

HYDRAULIC ANALYSIS

FOR

SWETMAN SITE PLAN
4015 WEST LAKE ROAD
TOWN OF CANANDAIGUA, NY

PROJECT NO. 20105



PREPARED BY:

MEAGHER ENGINEERING, PLLC
2024 WEST HENRIETTA ROAD, SUITE 2C
ROCHESTER, NY 14623

OCTOBER, 2020



2024 WEST HENRIETTA ROAD, SUITE 2C
ROCHESTER, NY 14623
(585) 924-7430

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1. Introduction

This project falls within Zone A as defined within the Town of Canandaigua Steep Slope Law C (1)(a), having more than 500 square feet of land disturbance on a steep slope protection area within 2,000 feet horizontal distance from Canandaigua Lake. This report will document the design of the proposed stormwater mitigation facilities onsite including multiple infiltration drywells. To comply with the Town of Canandaigua Code §220-8.E (7), this project is required to provide for water quality treatment up to the one-year storm event. Also, to comply with the Town of Canandaigua Code §170-7.D (1), the post-developed condition of the project site shall be no more than 90% of that which occurs under the pre-developed condition. For the purposes of this report, the 90% criteria between the pre-developed and post-developed conditions omit runoff in the region by Canandaigua Lake where the site has already been developed (and no additional development has been proposed) and in offsite regions draining towards the site. That being said, design of the systems on site provide redundant measures in order to allow excess runoff to be directed towards the existing roadside swale, which is responsible for receiving pre-developed runoff currently.

Analysis was performed using the software HydroCAD for pre-developed and post-developed scenarios. The drainage area was kept consistent for both cases with variation in the area breakdown (i.e. impermeable vs permeable). Time of concentration values were based on runoff flow to a common point at the eastern (downhill) side of the parcel. According to USDA soils data, the site is comprised primarily of two types of Honeoye Loam soils. Both soils are classified as Hydrological Soil Group B (Appendix A). The pre-developed and post-developed cases are described in detail below.

2. Pre-developed Condition

The pre-developed site area is a total of 34,935 sf [0.802 acres]. The grade is a consistent 20% and ground cover is a combination of woods and grass. There is no impervious area in the pre-developed site. The time of concentration was determined based on the total length of runoff taken as sheet flow. The pre-developed condition was subjected to model 1-yr 10-yr and 100-yr, 24-hr storm events. Storm data was taken from the NOAA Precipitation Frequency Data Server for the location of our site. The results of the HydroCAD analysis are detailed in Appendix C and summarized below.

<u>Storm</u>	<u>Runoff</u>
1-yr	0.02 cfs
10-yr	0.39 cfs
100-yr	1.30 cfs

3. Post-developed Condition

The total site area for the post-developed analysis 34,935 sf [0.802 acres], which is equal to the pre-developed analysis; however, the post-developed site analysis is broken into two “subcatchments” to model the different surface conditions that will exist in the post-developed site and break areas up into which infiltration drywell they are directed to. Subcatchment 2S includes impervious surfaces (directed towards the central drywell initially). Subcatchment 10S includes all other surfaces present at the site which are directed towards the roadside infiltration drywells. Both infiltration drywells (Nodes 9P and 14P) are modeled as “ponds” with storage volumes and outlet conditions equivalent to those detailed on the construction documents. For severe storm events, Pond 9P, which receives runoff from Subcatchment 2S, is allowed to overflow towards Pond 14P. The post-developed model allows runoff to flow from subcatchments to the respective ponds and then to a common “reach” (Appendix A). By analyzing the flow into the reach, we can compare the pre-developed and post-developed conditions with similar boundary conditions. The results of the HydroCAD analysis is detailed in Appendix C and summarized below.

<u>Storm</u>	<u>Runoff</u>	<u>% of Predeveloped Condition</u>
1-yr	0.02 cfs	0%
10-yr	0.39 cfs	10%
100-yr	1.08 cfs	83

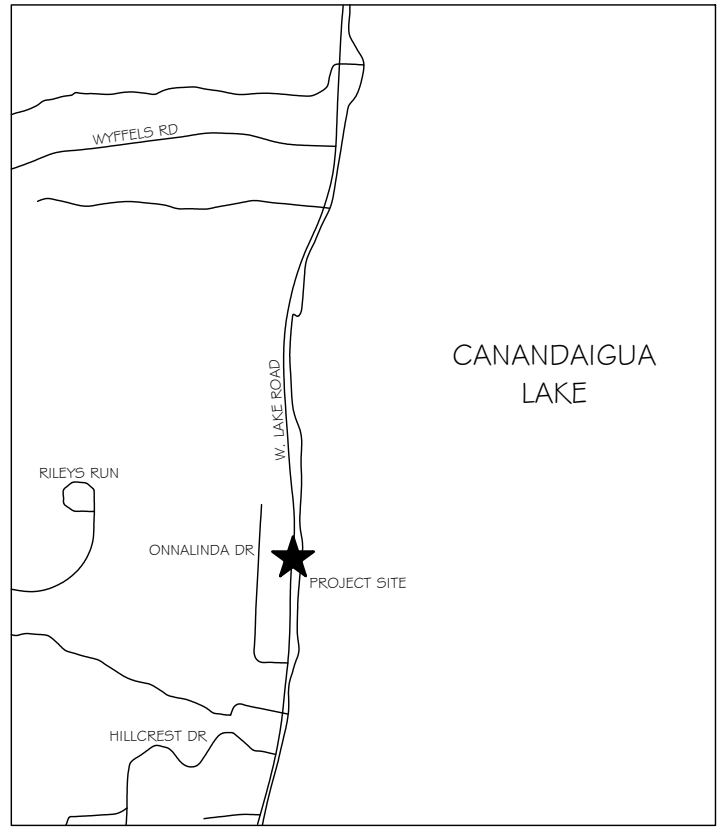
4. Results

The design was successful in reducing the runoff flow from the pre-developed condition to the post-developed condition for the 10-yr and 100-yr storm events. Also, the infiltration practices were able to retain runoff from the 1-yr storm event, which occurs within the site, without discharging. Therefore, the project is compliant with the Town of Canandaigua Steep Slope Protection laws for water quality treatment and Town of Canandaigua Stormwater Management Code for reduced runoff.

APPENDIX A

SITE MAP

PRELIMINARY
NOT FOR
CONSTRUCTION



LOCATION MAP
SCALE: N.T.S.

SITE DATA:

ADDRESS: 4015 WEST LAKE ROAD,
CANANDAIGUA, NY 14424
TAX ACCOUNT # 113.17-1-14
ZONING: RESIDENTIAL LAKE DISTRICT (RLD)
LOT SIZE = 1.002 ACRES (±43,651 SF)

PROPOSED HOUSE
SIDE SETBACK = 14.91 FT / 15.74 FT
REAR SETBACK = 121.80 FT
FRONT SETBACK = 42.17 FT
BUILDING HEIGHT = 25.0 FT

EXISTING LOT COVERAGE = 2,666.4 SF (6.11%)
PROPOSED LOT COVERAGE = 12,728.2 (29.16%)
DRIVEWAY = 1,713.6 SF (3.926%)
PATH TO FRONT DOOR = 328.0 SF (0.751%)
HOUSE & DECK = 5,708.7 SF (13.08%)
ROOF OVERHANG = 459.2 SF (1.05%)
WALKING PATH = 1,391.9 SF (3.189%)
LOWER PATIO AREA = 250.0 SF (0.573%)
STAIRS = 131.0 SF (0.300%)
RETAINING WALL = 30.0 SF (0.069%)
GRAVEL PAD FOR HVAC = 49.5 SF (0.113%)

EXISTING BLDG. COVERAGE = 575.5 SF (1.32%)
PROPOSED HOUSE & DECK = 5,708.7 SF (13.08%)
TOTAL BLDG. COVERAGE = 6,284.2 SF (14.40%)

MINIMUM SIDE SETBACK = 12 FT
MINIMUM REAR SETBACK = 65 FT
NOTE: TAKEN FROM WEST LAKE ROAD
MINIMUM FRONT SETBACK = 60 FT
NOTE: TAKEN FROM ONNALINDA DRIVE
MAXIMUM BUILDING HEIGHT = 25 FT
MAXIMUM LOT COVERAGE = 22.5%
NOTE: INCLUDING 10% REDUCTION GIVEN
DEVELOPMENT IN STEEP SLOPE PROTECTION AREAS
MAXIMUM BUILDING COVERAGE = 15%

ANTICIPATED DISTURBED AREA = 29,700 SF (0.682 ACRES)

ANTICIPATED START OF CONSTRUCTION: SPRING 2021

LEGEND

- PROPERTY LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- SETBACK
- SILT FENCE
- DOMESTIC WATER
- STORM PIPE
- SANITARY
- OVERHEAD ELECTRIC
- GAS
- EXISTING VEGETATION EXTENT
- DISTURBED AREA BOUNDARY
- PROPOSED ELECTRIC SERVICE
- DRIVEWAY / WALKING PATH
- DRYWELL
- EXISTING MONUMENTATION
- UTILITY POLE

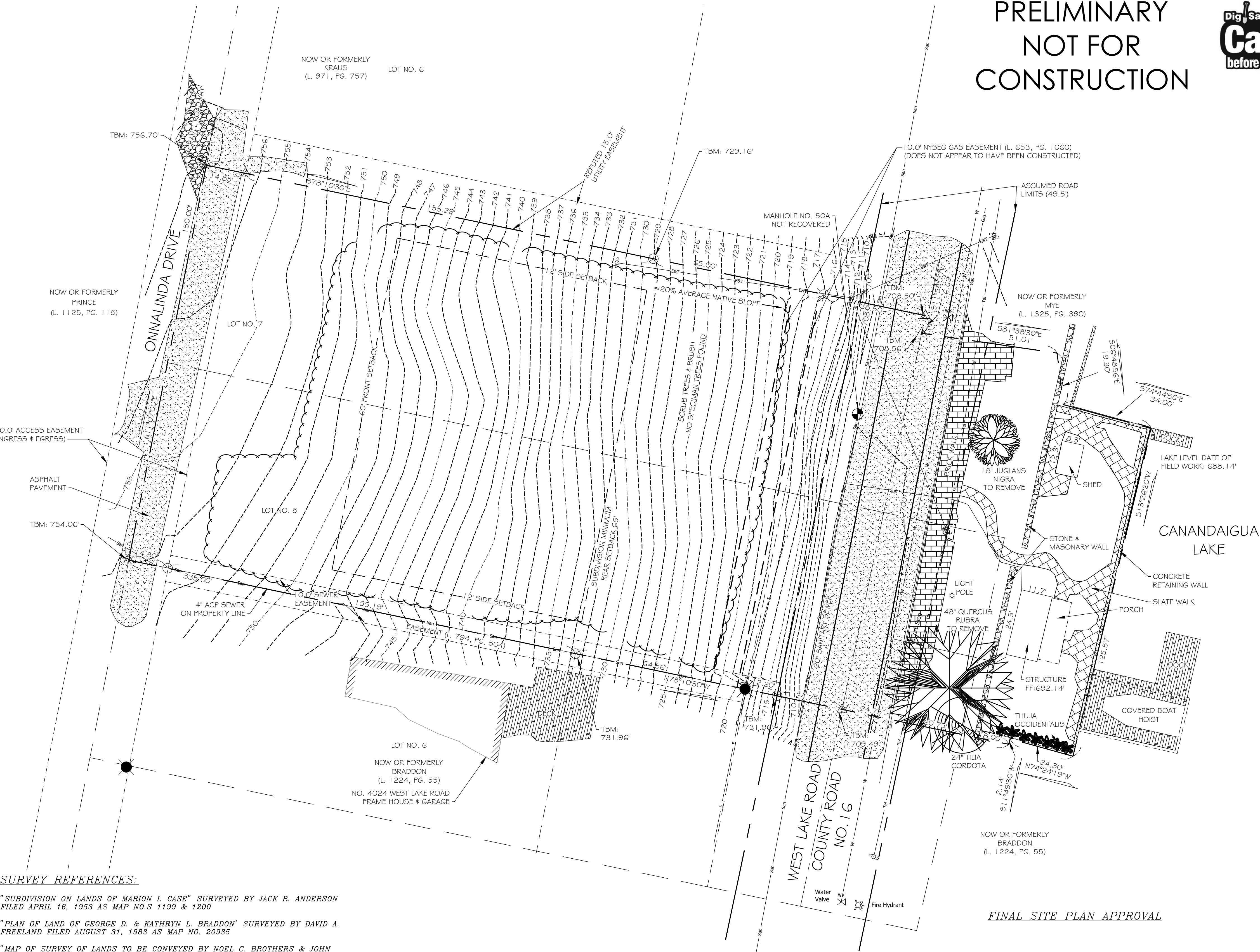
FINAL SITE PLAN APPROVAL

PLANNING BOARD CHAIRMAN _____ DATE _____

TOWN ENGINEER _____ DATE _____

CITY OF CANANDAIGUA
DIRECTOR OF PUBLIC WORKS _____ DATE _____

NOTE:
NO BUILDING PERMIT MAY BE ISSUED UNTIL FINAL SITE
PLAN APPROVAL HAS BEEN GRANTED AND THE FINAL SITE
PLAN SIGNED BY THE PLANNING BOARD CHAIRPERSON.



SURVEY REFERENCES:

- "SUBDIVISION ON LANDS OF MARION I. CASE" SURVEYED BY JACK R. ANDERSON
FILED APRIL 16, 1953 AS MAP NO.S 1199 & 1200
- "PLAN OF LAND OF GEORGE D. & KATHRYN L. BRADDON" SURVEYED BY DAVID A.
FREELAND FILED AUGUST 31, 1983 AS MAP NO. 20935
- "MAP OF SURVEY OF LANDS TO BE CONVEYED BY NOEL C. BROTHERS & JOHN
THEODORE" SURVEYED BY GARY L. DUNTON - FILED JULY 26, 1988 AS MAP NO.
16078
- "FINAL ANNEXATION MAP PREPARED FOR BETH A. WESTBROOK" SURVEYED BY
VENEZIA & ASSOCIATES - FILED MAY 12, 2006 AS MAP NO. 29441
- "MAP OF SURVEY PREPARED FOR PETER M. GERMAN & FREDERICK A. GERMAN
JR." SURVEYED BY JEREMY E. YEARS COMPLETED OCTOBER 30, 2006 AS JOB
NO. YB1315
- "MAP OF SURVEY PREPARED FOR FRANCIS J. CONSENTINO & JANE ELLEN
PARKER" SURVEYED BY JEREMY E. YEARS COMPLETED JULY 2, 2012 AS JOB
NO. YB3230
- "MAP OF A SURVEY PREPARED FOR ANNE G. PURDUE" SURVEYED BY JEREMY E.
YEARS - COMPLETED JANUARY 14, 2015 AS JOB NO. YB4225
- SEE SHEET 11 OF 49 CANANDAIGUA LAKE COUNTY SEWER DISTRICT BY
HERSHEY, MALONE & ASSOCIATES ON FILE AT THE ONTARIO COUNTY OFFICE OF
PUBLIC WORKS

EXISTING SITE PLAN

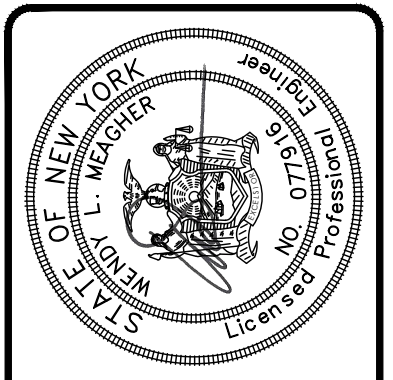
SCALE: 1"=20'-0"
0 20 40 Feet

SURVEY DATA:

"TOPOGRAPHIC PLAN LANDS OWNED BY JAMES F. & COLLEEN P. SWETMAN
AT 4015 WEST LAKE ROAD IN LOT NO. 80, TOWNSHIP 9, RANGE 111
OF THE PHELPS & CORHAM PURCHASE IN THE TOWN OF CANANDAIGUA,
COUNTY OF ONTARIO, STATE OF NEW YORK" BY WILLSON & ASSOCIATES
DATED AUGUST 24, 2020
VERTICAL DATUM: 1929 NCVD
HORIZONTAL DATUM: ASSUMED

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MEAGHER ENGINEERING, PLLC 2013

AUTHORIZED BY THE ENGINEER OF RECORD. NO REVISIONS ARE ALLOWED TO THIS ARTICLE 147 SECTION 7205, VIOLATIONS OF THE NYS EDUC. LAW, ADDITION TO THIS UNAUTHORIZED ALTERATIONS OR		JOB NO.		20105	REVISIONS:		
		DRAWN:		AXT	E		
		DATE:		10-6-20	D		
		CHECKED: WLM		C			
		DATE:		10-6-20	B		
				A			
		NO.		DESCRIPTION		DATE	



MEAGHER
ENGINEERING
CIVIL / STRUCTURAL ENGINEERING
2024 W. HENRIETTA ROAD, SUITE 2C
ROCHESTER, NY 14623
PH: 585-924-7430

CLIENT:	JIM & COLLEEN SWETMAN 76 MCCORD WOODS DRIVE FAIRPORT, NEW YORK 14450
PROJECT:	SWETMAN SITE PLAN 4015 W. LAKE ROAD CANANDAIGUA, NEW YORK 14424
DRAWING:	EXISTING SITE PLAN

DRAWING NO.
C-1
1 of 5

NOTE: GRADE DRIVEWAY REGION SUCH THAT FLOW IS DIRECTED TO NORTHEAST (AWAY FROM GARAGE & HOME)

NOTE: VEGETATION TO BE REMOVED AS NEEDED FOR ACCESS WALKWAY DOWN TO WEST LAKE ROAD

NOTE: MAJORITY OF SITE IS MODERATELY STEEP (15-25%)

NOTE: SPACING BETWEEN CLEANOUTS IS LESS THAN 90 FEET

NOTE: REINFORCE ALL 1:2 REGIONS WITH JUTE MESH

NOTE: ALL STORMWATER RUNOFF FROM PROP. HOME, DRIVEWAY AND 24" CATCHBASIN DIRECTED TOWARDS CENTRAL DRYWELL

NOTE: UTILITY CROSSING & SANITARY LATERAL INSTALLATION REQUIRES HIGHWAY PERMIT

NOTE: IMPROVE ROADSIDE SWALE TO MAINTAIN EXISTING DRAINAGE PATH

10.0' NYSEG GAS EASEMENT (L. 653, PG. 1060) (DOES NOT APPEAR TO HAVE BEEN CONSTRUCTED)

ASSUMED ROAD LIMITS (49.5')
INSERTED-T CONNECTION TO EX. MAIN ANTICIPATED INV: 701.45' TO BE CONDUCTED BY LICENSED ASBESTOS ABATEMENT CONTRACTOR

NOW OR FORMERLY MVE (L. 1325, PG. 390)

SHED
STONE & MASONRY WALL
CONCRETE RETAINING WALL
SLATE WALK
PORCH
STRUCTURE FF:692.14'
THUJA OCCIDENTALIS
COVERED BOAT HOIST

CANANDAIGUA LAKE

NOW OR FORMERLY BRADDON (L. 1224, PG. 55)

WEST LAKE ROAD
COUNTY ROAD NO. 16

Manhole #51
Rim Elev. 709.64'
Inv. 701.97'

FINAL SITE PLAN APPROVAL

PLANNING BOARD CHAIRMAN DATE

TOWN ENGINEER DATE

CITY OF CANANDAIGUA
DIRECTOR OF PUBLIC WORKS DATE

NOTE:
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PROPOSED SITE PLAN

SCALE: 1"=20'-0"

0 20 40 Feet



Dig Safely. New York
Call 811
before you dig

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LEGEND

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STORM PIPE
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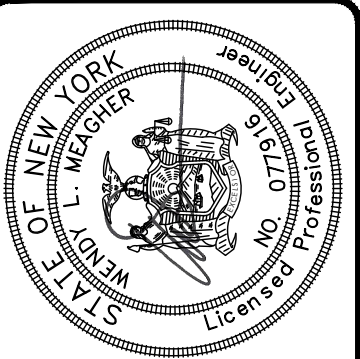
GENERAL & UTILITY NOTES

- DEVELOPER SHALL PROVIDE FOR EROSION CONTROL BARRIERS WHERE NEEDED DURING CONSTRUCTION. EROSION CONTROL SHALL NOT BE REMOVED UNTIL APPROVAL HAS BEEN GRANTED BY THE TOWN OF CANANDAIGUA.
- PROPOSED USE - SINGLE FAMILY DWELLING.
- ROADWAY DRAINAGE ALONG WEST LAKE ROAD & ONNALINDA DRIVE TO BE MAINTAINED AS NECESSARY.
- THE ACCURACY OF EXISTING UTILITIES SHOWN HEREON IS NOT GUARANTEED. EXISTING UTILITIES SHOWN ARE PLOTTED FROM FIELD SURVEY DATA AND RECORD MAP INFORMATION. THE CONTRACTOR SHALL TAKE THE NECESSARY MEASURES TO PROTECT EXISTING UTILITIES.
- ALL UTILITIES SHALL BE UNDERGROUND. CONTRACTOR TO PROVIDE AS-BUILT RECORDS TO THE BUILDING INSPECTOR.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE AND PROTECT ALL SURVEY MONUMENTATION.
- FILL AREAS TO BE IMMEDIATELY SEEDED TO PREVENT EROSION.
- SAFE AND CONTINUOUS TRAFFIC AND INGRESS AND EGRESS FOR ADJACENT OWNER DRIVEWAYS, SERVICE AND PUBLIC ROADS SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION.
- ALL TOPSOIL STRIPPED SHALL BE STOCKPILED AND REMAIN ONSITE UNTIL PROJECT IS COMPLETED OR UNTIL INSURANCE OF A MINIMUM SEED BED OF 4 INCHES OF TOPSOIL IS PROVIDED.
- MATERIAL BROUGHT TO THE SITE SHALL BE CLEAN FILL, FREE OF ORGANICS, WASTES, AND FROZEN MATERIAL.
- THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES PRIOR TO COMMENCING EARTHWORK OPERATIONS.
- ALL CONSTRUCTION SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL CONSTRUCTION STANDARDS.
- ROOF LEADERS TO TIE INTO CENTRAL INFILTRATION DRY WELL AS INDICATED ON PLAN.
- THE CONDITION OF THE EXISTING DOMESTIC WATER SOURCE SHALL BE VERIFIED BY THE CONTRACTOR AND TESTED FOR PATHOGENS, CONTAMINATION, MINERALS, OR OTHER POLLUTANTS. THE ENGINEER OF RECORD SHALL BE NOTIFIED IF AN ALTERNATIVE DOMESTIC WATER SOURCE IS REQUIRED.
- CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ADEQUATE SHORING OF ONGOING CONSTRUCTION. ALL CONSTRUCTION OPERATIONS SHALL BE IN COMPLIANCE WITH "THE BUILDING CODE OF NEW YORK STATE", THE UNIFORM BUILDING CODE, OSHA, AND LOCAL GOVERNING AGENCIES HAVING JURISDICTION.
- PROPOSED LANDSCAPING T.B.D. BY OTHERS.
- ANTICIPATED DOMESTIC WATER FROM EXISTING WATER SERVICE PENDING INSPECTION BY CONTRACTOR AND APPROVAL FROM TOWN OF CANANDAIGUA.
- RENOVATION PERMIT REQUIRED FOR RENOVATION PER OCPW.

