being discharged to a silt-trapping device? _____
3. Groundwater from excavations □ N A - is being managed properly (sumps and sediment control)? _____
Describe corrective action(s): _____
Date correction needed: _____

d. Soil Stabilization *Basic erosion control is achieved by covering all bare ground areas.*

Topsoil and Spoil Stockpiles □ N A
Stabilized - sediment controls at downhill slope? _____
Describe corrective action(s): _____
Date correction needed: _____

Revegetation/Stabilization □ N A
Has temporary or permanent seeding *and* mulch (as shown on site sketch plan) been applied to areas that have been inactive for 14 days or less (or, inactive for 7 days if over 5 acres disturbed)?_____
Has soil preparation been applied as specified in the SWPPP and in accordance with the Blue Book (Assure that all the necessary soil testing/fertilizer/lime, topsoil, decompaction has been applied)?
_____
Have rolled erosion control products specified for steep slopes or channels been installed? _____
Describe corrective action(s): _____
Date correction needed: _____

e. Sediment Controls

Stabilized Construction Entrance □ N A
Stone is clean and all access areas covered (entrances, construction routes, materials storage areas, equipment parking)?_____ Tracking onto public streets is minimized and cleaned daily? _____
Describe:_____
Date correction needed: _____

Silt Fence □ N A

Installed on contour? not across conveyance channels?_____ At least 10 feet from toe of slope?_____At appropriate spacing intervals based on slope?_____Wrapped ends for continuous support?_____Fabric is tight, without rips or frayed areas?_____Posts are stable?_____ buried 6 inches minimum?_____Any "bulges"?_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Trap □ N A

Is outlet structure constructed properly?_____geotextile fabric has been placed beneath rock fill?_____Maintenance – depth of sediment in basin? _____ 50% capacity? _____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Basin □ N A

Is basin and outlet structure constructed per the approved plan? _____
Are basin side slopes stabilized with seed/mulch? _____
Maintenance – depth of sediment in basin? _____ 50% capacity? _____
Describe:_____
_____
Date correction needed: _____

Drop Inlet Protection □ N A

Type(s) of inlet control? _____
Installed per Blue Book specifications: drainage area (typically 1 acre)? _____
Appropriate for location? _____
Describe:_____
_____
Date correction needed: _____

f. Digital Color Photographs of Deficient BMPs

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of deficient BMPs with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions.

g. Digital Color Photographs of BMPs that have been Corrected

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of corrected BMPs with date stamp, that clearly show the condition of the practice(s) after the corrective actions has been completed.

h. Post-Construction Stormwater Management

Report of any corrective action(s) that must be taken to install, correct, repair, replace or maintain any deficiencies identified with the construction of the post-construction stormwater management practice(s).
Report the current phase of construction of all post-construction stormwater management practice(s) and whether the installation appears to be geometrically consistent with the approved hydraulic design (e.g. the pond, the outlet structure, orifice, pipe sizing and slope is geometrically consistent with the SWPPP):_____

_____
_____
_____

i. Revisions to SWPPP

When the owner or operator becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any other report, or have made 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 and/or the MS4, they shall promptly submit such facts or information. Failure of the owner or operator to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a permit violation (GP-0-10-001 PartVII.G)

_____
_____
_____
_____

j. Inspection Notes and Signature

Inspection Notes:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Standardized Qualified Inspector Form

PART I. j. Signature

GP-0-10-001 Part VII.Q

Articles 175 and 210 of the New York State Penal Law provide for Criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

_____ _____

Qualified Inspector (print name) **Date of Inspection**

_____

Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Title: _____ Address: _____

Phone: _____ Email: _____

CPESC#: _____

Stormwater Training Number for *Trained Individuals*: _____
P.E. or L.A. Supervisor Name for *Trained Individuals*:_____

Compliance certification:

Received and reviewed by_____Title:_____

The above signed acknowledges receipt of this inspection report

HC 210
(1/21)

NOTICE TO REDUCE FREQUENCY OF SPDES SITE INSPECTIONS

SPDES General Permit for Stormwater Discharges from Construction Activity

In accordance with Part IV.C.2.c of the SPDES General Permit for Stormwater Discharges from Construction Activity, the New York State Department of Transportation hereby notifies the New York State Department of Environmental Conservation that work on this Contract will be temporarily suspended and temporary stabilization measures have been applied to all disturbed areas.

A Qualified Inspector will conduct a site inspection at least once every 30 calendar days during this period. The standard site inspection frequency will resume when construction activities re-commence.