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E	D	C	B	A	NO.
20105	AXT	10-6-20	WLM	10-6-20	
JOB NO.	DRAWN:	CHECKED:	DATE:		

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7205, SHALL BE
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ALTERATIONS OR

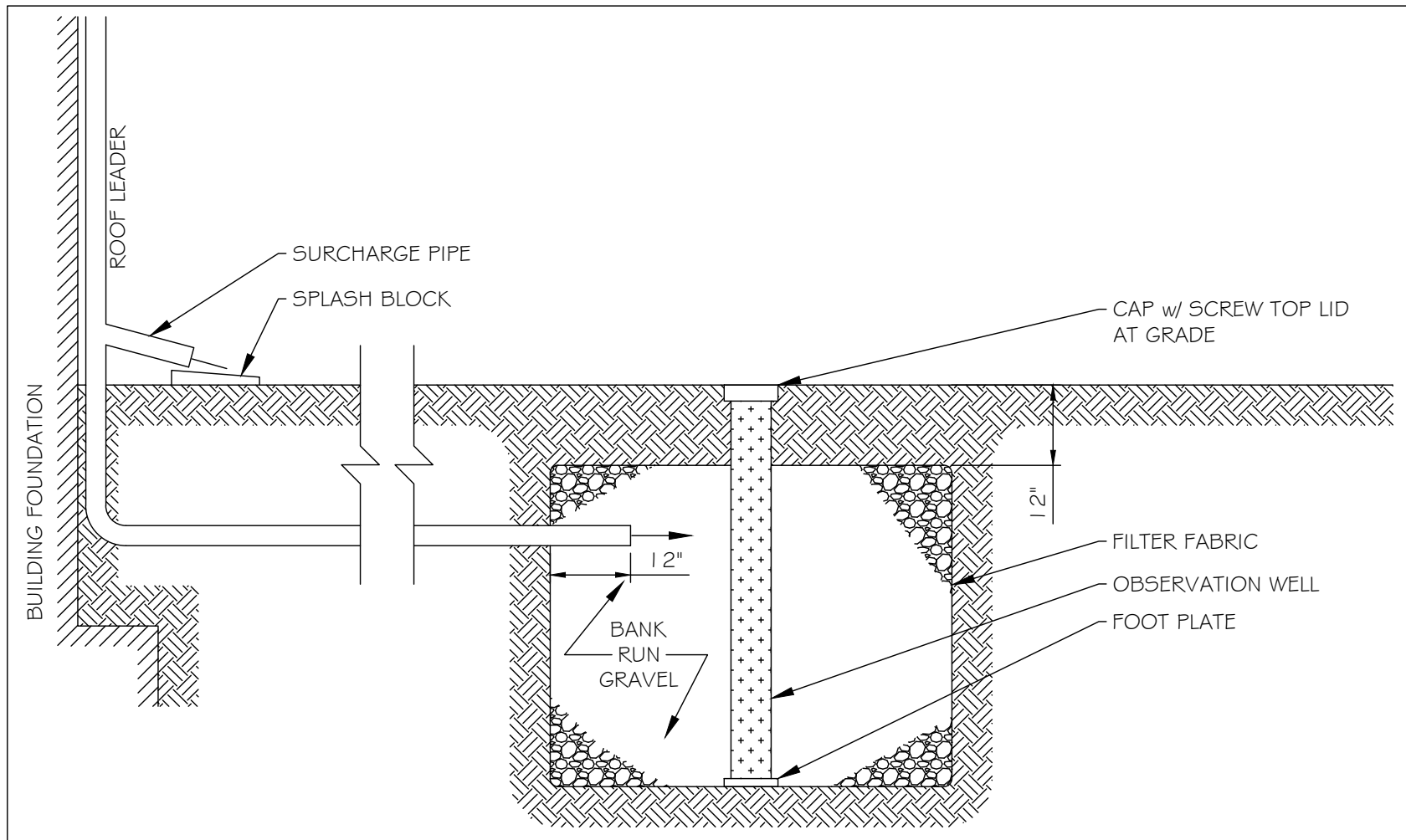
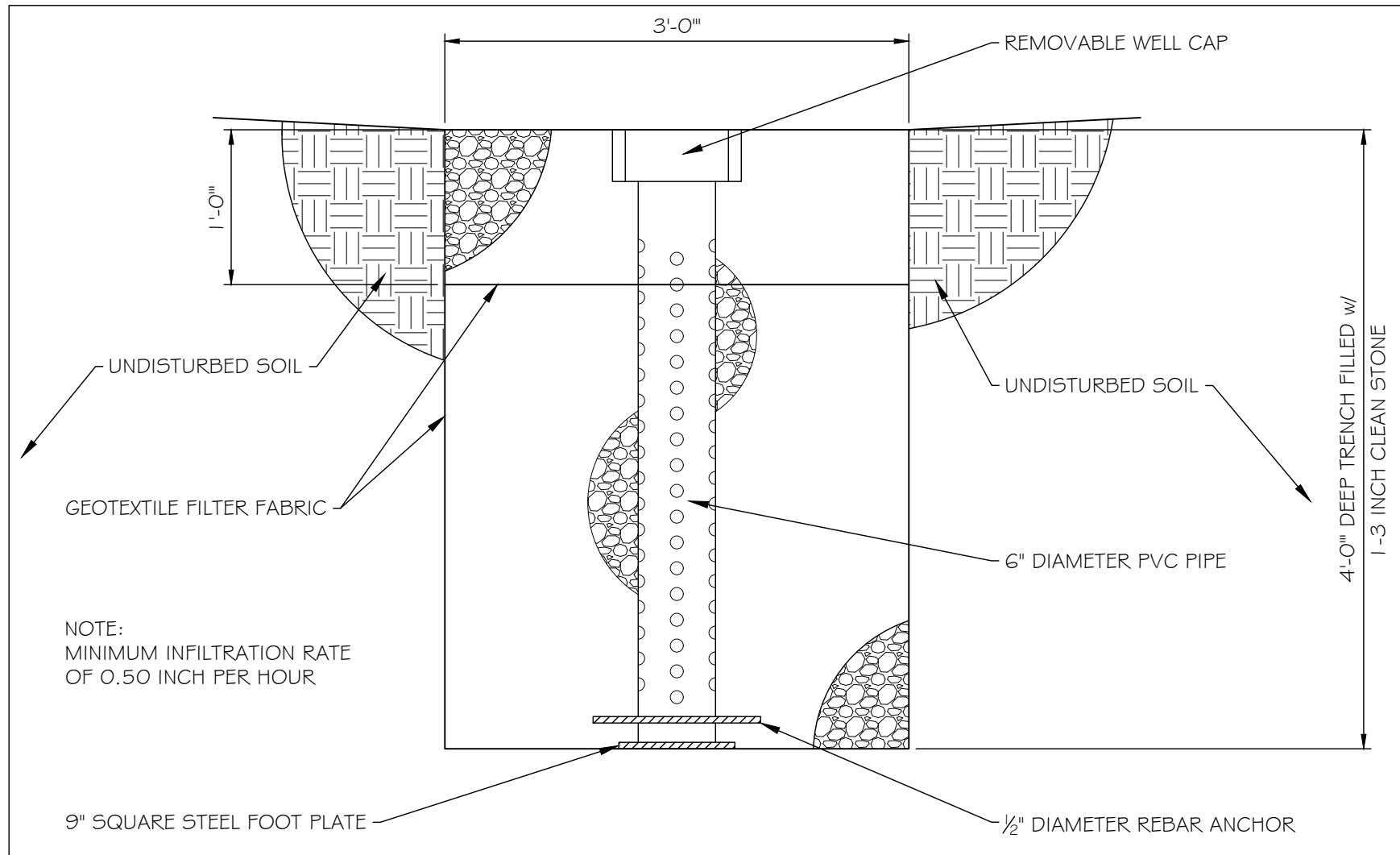
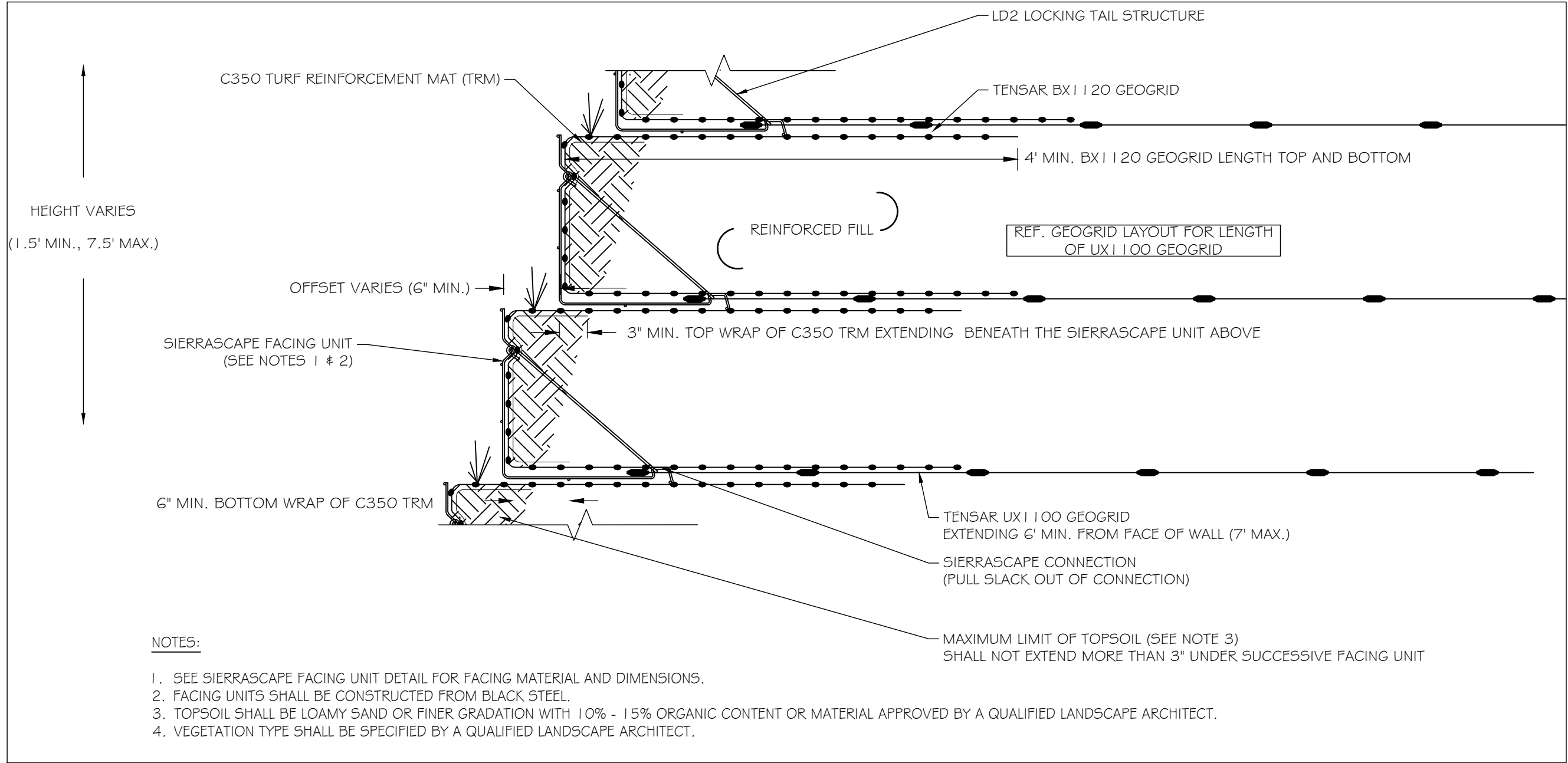
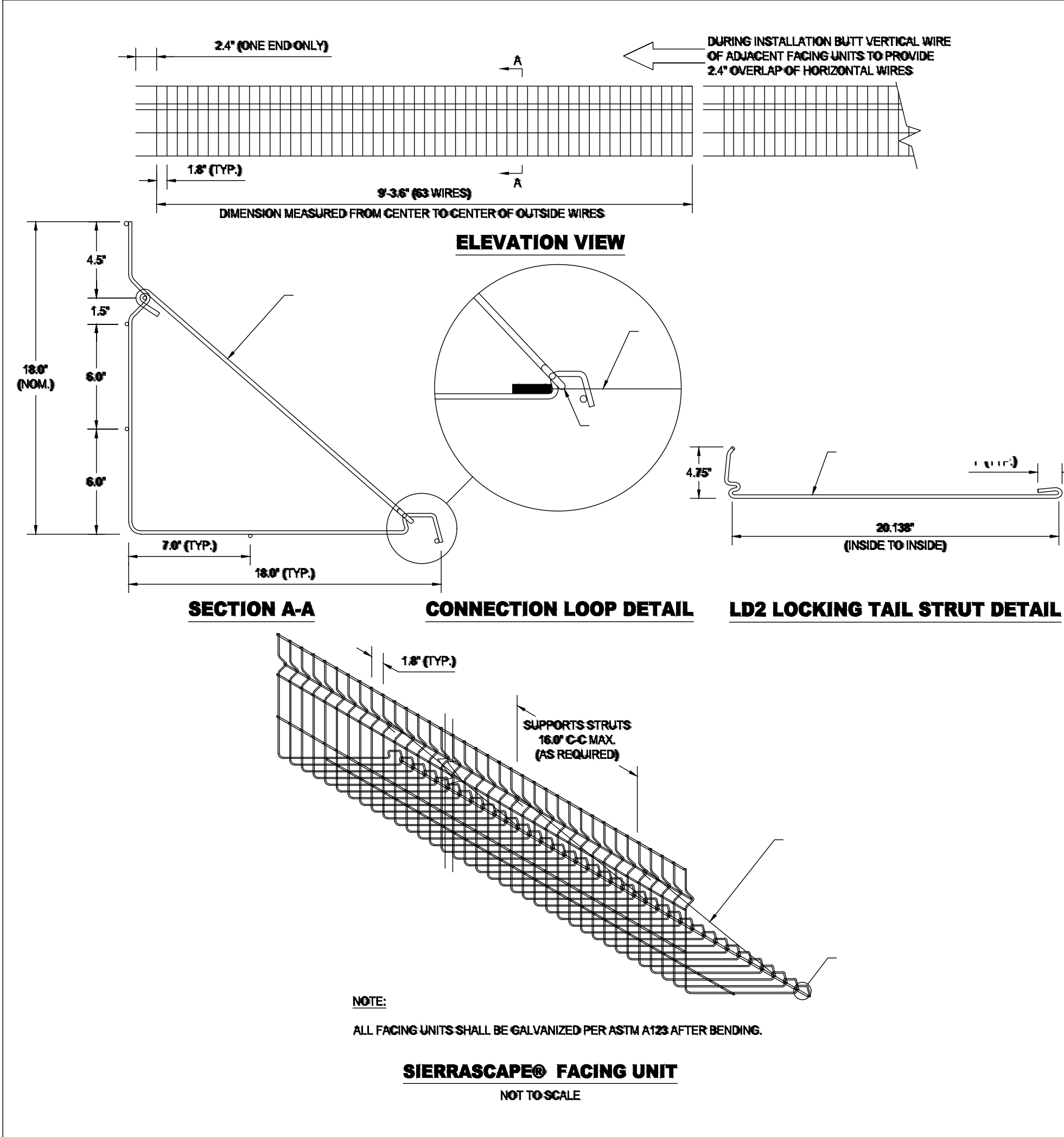
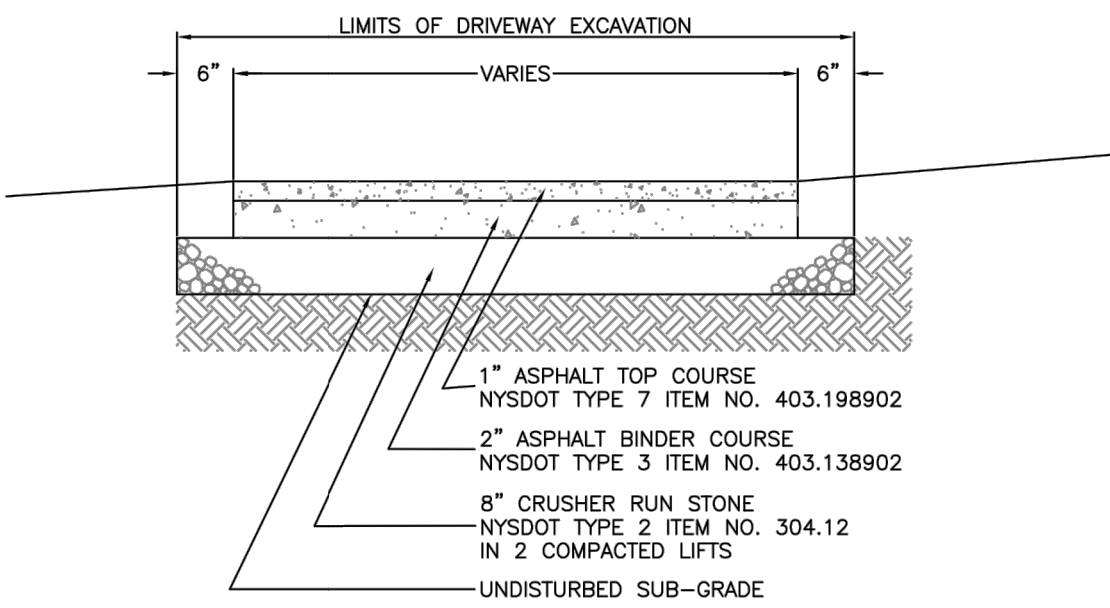
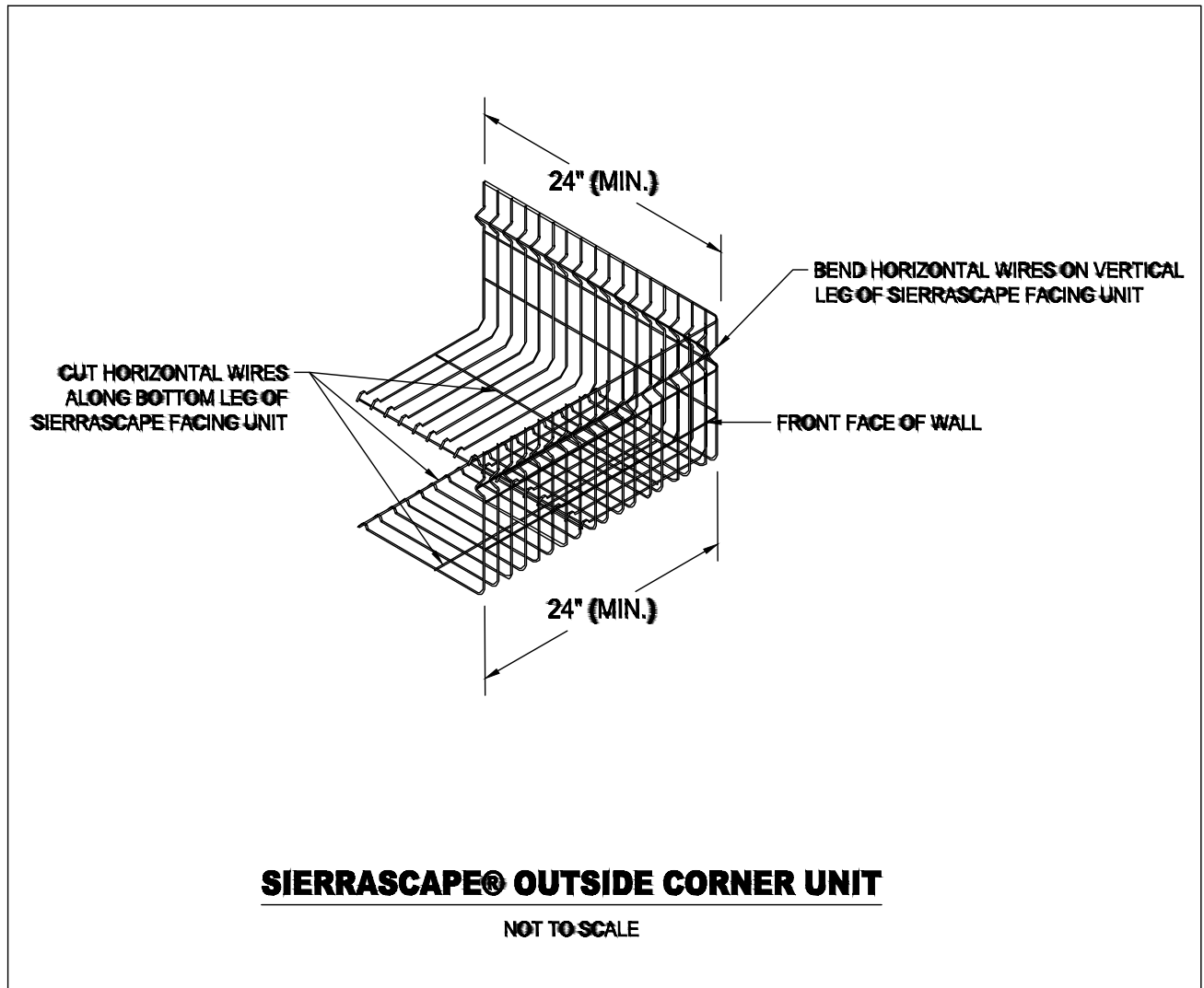


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JIM & COLLEEN SWETMAN
76 MCCORD WOODS DRIVE
FAIRPORT, NEW YORK 14450
SWETMAN SITE PLAN
4015 W. LAKE ROAD
CANANDAIGUA, NEW YORK 14424
PROPOSED SITE PLAN

DRAWING NO.

C-2



CONSTRUCTION ENTRANCE NOTES:

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- INSPECTION - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

CONSTRUCTION ENTRANCE DETAIL

SCALE: N.T.S.

ANTICIPATED CONSTRUCTION SEQUENCE:

- INSTALL PERIMETER SEDIMENT CONTROLS, (I.E. SILT FENCE).
- PROTECT VEGETATION TO REMAIN.
- CLEAR AND REMOVE VEGETATION FROM SITE WHERE NECESSARY
- CONSTRUCT SWALES, DRY WELLS, AND INSTALL DRAINAGE INLETS AND STORM PIPING.
- CONSTRUCT HOUSE STRUCTURE AND RETAINING WALL SYSTEMS
- INSPECT ALL EROSION CONTROL DEVICES DAILY AND REPAIR AS NECESSARY.
- RESTORE AREAS AS DEFINED BY CONTRACT DOCUMENTS.
- REMOVE EROSION CONTROL MEASURES AS AREAS REESTABLISH WITH GROUND COVER.
- IF SITE PREPARATIONS OCCUR BETWEEN SEPTEMBER 1 AND MARCH 31, ADDITIONAL EROSION CONTROLS MUST BE TAKEN INCLUDING REDUCING THE SIZE OF DISTURBED AREAS AND PLACING HEAVY STRAW MULCH WHERE PRACTICAL.

EROSION CONTROL NOTES

- NO FILLING, CONSTRUCTION, OR STORING OF MATERIALS ON SITE WILL BE ALLOWED UNTIL EROSION CONTROL MEASURES ARE IN PLACE AS SHOWN, DESCRIBED AND DETAILED ON THIS SHEET.
- NO PAYMENT REQUESTS WILL BE ACCEPTED UNLESS THE EROSION CONTROL MEASURE REQUIREMENTS STIPULATED ON THIS PLAN HAVE BEEN ADHERED TO.
- EROSION CONTROL MEASURES ARE TO BE TO THE SATISFACTION THE TOWN OF CANANDAIGUA AND THEIR ENGINEER.
- EXISTING UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM FIELD LOCATIONS AND/OR UTILITY COMPANY RECORD PLANS. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL CALL THE UPPO HOTLINE AT 1 (800) 962-7962 FOR STAKROUT OF EXISTING UTILITIES.
- EROSION CONTROL DEVICES ARE TO BE ESTABLISHED PRIOR TO COMMENCING EARTHWORK. EROSION CONTROL DEVICES TO BE MAINTAINED BY THE CONTRACTOR PER THE SPECIFICATIONS UNTIL UPSTREAM GROUND COVER HAS BEEN ESTABLISHED AND REMOVAL IS APPROVED BY THE TOWN OF CANANDAIGUA AND THEIR ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY SILT FENCE THAT HAS BECOME CLOGGED, INOPERABLE OR DAMAGED. SILT FENCE SHALL BE INSPECTED DAILY FOR REPLACEMENT. REPLACEMENT WILL BE AS NECESSARY OR AS DIRECTED BY THE TOWN OF CANANDAIGUA AND THEIR ENGINEER.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO ALLOW SILT RUNOFF ONTO ADJOINING PROPERTIES OR CANANDAIGUA LAKE. THIS MAY INCLUDE THE USE OF INTERCEPTOR SWALES, STRAW WATTLES AND/OR CRUSHED STONE FILTERS. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CLEANING THE ADJACENT STREETS. CUTTERS AND/OR DOWNSTREAM STORM SEWERS ARE NECESSARY OR AS DIRECTED BY THE TOWN OF CANANDAIGUA AND THEIR ENGINEER.
- DISTURBED AREAS ARE TO BE SEEDED UPON COMPLETION OF THE EARTHWORK AND GRADING.
- SLOPES SHALL NOT EXCEED 1' VERTICAL TO 3' HORIZONTAL WITHOUT SLOPE REINFORCEMENT PER SITE PLANS.

FINAL SITE PLAN APPROVAL

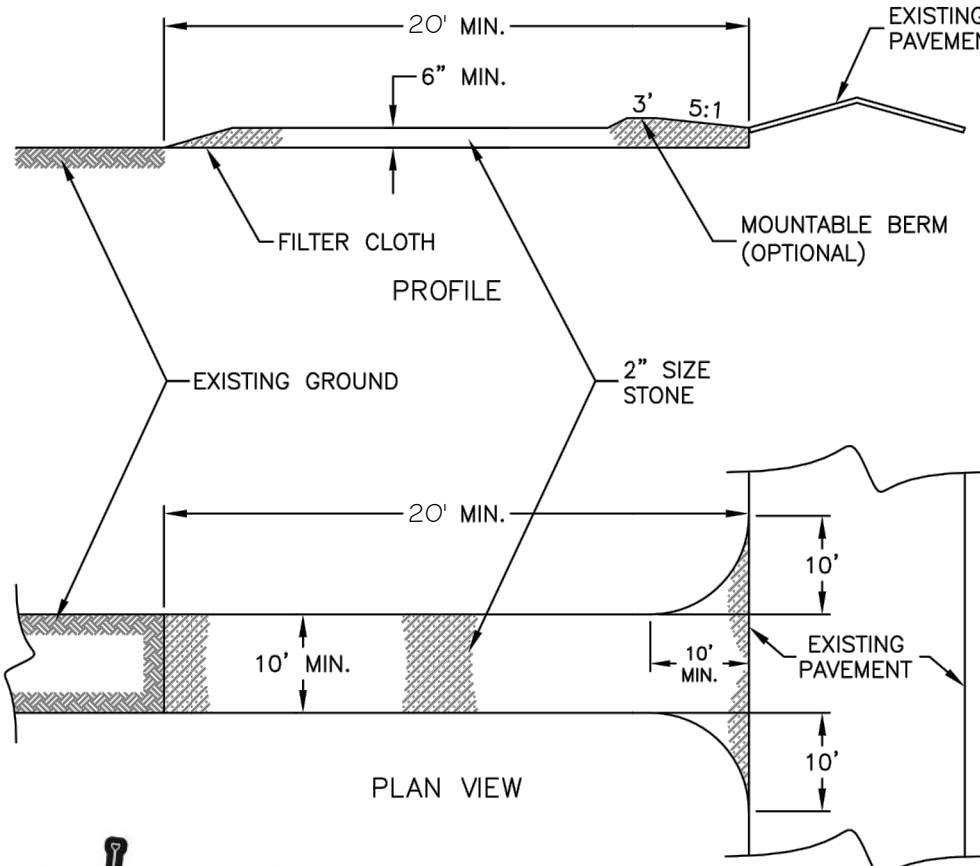
PLANNING BOARD CHAIRMAN _____ DATE _____

TOWN ENGINEER _____ DATE _____

CITY OF CANANDAIGUA _____ DATE _____

DIRECTOR OF PUBLIC WORKS

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REVISIONS:		NO.		DESCRIPTION		DATE
JOB NO.	20105	E	D	C	B	A
DRAWN:	AXT					
DATE:	10-6-20					
CHECKED:	WLM					
DATE:	10-6-20					

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CIVIL / STRUCTURAL ENGINEERING
2024 W. HENRIETTA ROAD, SUITE 2C
ROCHESTER, NY 14623
PH: 585-924-7430

SWETMAN SITE PLAN
4015 W. LAKE ROAD
CANANDAIGUA, NEW YORK 14424

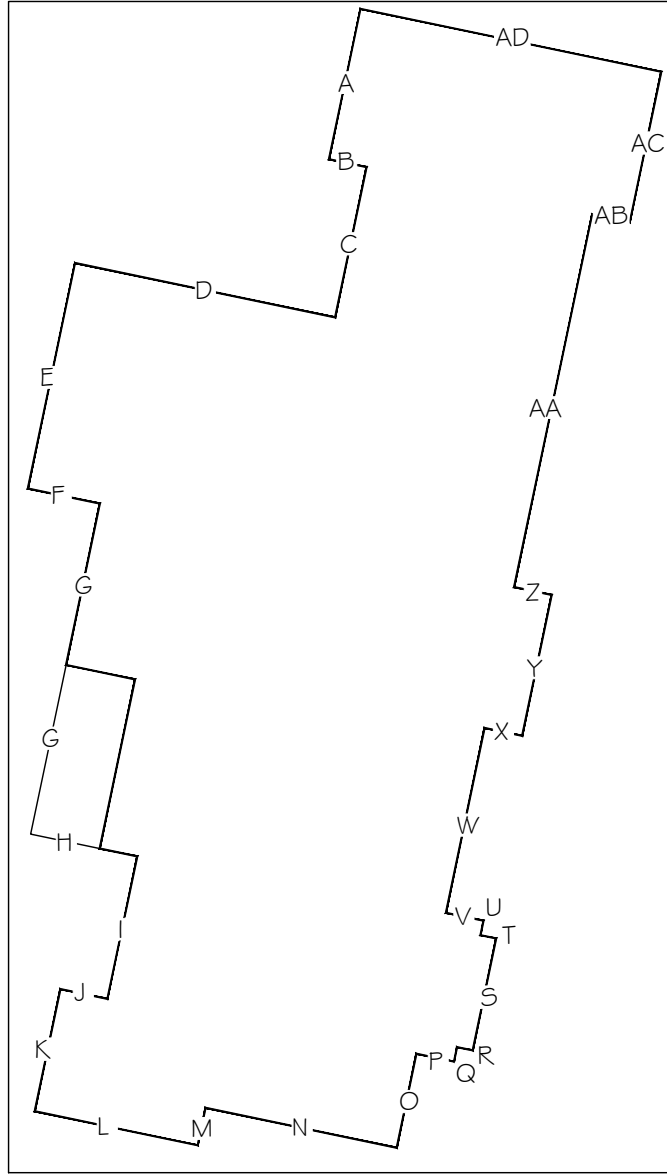
SITE DETAILS

CUSTOMER: JIM & COLLEEN SWETMAN
76 MCCOORD WOODS DRIVE
FAIRPORT NEW YORK 14450

PROJECT: SWETMAN SITE PLAN

DRAWING: SITE DETAILS

DRAWING NO. **C-4**
4 of 5



AVERAGE GRADE							
SIDE	LENGTH (α)	GRADE 1	GRADE 2	GRADE 3	GRADE 4	AVE. GRADE (β)	α x β
A	16	753			753	753.0	12048.0
B	4	753			753	753.0	3012.0
C	16	753			753	753.0	12048.0
D	27.67	753			753	753.0	20833.5
E	24	753			753	753.0	18072.0
F	7.67	753			753	753.0	5775.5
G	35.17	753			753	753.0	26483.0
H	11.33	753			753	753.0	8531.5
I	15.17	753			753	753.0	11423.0
J	5	753			752	752.5	3762.5
K	13	752			749	750.5	9756.5
L	17.33	749			745	747.0	12945.5
M	4	745			745	745.0	2980.0
N	20.33	745	745	744	743	744.3	15130.6
O	10	743			742.33	742.7	7426.7
P	4	742.33			742.33	742.3	2969.3
Q	1.54	742.33			742.33	742.3	1143.2
R	1.67	742.33			742.33	742.3	1239.7
S	11.92	742.33			742.33	742.3	8848.6
T	1.67	742.33			742.33	742.3	1239.7
U	1.54	742.33			742.33	742.3	1143.2
V	4	742.33			742.33	742.3	2969.3
W	19.67	742.33			742.33	742.3	14601.6
X	4	742.33			742.33	742.3	2969.3
Y	15	742.33			742.33	742.3	11135.0
Z	4	742.33			742.33	742.3	2969.3
AA	39.67	742.33			742.33	742.3	29448.2
AB	4	742.33			742	742.2	2968.7
AC	16	742			745	743.5	11896.0
AD	32	745			753	749.0	23968.0
TOTAL	387.35						289739.4
AVERAGE GRADE =		289739.4		387.4 =		748.0	
							748.0041
TOP OF ROOF (FT)		773					
BUILDING HEIGHT (FT)		25.00					

LOT SIZE (SF)	43651.95	NOTE: NOT INCLUDING EASEMENT ON WEST SIDE (ONNALINDA ACCESS) AND ROW FOR WEST LAKE ROAD															
LOT SIZE (ACRES)	1.002	NOTE: PER CORRESPONDENCE WITH ERIC COOPER 8-27-20, NOT INCLUDING LOT AREA WITHIN ROW / EASEMENTS FOR WEST LAKE ROAD / ONNALINDA DRIVE															
BUILDING COVERAGE (SF)	6547.8	NOTE: 15% ACCORDING TO ZONING SCHEDULE FOR RLD LOT OF THIS SIZE															
EXISTING BUILDING COVERAGE (SF)	575.5	1.318%															
	SHED (SF)	102.95	0.236%														
	STRUCTURE (SF)	472.55	1.083%														
EXISTING LOT COVERAGE EXCLUDING EXISTING STRUCTURES (SF)	2090.9																
	RETAINING WALL (SF)	425.74	0.975%														
	PARKING AREA (SF)	428.38	0.981%														
	WALKWAY / PATIO (SF)	1236.73	2.833%														
PROPOSED DEVELOPMENT (SF)	10061.84																
	DRIVEWAY (SF)	1713.56	3.926%	NOTE: NOT INCLUDING ROOF OVERHANG OVERLAP; INCLUDES TRENCH DRAINS IN DRIVEWAY													
	PATH TO FRONT DOOR (SF)	328.04	0.751%	NOTE: NOT INCLUDING ROOF OVERHANG OVERLAP													
	HOUSE & DECK (SF)	5708.65	13.078%	NOTE: INCLUDES BACK DECKS AND STAIRS LEADING DOWN TO SITE													
	ROOF OVERHANG (SF)	459.24	1.052%	NOTE: INCLUDES EVERYTHING PAST BUILDING FOOTPRINT													
	WALKING PATH - IMPERMEABLE (SF)	1391.87	3.189%	NOTE: NEED TO MANUALLY ADJUST VALUE IN FORMULA													
	LOWER PATIO AREA (SF)	250	0.573%	NOTE: SITUATED BETWEEN WALKING PATH LANDING AT WEST LAKE ROAD AND INTESECTION OF STAIRS WITH UPPER WALKING PATH													
	STAIRS (SF)	131.01	0.300%	NOTE: NOT INCLUDING DECK STAIRS (STAIRS BETWEEN WALKING PATH LANDING BY SCREENED PORCH) & ROOF OVERHANG OVERLAP													
	RETAINING WALL (SF)	30	0.069%	NOTE: ONLY INCLUDING ENTRY AREA FROM WEST LAKE ROAD													
	GRAVEL PAD FOR HVAC (SF)	49.47	0.113%	NOTE: NOT INCLUDING AREA WITHIN ROOF OVERHANG													
PROPOSED BUILDING COVERAGE (SF)	6284.15	14.396%															
PROPOSED BUILDING COVERAGE (ACRE)	0.144																
PROPOSED LOT COVERAGE (SF)	12728.19	29.158%															
ALLOWABLE BUILDING COVERAGE (%)	15%	NOTE: 15% ACCORDING TO ZONING SCHEDULE FOR RLD LOT OF THIS SIZE															
ALLOWABLE LOT COVERAGE (%)	25%	NOTE: 25% ACCORDING TO ZONING SCHEDULE FOR RLD LOT OF THIS SIZE															
REDUCED ALLOWABLE LOT COVERAGE (%)	22.5%	NOTE: ASSUMING 50% OF DISTURBANCE WILL BE LOCATED IN STEEP SLOPE PROTECTION AREA															

AVERAGE GRADE / BUILDING HEIGHT CALCS

FINAL SITE PLAN APPROVAL

PLANNING BOARD CHAIRMAN _____ DATE _____

TOWN ENGINEER DATE

CITY OF CANANDAIGUA DATE
 DIRECTOR OF PUBLIC WORKS

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NOT FOR
CONSTRUCTION



JIM & COLLEEN SWETMAN
76 MCCOY RD WOODS DRIVE
FAIRPORT, NEW YORK 14450

SWETMAN SITE PLAN

4015 W. LAKE ROAD
CANANDAIGUA, NEW YORK 14424

SITE DESIGN CALCS

CLIENT:

PROJECT:

DRAWING:

DRAWING NO.

C-5

5 of 5

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DRAWN:	AXT	E	
DATE:	10-6-20	D	
CHECKED:	WLM	C	
DATE:	10-6-20	B	
		A	
		NO.	DESCRIPTION
			DATE

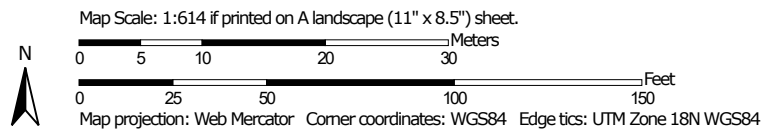
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2205, VIOLATIONS OF
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APPENDIX B
SITE SOILS MAP – USDA NRCS

Soil Map—Ontario County, New York (SWETMAN SITE PLAN)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

7/14/2020
Page 1 of 3

Soil Map—Ontario County, New York
(SWETMAN SITE PLAN)

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 1:12,000.

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: Ontario County, New York
Survey Area Data: Version 18, Jun 11, 2020

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

Date(s) aerial images were photographed: Jul 9, 2019—Jul 15, 2019

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
101C	Honeoye loam, 8 to 15 percent slopes	0.2	13.1%
101E	Honeoye loam, 25 to 35 percent slopes	1.2	86.9%
Totals for Area of Interest		1.3	100.0%

Ontario County, New York

101C—Honeoye loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w3nr

Elevation: 440 to 1,400 feet

Mean annual precipitation: 31 to 57 inches

Mean annual air temperature: 41 to 50 degrees F

Frost-free period: 100 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Honeoye and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Honeoye

Setting

Landform: Drumlins, till plains, ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam

E - 8 to 10 inches: silt loam

Bt/E - 10 to 14 inches: loam

Bt1 - 14 to 23 inches: loam

Bt2 - 23 to 29 inches: gravelly loam

C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Lima

Percent of map unit: 5 percent

Landform: Till plains, drumlins, ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Lansing

Percent of map unit: 4 percent

Landform: Till plains, drumlins, hills

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Kendaia

Percent of map unit: 4 percent

Landform: Drumlins, ridges, till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Wassaic

Percent of map unit: 2 percent

Landform: Benches, ridges, till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Data Source Information

Soil Survey Area: Ontario County, New York

Survey Area Data: Version 18, Jun 11, 2020

Ontario County, New York

101E—Honeoye loam, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2w3nv

Elevation: 540 to 1,400 feet

Mean annual precipitation: 31 to 57 inches

Mean annual air temperature: 41 to 50 degrees F

Frost-free period: 100 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Honeoye and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Honeoye

Setting

Landform: Drumlins, till plains, ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam

E - 8 to 10 inches: silt loam

Bt/E - 10 to 14 inches: loam

Bt1 - 14 to 23 inches: loam

Bt2 - 23 to 29 inches: gravelly loam

C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 25 to 35 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Lima

Percent of map unit: 5 percent

Landform: Drumlins, ridges, till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Lansing

Percent of map unit: 4 percent

Landform: Drumlins, hills, till plains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Kendaia

Percent of map unit: 4 percent

Landform: Till plains, drumlins, ridges

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Wassaic

Percent of map unit: 2 percent

Landform: Till plains, benches, ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

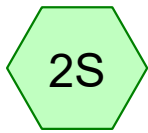
Data Source Information

Soil Survey Area: Ontario County, New York

Survey Area Data: Version 18, Jun 11, 2020

APPENDIX C

HYDROCAD ANALYSIS



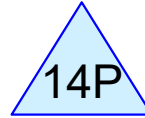
PROPOSED SITE (TO
CENTRAL DRYWELL)



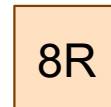
CENTRAL DRYWELL



PROPOSED SITE (TO
ROADSIDE DRYWELL)



ROADSIDE
DRYWELLS



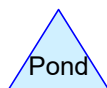
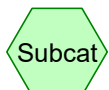
PROPOSED OUTFALL



EXISTING SITE



EXISTING OUTFALL



Routing Diagram for SWETMAN SITE PLAN WITHOUT OFFSITE - AXT - 10.6.20
Prepared by {enter your company name here}, Printed 10/6/2020
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SWETMAN SITE PLAN WITHOUT OFFSITE - AXT - 10.6.20

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.577	61	>75% Grass cover, Good, HSG B (10S)
0.071	98	Paved parking, HSG B (2S, 10S)
0.011	98	Unconnected pavement, HSG B (2S, 10S)
0.142	98	Unconnected roofs, HSG B (2S)
0.802	65	Woods/grass comb., Fair, HSG B (6S)
1.604	68	TOTAL AREA

SWETMAN SITE PLAN WITHOUT OFFSITE - AXT - 10.6.20

Prepared by {enter your company name here}

Printed 10/6/2020

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.604	HSG B	2S, 6S, 10S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
1.604		TOTAL AREA

Summary for Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

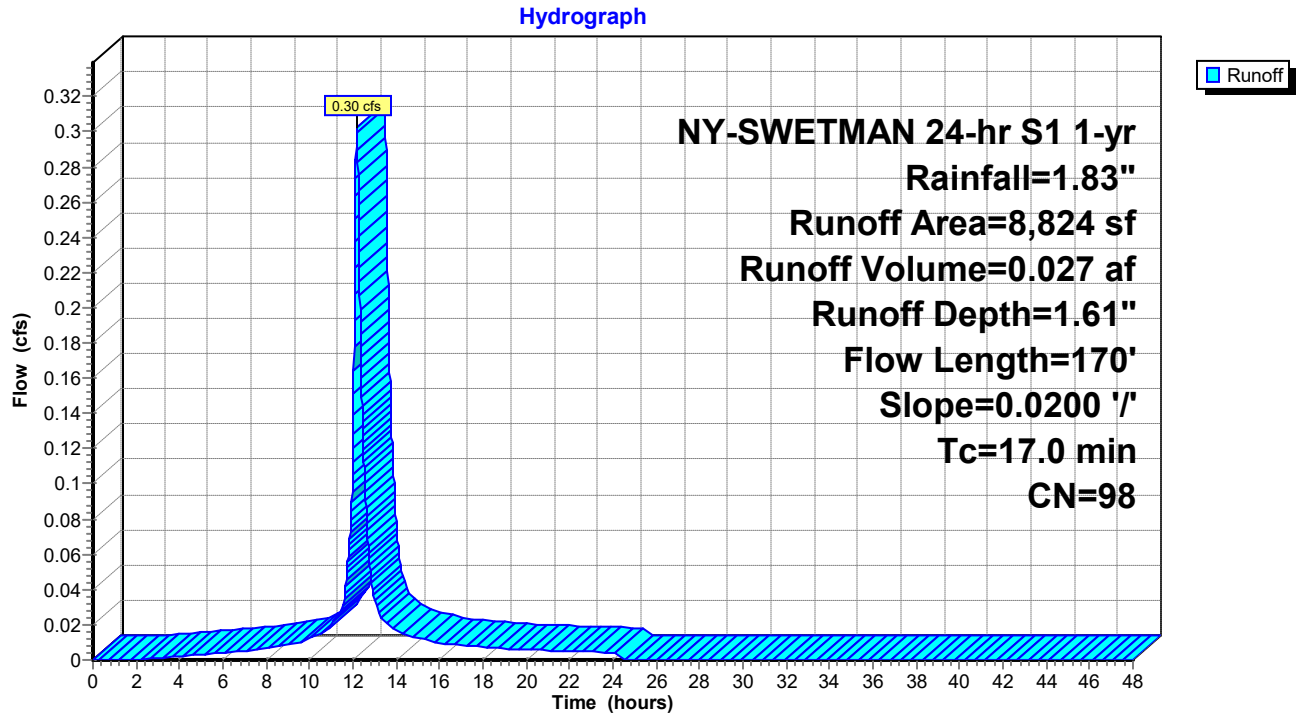
Runoff = 0.30 cfs @ 12.18 hrs, Volume= 0.027 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 1-yr Rainfall=1.83"

Area (sf)	CN	Description
1,714	98	Paved parking, HSG B
5,709	98	Unconnected roofs, HSG B
459	98	Unconnected roofs, HSG B
561	98	Paved parking, HSG B
250	98	Unconnected pavement, HSG B
131	98	Unconnected pavement, HSG B
8,824	98	Weighted Average
8,824		100.00% Impervious Area
6,549		74.22% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	20	0.0200	0.81		Sheet Flow, ACROSS DRIVEWAY
					Smooth surfaces n= 0.011 P2= 2.13"
16.6	150	0.0200	0.15		Sheet Flow, INITIAL SHEET FLOW
					Grass: Short n= 0.150 P2= 2.13"
17.0	170	Total			

Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)



Summary for Subcatchment 6S: EXISTING SITE

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE) TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

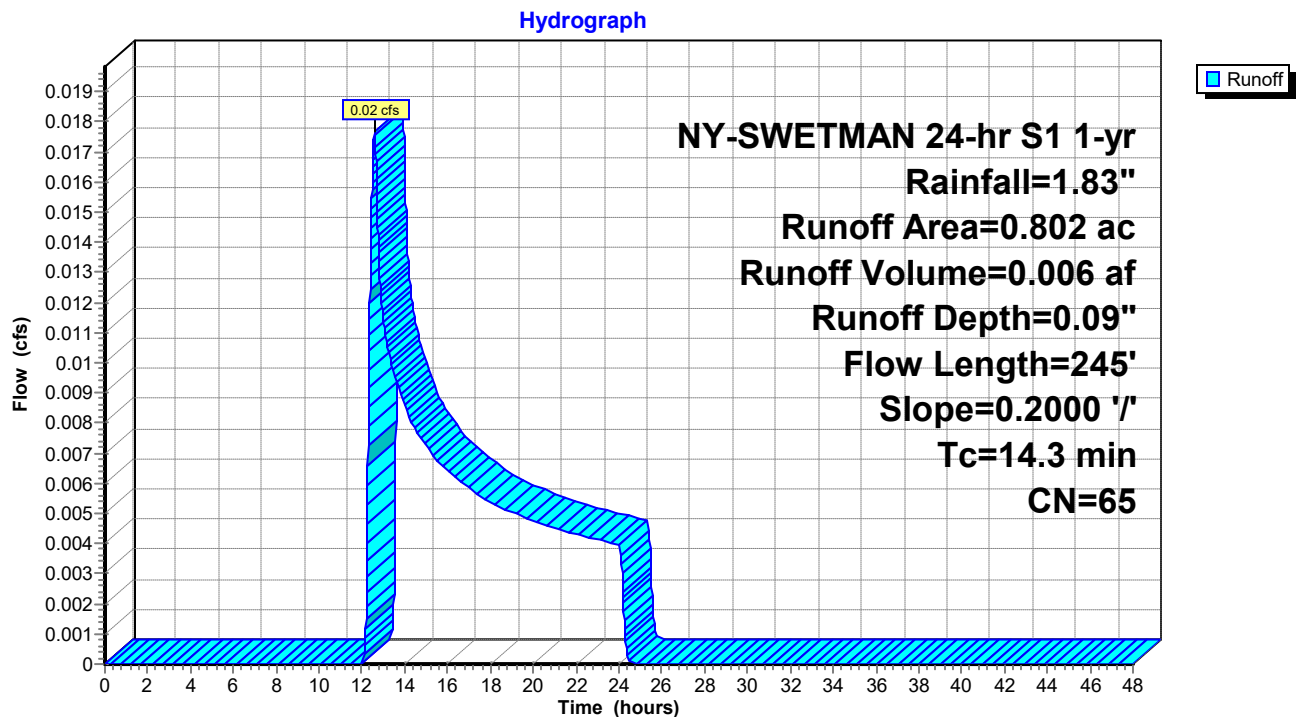
Runoff = 0.02 cfs @ 12.59 hrs, Volume= 0.006 af, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 1-yr Rainfall=1.83"

Area (ac)	CN	Description
0.802	65	Woods/grass comb., Fair, HSG B
0.802		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	245	0.2000	0.29		Sheet Flow, INITIAL SHEET FLOW Grass: Dense n= 0.240 P2= 2.13"

Subcatchment 6S: EXISTING SITE



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 1-yr Rainfall=1.83"

Prepared by {enter your company name here}

Printed 10/6/2020

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Page 7

Summary for Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)