SPDES Permit ID #: _____

Contract No.: _____ PIN: _____

Description: _____

Town, Village,City: _____

County: _____

Reason for temporary suspension of work:

- ☐ Winter Shutdown
- ☐ Other _____

Approximate date work will be suspended: _____

Approximate date work will resume: _____

Signature: _____

Name: _____

Title: _____

Phone: _____

E-Mail: _____

Date Submitted to NYSDEC: _____

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION

Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

APPENDIX F: E-NOTICE OF INTENT & ACKNOWLEDGEMENT LETTER

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.35

(Submission #: HPQ-VZNY-EJ7CK, version 1)

Details

Submitted	1/31/2023 (0 days ago) by George Cronk
Alternate Identifier	Clarkstown North High School
Submission ID	HPQ-VZNY-EJ7CK
Submission Reason	New
Status	Submitted
Active Steps	Under Review ,Under Review

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
Clarksktown School District

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

Owner/Operator Contact Person First Name
Marc

Owner/Operator Mailing Address
62 Old Middletown Road

City
New City

State
NY

Zip
10956

Phone
8456396300

Email
superintendentoffice@ccsd.edu

Federal Tax ID
13-6007107

Project Location

Project/Site Name
Clarkstown North High School

Street Address (Not P.O. Box)
151 Congers Rd

Side of Street
East

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

State
NY

Zip
10956

DEC Region
3

County
ROCKLAND

Name of Nearest Cross Street
Cairnsmuir Lane

Distance to Nearest Cross Street (Feet)
500

Project In Relation to Cross Street
North

Tax Map Numbers Section-Block-Parcel
43.16-3-5

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
41.15040921292332,-73.97107743613587

Project Details

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

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

Pre-Development Existing Landuse
Institutional/School

Post-Development Future Land Use
Institutional/School

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)
36

Total Area to be Disturbed (acres)
4.1

Existing Impervious Area to be Disturbed (acres)
2.8

Future Impervious Area Within Disturbed Area (acres)
3.1

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 (%)
49

B (%)
37

C (%)
3

D (%)
11

7. Is this a phased project?
No

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

Start Date
04/16/2023

End Date
12/15/2023

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

9a. Type of waterbody identified in question 9?
Stream/Creek On Site

Other Waterbody Type Off Site Description
NONE PROVIDED

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

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

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

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?
No

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as D (provided the map unit name is inclusive of slopes greater than 25%), E or F on the USDA Soil Survey?
NONE PROVIDED

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

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

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

16. What is the name of the municipality/entity that owns the separate storm sewer system?
NONE PROVIDED

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

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

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

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

Required SWPPP Components

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

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

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

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

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

SWPPP Preparer
Passero

Contact Name (Last, Space, First)
George Cronk

Mailing Address
19 Front Street

City
Newburgh

State
NY

Zip
12550

Phone
8456679950

Email
gcronk@passero.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

> swpppcert-signed.pdf - 01/21/2023 05:59 PM
> **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
Construction Road Stabilization
Silt Fence
Storm Drain Inlet Protection

Biotechnical
None

Vegetative Measures
Seeding
Topsoiling

Permanent Structural
None

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).
Compacted areas were considered as impervious cover when calculating the WQv Required, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet)
0.1898

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

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

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

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet)
0.1898

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

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

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

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

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

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

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

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

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

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

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

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

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

If Yes, go to question 36.

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

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

CPv Required (acre-feet)
0.2973

CPv Provided (acre-feet)
0.3662

36a. The need to provide channel protection has been waived because:
Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

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

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)
18.05

Post-Development (CFS)
13.82

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)
33.89

Post-Development (CFS)
28.34

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

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

If Yes, Identify the entity responsible for the long term Operation and Maintenance
Clarkstown Central School District

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)
1.26

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

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

If Other, then identify
NONE PROVIDED

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

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

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

MS4 SWPPP Acceptance

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

If No, skip question 44

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

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

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

Owner/Operator Certification

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

Upload Owner/Operator Certification Form
> APP G NYSDEC Owner Operator Certification Form.pdf - 01/24/2023 08:20 PM
> **Comment**
> NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
1/24/2023 8:20 PM	APP G NYSDEC Owner Operator Certification Form.pdf	Attachment	George Cronk
1/21/2023 5:59 PM	swpppcert-signed.pdf	Attachment	George Cronk

Status History

	User	Processing Status
1/21/2023 5:18:57 PM	George Cronk	Draft
1/31/2023 6:23:35 PM	George Cronk	Submitting
1/31/2023 6:23:48 PM	George Cronk	Submitted

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	George Cronk	1/31/2023 6:23:48 PM
Under Review	DAVID GASPER	
Under Review	Daniel von Schilgen	

APPENDIX G: NYSDEC OWNER CERTIFICATION

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

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

Project/Site Name: Clarkstown North High School

eNOI Submission Number: HPQ-VZNY-EJ7CK

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

Certification Statement - Owner/Operator

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

Owner/Operator First Name Marc M.I. P Last Name Baiocco

Signature

January 23, 2023

Date

APPENDIX H: NYSDEC ENGINEER CERTIFICATION

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

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

Project Site Information

Project/Site Name

Clarkstown North High School

Owner/Operator Information

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

Clarkstown Central School District

Certification Statement – SWPPP Preparer

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

George		Cronk
First name	MI	Last Name

1/21/2023

Signature Date

Revised: January 2020

APPENDIX I: NOTICE OF TERMINATION

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

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

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

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

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

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

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

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

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

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

_____

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

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

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

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

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

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

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

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

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

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

V. Additional Information/Explanation:

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

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

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

Printed Name:

Title/Position:

Signature:	Date:

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

VII. Qualified Inspector Certification - Final Stabilization:

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

Printed Name:	
Title/Position:	
Signature:	Date:

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

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

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

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

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX J: SHPO FLOW CHART AND RESPONSE LETTER

CULTURAL RESOURCE SCREENING PROCESS FLOW CHART