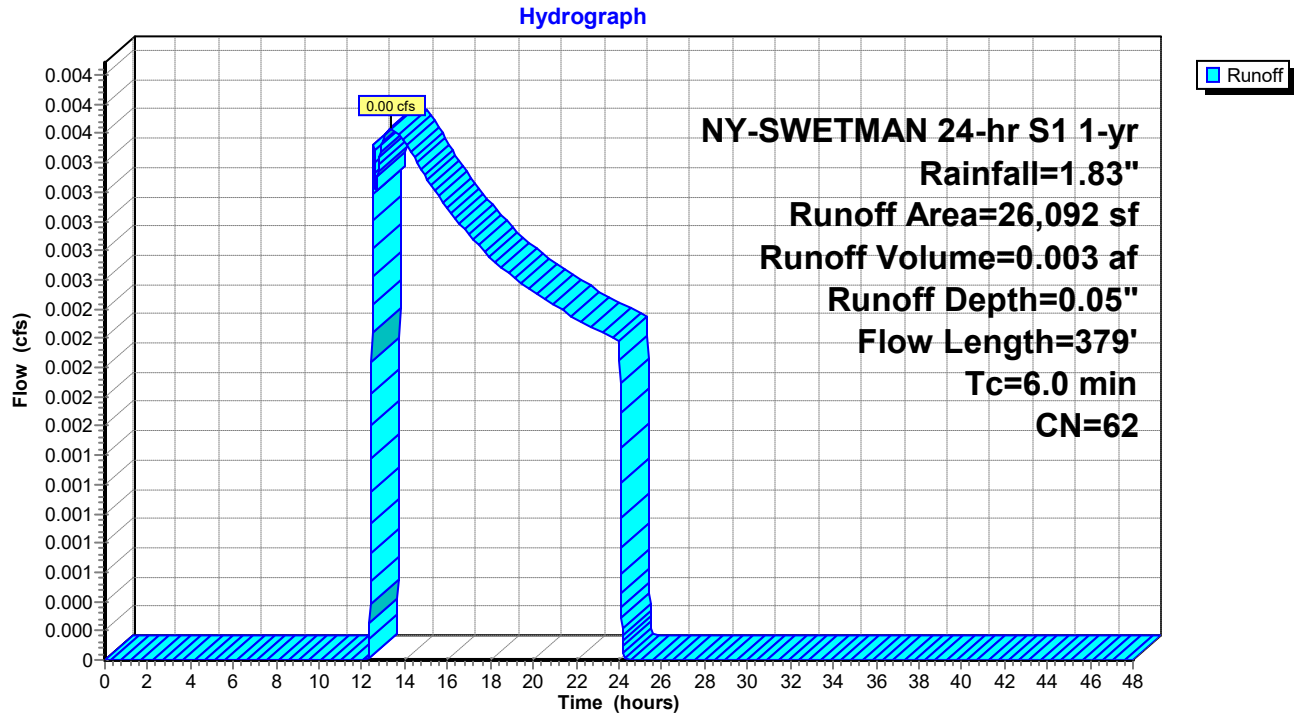
INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

Runoff = 0.00 cfs @ 13.34 hrs, Volume= 0.003 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 1-yr Rainfall=1.83"

Area (sf)	CN	Description
25,150	61	>75% Grass cover, Good, HSG B
30	98	Unconnected pavement, HSG B
49	98	Unconnected pavement, HSG B
32	98	Unconnected pavement, HSG B
831	98	Paved parking, HSG B
26,092	62	Weighted Average
25,150		96.39% Pervious Area
942		3.61% Impervious Area
111		11.78% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	40	0.1500	0.26		Sheet Flow, INITIAL SHEET FLOW Grass: Short n= 0.150 P2= 2.13"
0.6	225	0.2000	6.71		Shallow Concentrated Flow, SOUTHWEST SWALE Grassed Waterway Kv= 15.0 fps
0.1	44	0.2000	10.06	3.51	Pipe Channel, FIRST PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
0.1	20	0.1000	4.74		Shallow Concentrated Flow, WATERWAY TO CATCHBASIN Grassed Waterway Kv= 15.0 fps
0.1	50	0.2000	10.06	3.51	Pipe Channel, SECOND PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
3.5	379	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)

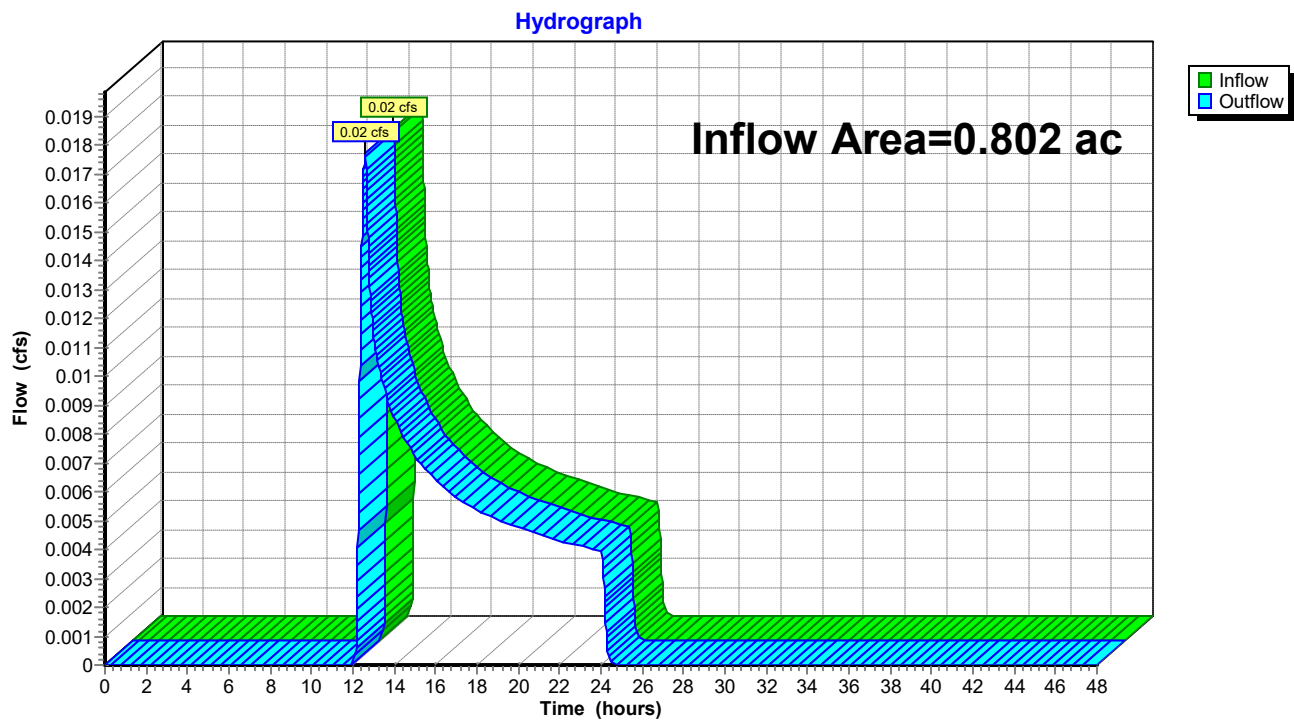
Summary for Reach 7R: EXISTING OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND EXISTING SITE.

Inflow Area = 0.802 ac, 0.00% Impervious, Inflow Depth = 0.09" for 1-yr event
Inflow = 0.02 cfs @ 12.59 hrs, Volume= 0.006 af
Outflow = 0.02 cfs @ 12.59 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 7R: EXISTING OUTFALL



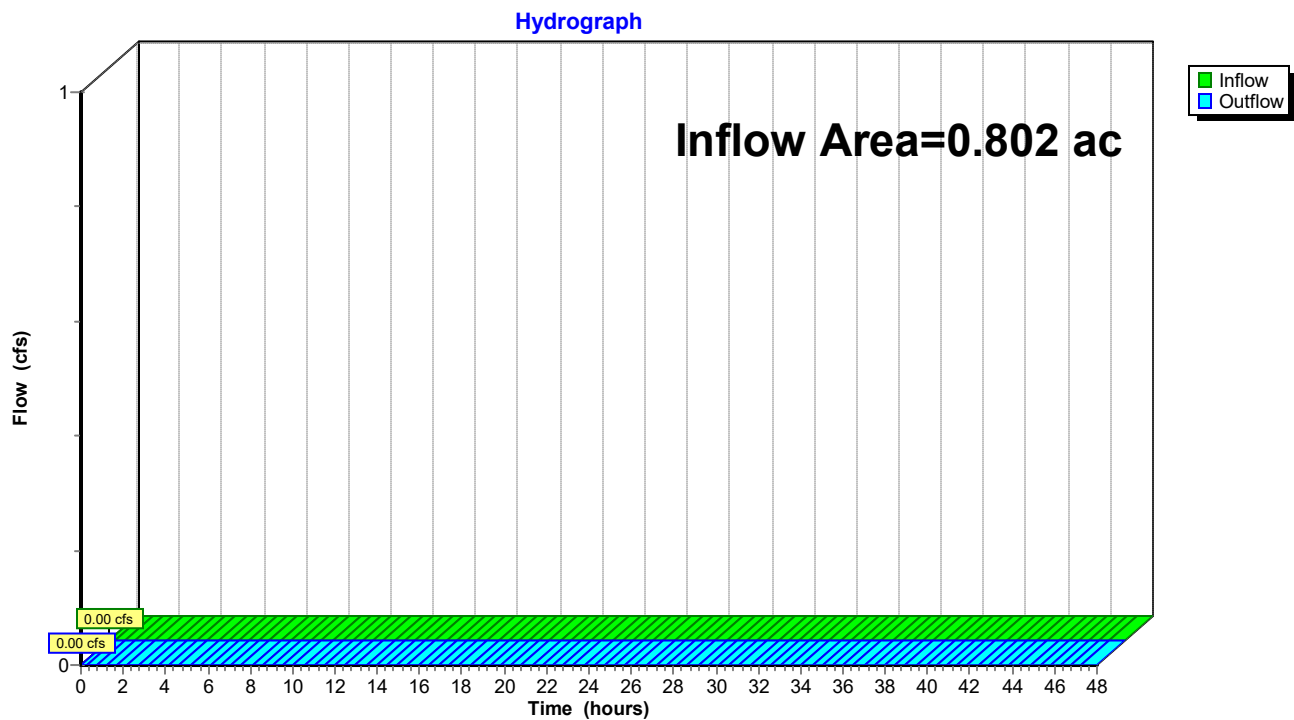
Summary for Reach 8R: PROPOSED OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND PROPOSED SITE.

Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 8R: PROPOSED OUTFALL



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 1-yr Rainfall=1.83"

Prepared by {enter your company name here}

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Summary for Pond 9P: CENTRAL DRYWELL

SHALL CONTAIN 1-YEAR STORM EVENT.

Inflow Area = 0.203 ac, 100.00% Impervious, Inflow Depth = 1.61" for 1-yr event
 Inflow = 0.30 cfs @ 12.18 hrs, Volume= 0.027 af
 Outflow = 0.01 cfs @ 19.52 hrs, Volume= 0.019 af, Atten= 98%, Lag= 440.2 min
 Discarded = 0.01 cfs @ 19.52 hrs, Volume= 0.019 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 728.61' @ 19.52 hrs Surf.Area= 320 sf Storage= 835 cf
 Flood Elev= 731.00' Surf.Area= 320 sf Storage= 1,600 cf

Plug-Flow detention time= 926.4 min calculated for 0.019 af (70% of inflow)
 Center-of-Mass det. time= 824.5 min (1,606.5 - 782.1)

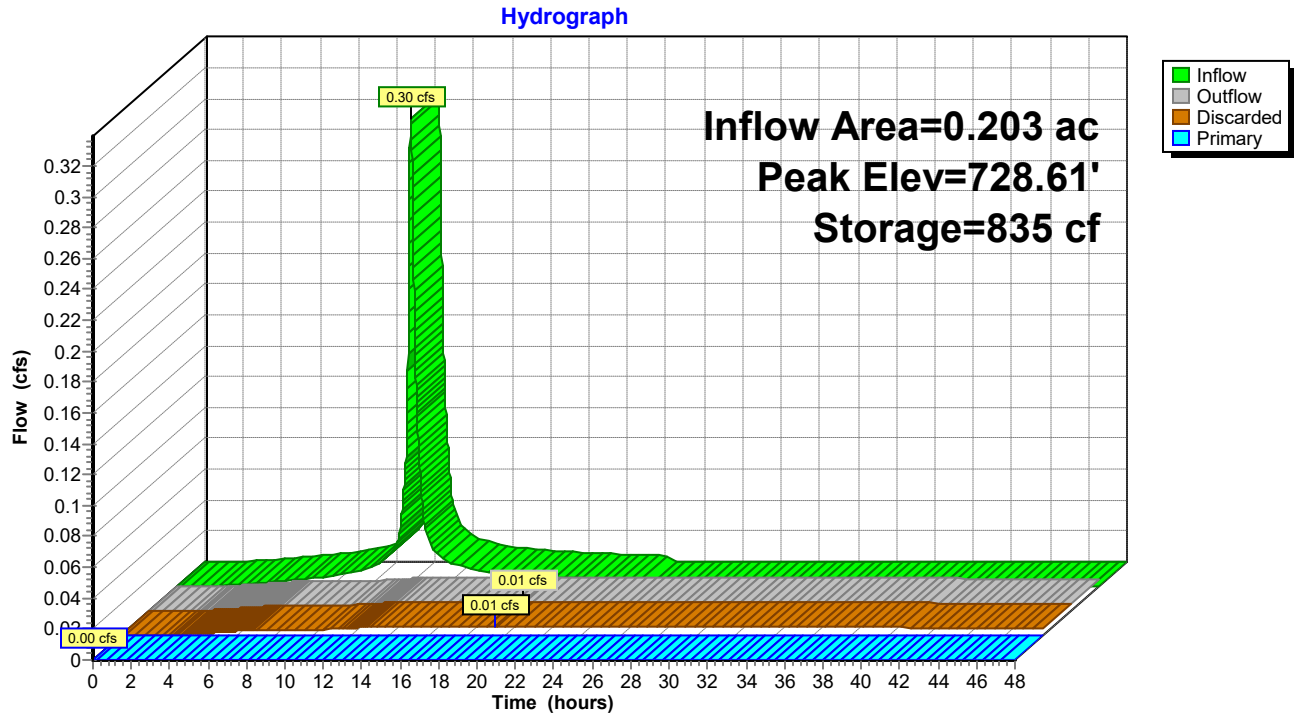
Volume	Invert	Avail.Storage	Storage Description
#1	726.00'	1,600 cf	12.00'W x 26.67'L x 5.00'H CENTRAL DRYWELL

Device	Routing	Invert	Outlet Devices
#1	Primary	730.50'	6.0" Round PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE) L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 730.50' / 727.50' S= 0.1875 ' S= 0.1875 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Discarded	726.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 722.00'

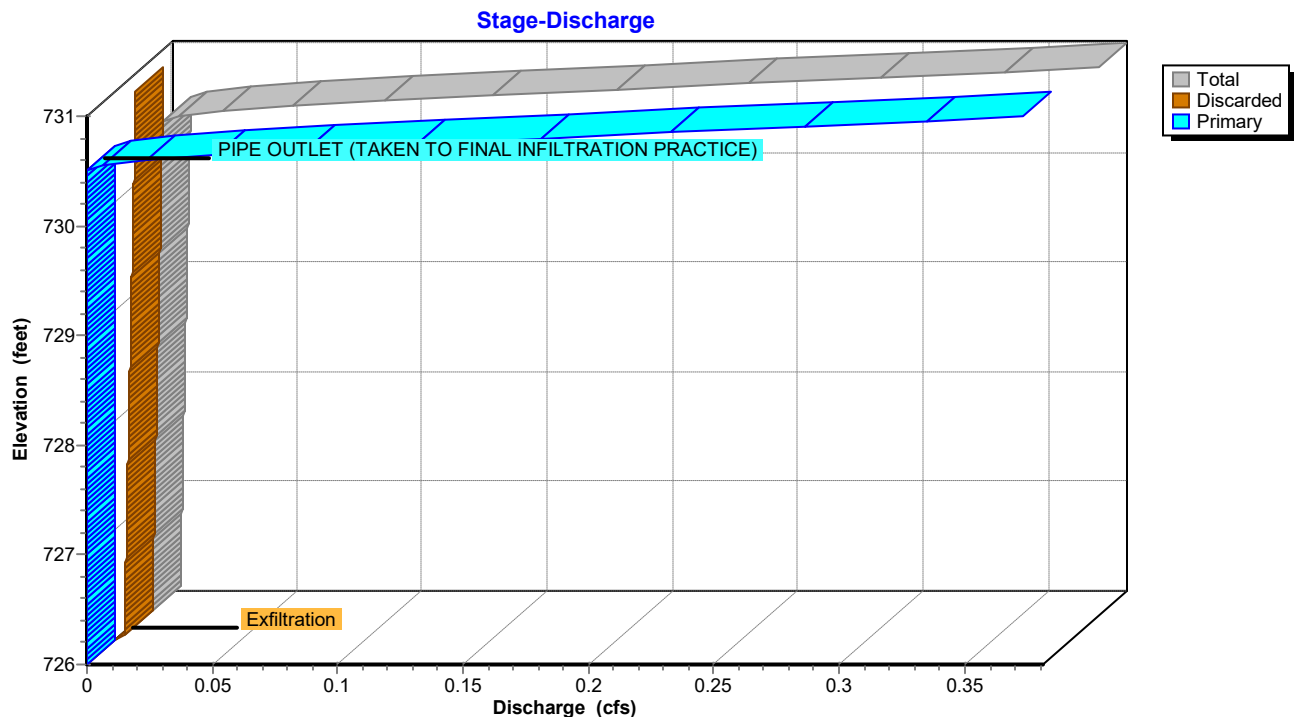
Discarded OutFlow Max=0.01 cfs @ 19.52 hrs HW=728.61' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=726.00' (Free Discharge)
 ↑ **1=PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE)** (Controls 0.00 cfs)

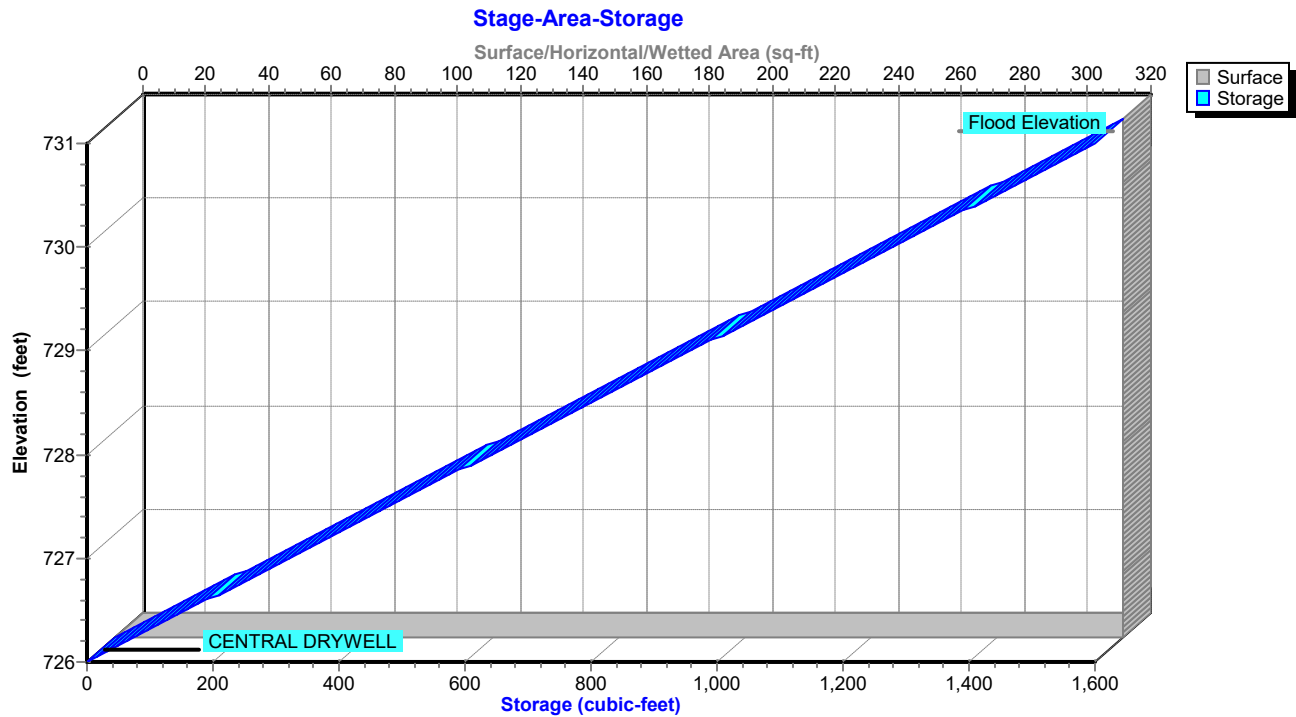
Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



Summary for Pond 14P: ROADSIDE DRYWELLS

SHALL CONTAIN 1-YEAR STORM EVENT.

Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 0.04" for 1-yr event
 Inflow = 0.00 cfs @ 13.34 hrs, Volume= 0.003 af
 Outflow = 0.00 cfs @ 24.08 hrs, Volume= 0.003 af, Atten= 69%, Lag= 644.3 min
 Discarded = 0.00 cfs @ 24.08 hrs, Volume= 0.003 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 704.44' @ 24.08 hrs Surf.Area= 80 sf Storage= 75 cf
 Flood Elev= 708.50' Surf.Area= 80 sf Storage= 400 cf

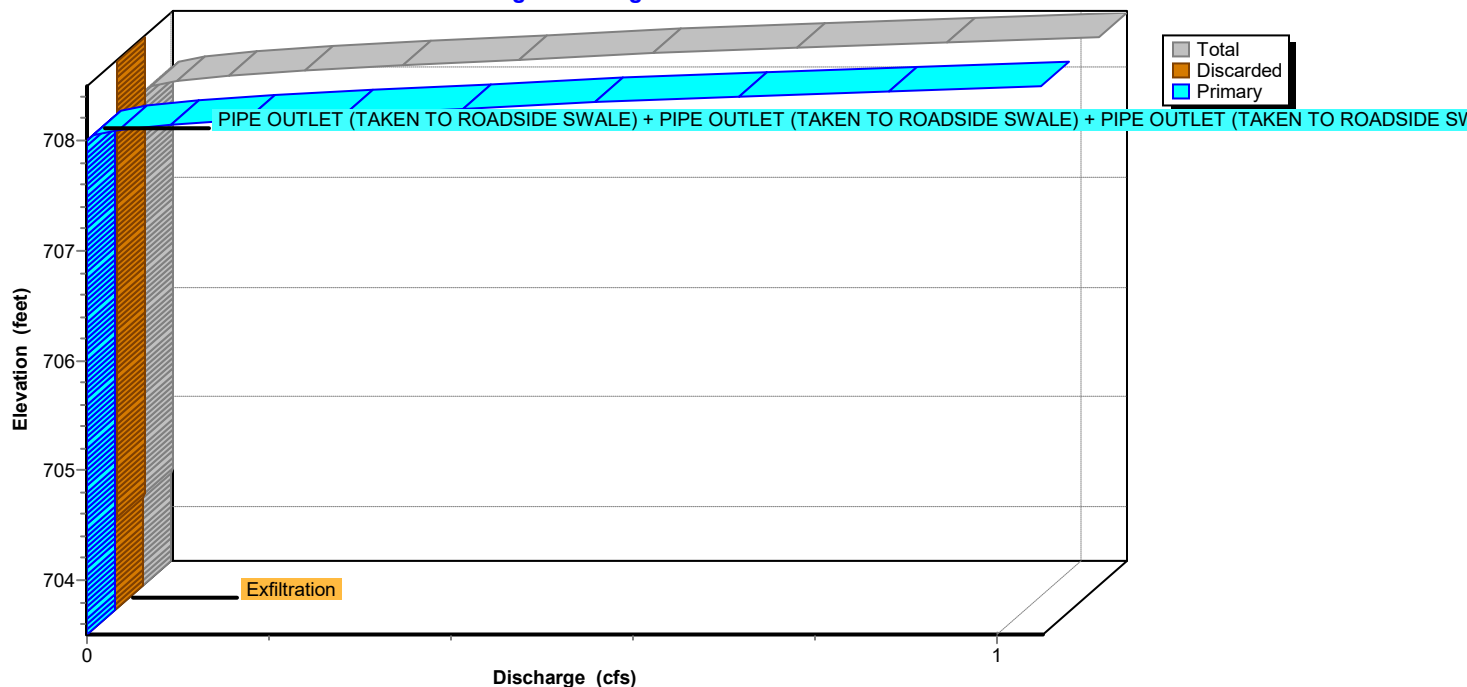
Plug-Flow detention time= 637.5 min calculated for 0.003 af (100% of inflow)
 Center-of-Mass det. time= 637.3 min (1,701.5 - 1,064.2)

Volume	Invert	Avail.Storage	Storage Description
#1	703.50'	400 cf	8.00'W x 10.00'L x 5.00'H ROADSIDE DRYWELLS

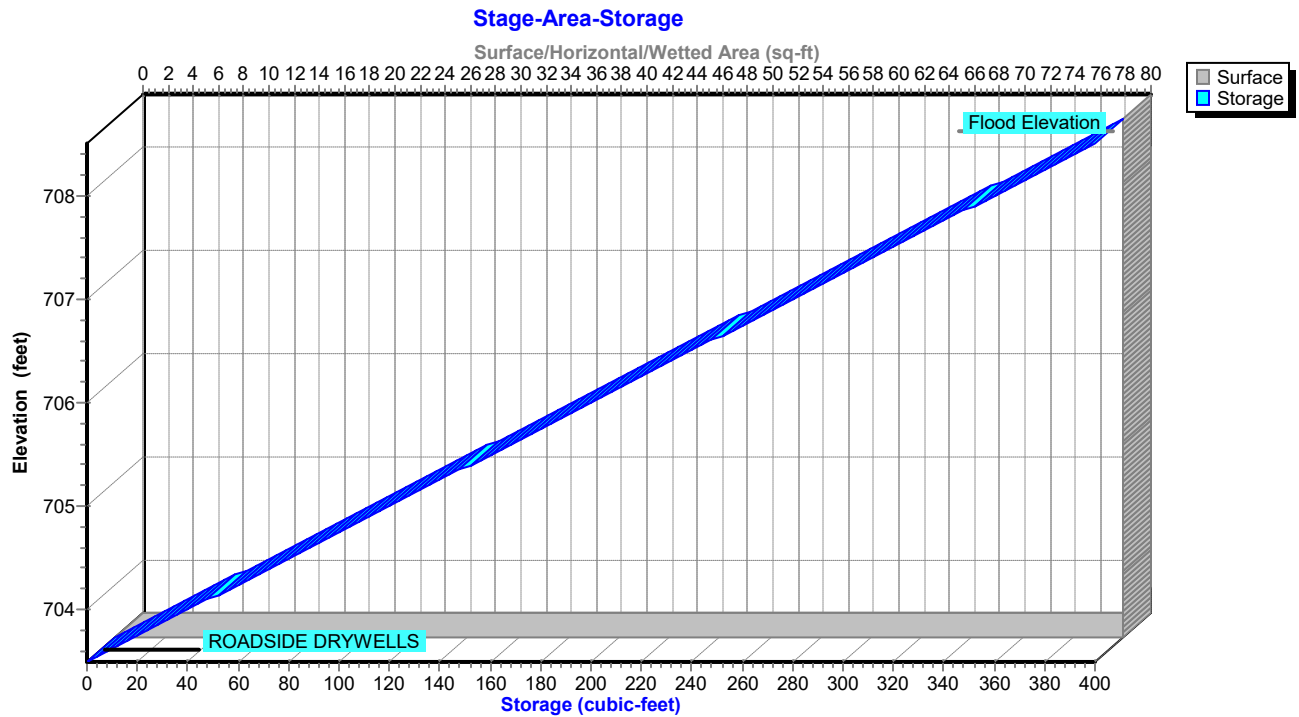
Device	Routing	Invert	Outlet Devices
#1	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#3	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#4	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#5	Discarded	703.50'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 699.00'

Discarded OutFlow Max=0.00 cfs @ 24.08 hrs HW=704.44' (Free Discharge)
 5=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=703.50' (Free Discharge)
 1=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Controls 0.00 cfs)
 2=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Controls 0.00 cfs)
 3=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Controls 0.00 cfs)
 4=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Controls 0.00 cfs)



Pond 14P: ROADSIDE DRYWELLS



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

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Summary for Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

Runoff = 0.58 cfs @ 12.18 hrs, Volume= 0.049 af, Depth= 2.92"

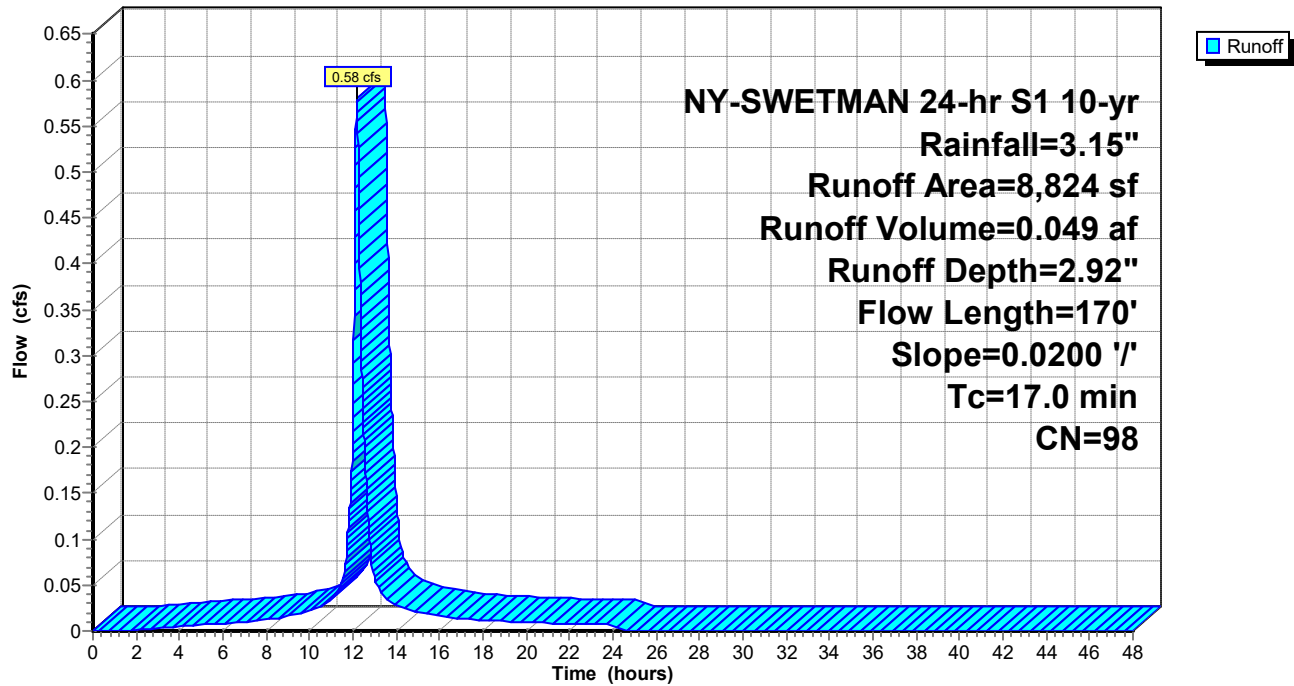
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

Area (sf)	CN	Description
1,714	98	Paved parking, HSG B
5,709	98	Unconnected roofs, HSG B
459	98	Unconnected roofs, HSG B
561	98	Paved parking, HSG B
250	98	Unconnected pavement, HSG B
131	98	Unconnected pavement, HSG B
8,824	98	Weighted Average
8,824		100.00% Impervious Area
6,549		74.22% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	20	0.0200	0.81		Sheet Flow, ACROSS DRIVEWAY
					Smooth surfaces n= 0.011 P2= 2.13"
16.6	150	0.0200	0.15		Sheet Flow, INITIAL SHEET FLOW
					Grass: Short n= 0.150 P2= 2.13"
17.0	170	Total			

Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)

Hydrograph



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

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Summary for Subcatchment 6S: EXISTING SITE

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

Runoff = 0.39 cfs @ 12.19 hrs, Volume= 0.039 af, Depth= 0.58"

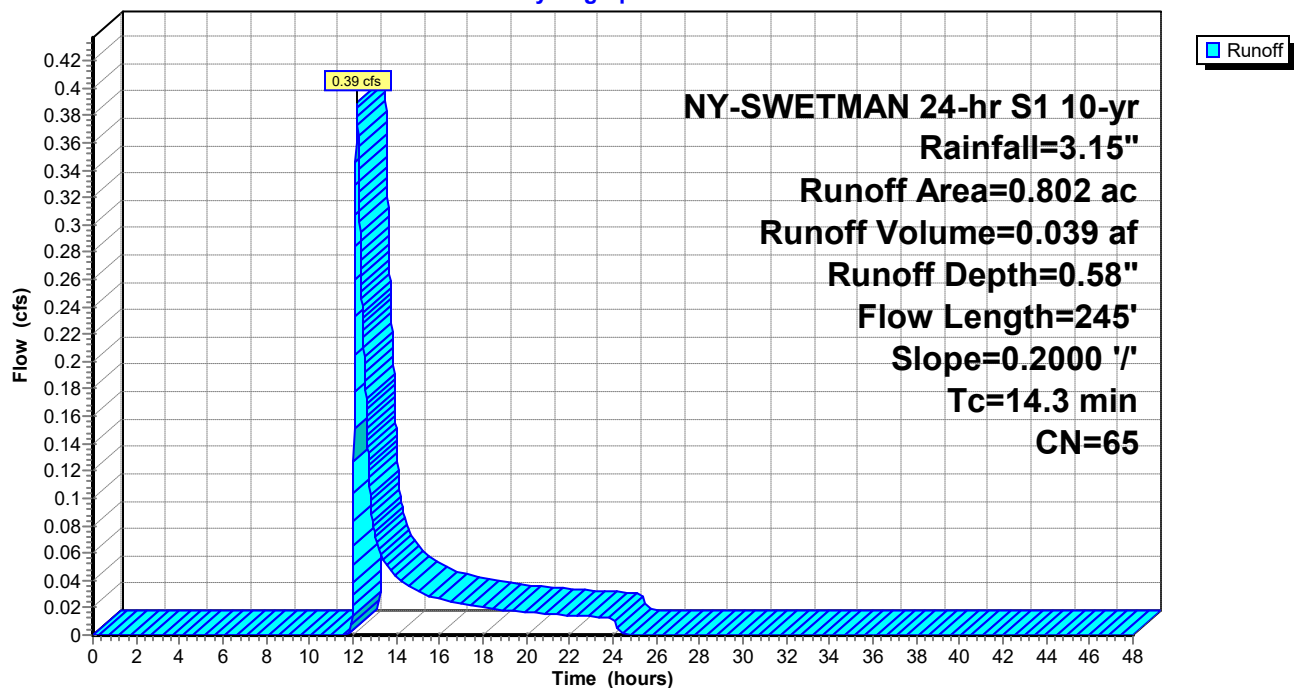
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

Area (ac)	CN	Description
0.802	65	Woods/grass comb., Fair, HSG B
0.802		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	245	0.2000	0.29		Sheet Flow, INITIAL SHEET FLOW Grass: Dense n= 0.240 P2= 2.13"

Subcatchment 6S: EXISTING SITE

Hydrograph



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

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Summary for Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

Runoff = 0.28 cfs @ 12.06 hrs, Volume= 0.023 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

Area (sf)	CN	Description
25,150	61	>75% Grass cover, Good, HSG B
30	98	Unconnected pavement, HSG B
49	98	Unconnected pavement, HSG B
32	98	Unconnected pavement, HSG B
831	98	Paved parking, HSG B
26,092	62	Weighted Average
25,150		96.39% Pervious Area
942		3.61% Impervious Area
111		11.78% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	40	0.1500	0.26		Sheet Flow, INITIAL SHEET FLOW Grass: Short n= 0.150 P2= 2.13"
0.6	225	0.2000	6.71		Shallow Concentrated Flow, SOUTHWEST SWALE Grassed Waterway Kv= 15.0 fps
0.1	44	0.2000	10.06	3.51	Pipe Channel, FIRST PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
0.1	20	0.1000	4.74		Shallow Concentrated Flow, WATERWAY TO CATCHBASIN Grassed Waterway Kv= 15.0 fps
0.1	50	0.2000	10.06	3.51	Pipe Channel, SECOND PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
3.5	379	Total, Increased to minimum Tc = 6.0 min			

SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

Prepared by {enter your company name here}

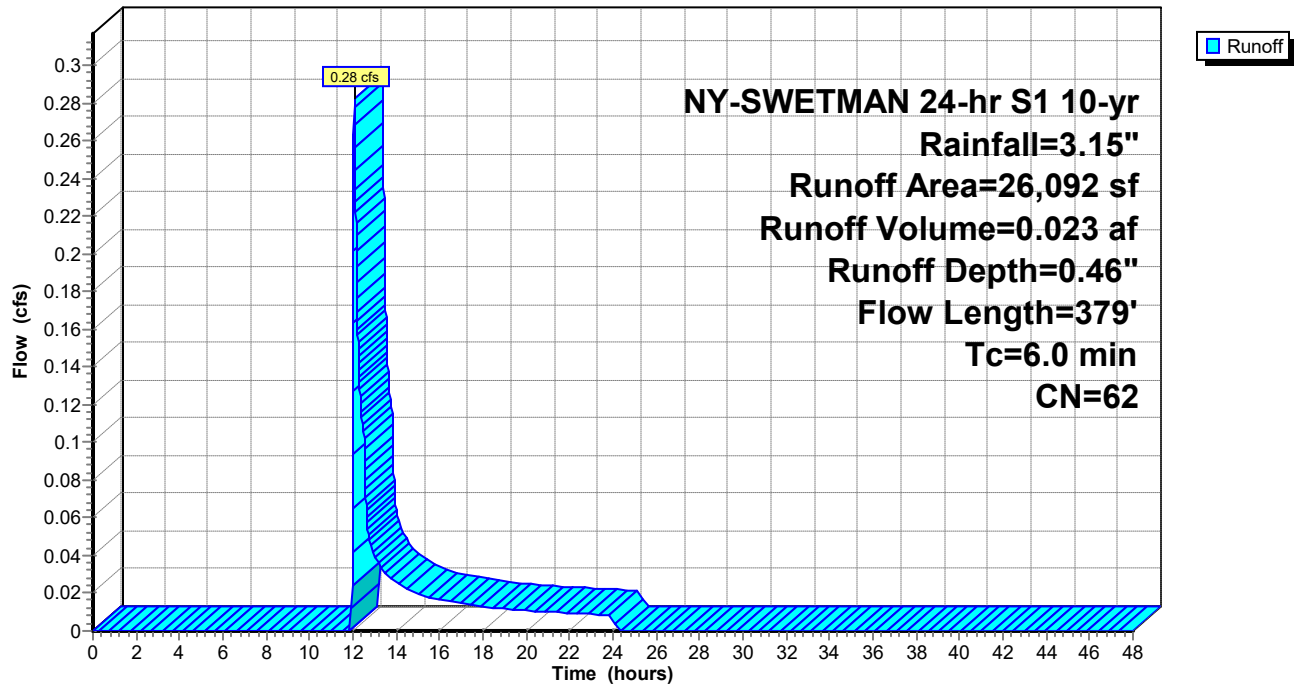
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Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)

Hydrograph



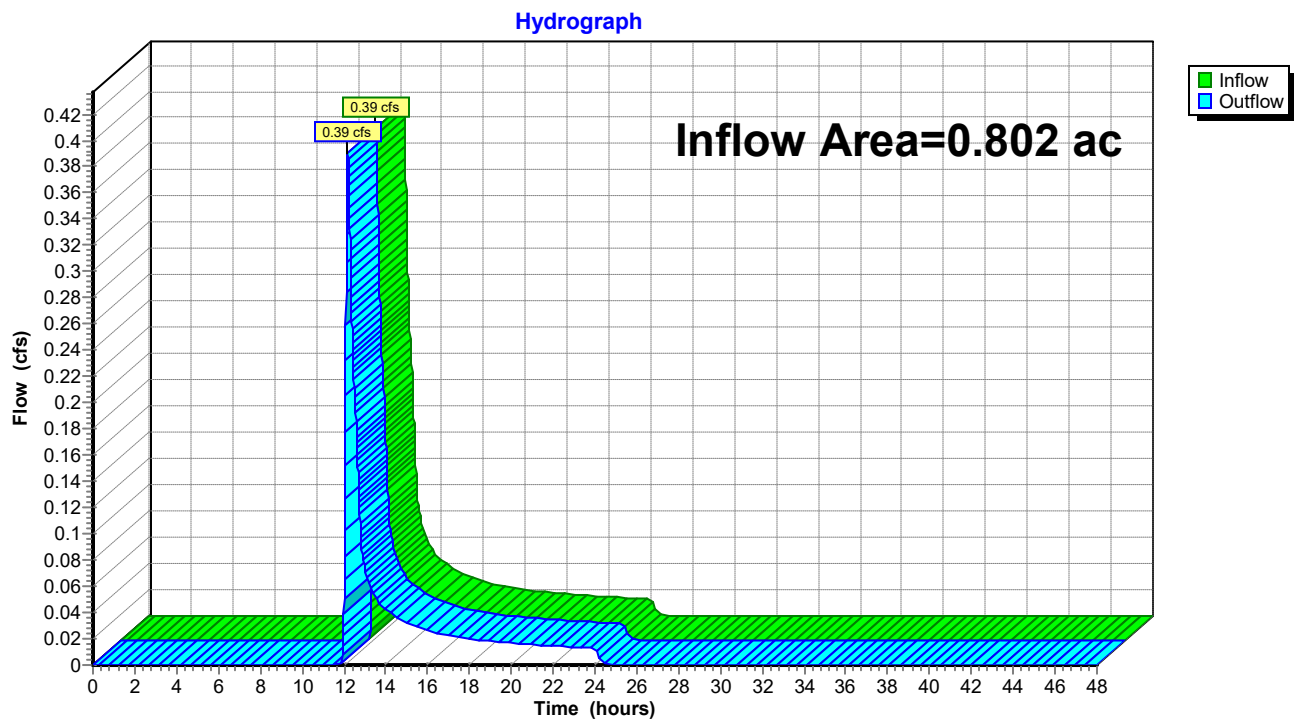
Summary for Reach 7R: EXISTING OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND EXISTING SITE.

Inflow Area = 0.802 ac, 0.00% Impervious, Inflow Depth = 0.58" for 10-yr event
Inflow = 0.39 cfs @ 12.19 hrs, Volume= 0.039 af
Outflow = 0.39 cfs @ 12.19 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 7R: EXISTING OUTFALL



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

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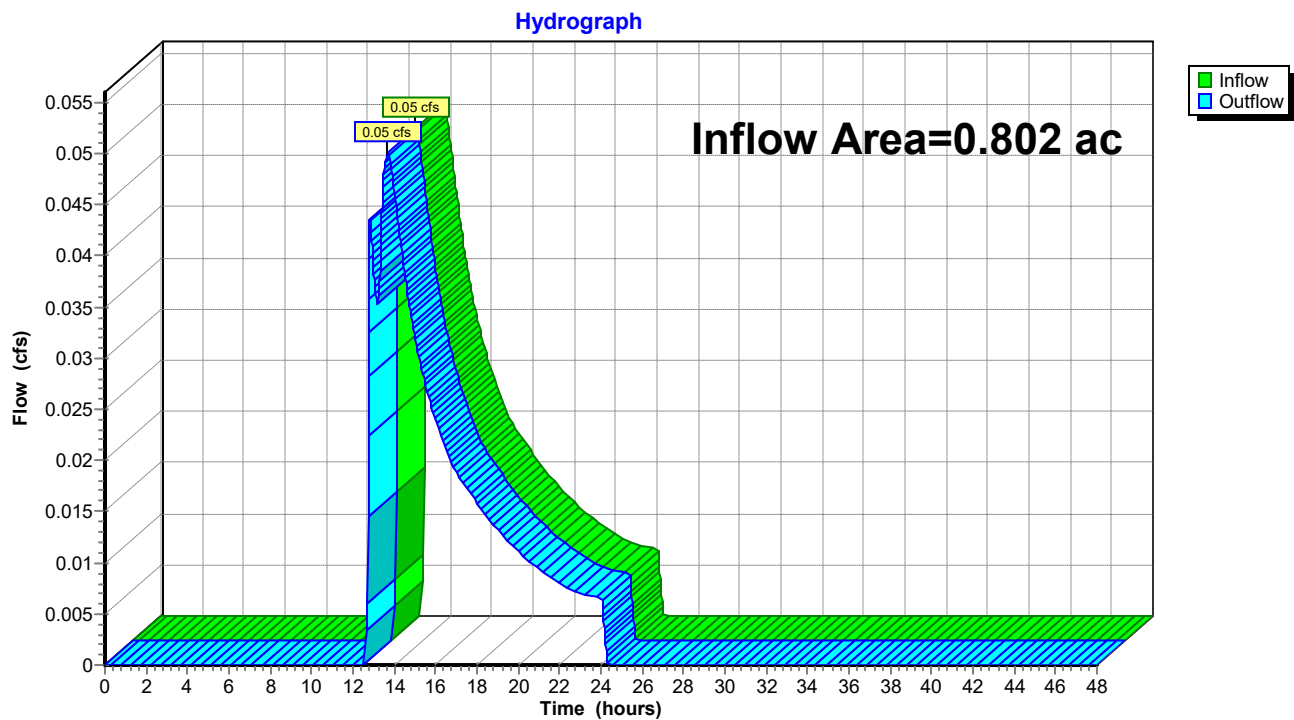
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Summary for Reach 8R: PROPOSED OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND PROPOSED SITE.

Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 0.27" for 10-yr event
 Inflow = 0.05 cfs @ 13.66 hrs, Volume= 0.018 af
 Outflow = 0.05 cfs @ 13.66 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 8R: PROPOSED OUTFALL

SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

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Summary for Pond 9P: CENTRAL DRYWELL

SHALL CONTAIN 1-YEAR STORM EVENT.

Inflow Area = 0.203 ac, 100.00% Impervious, Inflow Depth = 2.92" for 10-yr event
 Inflow = 0.58 cfs @ 12.18 hrs, Volume= 0.049 af
 Outflow = 0.03 cfs @ 13.77 hrs, Volume= 0.030 af, Atten= 95%, Lag= 95.5 min
 Discarded = 0.01 cfs @ 13.77 hrs, Volume= 0.025 af
 Primary = 0.02 cfs @ 13.77 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 730.60' @ 13.77 hrs Surf.Area= 320 sf Storage= 1,472 cf
 Flood Elev= 731.00' Surf.Area= 320 sf Storage= 1,600 cf

Plug-Flow detention time= 820.9 min calculated for 0.030 af (61% of inflow)
 Center-of-Mass det. time= 713.2 min (1,479.9 - 766.7)

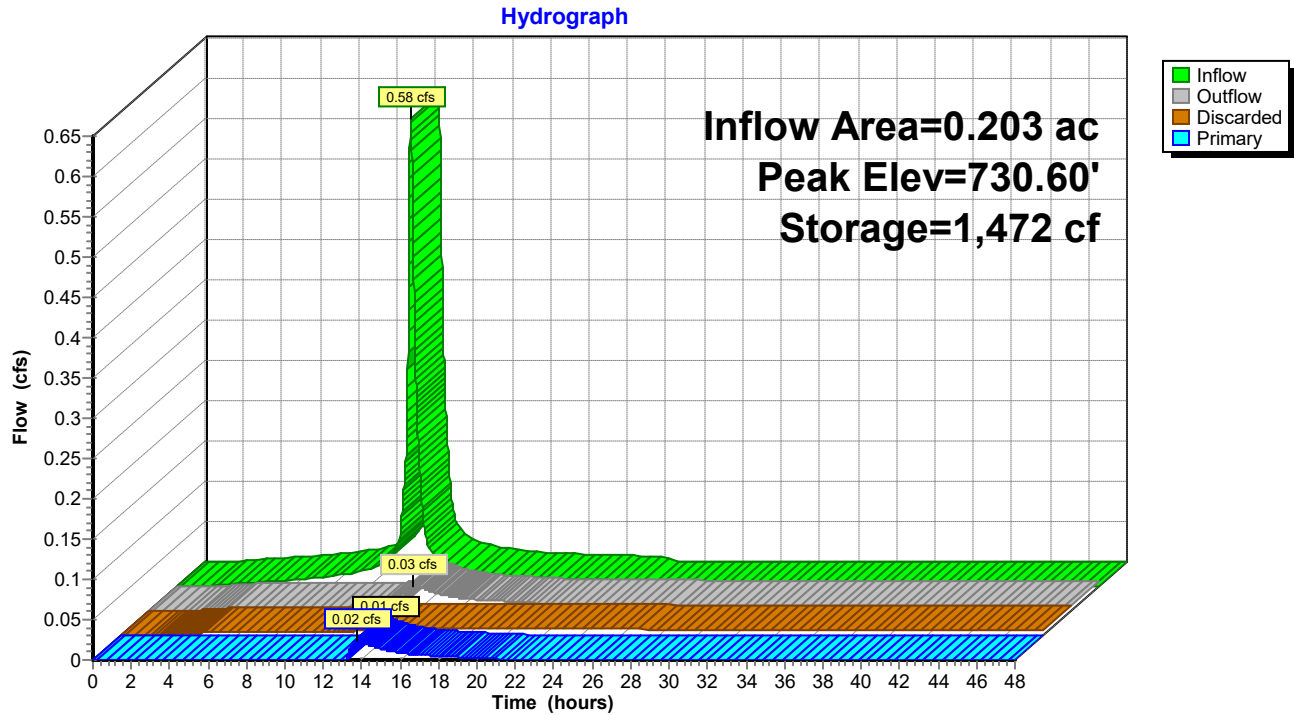
Volume	Invert	Avail.Storage	Storage Description
#1	726.00'	1,600 cf	12.00'W x 26.67'L x 5.00'H CENTRAL DRYWELL

Device	Routing	Invert	Outlet Devices
#1	Primary	730.50'	6.0" Round PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE) L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 730.50' / 727.50' S= 0.1875 ' S= 0.1875 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Discarded	726.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 722.00'

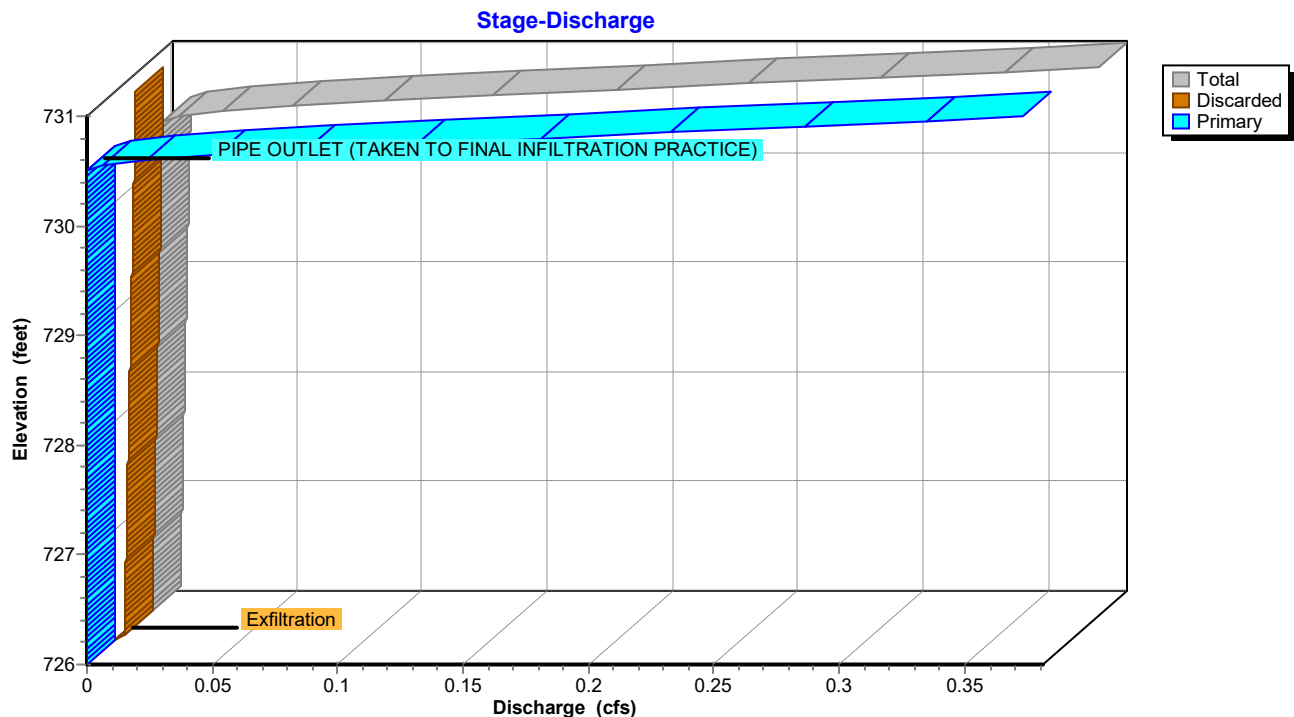
Discarded OutFlow Max=0.01 cfs @ 13.77 hrs HW=730.60' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.02 cfs @ 13.77 hrs HW=730.60' (Free Discharge)
 ↑ **1=PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE)** (Inlet Controls 0.02 cfs @ 0.85 fps)

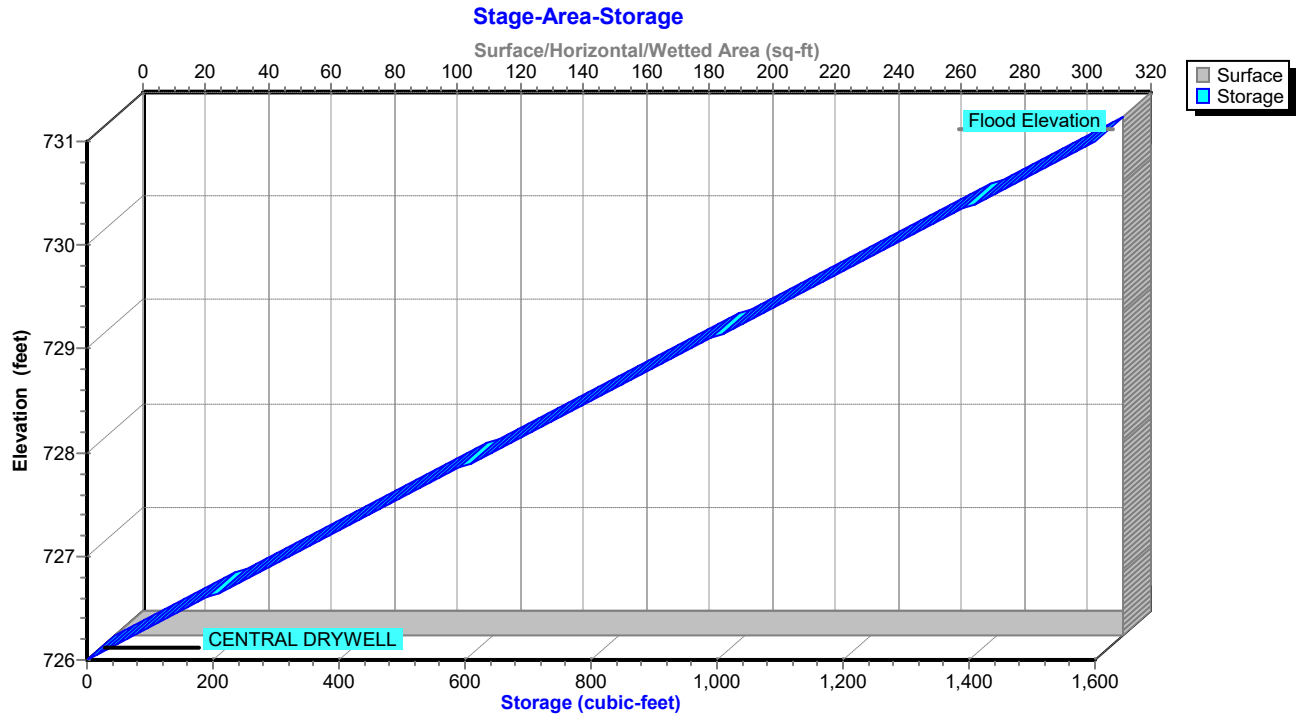
Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



SWETMAN SITE PLAN WITHOUT OFFSITE - AX NY-SWETMAN 24-hr S1 10-yr Rainfall=3.15"

Prepared by {enter your company name here}

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Summary for Pond 14P: ROADSIDE DRYWELLS

SHALL CONTAIN 1-YEAR STORM EVENT.



Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 0.43" for 10-yr event
 Inflow = 0.28 cfs @ 12.06 hrs, Volume= 0.028 af
 Outflow = 0.05 cfs @ 13.66 hrs, Volume= 0.023 af, Atten= 82%, Lag= 96.1 min
 Discarded = 0.00 cfs @ 13.66 hrs, Volume= 0.005 af
 Primary = 0.05 cfs @ 13.66 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 708.11' @ 13.66 hrs Surf.Area= 80 sf Storage= 369 cf
 Flood Elev= 708.50' Surf.Area= 80 sf Storage= 400 cf

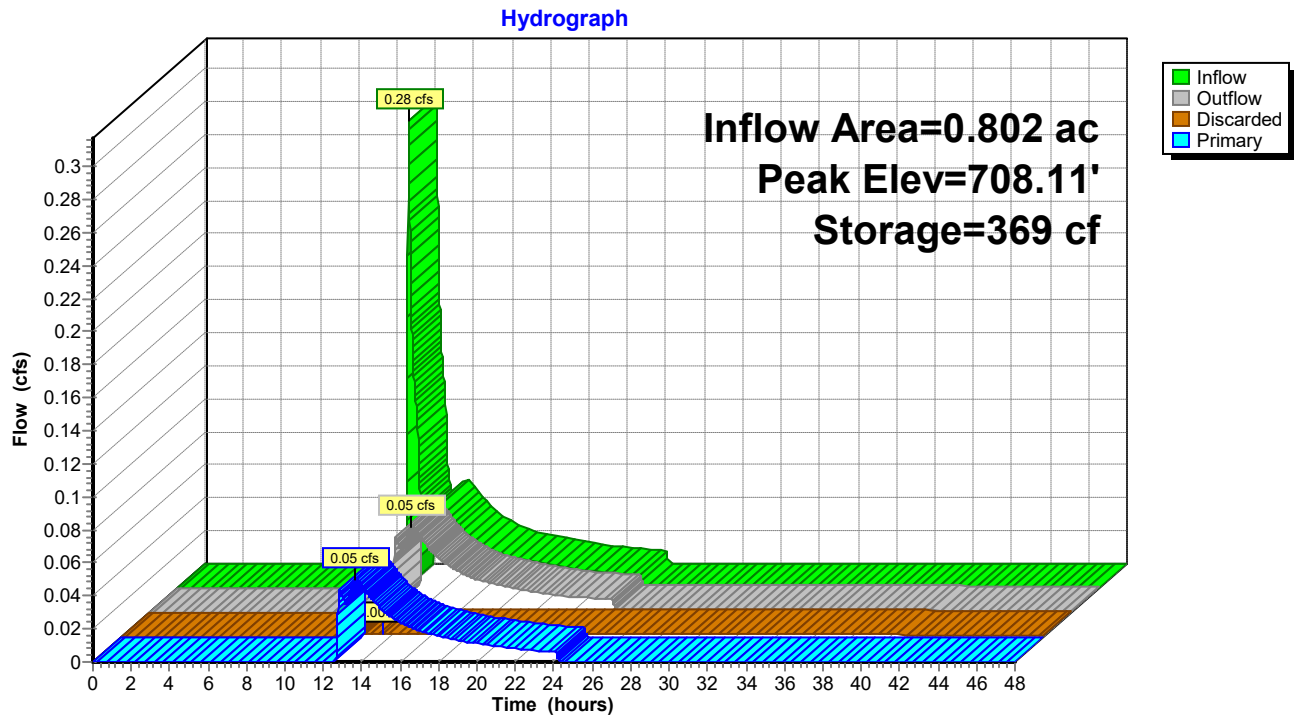
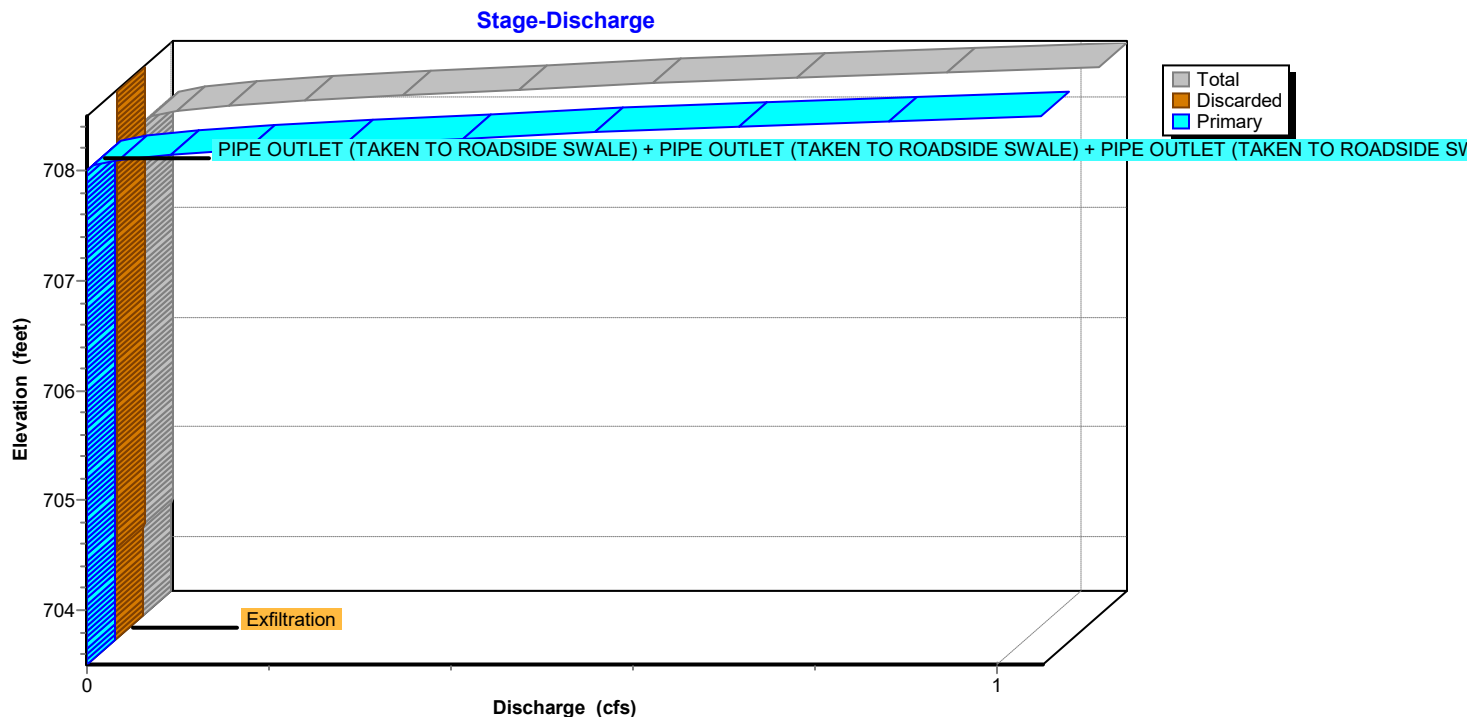
Plug-Flow detention time= 312.7 min calculated for 0.023 af (82% of inflow)
 Center-of-Mass det. time= 238.9 min (1,156.8 - 917.9)

Volume	Invert	Avail.Storage	Storage Description
#1	703.50'	400 cf	8.00'W x 10.00'L x 5.00'H ROADSIDE DRYWELLS

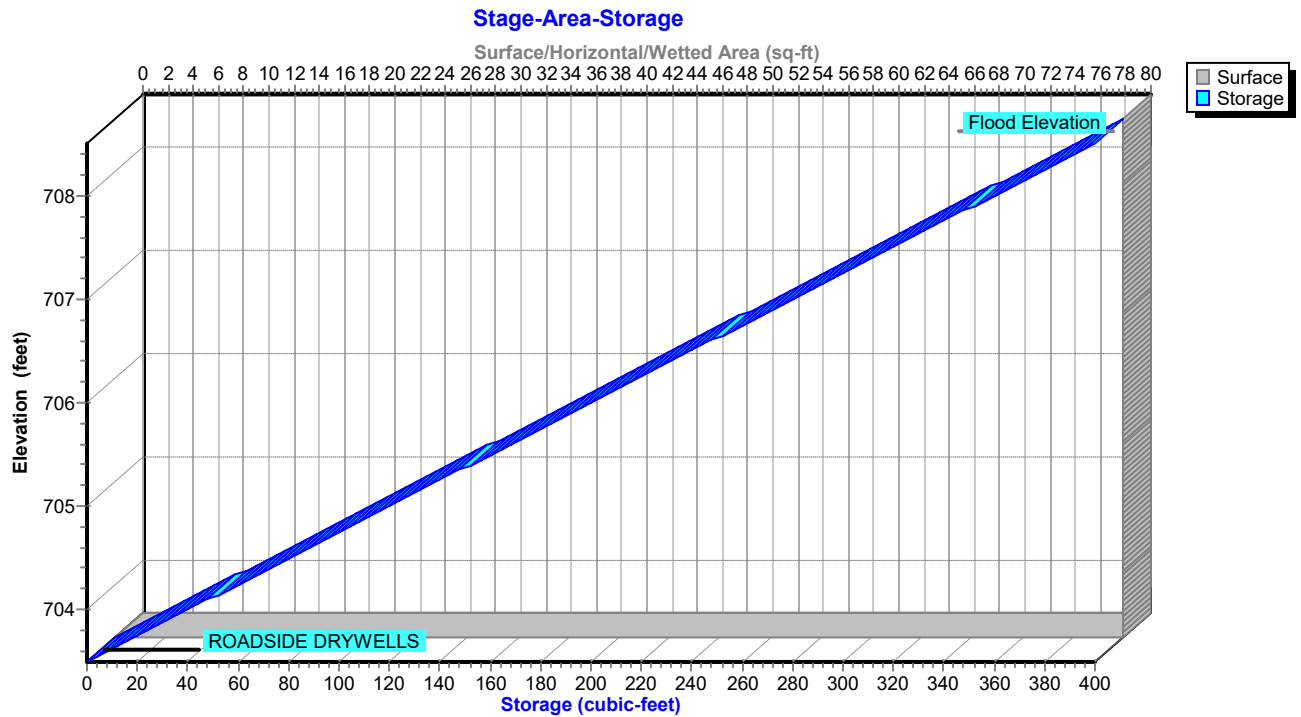
Device	Routing	Invert	Outlet Devices
#1	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#3	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#4	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#5	Discarded	703.50'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 699.00'

Discarded OutFlow Max=0.00 cfs @ 13.66 hrs HW=708.11' (Free Discharge)

5=Exfiltration (Controls 0.00 cfs)
Primary OutFlow Max=0.05 cfs @ 13.66 hrs HW=708.11' (Free Discharge)


1=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.01 cfs @ 0.54 fps)
2=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.01 cfs @ 0.54 fps)
3=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.01 cfs @ 0.54 fps)
4=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.01 cfs @ 0.54 fps)

Pond 14P: ROADSIDE DRYWELLS**Pond 14P: ROADSIDE DRYWELLS**

Pond 14P: ROADSIDE DRYWELLS



SWETMAN SITE PLAN WITHOUT OFFSITE - A NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

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Summary for Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

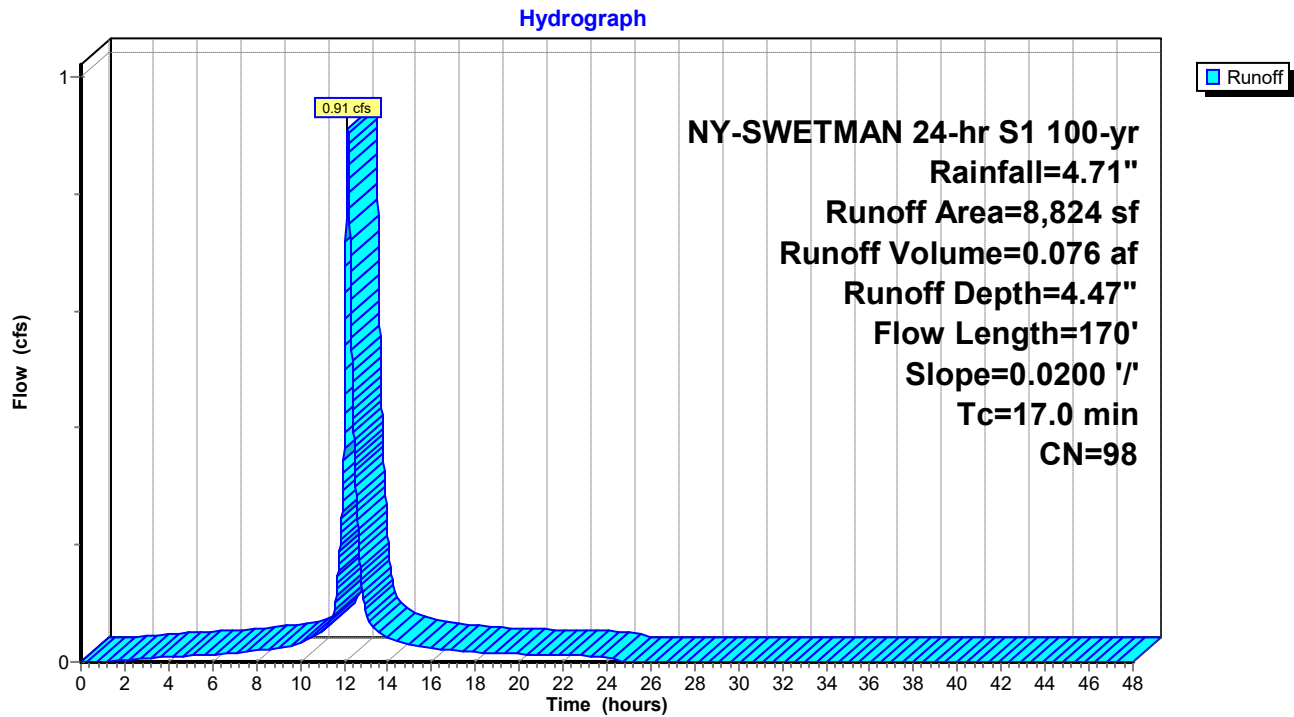
Runoff = 0.91 cfs @ 12.18 hrs, Volume= 0.076 af, Depth= 4.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Area (sf)	CN	Description
1,714	98	Paved parking, HSG B
5,709	98	Unconnected roofs, HSG B
459	98	Unconnected roofs, HSG B
561	98	Paved parking, HSG B
250	98	Unconnected pavement, HSG B
131	98	Unconnected pavement, HSG B
8,824	98	Weighted Average
8,824		100.00% Impervious Area
6,549		74.22% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	20	0.0200	0.81		Sheet Flow, ACROSS DRIVEWAY
					Smooth surfaces n= 0.011 P2= 2.13"
16.6	150	0.0200	0.15		Sheet Flow, INITIAL SHEET FLOW
					Grass: Short n= 0.150 P2= 2.13"
17.0	170	Total			

Subcatchment 2S: PROPOSED SITE (TO CENTRAL DRYWELL)



SWETMAN SITE PLAN WITHOUT OFFSITE - A NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Prepared by {enter your company name here}

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Summary for Subcatchment 6S: EXISTING SITE

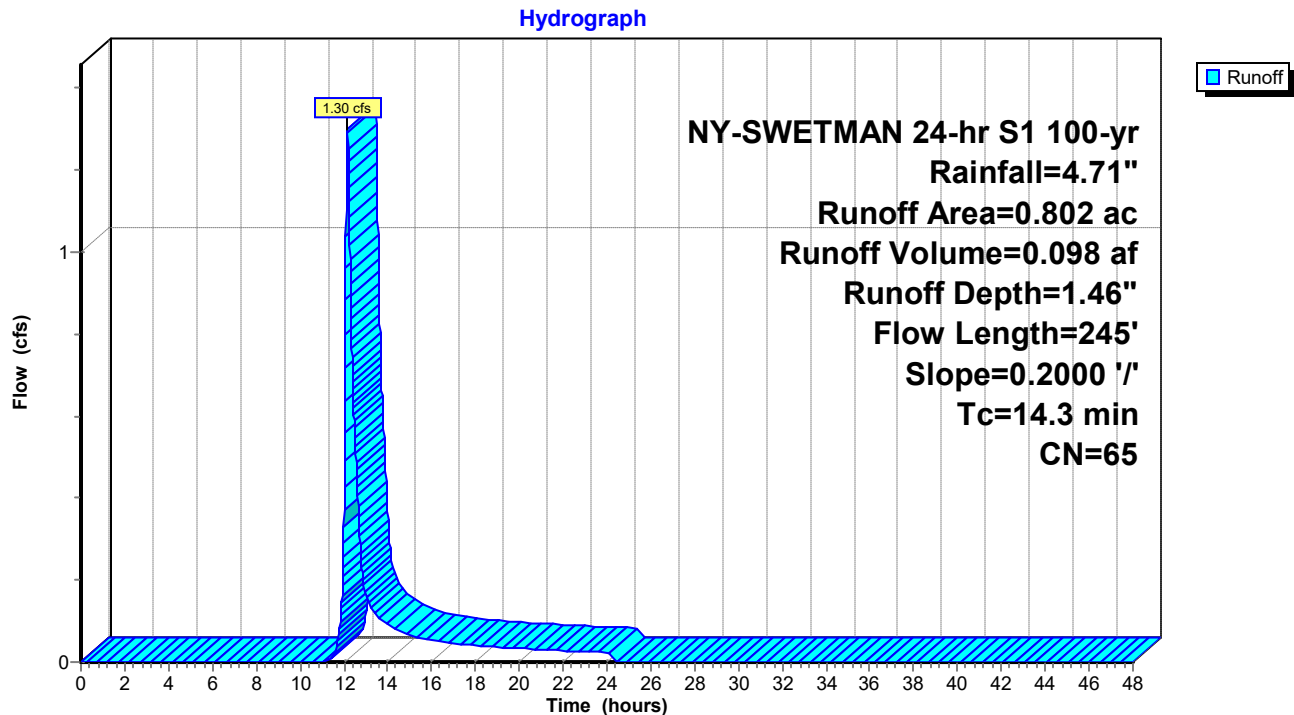
INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

Runoff = 1.30 cfs @ 12.16 hrs, Volume= 0.098 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Area (ac)	CN	Description
0.802	65	Woods/grass comb., Fair, HSG B
0.802		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	245	0.2000	0.29		Sheet Flow, INITIAL SHEET FLOW Grass: Dense n= 0.240 P2= 2.13"

Subcatchment 6S: EXISTING SITE

SWETMAN SITE PLAN WITHOUT OFFSITE - A NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

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Summary for Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)

INCLUDES AREA FROM WESTERN PROPERTY LINE (I.E. EASTERN ROW OF ONNALINDA DRIVE)
TO WESTERN EDGE OF PAVEMENT OF WEST LAKE ROAD.

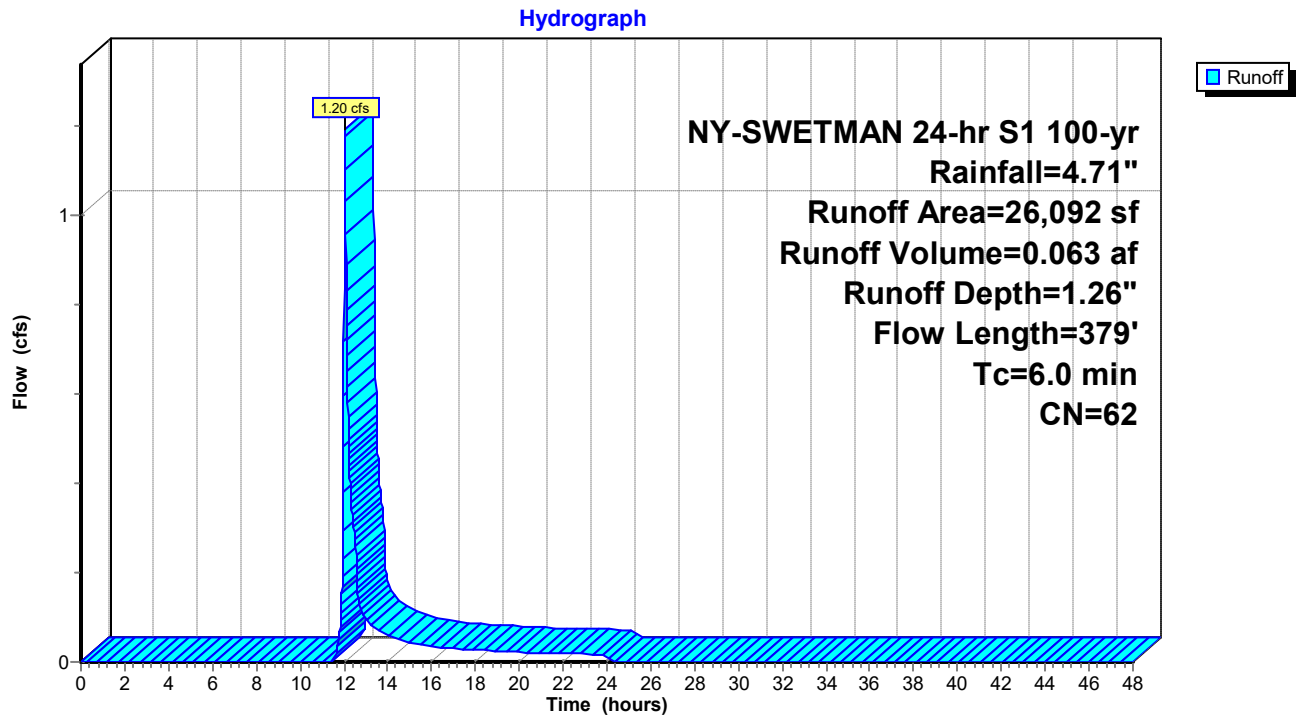
Runoff = 1.20 cfs @ 12.05 hrs, Volume= 0.063 af, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Area (sf)	CN	Description
25,150	61	>75% Grass cover, Good, HSG B
30	98	Unconnected pavement, HSG B
49	98	Unconnected pavement, HSG B
32	98	Unconnected pavement, HSG B
831	98	Paved parking, HSG B
26,092	62	Weighted Average
25,150		96.39% Pervious Area
942		3.61% Impervious Area
111		11.78% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	40	0.1500	0.26		Sheet Flow, INITIAL SHEET FLOW Grass: Short n= 0.150 P2= 2.13"
0.6	225	0.2000	6.71		Shallow Concentrated Flow, SOUTHWEST SWALE Grassed Waterway Kv= 15.0 fps
0.1	44	0.2000	10.06	3.51	Pipe Channel, FIRST PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
0.1	20	0.1000	4.74		Shallow Concentrated Flow, WATERWAY TO CATCHBASIN Grassed Waterway Kv= 15.0 fps
0.1	50	0.2000	10.06	3.51	Pipe Channel, SECOND PIPE 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.020 Corrugated PE, corrugated interior
3.5	379	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 10S: PROPOSED SITE (TO ROADSIDE DRYWELL)



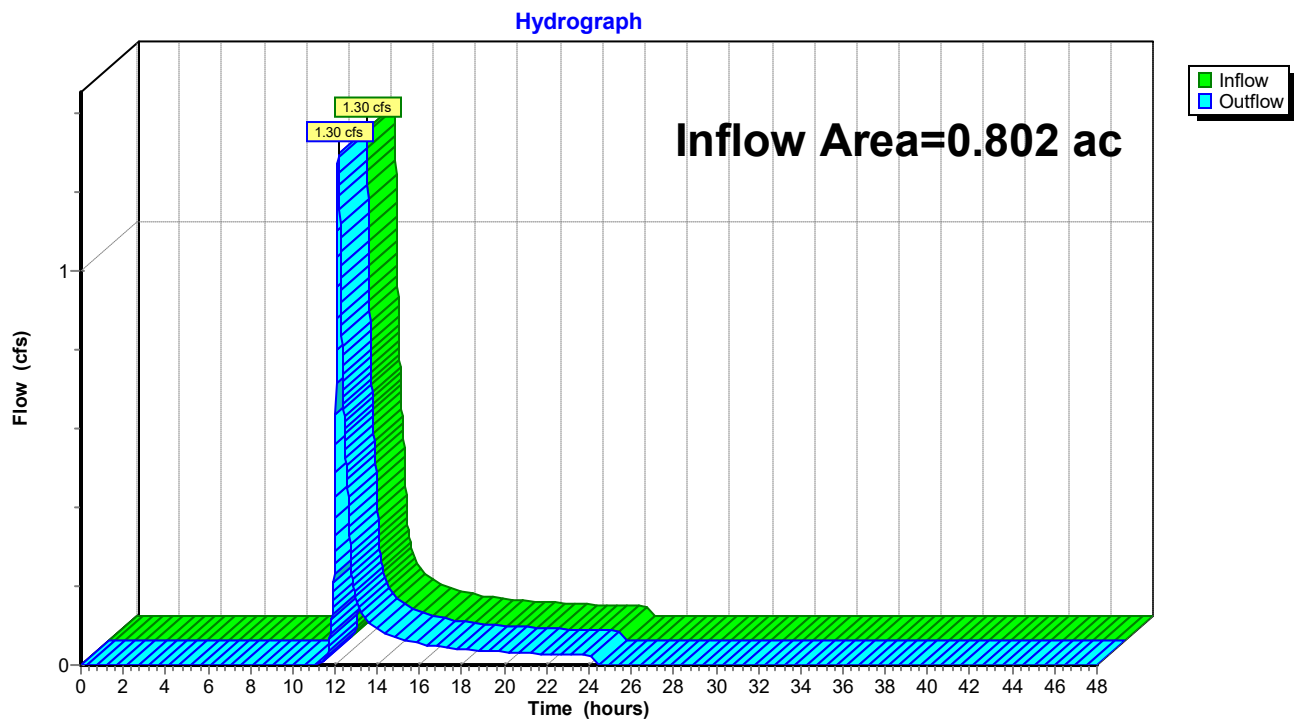
Summary for Reach 7R: EXISTING OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND EXISTING SITE.

Inflow Area = 0.802 ac, 0.00% Impervious, Inflow Depth = 1.46" for 100-yr event
Inflow = 1.30 cfs @ 12.16 hrs, Volume= 0.098 af
Outflow = 1.30 cfs @ 12.16 hrs, Volume= 0.098 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 7R: EXISTING OUTFALL



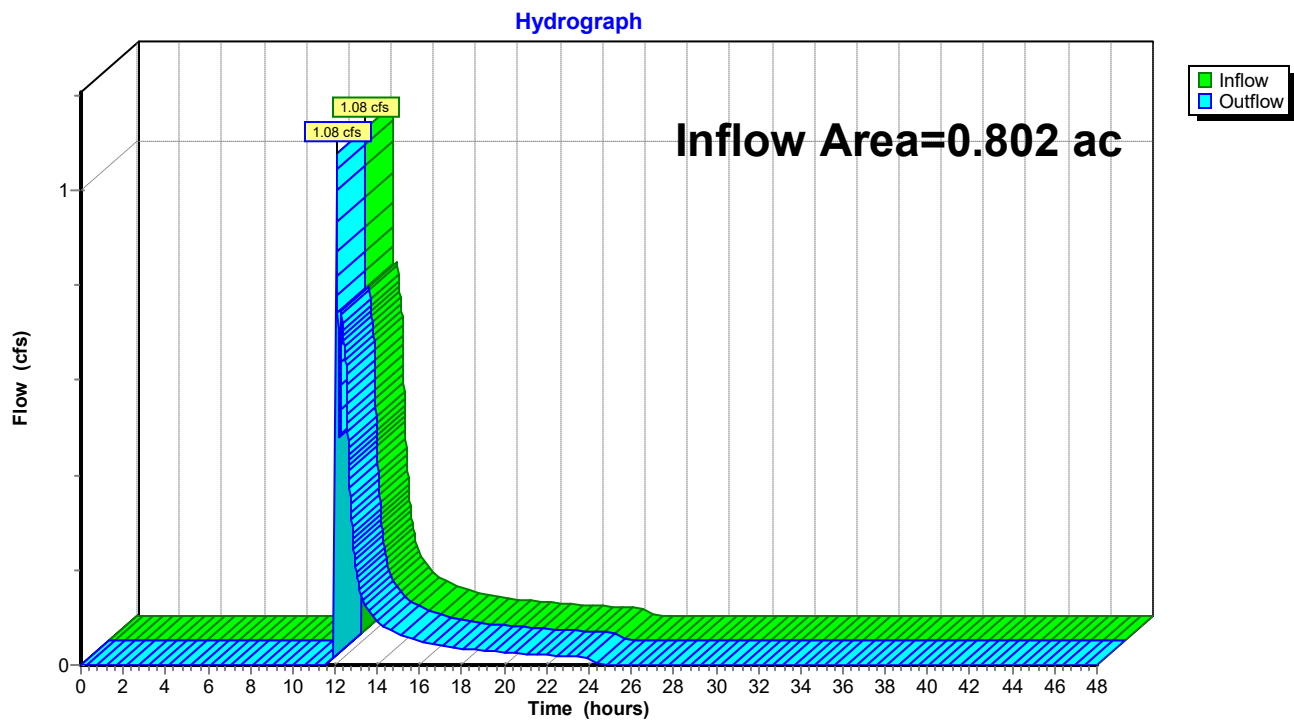
Summary for Reach 8R: PROPOSED OUTFALL

INCLUDES RUNOFF FROM BOTH OFFSITE AND PROPOSED SITE.

Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 1.23" for 100-yr event
Inflow = 1.08 cfs @ 12.07 hrs, Volume= 0.082 af
Outflow = 1.08 cfs @ 12.07 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 8R: PROPOSED OUTFALL



SWETMAN SITE PLAN WITHOUT OFFSITE - A NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Prepared by {enter your company name here}

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Summary for Pond 9P: CENTRAL DRYWELL

SHALL CONTAIN 1-YEAR STORM EVENT.

Inflow Area = 0.203 ac, 100.00% Impervious, Inflow Depth = 4.47" for 100-yr event
 Inflow = 0.91 cfs @ 12.18 hrs, Volume= 0.076 af
 Outflow = 0.42 cfs @ 12.31 hrs, Volume= 0.055 af, Atten= 54%, Lag= 8.0 min
 Discarded = 0.01 cfs @ 12.31 hrs, Volume= 0.025 af
 Primary = 0.41 cfs @ 12.31 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 731.05' @ 12.31 hrs Surf.Area= 320 sf Storage= 1,600 cf
 Flood Elev= 731.00' Surf.Area= 320 sf Storage= 1,600 cf

Plug-Flow detention time= 508.5 min calculated for 0.055 af (72% of inflow)
 Center-of-Mass det. time= 419.2 min (1,177.6 - 758.4)

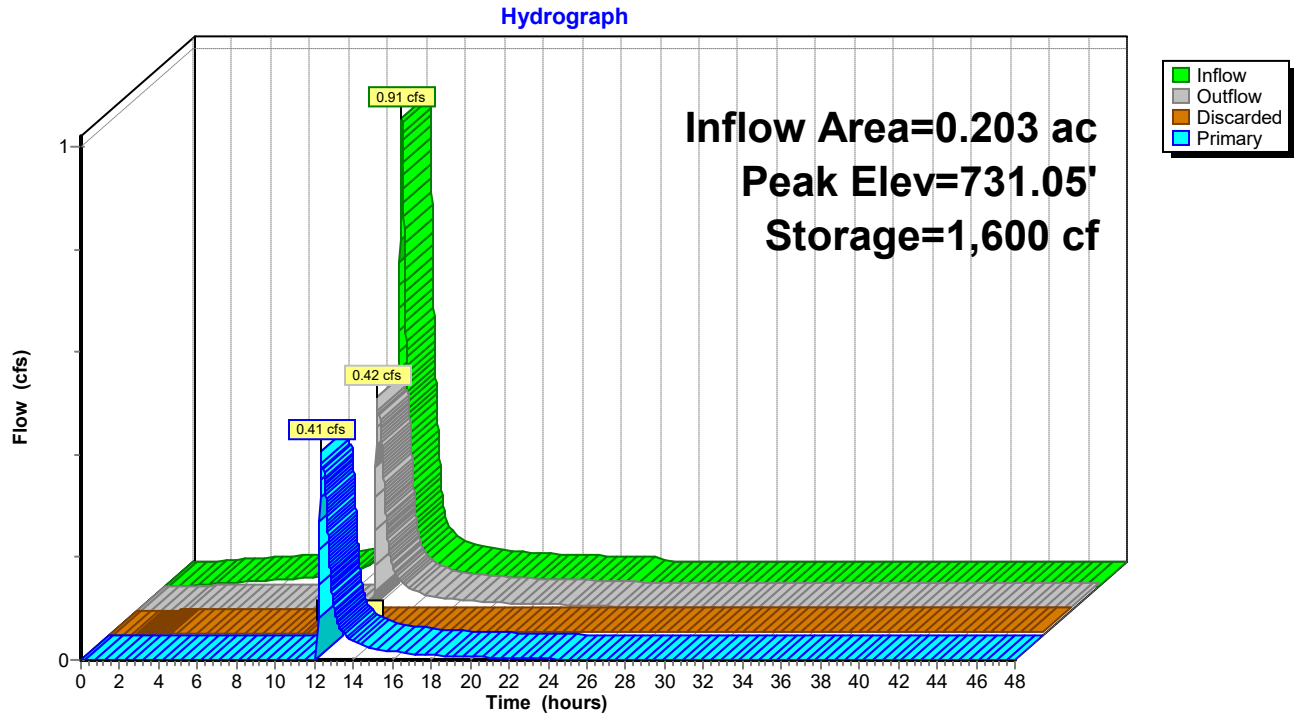
Volume	Invert	Avail.Storage	Storage Description
#1	726.00'	1,600 cf	12.00'W x 26.67'L x 5.00'H CENTRAL DRYWELL

Device	Routing	Invert	Outlet Devices
#1	Primary	730.50'	6.0" Round PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE) L= 16.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 730.50' / 727.50' S= 0.1875 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Discarded	726.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 722.00'

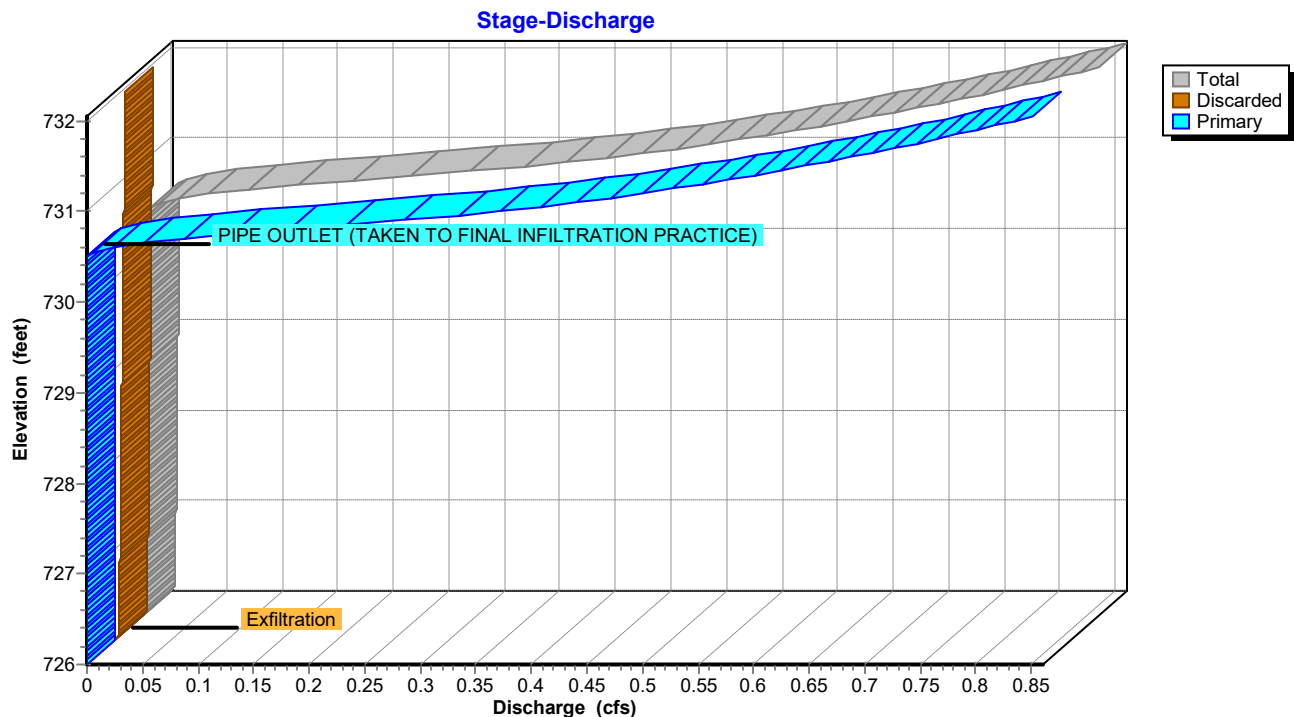
Discarded OutFlow Max=0.01 cfs @ 12.31 hrs HW=731.04' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.40 cfs @ 12.31 hrs HW=731.04' (Free Discharge)
 ↑ **1=PIPE OUTLET (TAKEN TO FINAL INFILTRATION PRACTICE)** (Inlet Controls 0.40 cfs @ 2.04 fps)

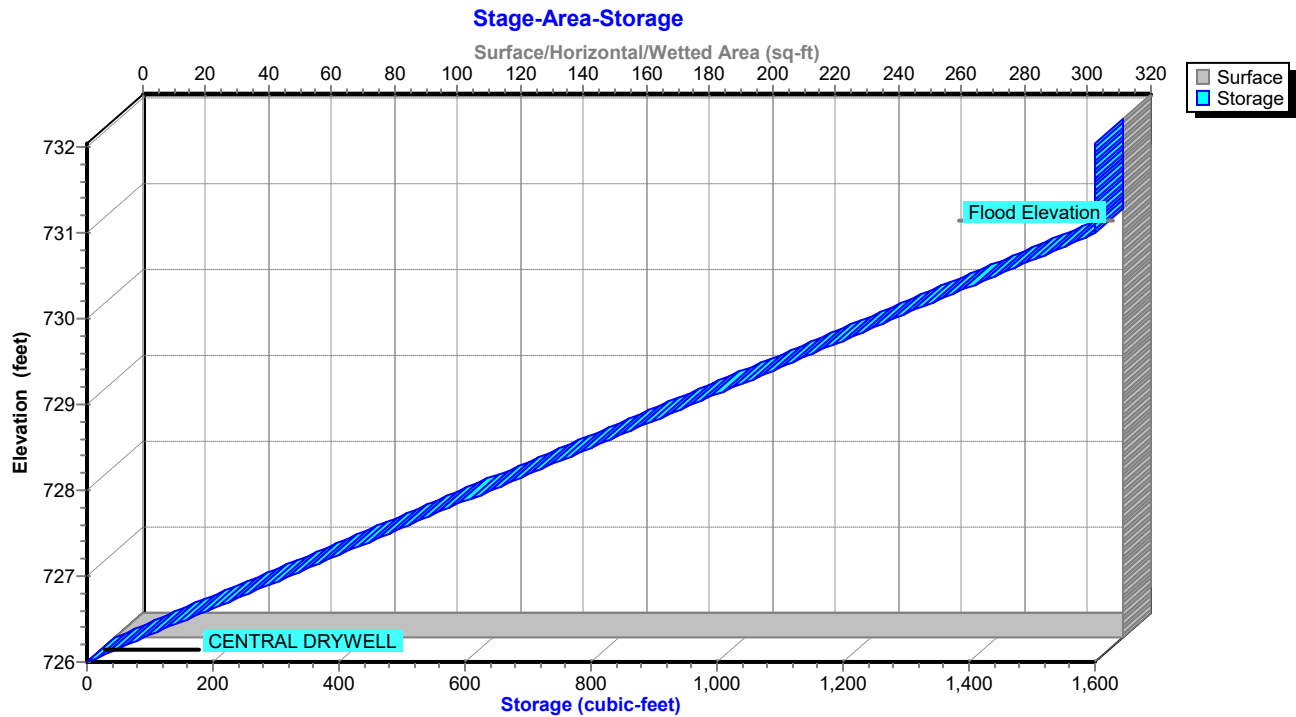
Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



Pond 9P: CENTRAL DRYWELL



SWETMAN SITE PLAN WITHOUT OFFSITE - A NY-SWETMAN 24-hr S1 100-yr Rainfall=4.71"

Prepared by {enter your company name here}

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Summary for Pond 14P: ROADSIDE DRYWELLS

SHALL CONTAIN 1-YEAR STORM EVENT.



Inflow Area = 0.802 ac, 27.97% Impervious, Inflow Depth = 1.39" for 100-yr event
 Inflow = 1.20 cfs @ 12.05 hrs, Volume= 0.093 af
 Outflow = 1.08 cfs @ 12.07 hrs, Volume= 0.088 af, Atten= 10%, Lag= 1.5 min
 Discarded = 0.00 cfs @ 12.07 hrs, Volume= 0.005 af
 Primary = 1.08 cfs @ 12.07 hrs, Volume= 0.082 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 708.51' @ 12.07 hrs Surf.Area= 80 sf Storage= 400 cf
 Flood Elev= 708.50' Surf.Area= 80 sf Storage= 400 cf

Plug-Flow detention time= 91.4 min calculated for 0.088 af (95% of inflow)
 Center-of-Mass det. time= 62.9 min (922.7 - 859.7)

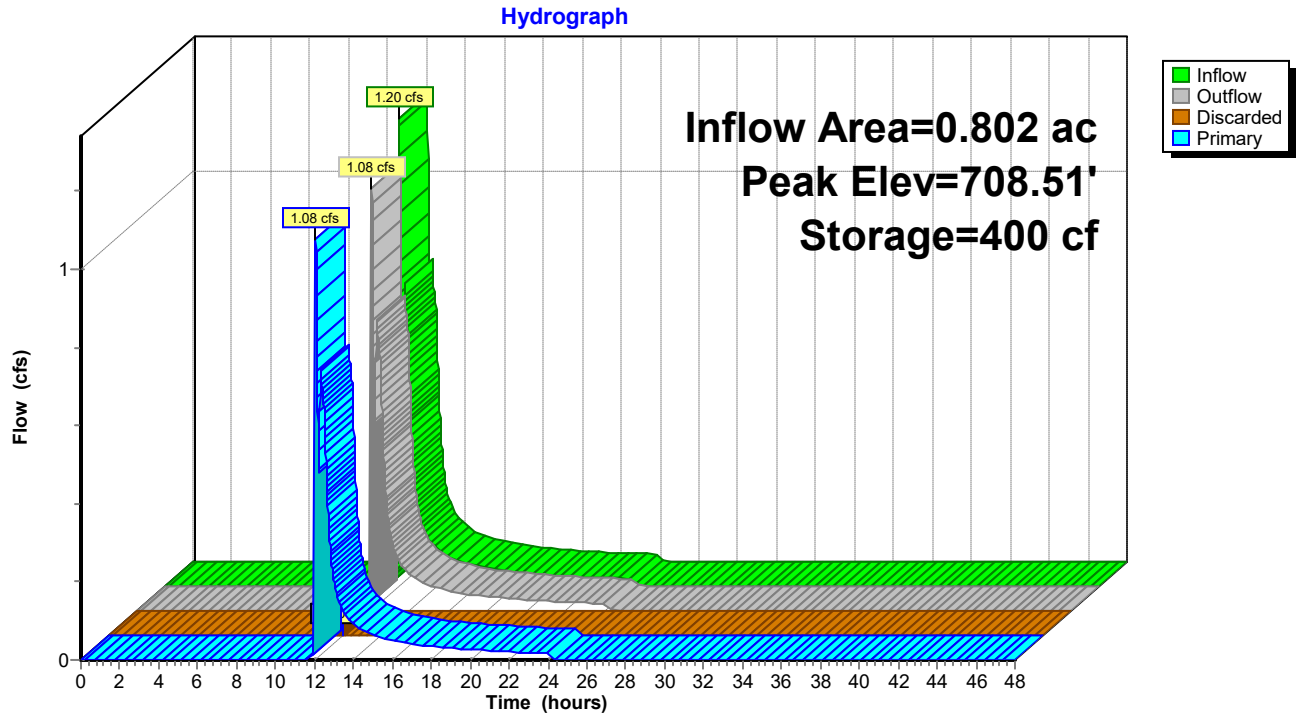
Volume	Invert	Avail.Storage	Storage Description
#1	703.50'	400 cf	8.00'W x 10.00'L x 5.00'H ROADSIDE DRYWELLS

Device	Routing	Invert	Outlet Devices
#1	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#2	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#3	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#4	Primary	708.00'	6.0" Round PIPE OUTLET (TAKEN TO ROADSIDE SWALE) L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 708.00' / 708.00' S= 0.0000 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.20 sf
#5	Discarded	703.50'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 699.00'

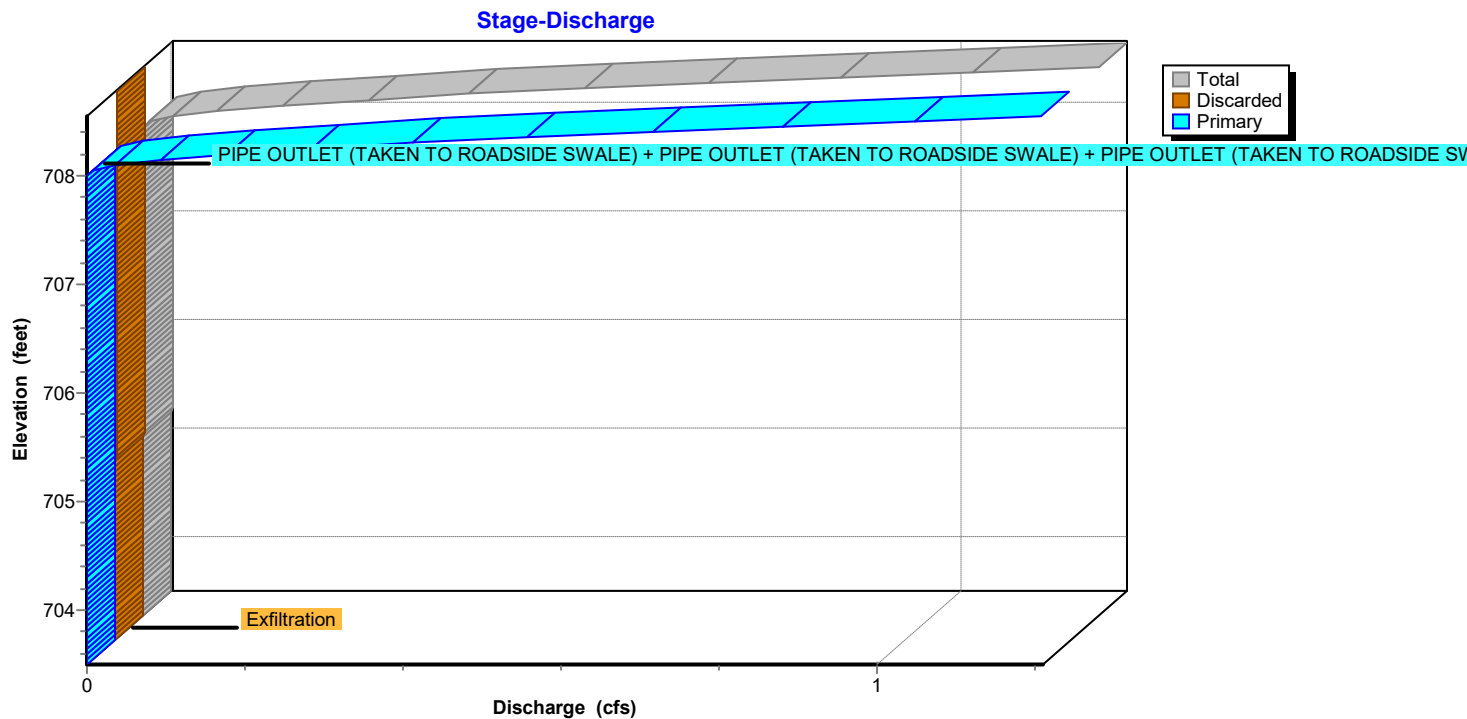
Discarded OutFlow Max=0.00 cfs @ 12.07 hrs HW=708.51' (Free Discharge)

5=Exfiltration (Controls 0.00 cfs)
Primary OutFlow Max=1.07 cfs @ 12.07 hrs HW=708.51' (Free Discharge)


1=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.27 cfs @ 1.67 fps)
2=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.27 cfs @ 1.67 fps)
3=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.27 cfs @ 1.67 fps)
4=PIPE OUTLET (TAKEN TO ROADSIDE SWALE) (Barrel Controls 0.27 cfs @ 1.67 fps)

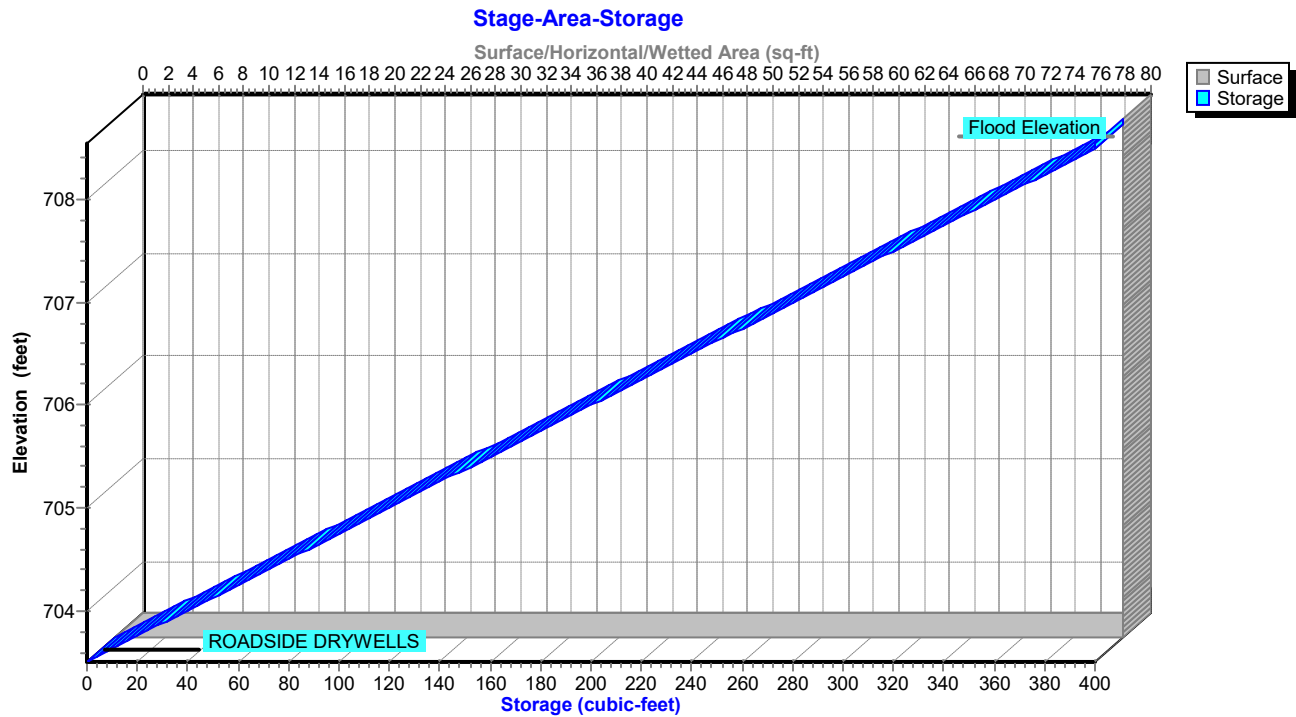
Pond 14P: ROADSIDE DRYWELLS



Pond 14P: ROADSIDE DRYWELLS



Pond 14P: ROADSIDE DRYWELLS



APPENDIX D

RAINFALL DATA



NOAA Atlas 14, Volume 10, Version 3
Location name: Canandaigua, New York, USA*
Latitude: 42.8323°, Longitude: -77.2819°
Elevation: 699.12 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.266 (0.214-0.332)	0.324 (0.260-0.405)	0.419 (0.335-0.525)	0.498 (0.396-0.628)	0.606 (0.464-0.800)	0.687 (0.515-0.929)	0.773 (0.560-1.09)	0.872 (0.592-1.25)	1.02 (0.662-1.51)	1.14 (0.721-1.73)
10-min	0.377 (0.303-0.470)	0.459 (0.368-0.573)	0.593 (0.474-0.743)	0.705 (0.559-0.887)	0.858 (0.657-1.13)	0.973 (0.728-1.32)	1.10 (0.793-1.54)	1.24 (0.839-1.77)	1.44 (0.937-2.14)	1.61 (1.02-2.45)
15-min	0.443 (0.356-0.553)	0.540 (0.433-0.674)	0.698 (0.558-0.875)	0.830 (0.658-1.05)	1.01 (0.773-1.33)	1.15 (0.856-1.55)	1.29 (0.933-1.81)	1.45 (0.987-2.09)	1.70 (1.10-2.52)	1.90 (1.20-2.88)
30-min	0.601 (0.483-0.750)	0.733 (0.588-0.915)	0.948 (0.758-1.19)	1.13 (0.893-1.42)	1.37 (1.05-1.81)	1.55 (1.16-2.10)	1.75 (1.26-2.46)	1.97 (1.34-2.83)	2.30 (1.50-3.42)	2.58 (1.63-3.91)
60-min	0.759 (0.610-0.947)	0.925 (0.742-1.16)	1.20 (0.956-1.50)	1.42 (1.13-1.79)	1.73 (1.32-2.29)	1.96 (1.47-2.65)	2.21 (1.60-3.11)	2.49 (1.69-3.57)	2.91 (1.89-4.32)	3.26 (2.06-4.94)
2-hr	0.934 (0.755-1.16)	1.13 (0.914-1.41)	1.46 (1.17-1.81)	1.73 (1.38-2.16)	2.10 (1.61-2.74)	2.38 (1.78-3.18)	2.67 (1.94-3.70)	3.00 (2.05-4.25)	3.47 (2.27-5.09)	3.85 (2.45-5.77)
3-hr	1.05 (0.851-1.29)	1.27 (1.03-1.56)	1.62 (1.31-2.01)	1.92 (1.54-2.39)	2.32 (1.79-3.02)	2.63 (1.98-3.49)	2.95 (2.14-4.06)	3.30 (2.26-4.65)	3.80 (2.49-5.55)	4.20 (2.68-6.26)
6-hr	1.27 (1.04-1.56)	1.52 (1.24-1.87)	1.93 (1.57-2.38)	2.27 (1.83-2.81)	2.74 (2.13-3.53)	3.09 (2.34-4.07)	3.46 (2.53-4.70)	3.86 (2.66-5.38)	4.42 (2.91-6.37)	4.86 (3.12-7.16)
12-hr	1.54 (1.27-1.88)	1.83 (1.50-2.22)	2.29 (1.87-2.80)	2.68 (2.17-3.29)	3.21 (2.51-4.11)	3.61 (2.76-4.71)	4.03 (2.97-5.44)	4.49 (3.12-6.20)	5.13 (3.41-7.32)	5.65 (3.65-8.22)
24-hr	1.83 (1.52-2.22)	2.16 (1.79-2.62)	2.70 (2.22-3.28)	3.15 (2.57-3.84)	3.76 (2.96-4.78)	4.23 (3.25-5.47)	4.71 (3.49-6.30)	5.25 (3.67-7.17)	6.02 (4.02-8.49)	6.65 (4.32-9.56)
2-day	2.15 (1.79-2.58)	2.54 (2.11-3.05)	3.17 (2.63-3.82)	3.69 (3.04-4.47)	4.42 (3.50-5.56)	4.96 (3.84-6.37)	5.53 (4.13-7.34)	6.18 (4.34-8.35)	7.12 (4.78-9.93)	7.90 (5.16-11.2)
3-day	2.39 (2.00-2.85)	2.81 (2.34-3.36)	3.49 (2.91-4.20)	4.07 (3.36-4.90)	4.85 (3.86-6.08)	5.44 (4.23-6.95)	6.06 (4.55-8.01)	6.78 (4.77-9.10)	7.82 (5.26-10.8)	8.68 (5.68-12.2)
4-day	2.58 (2.17-3.08)	3.03 (2.54-3.62)	3.76 (3.14-4.50)	4.36 (3.62-5.25)	5.19 (4.14-6.49)	5.82 (4.53-7.41)	6.48 (4.87-8.52)	7.23 (5.11-9.67)	8.33 (5.62-11.5)	9.24 (6.06-12.9)
7-day	3.10 (2.61-3.67)	3.59 (3.03-4.26)	4.40 (3.69-5.24)	5.08 (4.23-6.07)	6.00 (4.81-7.44)	6.70 (5.24-8.45)	7.43 (5.61-9.67)	8.26 (5.86-10.9)	9.44 (6.40-12.9)	10.4 (6.86-14.4)
10-day	3.58 (3.03-4.23)	4.11 (3.48-4.86)	4.99 (4.20-5.91)	5.71 (4.77-6.80)	6.70 (5.39-8.26)	7.46 (5.85-9.34)	8.24 (6.22-10.6)	9.10 (6.48-12.0)	10.3 (7.02-14.0)	11.3 (7.47-15.6)
20-day	5.07 (4.32-5.95)	5.69 (4.84-6.68)	6.70 (5.68-7.89)	7.54 (6.35-8.92)	8.70 (7.03-10.6)	9.59 (7.55-11.8)	10.5 (7.92-13.3)	11.4 (8.19-14.8)	12.6 (8.66-16.9)	13.6 (9.04-18.5)
30-day	6.34 (5.43-7.41)	7.02 (6.00-8.21)	8.14 (6.92-9.54)	9.06 (7.65-10.7)	10.3 (8.38-12.5)	11.3 (8.93-13.9)	12.3 (9.29-15.4)	13.2 (9.55-17.1)	14.5 (9.96-19.2)	15.4 (10.3-20.8)
45-day	7.95 (6.83-9.25)	8.70 (7.46-10.1)	9.92 (8.48-11.6)	10.9 (9.28-12.8)	12.3 (10.0-14.8)	13.4 (10.6-16.3)	14.5 (11.0-18.0)	15.5 (11.2-19.9)	16.7 (11.6-22.0)	17.6 (11.8-23.6)
60-day	9.31 (8.02-10.8)	10.1 (8.70-11.7)	11.4 (9.79-13.3)	12.5 (10.7-14.6)	14.0 (11.4-16.8)	15.2 (12.1-18.4)	16.3 (12.4-20.2)	17.4 (12.6-22.1)	18.6 (12.9-24.3)	19.4 (13.0-25.9)

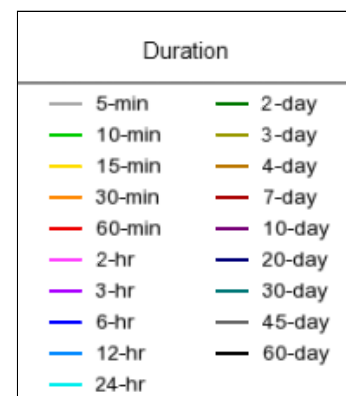
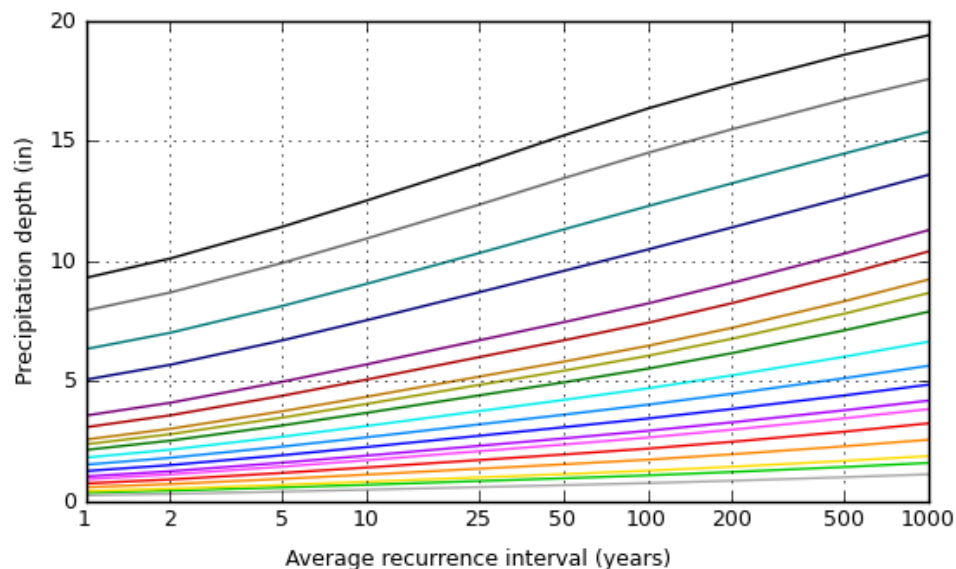
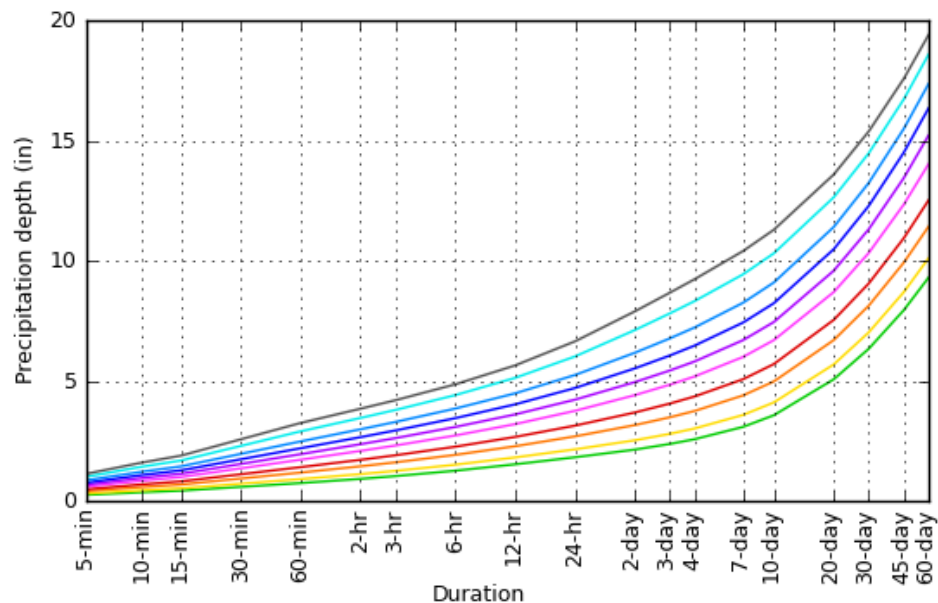
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves

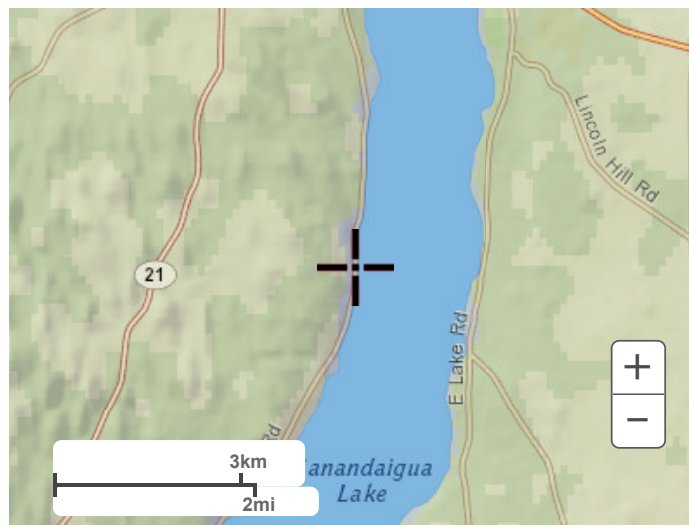
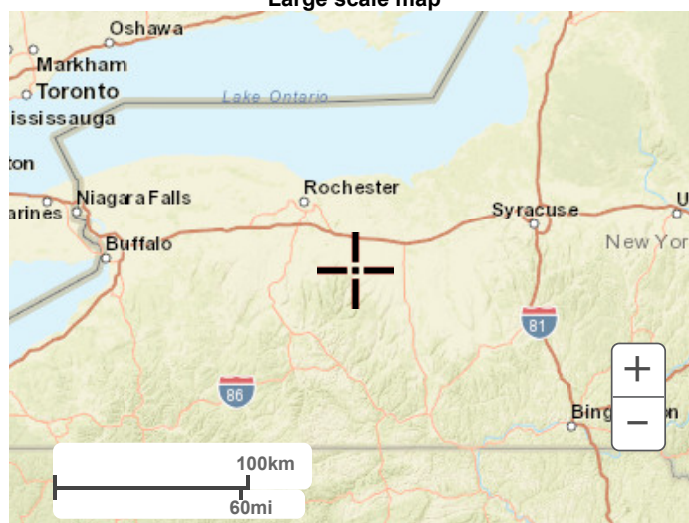
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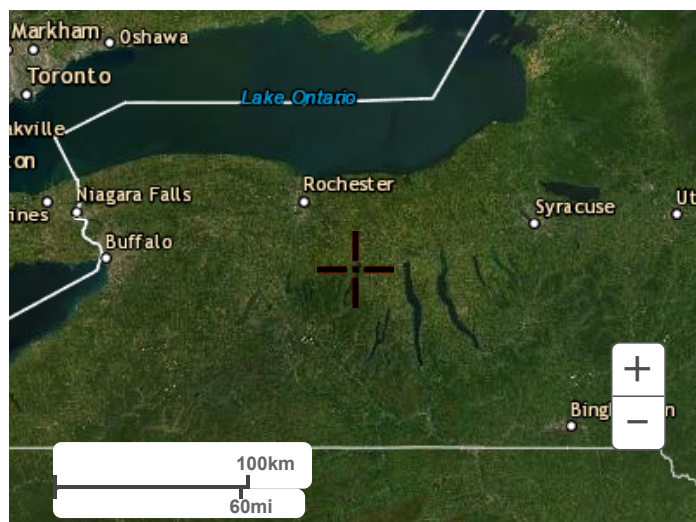


NOAA Atlas 14, Volume 10, Version 3

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